Skin That Wears: Body-site as a context for designing wearable artefacts

A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

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September 2014
Declaration

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis/project is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and, ethics procedures and guidelines have been followed.

Tarryn Claire Handcock

2nd September 2014
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Tarryn Claire Handcock

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PREFACE
DISSEYATION DOCUMENT DESIGN

The structure and design of this dissertation is a means to disseminate how my practice has evolved to include embodied processes of designing, writing, and making. In designing the dissertation, I wanted to interleave discussion of the research with material samples, images of made work, textual projects, and haptic methods that I use for thinking. The confluence of these devices is a way to communicate my knowing as knowledge. The devices in the dissertation describe the projects as well as demonstrate my skin-based approach to working through design ideas and processes.

Throughout the dissertation, I use footnotes as a stylistic device to supplement the primary discussion with evocative parallel reflections. These are distinguished from the primary text through font changes and page formatting. The dissertation also incorporates modes of haptic thinking such as ideograms, and 'depictograms', which are drawings that illustrate key ideas explored through the projects. These are a method to synthesise, represent and describe key information.

Many of the projects have resulted in textual artefacts. The Dust Project and The Invisible Man project both incorporate peer-reviewed publications, and Hand-writing and The Anatomy Museum include textual components. I have distinguished these projects from the primary research discussion by using clear changes in font, formatting, and paper stock. In the same way that images of design processes and wearable artefacts describe my skin-based approach in other projects, these textual artefacts demonstrate an engagement with skin as a body-site through a critically reflective mode of practice.
As many of the designed and made artefacts have developed in response to transformative qualities of skin and fleeting encounters with wearable artefacts, I have included process work in the dissertation as a way to communicate the development of the research out of these conditions. Photographic sequences, photo essays, and drawings are used to show ephemeral or experiential processes that are important to the way that I work, and to showcase temporal artefacts. For instance, in *Tanlines* this includes material experiments leading up to the project, the application of the design to skin, and documentation of the subsequent deterioration as it faded and flaked away. *The Anatomy Museum* project is also interleaved with observational drawings and notes taken during my visits (August 18 & December 11, 2013) to Melbourne University’s Harry Brookes Allen Museum of Anatomy and Pathology. The museum prohibits photography and filming so the processes of drawing and writing became critical methods for documenting the collection; the inclusion of the research process shows my particular approach to working with the museum’s anatomical specimens.

The document is also a haptic artefact that includes tactile elements that capture the materiality, temporality, and transformation of phenomenological skin. Feeling and handling the material samples is an opportunity to gain a tactile understanding of the properties of the materials used (gold leaf and liquid latex) which offers insight into why these materials have been chosen. Tactile encounters with these materials draw out qualities of skin. With the slightest touch, metal leaf can break apart and become embedded in the lines of a fingerprint, while liquid latex can be cast into skin-like sheets or applied to the body as a way to capture the finest details of skin.

The research projects can be understood as responding to the ‘moments’ as embodied skins and materials meet. The textual, visual, and tactile devices embedded in the pages elucidate my process of studying skin as a conceptual and corporeal body-site for design practice.
GLOSSARY

This is not a comprehensive list of definitions relating to the research. Rather, the glossary functions as an outline of key terms used throughout the dissertation that I have developed as a way of thinking through practice.

**Skin-Based Practice**
Interests focus on conceptual and corporeal qualities of human skin, including physiology and anatomy, psychological associations, subjective experiences, culturally constituted meaning, and allegorical possibilities.

**Critically Reflective Practice**
The PhD incorporates critical design strategies including speculative scenarios to increase understandings of skin and dress, and to generate propositions that go beyond present conditions. It also integrates reflective strategies, including embodied thinking and making processes, as well as reflective activities for evaluating design practice.

**Object-Based Practice**
Primary interests relate to the properties of artefacts, including materiality, methods of making, and narratives developing around the object.

**Skin That Wears**
A skin that wears forms a conceptual framework for research inquiry into the phenomenological body’s relationship with wearable artefacts. It is used to describe a relational milieu arising between skin and dress through three proposed scenarios: a subject ‘wearing skin’, a skin ‘wearing artefacts’, and a body transforming as it is ‘wearing away’ into the world.

**Temporal**
Relating to time, particularly to ephemeral changes occurring over time.

**Body-Site**
A situational context for practice: a place for designing, making, producing, performing, encountering, and spatially locating artefacts in relation to the phenomenological body. In this research I focus on skin as a body-site.
**Artefact**
Latin *arte* (ablative of *ars* ‘art’) + *factum* (neut. Past part. of *facere* ‘make’)

In the dissertation ‘artefact’ refers to the diverse outputs produced through processes of design practice research. While the term is often used in cultural studies and social sciences, I position my use of it in the context of design. I have denoted the products of my practice as ‘artefacts’ since my undergraduate years, employing it as an inclusive term to describe ephemeral, performative, textual, interactive, and object aspects of my work.

**Wearable Artefacts**
This research has identified a field of practitioners producing artefacts including clothing, jewellery, objects, and substances (e.g. special effects makeup) that are worn or placed in direct contact with the skin. *Wearable artefacts* describes this broad range of skin-dressing practices and artefacts while directing attention away from the inherent disciplinary connotations of terms such as ‘dress’ (fashion) and ‘wearables’ (interaction design). The term is used as a way to recognise that many practitioners with skin-based interests identify across one or more disciplines, including fashion, contemporary jewellery, sculpture, interactive design, medicine, and entertainment industries.

**Body-site-writing**
An embodied process of writing that builds understanding of the body-site. In the research I expand upon Jane Rendell’s (2010) method of ‘site-writing’ by developing ways that writing can be applied as a design tool for investigating the body-site through alternate observational, analytical, subjective, and speculative perspectives.

**Ideograms**
I distinguish between two different intentions underlying the drawings that function as haptic thinking processes in my design practice. ‘Ideograms’ are the research ideation and conceptual development.

**Depictograms**
I have developed ‘depictogram’ as a term for my drawings that combine descriptive graphic and diagrammatic elements. ‘Depictograms’ are used to organise ideas and visualise my thinking through practice.
SKIN THAT WEARS:
Body-site as a context for designing wearable artefacts
ABSTRACT

This research investigates ‘body-sites’ as a situational context for designing and encountering wearable artefacts in relation to the phenomenological body. As a body-site, skin is a probable location for experiences and practices of dress, including adornment with wearable artefacts such as clothing, jewellery, and cosmetics. This research builds a deeper understanding of the potential for wearable artefacts to engage with corporeal and conceptual qualities of skin as a body-site, thereby opening up avenues to create alternative modes of dress.

The body-site is studied through projects that investigate the transformative qualities of skin as it shifts between lived (Leib), object (Körper), and speculative states of being. This gives rise to the conceptual framework of a skin that wears. Produced out of the relationships between skin and dress, a skin that wears is revealed through the projects to be a complex network of intermingling functions: skin is a sensitive and perceptive integument, a physical organ that envelops the human form, and a structure invested with personal and social meaning that can be enhanced through relationships with dress. Over the course of the research, embodied processes including writing, drawing, and making develop as ways to identify and describe qualities of the body-site and a skin that wears.

Through embodied processes, projects reveal that temporal forms of dress can emphasise small details of the body-site by drawing attention to subtle and ephemeral states of skin. It is shown that wearable artefacts can become
integrated into body image, act as a medium for imagining alternative states of being, and can visually symbolise social ideas and values. This suggests that dressing skin holds the potential to transform embodied and culturally constituted experiences and understandings of the body. Furthermore, design processes refined through the projects are shown to amplify subjective awareness of the body-site. This reveals opportunities for developing wearable artefacts that could be experienced, attached, and imbued with meaning by interacting with particular qualities of skin.

This PhD forms a precedent ‘skin-based’ model for design practice. It situates the body-site as the locus of an investigation conceptualised through the layered anatomical structure of human skin. In the research this is illustrated through projects that integrate a research topology, which draws together ideas and processes from across different disciplines (such as literature and art), as well as an overlaid research topography that generates knowledge through iterative making and cumulative action. The research projects constitute a critically reflective design practice; ‘skin-based’ inquiry becomes a way to analyse and speculate on alternative ways that skin and wearable artefacts can interact and be given meaning.

Through the PhD my practice and thinking have expanded beyond jewellery and object-based interests by engaging with the potential of a complex and dynamic body-site. This has repositioned my practice within a growing community of theorists and practitioners with skin-based interests that spans across disciplines, contributing toward growing discourse and knowledge around skin as a context for design.
INTRODUCTION
A SKIN THAT WEARS

I dress myself with powders, unctions, dyes, textiles and artefacts. I shower, scrub, and towel my skin dry, roll on a slick of deodorant, and massage moisturiser into my dry knees until the cream disappears inside the pores. I layer clothing, dust on makeup, thread in earrings, and hold my breath as a mist of perfume settles from above. I fasten a necklace around my throat, pull up the sheer sheath of stockings to my waist, and tie my feet into shoes. I examine the result: Does it fit? Is it ‘me’? Is it what I imagined? Who will see it? Will it ‘do’? After a time I undress, and the residue ends up on the floor, in a basket, on a table, in a bin, and floating upon the air. I am wearing skin.

The dressing of the body is primarily perceived, situated and experienced through the envelope of the skin. Artefacts of dress are attached and arranged at the skin, and it is dressed through processes of cleaning, grooming and adornment. In the intimate space where dress and body touch, skin undergoes both conceptual and corporeal transformation. It is dressed, undressed, and redressed through material and imaginative propositions for what skin might be or become. Dressing skin holds the possibility of transformation, of temporally shifting from one form or surface to another. This research investigates how the development of wearable artefacts can engage with skin through a critically reflective design practice, using the device of a phenomenological skin that wears. The PhD poses the questions: What is it to be ‘wearing skin’, and, to be ‘a wearing skin’? How can wearable artefacts of dress engage with skin?

‘Wearing skin’ is a condition of the corporeal body. Skin is simultaneously a lived, perceptual field (Leib) and an anatomical object (Körper) (Merleau-Ponty 1999, pp. 155-156; Husserl 1973, p. 57). All knowledge, experience, identity, and understanding are produced by virtue of having and being a body bounded by a phenomenological skin (Grosz 1994, p. 87; Pallasmaa 2005, p. 64). Skin covers us all, and it covers us all over; human bodies are all ‘wearing skins’.
To be ‘a wearing skin’ is to be inherently temporal and spatial, to be subject to corporeal processes of wear and to have one’s flesh protected against wear. Over the course of a human lifetime, skin cells form and flake away every twenty-eight days. The residue of this ‘wearing skin’ is dissipated into the world as dust that is ground into garments, travels on the wind, and settles upon other bodies in distant places. To imagine skin apart from one’s body or self is to bring into being what Steven Connor (2002, 2004) refers to as “a skin that walks” – an apparition and exfoliation that is closely entwined and inseparable from the body as a whole, yet is “part immaterial, ideal, ecstatic” (Connor 2004, p. 29). “A skin that walks” carries the connotations of the whole body behind it as it steps out into the world. Yet more intimate still than “a skin that walks” is a skin that wears – a skin subject to corporeal and conceptual processes of dressing and wearing, that is enmeshed in the material and imaginative space between body and dress.

Skin that wears focuses on the body as a phenomenological site by encompassing what it is to be ‘wearing skin’, to be ‘a wearing skin’, and to wear artefacts of dress in direct contact with the epidermis of skin (‘at the skin’). It is a conceptual model for the dynamic negotiation between physiological, sociological, subjective, and propositional qualities of skin in the intermingling space where body and dress meet. In this PhD study, I establish the concept of a skin that wears as a provocation for design practice: to respond to the skin at the boundary of the body where it is in a close relationship with wearable artefacts.’

Wearable artefacts such as clothing, jewellery, prosthetics, and cosmetics are situated in direct contact with skin. Far more than any other organ, skin is considered a synecdoche for the self as a whole, a medium of embodied expression that might reveal an individual’s inner essence (Benthien 1999, p. 23). In part, this is because skin is the body’s largest and most visible organ; it is uniquely and observably marked through the personal experiences and actions of a lifetime. The appearance of skin is considered a semiotic indication of a person’s age, identity, ancestry, occupation, and health, as well as a reflection of cultural affiliations. Skin is invested with semantic meaning that is based on an understanding of the body’s surface as a fundamentally transformative but ‘authentic’ canvas on which the inner nature of a person can reveal itself (Benthien 1999, pp. 102-103). Emotions find expression through the spread of goosebumps running up an arm, or a rosy blush flushing over the cheeks and neck. Yet as a semiotic surface, skin is far from reliable; it can be made to appear other than it is (Ahmed & Stacey 2001, p. 4; Prosser 2001, p. 52). In combination with practices of dress, skin can communicate mixed messages.

1 Connor adopts the phrase, “a skin that walks” in allusion to Antonin Artaud’s notes on the Peyote ritual practiced by the Tarahumara people of Mexico. Artaud inverts the relationship between skin and skeleton, re-imagining skin as a bearer of inner spiritual and bodily meaning: “with Peyote MAN is alone, desperately scraping out the music of his own skeleton, without father, mother, family, love, god, or society. And no living being to accompany him. And the skeleton is not of bone but of skin, like a skin that walks. And one walks from the equinox to the solstice, buckling on one’s own humanity” (Artaud 1976, pp. 37-8; cited in Connor 2002, 2004, p. 7). A “skin that walks” becomes a poetic metaphor for skins that are removed from the body or operate at its fringes, as when the skin is flayed or implicated in a fantastical out-of-body experience.
It can be camouflaged or coerced into transmitting ‘inauthentic’ signals that are burdened with unconscious and fantastic desires “for what we wish were true – or what we cannot acknowledge to be true” (Prosser 2001, p. 52). An everyday example of this is the manner in which cosmetics are used to enhance desirable qualities like red lips and to conceal undesirable qualities such as sunspots and dark circles under eyes. Skin is not a neutral canvas but is culturally embedded and understood as a statement about the individual and their social situation; whether dressed, nude, or “natural looking”, bodies are invested with meaning (Jablonski 2006, 164-165; Entwistle 2000, p. 324).

In phenomenological philosophy, the body is always concurrently a subjective lived reality (\textit{Leib}), and an abstract, anatomical object (\textit{Körper}) (Merleau-Ponty; Husserl, ibid). The conceptual device of \textit{skin that wears} operates in the blurred zone between skin and dress where subject and object states intermingle. It is a means to negotiate and respond to the complex relationships that arise between skin and wearable artefacts. The perceptive, sensory body is our sole source of reference and perspective, that which Elizabeth Grosz refers to as a “sense-bestowing” and “form-giving” instrument, and our “being-in-world”; it is the locus of all human knowledge, memory and imagination, and through it all, meaning is generated (Grosz 1994, pp. 87, 100; Pallasmaa 2009, p. 101).\textsuperscript{2} At the skin, the experiential world is oriented, defined, and given meaning through the combination of the senses. A \textit{skin that wears} draws together the lived, perceptive subject ‘wearing skin’ (\textit{Leib}), and the physiological ‘wearing skin’ that is static, abstract, and anatomical (\textit{Körper}).

Research projects study these states of skin in relation to the development of wearable artefacts through design practice. In my approach to the research, I propose that the space between skin and wearable artefacts can be studied as a ‘body-site’. The concept of skin as a body-site builds upon the precedent of Michel Serres’ \textit{The Five Senses}, in which he proposes that skin is an intermingling sensory and spatial milieu where “the world and the body intersect and caress each other” (2008, p. 80), as well as Connor’s concept that skin can be a connection and coordination of the senses - an entire environment through which we experience our shape \textit{in} the world and our shape \textit{of} the world (2004, pp. 34-36).\textsuperscript{3} The skin as a body-site for wearable artefacts is thus conceived as a milieu out of which temporal and spatial transformation may emerge. I study this space through projects that identify intermingling physiological, sociological, subjective and propositional functions between skin and dress.

\textsuperscript{2} Juhani Pallasmaa also suggests that skin orients the body in space by establishing a constant dialogue and interaction with the environment through the senses, yet this intermingling makes it impossible to detach the image of the Self from its spatial and situational existence” (2005, pp. 42, 64; 2009, p. 100).

\textsuperscript{3} Serres refers to skin as a \textit{contingency} where world and body touch, stating: “I prefer to say that things mingle with each other and that I am no exception to that, I mix with the world which mixes with me. Skin intervenes between several things in the world and makes them mingle” (2008, p. 80). Connor builds upon this proposition by suggesting that skin is “the first of all first places ... the shape of shape,” a non-orientable manifold like a Mobius strip, or a complex topology that emerges “like the gathering of a wave, or the piling of a cloud, through the passage of time, whose shape it itself comes to be” (2004, p. 36). This is a suggestive image – skin as a Klein bottle enfolded upon itself through orifices and interior openings, or gaining momentum as it is brought into being through the phenomenological convergence of perceptive experience.
As articles of dress, wearable artefacts are situated at the skin and are semiotically encoded with personal and cultural meaning. They can become incorporated into a sense of self, and offer the possibility of imagining or realising alternative conceptual or corporeal bodies. Thus, articles and practices of dress situated in relation to the skin may be able to function as an embodied form of speculation. Dress can be a means to reinvent the embodied self through temporal engagement with wearable artefacts. The research builds a greater understanding of this dynamic by sharing embodied knowledge about the phenomenological relationships between skin and dress.

In the research, I position dress as a medium that can play a role in temporally transforming an individual’s physical form or surface, as well as influencing personal attitudes and mental representations of bodies. The practice of dressing skin with wearable artefacts allows individuals to manage and physically express their personal identity. Through processes of dressing, skin can be invested and recoded with both personal and cultural meaning. Dress can be altered to suit the perceived requirements of different social situations and cultural contexts, and it can temporarily transform physical and experiential qualities of the body (Cohn 2009, p. 74; Jablonski 2006, p. 142; Leeds-Hurwitz 2012, pp. 113). Furthermore, in the intimate space where skin and dress meet, wearable artefacts may be psychically associated with a sense of self by means of body image. Through incorporation into the body image, dress becomes integrated into an individual’s perceptual and emotional experience of their own body, as well as influencing their attitude toward bodies in general (Gallagher & Cole 1999, p. 132; Grosz 1994, pp. 80-81). Therefore, wearable artefacts that engage with the skin have the potential to produce alternative conceptual and corporeal understandings of the body and its relationship to dress.

**Body-Site**

Through the PhD research, skin is studied as a ‘body-site’, a corporeal zone for critical and embodied engagement with wearable artefacts. As a research proposition, studying skin as a body-site presents a particular way of approaching the human body not only *within* the context of design practice, but *as a context for* design practice. Body-sites are a place for designing, making, producing, performing, and locating dress in relation to skin.

To give an example, in disciplines including fashion and jewellery the body may be broken up into separate zones for design consideration. In response to the corporeal form, as well as
the potential for attaching adornments to particular zones of the body, wearable artefacts such as shirts, shoes or rings may be developed. The body-sites these articles are commonly associated with are located at the torso, feet and fingers. However, a body-site does not have to be associated with a certain type of wearable artefact, or with a particular mode of attachment. Instead, I propose that body-sites are areas of design focus. They are probable zones for situating wearable artefacts that represent a speculation on the potential that areas of the body present for design development and engagement.

In this research, the body-sites studied are, for the most part, located at the skin surface. However, as probable locations for a whole range of wearable artefacts, it should be understood that body-sites may incorporate the body’s interior and extensive spaces, and delineated regions above, below, or at the skin surface (Fig. 1). Body-sites can overlap, disappear, migrate, merge, or emerge with the temporal shifts and transformations of the lived body as it undergoes perpetual cycles of being, becoming, and breaking down. Most importantly, the body-site is approached, to paraphrase Alphonse Lingis, not so much as a surface but as a subject with a hidden interiority and profound, layered depth (Lingis cited in Grosz 1994, p. 138). The process of studying a body-site is an exploratory means to generate propositional scenarios and openings for wearable artefact design that engage with the potential for performative, communicative, embodied, and imaginative encounters.
Wearable Artefacts

Situated in contact with skin, wearable artefacts represent the intermingling material and immaterial qualities that arise in the milieu between body and dress. They are enfolded into embodied physical, emotive, and imaginative experiences of the phenomenological body, as well as the encoding of skin and dress with cultural ideas and values.

Wearable artefacts are a particular mode of dress encompassing diverse objects, substances, enclosures, attachments and practices that supplement the body by directly engaging with skin. This builds upon Joanne Eicher and Mary Ellen Roach-Higgins’ (1992, pp. 15, 18) definition of dress as a practice that incorporates an expanded range of body modifications and body supplements including, but not limited to, garments and textiles. Body supplements include artefacts that attach to the body such as clothing, jewellery, prosthetics, objects that can be held in the hand, and enclosures that are pre-formed, wrapped or suspended (Lamp 2010). Body supplements also include secondary attachments to body enclosures and artefacts that attach to the body, such as Ursula Guttman’s jewellery-like objects that protrude from garments in the [x]: tension, organic symbiosis.

Fig. 2 - Author’s depictogram of wearable artefacts as a category of body supplements. Joanne Eicher and Mary Ellen Roach-Higgins (1992) define body supplements and body modifications as key modes of dress.
series (2009) (Fig. 2). As depicted in Figure 2, body modifications include practices that alter hair, skin, nails, eyes, teeth, the muscular system, and even breath.

In relation to Eicher and Roach-Higgins’ classification of dress, wearable artefacts are a category of body supplements situated in direct contact with the skin through temporal practices of dressing (Fig. 2).5 Wearable artefacts can embellish, adorn, or alter skin, and may offer the opportunity for sensory, perceptive, imaginative, reflective, or symbolic engagement. The scope of this research is focused on wearable artefacts situated in relation to skin, but for ethical reasons does not explore wearable artefacts situated beneath the skin surface (i.e. in interior spaces of the body). Instead, research projects look to wearable artefacts at the skin surface (on the visible, outer surface of skin), and beyond the skin surface (engaging with skin in ways that extended outward from the surface of the body).

One of the primary characteristics of wearable artefacts is the function of temporal adornment. When situated at the skin, wearable artefacts are material objects that can become embedded with personal and social meaning, and be incorporated into a sense of self through close association with an individual’s body image and body schema (Grosz 1994, p. 80). Worn briefly at the skin, wearable artefacts can enact ephemeral change, or the illusion of change. As ornamentation, they play a role in signifying self-identity and social standing, and may be used to act out aspirations to cultural standards of beauty by altering the shape, movement or surface of the body. As a mode of dress, they may also offer physical, moral or spiritual protection (Horn & Gurel 1981, pp. 19-35; Cohn 2009). While the forms and functions of wearable artefacts are diverse, they can be defined as supplements that directly engage with the temporal and transformative qualities of skin. In the fleeting moment of contact between wearable artefacts and skin, there is the potential to transform the appearance, experience, and meaning of the corporeal body and how individuals within a culture understand it.

5 Wearable artefacts are not to be confused with wearables; the latter term is commonly used in the field of interaction design when referring to body-borne interface technologies and wearable computers (though these may be wearable artefacts).
The PhD has facilitated change in my approach to designing by shifting from an object-based practice to a skin-based practice that engages with body-site as an embodied and culturally situated design context. The new approach to practice is critically reflective and speculative, exploring the potential for developing wearable artefacts in response to the skin by asking: What is the role of a design practice that addresses the embodied, transformative relationships between skin and wearable artefacts? What could the outcomes of a skin-based design practice be? Through a skin-based approach to design that perceives a skin that wears, there may be the potential to encourage greater awareness of the temporal and transformative qualities of skin. This could build a deeper understanding of the phenomenological body through haptic perception, and speculate on possible future engagements between skin and wearable artefacts that might influence the way that people experience and use dress.

This research direction was formed in response to Australian contemporary jeweller Susan Cohn’s concept of a “canvas fallacy” (2009, p. 8). Cohn cites Peter Dormer’s suggestion that “art jewellers have used the body in photography as a mere inanimate sculpture upon which their own art might work” (Cohn 2009, p. 7). Dormer and Cohn highlight the propensity for artists and designers to position the human form and surface as a background for showcasing object-based ideas, rather than responding to the inherent qualities of a lived body and the dynamic experience of wearing jewellery artefacts.

The “canvas fallacy” provoked how I address the body in my practice, which previously placed object materiality, jewellery techniques and my own interests at the fore, even while attempting to ‘sympathetically’ design for embodied users. The “canvas fallacy” presented particular challenges for my emergent design practice to respond to. It was an incitement to investigate an alternative approach to designing wearable artefacts as art objects situated on the body background, and to explore the lived potential of skin as a basis for design. Spurred on by Cohn’s challenge, I began the research journey with a series of projects to build understanding about and through the skin of my own body. These projects, which are discussed across Parts 1 and 2...
of the dissertation, incorporated experimental processes to draw out information about phenomenological experiences of wear and wearing, and the nuanced relationships between skin and wearable artefact. As a result of engaging with *skin that wears*, my design practice expanded to include embodied processes for collecting information about the experience and meaning of temporally dressing skin. The incorporation of these processes marked a significant point in the research - the beginning of a new approach to practice that is *skin-based* rather than object-based.

Expanding upon my former object-based practice by responding to concerns of the "canvas fallacy", I have established a skin-based approach to design that builds deeper understanding of the relationships between skin and wearable artefacts by recognising the phenomenological body-site. The approach integrates different processes that reveal invisible and unconscious conditions between skin and dress. Skin-based design practice enables wearable artefacts to be conceptualised out of ideas, observations, embodied experiences, and imaginative speculations generated *through* skin, as well as in response to skin as a body-site. Addressing relationships between skin and wearable artefacts has determined that a skin-based approach to design can build understanding of the body-site as a subjectively experienced and culturally situated context for designing and wearing artefacts. Through a skin-based model of practice, wearable artefacts can be developed that are responsive to the relational milieu between skin and dress, allowing alternative concepts and artefacts to be proposed, designed, or made that engage with the inherently temporal and transformative qualities of the phenomenological body. This offers the potential for creating new modes and forms of dress, as well as opening up avenues to evolve design practices for developing dress, by speculating upon ways wearable artefacts could attach to the skin and function in future.

This research also demonstrates that skin-based design practice can play a role in expanding critical discourse across the field of skin-based theory and practice. The research has identified a gap in publications from practitioner and practice-based research perspectives in the skin-based field. Through disseminated publications, exhibitions and workshops, the research has contributed to building a greater presence of publications that discuss the role of skin and the lived body in the development of wearable artefacts. The PhD research projects contribute to building shared knowledge across the skin-based field of theorists and practitioners, which spans disciplines where relationships between body and dress are of interest, including sociology, fashion, and contemporary jewellery.
In response to the provocation of skin as a body-site, the PhD research utilises two ‘skin-based’ approaches: one, a relational topology connecting ideas dispersed across a field of skin-based theorists and practitioners (discussed in the next chapter); the other, a cumulative topography, by which a depth of skin-based knowledge is built through the iteration of projects (Fig. 3). Utilising two different approaches to design practice research has enabled the adoption of multiple methods of enquiry.

A topological approach to the research is a non-linear exploration, by which previously unrelated theories and practices are brought together and organised through the projects; in this process, new concepts and methods arise organically. A topographical approach to the research is cumulative and incremental (though not necessarily linear). Concepts and methods emerge through iterative processes of designing and making; each tranche successively builds upon what has come before. By layering topological and topographical approaches to design practice, I have developed an alternative skin-based’ model that is adaptable to study the shifting milieu of skin and dress.

The skin-based model for design practice research (Fig. 4) integrates multiple approaches to design thinking as well as offering parallel streams for critically reflective

Fig. 3 - Author’s depictogram of an overlaid topology and topography of research
Projects use entwined methods of design practice research (designing-writing-making)

Cycles of testing, critical reflection, evaluation & feedback through design practice

Layered inquiry builds a depth of knowing & knowledge through design research practice

Critical reflection, evaluation & feedback through situating practice within a broader context

Concept development occurs as ideas are incorporated & framed through the research

Ideas arise at the research boundaries as they transform

Layered elements build a depth of knowing & knowledge through design research practice

Fig. 4 - Author’s ideogram of a skin-based model for design practice research
enquiry. In layering topological and topographical approaches to design practice research, the skin-based model frames the project focus while also allowing space for speculation. It builds upon the layered model for research practice developed by Laurene Vaughan (2004). Vaughan’s model (Fig. 5) visualises research as multiple elements that overlap into and extend outward from a shared central space where complex relationships and possibilities for meaning can arise and evolve (2004, p. 5). It is a flexible model ideal for disciplines such as design, where the research context may constantly change. Vaughan suggests that this is more aligned with the reality of design practice research than a rigid, linear structure such as Michael Crotty’s (1998) model for social research (Fig. 5). Crotty’s model is based on the assumption that a research context is stable and consistent (Vaughan 2004, pp. 2-3). Visualised in plan view (Fig. 5), my skin-based model for design practice expands upon Vaughan’s model by proposing that not only do the layered components of research evolve, but the research context and core focus also continue to change. This reflects the dynamics of working with skin, which is a phenomenological body-site that undergoes continual physical and conceptual transformation.

The skin-based model has evolved in direct response to studying the engagement between skin and wearable artefacts through the device of skin that wears, which forms a framework for the interests, aims, and approach underlying the research. Layering topological and topographical approaches in the model represents an intermingling of my approaches to an enquiry into ‘wearing skin’, being ‘a wearing skin’, and how wearable artefacts of dress can engage with skin as a body-site.
METHODS OF PRACTICE

Critically Reflective Design

The PhD research should be understood as an example of critically reflective design. It builds upon the tradition of critical design, a concept developed in the 1990’s by Anthony Dunne and Fiona Raby as a way to question the potential for design to imaginatively speculate and explore possibilities. Dunne and Raby position critical design as way to “challenge narrow assumptions, preconceptions, and givens about the role products play in everyday life” (2013, p. 34). Through critical design, artefacts are a medium to challenge unconscious structures through cultural critique. Rather than provide ‘solutions’, critical designs are provocations to provide alternatives to ingrained or habitual ways of seeing and interacting with the world.

The research is critically reflective as it incorporates strategies from critical design including speculative scenarios and fictional worlds to increase awareness of personal and cultural experiences and understandings of skin and dress, and to generate propositions that go beyond these conditions. It also integrates reflective strategies, including embodied processes for thinking and making to study skin as a body-site, as well as reflective activities for evaluating design practice.

One of the strengths of critical design identified by Dunne and Raby (2013, p. 2) that is emphasised in this research is the potential to inspire and encourage people’s imaginations to flow freely, by creating spaces for discussing alternate perspectives and ways of being. There are two such discursive spaces within the PhD: the first is generated through the dissemination of research, while the second is embedded in practice. Sharing knowledge through dissemination of project artefacts has created a space to stimulate critical thinking about and through a skin-based approach to practice.

A prime example of this is the (IM)MATERIAL BODIES workshop in 2013, which was generated out of shared research interests in skin as a body-site, as well as casting processes discussed in Part 2 of the dissertation. The workshop brought together 15 participants from diverse disciplinary backgrounds including

7 (IM)MATERIAL BODIES was a one-day intensive transdisciplinary workshop and exhibition run on September 19, 2013 at the RMIT Design Hub as a collaboration between myself, jeweller Anastasia Joannides (RMIT University) and glass artist Naomi Hunter (University of South Australia), in association with RMIT University’s School of Fashion & Textiles’ Producing Fashion symposium.
fashion design, interaction design, sculpture, performance, fine art, and jewellery. The group included independent practitioners, undergraduates, postgraduates, and teachers from different universities – a diverse cluster with different skills and levels of expertise. Participants were taken through observational exercises to encourage engagement with skin as a body-site, and were introduced to a range of techniques for body casting and moulding. Participants freely experimented with materials and their bodies, exchanged ideas and processes that they developed, and speculated about how this knowledge could be applied back into their own practice. The workshop reflected the means by which shared research knowledge could seed skin-based discourse between practitioners. It also demonstrated how embodied processes of making can be critically reflective and incorporate speculations for expanding beyond ingrained approaches to thinking and making.

Speculation through design is a way to produce propositional scenarios and critical design artefacts. In the research, speculative processes have the potential to encourage imaginative engagement with the phenomenological body and to propose alternate ways of experiencing and conceiving dress in relationship to the skin. I have engaged with the speculative potential of design through what Dunne and Raby refer to as fictional objects. These are artefacts that challenge ideals, values, and beliefs embodied in material culture (Dunne & Raby 2013, pp. 89-90). In the Prosthetics project, I draw upon the fictional capacity of objects as a platform to freely imagine and develop wearable artefacts that explore alternate forms of human skin. Prosthetics are presented to participants who must individually interpret how the wearable artefact should be attached and applied to their skin, or are used as sculptural renderings on body casts to conceptualise how wearable artefacts could symbiotically attach and emerge through a direct relationship with the body’s surface. These wearable artefacts encourage imaginative speculation about how dress could relate to skin by functioning as speculative props that compel viewers to propose alternative scenarios for how skins could be dressed or malleably moulded in the future.

Embodied Processes

Embodied processes including designing, drawing, writing, and making are a form of active critical reflection and speculation in my practice. Evident across creative disciplines including design and art as ways of thinking through the phenomenological body, embodied processes are utilised in the research projects as a way to engage with the qualities of lived skin. This research builds a
greater knowledge of skin that wears through layering multiple projects that investigate physiological, sociological, subjective, and propositional relationships between skin and dress (Fig. 6-7). Small-scale projects focus on selected zones of skin as a context for design. This directly relates to the small scale of wearable artefacts produced through my practice, which is informed by a background in jewellery and object design. The potential to engage with skin as a body-site is investigated through embodied processes that produce textual, iterative and wearable artefacts that may be ephemeral and experiential (Fig. 7).

In the research, embodied processes bring awareness to the body-site, which can inform the development of wearable artefacts. Ephemeral experiences such as encountering the body-site through drawing and writing (discussed in Part 1 of the dissertation), and temporally dressing skin (discussed in the Material Application Projects), are fundamental forms of reflection-in-action and reflection-on-action. For Donald Schön (cited in Poulsen & Thøgersen 2011, p. 31), a formative thinker in cognitive approaches to learning and practice, design thinking is a situated process - it occurs in actions that arise out of specific places, actual moments, and present people – through individual designers with personal and unique experiences that actively reflect in and on their practice. Schön’s concepts of reflection-in-action and reflection-on-action highlight how and why a practitioner adopts certain strategies, theories, and patterns of behaviour. Through reflection-in-action, “doing and thinking are complementary. Doing extends thinking in the tests, moves, and probes of experimental action, and reflection feeds on doing and its results. Each feeds the other, and each sets boundaries for the other” (Schön cited in Visser 2010, p. 21). Schön defines reflection-on-action as a practitioner retrospectively reflecting on their thinking, actions and feelings in relation to a particular instance of practice, and reflection-through-action is a practitioner becoming aware through the very actions of practice (Mason cited in Vaughan 2004, p. 2).

Embodied processes are fundamental forms of reflection-in-action that have multiple functions in my practice: they are a means of working, a method to generate ideas and speculative propositions, a way to approach and understand skin, and a mode of interacting with users. My skin-based approach to practice demonstrates reflection-in-action through the embodied processes of the design projects, and reflection-on-action through ‘depictograms’ and critical writing, which I use to think about the work.

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8 Reflection-in-action is a self-aware form of knowing-in-action, incorporating reflective activities in and on practice. This manifests as adaptive responses to the complexity and immediacy of given contexts, and brings together the general principles of theory with the particular concerns and constraints of practice (Visser 2010, p. 27). Conversely, knowing-in-action is a form of reflection that is tacit and often unconscious. It can be observed as a practitioner makes intuitive, capable decisions in situ, but he or she may be unable to vocalise this knowledge when not in the midst of action (Schön cited in Visser 2010, p. 22).

9 Academics Søren Bolvig Poulsen and Ulla Thøgersen (2011) use Schön’s definition of design thinking as a basis for a case study on the bodily engagement of designers. They conclude that design thinking relies on “complex and multidimensional interaction, which is based on the pre-linguistic engaged perspective of the lived body” (2011, p. 29). The phenomenological body thus plays a significant role in not only doing design, but in actively thinking design.
PHYSIOLOGICAL
anatomy & pathology

SUBJECTIVE
psychological self-boundary & identity

PROPOSITIONAL
imagined, remembered, allegorical, alternative

SOCIOLOGICAL
non-verbal cultural communication

SKIN FUNCTIONS

THE ANATOMY MUSEUM
WRITING

GOLDLEAF
TANLINES
PROSTHETICS

THE DUST PROJECT
LIVED SKIN STUDIES

100 HAND SITES

wearable artefacts
iterative artefacts
textual artefacts

Fig. 6 (top) - Author’s depictogram of skin functions
Fig. 7 (bottom) - Author’s depictogram of projects by type
Sculptor Jessica Harrison (2013) is a precedent example of the ways that embodied processes of thinking and doing practice can work in conjunction with a critically reflective practice. In her doctoral dissertation, Harrison applies “a model of thinking through the body to generate alternate ways of thinking about and working with the body sculpturally” (2013, p. 2). She looks to skin as a way to consider the relationship between interior and exterior spaces of the body, and the role of tactility in conjunction with vision, in the active making and perceptive interpreting of sculpture (Harrison 2013, p. 2). In my practice, embodied and speculative processes for thinking through skin are a means to alter or shift perceptions about skin and its relationship to dress. Critically and reflectively studying the development of wearable artefacts that engage with skin as a body-site has allowed me to draw attention to invisible (unseen, unrecognised, unconscious) embodied and culturally situated experiences of temporally dressing lived skin in addition to exploring imaginative potentials for dress.

Reflective activities have a particular application in this research, as they offer insight into how practice is constituted. Reflective activities critically build awareness of the assumptions, intentions and propositions underlying design practice, which I have most notably employed in the Hand-writing project, where the methods of Arthur Conan Doyle’s (2009 [1887]) fictional Sherlock Holmes are applied into design. This method has enabled me to observe, analyse and define my skin-based approach to practice, and to determine the scope and methods that this practice might integrate. My practice evolves through the changing thinking and understanding instilled by the projects, and simultaneously, thinking and understanding evolve as a result of changing practice. Using this framework, research through practice can be understood as cyclical: reflective activities such as knowing-in-action and reflection-in-action both shape practice and offer critical insight. Therefore, my design practice is inherently critically reflective, consisting of enfolded embodied processes that uncover relationships between the phenomenological skin and wearable artefacts.
DISSEYATN STRUCTURE

The dissertation establishes my particular approach to developing wearable artefacts through a critically reflective design practice that engages with the skin as a ‘body-site’. In the background chapter, the research scope and field of practice are defined. The body of the dissertation frames discussion of the research projects as a response to the conceptual device of a skin that wears. The body of the dissertation is divided into three parts that explore the temporal and transformative qualities of relationships between skin and dress. This is a way to engage with the conceptual and corporeal qualities encompassed by a skin that wears: I am wearing skin, I am wearing artefacts on my skin, I am a skin wearing away into the world. The research projects are distributed across the dissertation in relation to these themes (Fig. 8).

In Part 1, Wear/Where (I am wearing skin), skin is studied as a body-site that is static, objectified and anatomised (Körper), as well as embodied, perceptive and phenomenological (Leib). The projects discussed in this section interrogate skin using a process of ‘body-site-writing’, informed by writer and art/architecture critic Jane Rendell’s methods of site-writing, cultural theorist Mieke Bal’s approach to close reading, and the methods of novelist Arthur Conan Doyle’s fictional detective, Sherlock Holmes. Body-site-writing is a layered approach to writing through skin by studying it as a context for design practice research. The practice responds to Rendell’s observation about site-writing as a tool that “draws on spaces as they are remembered, dreamed and imagined, as well as observed, in order to take into account the critic’s position in relation to a work” (Rendell 2010, p. 18).

While Rendell writes this in reference to the practice of art criticism, body-site-writing operates on parallel terms – it incorporates multiple perspectives in order to account for the embodied and spatial relationship between the designer-writer and the body-site. These perspectives are observational, analytical, and speculative, allowing subjective, objective, and imaginative engagement with the existing, fictive, and future conditions of skin and its relationship to dress. This also expands upon Mieke Bal’s method of close reading, in recognising that viewers bring their own meaning to artefacts, that this meaning can be fluid, and that the production of meaning is often inscribed through semiotic signs and encoding (Bal 1999a,
Applied in the context of developing wearable artefacts, close reading is an approach to gaining a greater understanding of the personal and cultural significance of dress and dressing practices. Body-site-writing is a process that applies observational, reflective, deductive, and critical methods of ‘reading’ and ‘writing’ skin, to build up a layered understanding of how skins can be invested and divested with symbolic meaning. This method integrates knowledge of the ways that skins and dress are culturally represented and understood; it can be applied in design as a research process for unpacking the values, ideas, and imaginative qualities that manifest in material culture.

There are two body-site-writing projects in the dissertation: the first, **Hand-writing**, is a playful application of Sherlock Holmes’ methods for the ‘Science of Deduction’ in fiction, outlined in Conan Doyle’s novel *A Study In Scarlet* (op. cit.). This becomes a provocation for ‘reading’ and ‘writing’ the history and profession of an individual, based on observation and deduction of information visible on the surface of their hand – a challenge issued by Holmes within the narrative. The second project is an analysis of revelation and the unseen in H.G. Wells’ novel, *The Invisible Man* (2005 [1897]), in relation to embedded Western cultural attitudes about skin and dress in the text. The analysis is a means to engage with ways that skin and dress are culturally understood, and this provides insight into the personal and cultural functions and potentials of wearable artefacts.

Writing, therefore, becomes a medium for understanding and imagining skin and dress as surfaces of semiotic communication, and a way to explore how wearable artefacts might be produced in relation to, and in conversation with, the skin. Body-site-writing is thus a critically reflective and speculative practice that can be applied to expose unconscious and invisible underlying factors, as well as propose alternatives. Writing allows me to bring together ideas from diverse fields, in this case, grounded predominantly in literature, fashion studies, and cultural criticism, and applying them into a design practice. Posing speculative scenarios, critically analysing texts, and testing ideas through writing is a process for interweaving theory with practice, for exploring skin-based design concepts through the integration of ideas from different disciplines and perspectives. The projects illustrate my use of speculative and analytical writing to engage with skin as a body-site for developing wearable artefacts.

*Fig. 8 (following page spread)*- Skin That Wears. Author’s depictogram of projects distributed across the dissertation
SKIN THAT WEARS

PART 1
WEAR / WHERE
(I am wearing skin)

PART 2
WEARABLE ARTEFACTS
(I am wearing artefacts on my skin)

PART 3
WEARING SKINS
(I am a skin wearing away into the world)
The second half of Part 1 is a case study of *Two Hands* that are examined using embodied processes. The motif of two hands is used as a discursive device to gain an understanding of skin within the context of both the objectified (*Körper*) and lived (*Leib*) body. This is done through three projects: *The Anatomy Museum* applies embodied methods of observation to plastinated anatomical specimens in the context of a medical museum, and in doing so establishes a dialogue between the two interrelated design research practices (drawing, body-site-writing) and the two hands (*Körper/Leib*). *Lived Skin Studies* is a continued exploration of methods for understanding the skin as a phenomenological surface, layering investigations through designing and making to build a fragmented document of the temporal and transformative qualities of a body-site. *100 Hand Sites* is a further exploration of this theme – a conceptual study of the limitless possible body-sites of a single lived hand, which are cast in latex. Collectively, the skin-based approach to the projects forms a layered description of the body-site.

Part 2 of the dissertation, *Wearable Artefacts (I am wearing artefacts on my skin)*, engages with skin as a body-site through designing, making, and dressing skin with wearable artefacts. The *Material Applications Projects* discussed in this section are supplementary surface interventions that are used to temporally dress the dynamic lived body (*Leib*). Both the *Gold Leaf* and *Tanlines* projects address embodied experiences of wearable artefacts that are fleeting in duration. A veneer of *Gold Leaf* is applied to voluntary participants, highlighting skin memory and movement over the course of a day; artificial tanning solution is applied to the skin over a resist, leaving a sudoriferous (sweat) gland lace pattern that fades away over a period of weeks. The projects are documented through photography, which highlights the material wear of artefacts situated at the skin, and participant feedback that provides insight into intimate subjective, affective and perceptive responses to temporally dressing with wearable artefacts. The final project in this section is *Prosthetics*, a series of special effects makeup applications and sculptural pieces incorporating body-casting and liquid latex. *Prosthetics* are a speculative, imaginative response to the possibility of wearing alternative or other skins.

Part 3 of the dissertation, *Wearing Skins (I am a skin wearing away into the world)* is a proposition about the temporal and transformative qualities of skin as a body-site. Through the concept of a *nostalgic skin* that is un-unified and transformative, skin is positioned as a body-site beyond the corporeal surface. This section includes *The Dust Project*, a gathering of domestic dust in a collection of archive boxes. The project becomes a way
to explore the skin as a dissipated body-site that is no longer dressed in wearable artefacts but has become a worn artefact - a body of dust, or the body as dust. The Dust Project is a skin that is ‘dressed’ in the sense of the Old French dresser meaning ‘to prepare’ and drecier meaning ‘to arrange’ – it is a skin that is collected and made orderly. The proposition is used to speculate about critically reflective practices for engaging with skin that wears by exploring imaginative ideas and practices across literature, art and design.

In the concluding chapter of the dissertation, I reflect upon how the research process has brought about changes to my object-based practice, leading to the emergence of a new, critically reflective, skin-based approach to design, and the future direction that this practice can take.

Underpinning the three-part structure of the body of the document (Fig. 8) is the concept of a skin that wears. Through the projects, skin is studied as it shifts between three temporal and transformative states: Körper (static, anatomical, and objectified), Leib (embodied and lived), and Speculative (imaginative, alterative to what currently exists). The first part of the dissertation studies the qualities of skin as a body-site for the probable location and development of wearable artefacts, while the second part studies the mingling space between skin and temporal artefacts and practices of dress; the third part is an exploration of the corporeal and conceptual limits of skin and dress. In this way, the fleeting physiological, sociological, subjective, and propositional forms and functions of the skin are interwoven through projects that engage with, as well as study, skin as a conceptual and corporeal context for dress. Through the research, I have developed critically reflective processes for engaging with the skin as a temporal, transformative, conceptual and corporeal body-site. Skin has become an embodied locus for the convergence of the artefacts, ideas, and practices, of dress and design.
COMMUNITY OF PRACTICE

DRESSING SKIN

All people ‘dress’ the body in some way, be it through clothing, tattooing, cosmetics and other forms of body painting... no culture leaves the body undorned but adds to, embellishes, enhances or decorates the body (Entwistle 2000b, p. 6).

In this chapter, I outline a community of theorists and practitioners producing studies and creative works in response to physical, subjective, sociological, and propositional functions of human skin, which I refer to as the ‘skin-based’ field. The review of this community uncovers a breadth of interest in relationships between skin and dress that spans across disciplines, and contextualises my own work within the skin-based field.

Fashion & Dress

As the largest, most visible, and most accessible of human organs, skin is the site for diverse practices of dress. The PhD research investigates wearable artefacts within the context of a Western system of fashion and dress, which integrates multiple composite styles and cross-cultural development.10 The research expands upon definitions of dress proposed by Eicher and Roach-Higgins (1992, 1995), who position dress as a practice incorporating body modifications and supplements, as well as Entwistle’s (2000a) definition of dress as an embodied and situated bodily practice. Entwistle (p. 325) suggests that dress cannot be understood without recognising that the phenomenological body is physically and culturally emplaced. She proposes that individual practices of dress require both a conscious and unconscious negotiation of the embodied experience of dressing, the material properties of dress, and the cultural conventions of the social context that bodies are embedded within (Entwistle 2000b).
Dress enacts and enforces culturally dictated micro-social constraints on what is or is not appropriate to wear (Entwistle 2000a, pp. 328, 337-338). It is not, for instance, considered appropriate to dress for a daytime picnic at the beach in the same way that one would dress for a formal evening ceremony or a team-sporting event. Cultural knowledge, including knowledge of the modes of dress considered appropriate for particular circumstances, influences how individuals dress for particular occasions and settings as well as how they understand the dress of others. Cultural conventions of dress render bodies recognisable, meaningful and acceptable within society and particular contextual situations (Entwistle 2000a, pp. 323-324).

While the social structures driving cultural conventions of dress can be subtle and often invisible, artefacts and practices of dress can offer perceptually identifiable characteristics that help to non-verbally communicate information about personal identity, as well as locate assemblages of dress within a particular time, place, and social group (Roach-Higgins & Eicher 1995, p. 9).

The capacity for dress to be imbued with personal and cultural meaning forms one of the interests addressed through the research in *The Invisible Man* project.

It is important to recognise that dress and fashion are different entities in the research. Dress refers to embodied, culturally situated practices and artefacts used to modify and supplement the body, while fashion is a “system of institutions, organizations, groups, producers, events and practices, all of which contribute to the making of fashion” (Kawamura 2005, p. 43). As a discipline, fashion design is concerned with the conceptualisation, design, making, wearing, and communication of dress - primarily in the material form of clothing. This disciplinary context also encompasses fashion studies, which Susan Kaiser asserts is an interdisciplinary field that blends disciplines to break down the ways that people “articulate” through dress (Kaiser 2012, pp. 6-8). Fashion studies are generally concerned with the sociology, psychology, or phenomenology of clothing in Western culture, but this research is interested in wearable artefacts as a category of dress that includes garments, objects, and substances.

The intermingling perspectives integrated into fashion studies are an approach to understanding the interconnected ways that individuals and cultures construct integrated relationships through the materials, products, customs, and ways of wearing dress (Steele 2010; Kaiser 2012; Miller 2005, p. 7). Kaiser also suggests that interdisciplinarity enables fashion studies to mix metaphors and models in ways that enable critical and creative understanding of the complex “‘hows’ and ‘whys’ of body fashionings” and the social power relations associated...
with how people dress and style their appearances in everyday life - essentially, the fashion system (Kaiser 2012, p. 4). I situate my own emergent skin-based practice as an approach to understanding and engaging with the complex networks of fashion and dress in relation to the skin, though the primary focus is on the milieu between skin and wearable artefacts rather than the system of fashion per se.

My design practice studies and produces wearable artefacts through designing, writing, and making. These processes are used in the research projects as a way to gain information about the embodied and culturally constituted dynamics of skin and dress, namely how and why skin is dressed. Analysis of skin and dress in The Invisible Man (Wells 2005 [1897]) is a means of understanding ways that cultural meaning may be produced through the dressed (and undressed) body. Literary analysis provides critical insight into how and why skin and wearable artefacts can become invested with cultural meaning, as well as revealing personal and cultural values, ideas, and beliefs that prevail today. It also builds awareness of how, in contemporary Western culture, practices of dress are partially shaped through an ideological belief in the emotional and social value of fashion.12

Cultural meanings may become attributed to dress through semiotic meaning, a concept suggested by French literary theorist and semiotician Roland Barthes (1983, 2013). Barthes (2013) proposes that the meaning in dress is culturally constituted through fashion, which moves meaning from the culturally constituted world to consumer goods including clothing (McCracken 1986). Anthropologist Grant McCracken (1986, pp. 71-72) suggests that cultural meaning is found in three places: the culturally constituted world (which is organised through cultural principles and categories), consumer goods (which reflect and constitute how cultural meaning is organised), and the individual consumer (who views phenomena through the “lens” of the culture they are embedded within).13 The fashion system invests and divests goods of meaningful properties, firstly, by associating them with established cultural principles and categories of organisation; secondly, by inventing new cultural meanings; and thirdly, by reforming cultural meanings (McCracken 1986, p. 76). Fashion can therefore be seen as a system of belief; its perpetuation relies on a faith in the inherent value of goods, and to a large extent involves the production not only of material goods but also imagined properties.

In Fashion-ology, Yuniya Kawamura (2005) proposes that the fashion system is an institutional network of beliefs, customs and formal procedures “which form an organization with an acknowledged central purpose” – the communication, proposal,
While many of the books referenced in this research that are written about skin as a layer of the (lived, socially embedded) human body tend to simply refer to it as ‘skin’, authors including Cuskelly (2010) and Lappé (1996) use phrases such as “original skin”, and “the body’s edge” to position their particular interests. In this instance, I use the phrase “original skin” to differentiate between the natural layer of skin that envelopes the human body, and the ‘second skin’ of dress. Dress is often referred to as a “second skin”, as in the respective titles of books about clothing written by Horn and Gurel (1981), Flint (2011), and Farameh (2011). This tends to spring from an understanding of clothing as “the outermost layer of the private self put on public display” (Leeds-Hurwitz 2012, p. 105).

In the context of Western fashion, there are many practices of dress, generally falling within the realm of body modification, that seek to transform the “original skin” of the human body. Australian jeweller Tiffany Parbs is a standout example of the ways that contemporary jewellery has the potential to engage directly with the skin itself as a medium for design and creative expression. Parbs’ temporal pieces are produced through processes that affect the appearance of skin, including sunburn (Bake, 2008), friction (Blister-ring, 2005) (Fig. 9), pressure (Etched, 2004), gold paint (Vestige, 2013), and induced allergic reactions (Rash, 2004) (Klimt02 2014). The ephemeral decorative embellishments that result are documented through photography. Like Parbs, I am interested in the potential to temporally transform or embellish original skin. While she explores both body modification and supplementation practices, I focus on adornment with wearable artefacts. This is explored through a series of Material Application Projects, which are discussed in Part 2 of the dissertation.

However, perhaps one of the most well known practitioners working with original skin is French multi-media and ‘carnal artist’ Orlan, whose series of broadcast operation-performances entitled La Reincarnation de Sainte Orlan (The Reincarnation of Saint Orlan) took place between 1990-1993. In these performances, Orlan reveals the visceral mess and violence of fashioning identity through skin by undergoing cosmetic surgery to permanently remodel her face and body. During the surgical procedure, the operating theatre becomes an aestheticised theatre of performance, incorporating themed décor and costumes made by well-known designers (Ince 2000). Orlan is fully conscious during the operations, often reading aloud passages of literature, feminist theory and psychoanalysis that...
comment on the skin, identity, and transformation (Johnson Hurst 2013, p. 160). While Orlan’s reincarnation is ‘aesthetic’ she is not concerned with conforming to conventional ideas of beauty (Smith 2011, p. 69). Instead, her carnal art is a feminist practice that oscillates between distortion and reconstruction of the flesh; it is a self-transformation and self-portrait that enhances understanding of the role played by skin in the formation of personal identity (Orlan’s Carnal Art Manifesto 1989, cited in Donger & Shepherd 2010, pp. 28-29). Orlan’s modified skin is “a kind of allegory for the way in which finite human subjectivity can continue to modify itself, materially and endlessly” (Ince 2000). The Reincarnation of Saint Orlan thus highlights the status of skin as a cultural artefact functioning within the realm of fashion and semiotic cultural codes of dress. Her performances confound the boundary between dress and body: body modification activities render the skin a site of investigation and public discourse. Through her practice, “original” skin is no longer an object to be dressed. Rather, skin becomes dress.

Special Effects Makeup and Prosthetics

Orlan’s work has been an inspiration for Antwerp-based fashion designer Walter Van Beirendonck, who is known for responding to body modification practices through his work. For many years, Van Beirendonck appropriated the Puk Puk crocodile man of the Iatmul in northeastern Papua New Guinea as a logo that was knitted into his Cosmic Culture Clash (Autumn/Winter 1994 - 1995) and Avatar collections (Autumn/Winter 1997 - 1998). The Puk Puk motif references the skin modifying practices of the Iatmul people, who acquire the “skin of the crocodile” (bulged scarification on the back, chest and buttocks) as part of their initiation into adulthood. Reconstituted through Van Beirendonck’s collections, skin-modifying practices are manifested as wearable artefacts.

While Van Beirendonck’s work draws on ethnographic transformations of the ‘original’ skin, he is also known for playfully exploring fantastic transformations of the body through dress. In the past he has lent his image to the Oxfam Fair Trade “I’m in the mood for fair trade” campaign (2009) (Fig. 10), which depicts him in a state of hairy transition, part way between man and bear. Shaun Cole (cited in Biddle-Perry & Cheang 2008, p. 7) has suggested that the care, control, and management of body hair in western gay male culture is a medium of symbolic social expression, operating in conjunction with skin.16 As the body’s surface rarely exists in an untouched ‘natural’ state, the modification, management and transformation of skin and hair through practices, processes, and artefacts of dress becomes a

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16 Cole asserts that western gay male culture is dominated by strategies of both conformity and subversion of ‘straight’ masculinity - thus, the full beard and bristling chest of the image is one of overt homosexual masculinity, akin to the clone look popular during the 1970’s.
sign of constructed individual identity (Biddle-Perry & Cheang 2008, p. 202). The Oxfam Fair Trade image is thus a playful nod to Van Beirendonck’s sexuality; his status as a hirsute ‘bear’ is symbolised through the visual device of his wild beard and the exaggerated body hair sprouting from his ‘transforming’ bare torso and head. Through the Tanlines project discussed in Part 2 of the dissertation, I also found that body hair, as an epidermal derivative, could play a role in subjective experiences of dressing skin

In his W.& L.T. (Wild & Lethal Trash) Believe collection of Autumn/Winter 1998-1999, Van Beirendonck pays homage to Orlan’s 1993 Omnipresence performance (Fig. 9). He states “Believe was inspired by the artist Orlan, who was doing all this body manipulation. For me, it was like searching for a new kind of beauty. Instead of using make-up, I was working with prosthetics - prosthetic make-up and horns and things” (quoted in Steele 2013, p. 138). Believe was presented on models wearing prosthetic protrusions on their faces, similar to Orlan’s surgically implanted silicone forehead bumps, which were applied by special effects makeup artist Geoff Portass. Portass, like many special effects makeup artists, normally works by taking life casts of a model’s face and hand-sculpting prosthetic pieces onto the cast so that they fit the body perfectly. This is a technique that I often use for creating moulded wearable artefacts, as in the Prosthetics project. However, for the Believe fashion show, Portass took 3D digital scans of 52 models’ faces and manipulated the images to create subtle “exotic” changes in facial features before making the individual latex prosthetic appliances in plaster moulds (Suzy Menkes in Museum Boijmans Van Beuningen, Walter Van Beirendonck & Thimo te Duits [Eds.] 1998, p. 14). Van Beirendonck’s design process included imagining 120 variations upon integrated latex make-up that could be a “second protective skin” covering but also “ready-to-wear” cosmetics that explored prosthetic as an aesthetic alternative to colour (Museum Boijmans Van Beuningen 1998, pp. 43-44).

In her article on the collection, Fashion Editor of the International Herald Tribune, Suzy Menkes suggests that prosthetic makeup could, if commercialised, “join the array of detachable metal accessories for nose and other body parts and the tattoo-transfers of [sic] spray-on hair dyes. These are used as decorative effects on the club scene – for those who don’t fancy the permanence of tattoos or whose jobs do not permit it” (ibid, p. 14). Menkes’ observation is an interesting perspective. Prosthetic makeup is a means for fluid and temporal transformation of identity and aesthetic, and this is an underlying interest in the W.&L.T. Believe collection. In conversation with
Van Beirendonck about *Believe*, Orlan articulates her delight about the idea of young people being able to collect prosthetic “stick on bumps” like those made by Portass, which would allow them “to play at metamorphosis, to transform themselves physically and quote me at the same time” (p. 43). Yet Orlan also expresses her reaction upon seeing Van Beirendonck’s *Believe* as being “torn between two feelings: great happiness and total repulsion. Pleasure, because it’s rare to see bodies departing from the canons of beauty on the catwalk. Disgust because what I do is my life’s work and fashion, well, it changes every six months” (p. 44). Admittedly, Orlan is drawn to surgery as a medium for her own transformation because of its permanence, while Van Beirendonck claims to be frightened of the irreversibility of body modification practices (ibid, p. 45). To some extent, this does account for the very different structures of their work, respectively, *Operation-Performances*, and fashion. *Believe* is Van Beirendonck’s proposition on future ways of dressing, reflecting his conviction that temporal, rather than permanent, modifications of the skin will have an increasing presence in fashion (Brüderlin & Lütgens 2011, p.98), a sentiment with which I concur.17

Since the release of *Believe*, skin has proven to be of interest in fashion as well as across the fields of entertainment and art. In pop singer Lady Gaga’s *Born This Way* music video (2011) (Fig. 10), Gaga is depicted in the character of “Mother Monster” wearing special effects prosthetics developed by makeup artist Billy Brasfield, as well as donning temporary tattoos mirroring those of tattooed Canadian model Rick “Rico the Zombie” Genest, who is also featured in segments of the film clip (Gaga 2011). While Gaga is by no means the first music artist to employ special effects makeup in the fashioning of an alter ego (the road is well trodden by performers including David Bowie and Marilyn Manson), her use of prosthetics in *Born This Way* is of interest for a number of reasons. While Gaga’s mimicry of extensive tattooing barely raised an eyebrow, her prosthetics prompted Orlan to sue the singer in a French court.18 Orlan claimed that certain imagery in *Born This Way* was plagiarism of her own work, including the *Omnipresence* (1993) forehead bumps. This suggests that practices of fashioning and dressing skin, including cosmetics and prosthetics, can initiate debate about personal identity and ownership of an “original” skin.

In the *Fingers* project, I engage with this potential by replicating and fusing casts of “original” skins into wearable artefacts that conceal the individual tactile characteristics of skin. The *Fingers* are props that complicate the relationship that an article of dress can have to the body; each finger fits the hand of an anonymous individual perfectly, but the confluence of many fingers from

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17 Van Beirendonck presents *Believe* as “a proposition for future make-up” (Healy 2006, p. 57) and suggests that cosmetic surgery has the potential to be used in a “creative, adventurous way. Not only to recreate a special body shape, but also to improve our way of performing, working, loving” (Van Beirendonck quoted in Suzanne Lee, *Fashioning the Future: Tomorrow’s Wardrobe*, London 2005, p. 72. Cited in Brüderlin & Lütgens 2011, p. 98).

18 In the lawsuit, Orlan accused Gaga of stealing imagery including the *Omnipresence* (1993) forehead bumps that served as an inspiration for Van Beirendonck, as well as the *Femme Avec Tête* (Women With Head, 1996), to construct the visual universe of the 2011 *Born This Way* album (“Gaga”, Art Monthly 2013; “French Artist Orlan Sues Lady Gaga for Plagiarism”, in ARTinfo 2013).
many individuals means that no one person is able to claim 
physical ‘ownership’ over a piece through the relationship that it 
has to their skin.

Furthermore, Lady Gaga’s artistic vision for *Born This Way* 
is carefully positioned at the crossroads between music, 
performance art, and avant-garde fashion. In a *Harpers Bazaar* 
interview (Blasberg 2011) that took place shortly before the 
album’s release, Gaga states that she considers her use of 
prosthetics to be performance art, and cites inspiration from 
fashion designers including Alexander McQueen, whose Spring/ 
Summer 2010 collection *Plato’s Atlantis* features models wearing 
facial prosthetics designed by makeup artist Peter Philips. 
Greg Duggan (2006) suggests that the spectacle of fashion/ 
performance art hybridisation hit a significant point in the 1990’s, 
when designers including Alexander McQueen for Givenchy 
and John Galliano for Christian Dior, earned a reputation for 
elaborate fashion shows that looked to theatrical, film and opera 
productions, as well as music videos for inspiration. Gaga is an 
example of an effective inversion of this relationship, as her 
music videos draw upon the precedent of artists and fashion 
designers, even featuring designer collections to further blur the 
boundaries between fashion, music, and art performance. The 
discourse surrounding Gaga’s use of prosthetics is significant 
because it signals increased interest in experimental, expressive 
wearable artefacts *across* and *between* the disciplines of 
performance, art, and fashion.

In recent years particularly, there has been a visible increase in 
the presence of skin ‘transformed’ by wearable artefacts across 
practices that span these disciplines. Conceptual scenarios, such 
as Carla Ross Allen & Peter Allen’s *Skinthetic Redux* (2001), 
which features models’ skins cosmetically branded with Chanel’s 
iconic quilting, are no longer merely proposals but have become 
reality.19 Karl Lagerfeld’s Spring/Summer 2010 collection for 
Chanel featured temporary *Trompe l’oeil* tattoo transfers 
designed by Peter Philips, then the label’s artistic director of 
make-up (Cornford 2010). Available as a limited edition set from 
Chanel’s retail stores and make-up studio, the temporary tattoos 
allowed fans of the label to adorn their skins with brand-related 
seasonal motifs including dainty pearl strings, chains, blossoms, 
swallows, wheat, and the eponymous Chanel logo. Temporary 
tattoos are also used by artist Arianna Page Russell (2014), who 
as a part of her practice creates collages from images of her skin 
that can be transferred to bodies, walls, windows, and allow her 
to regain control over her own sensitive dermatographic surface. 
In *Tanlines*, I found that carbon transfer paper, which is used 
for tattoo linework, was also a highly effective way to create 
temporal skin adornments that could be worn in conjunction with

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19 Working under the label ‘KnoWear’, Ross Allen and Allen’s *Skinthetic Redux* (2001) was part of a series of design proposals that speculated on ways consumer branding could extend to the human body, merging skin surface and brand commodity into one and the same (Ross Allen & Allen 2011).
other cosmetic materials. Review of the skin-based field reveals that a significant number of practitioners are positioning work across fashion, performance, art, and entertainment to explore modes of dressing “original” skin through wearable artefacts such as clothing, cosmetic applications, and prosthetics (Fig. 12).

**Dressing with Second Skins**

Dress is physically located, experienced, and contextualised through the phenomenological body - so much so that articles of dress in intimate contact with skin are often colloquially referred to as a “second skin”. A second skin suggests an overlaying of original skin with a new skin, an alternative skin, a protective skin, another skin. It is a phrase ripe with the promise of actively peeling, growing or assuming something other than what exists – a shedding, renewal, rebirth, or reinvention. Contemporary artists including Ana Alvarez-Errecalde, Alba D’Urbano, and designer Imme van der Haak explore dress as a “second skin” through their respective collections that feature full-scale images of the nude human body printed onto garments.

Alvarez-Errecalde’s installation, TALLAS (2008) (Fig. 11), is a fictive ‘store’ displaying fifty bodysuits printed with un-retouched photographic images of different women’s bodies across a range of ages, races and sizes. In this environment, audience members are invited to select and try on someone else’s skin as a provocation to reflect upon how society treats female bodies as a commodity. The bodysuits are opaque and completely cover the body of the wearer from the neck down, even incorporating gloved fingers and panelled feet. The form pays homage to the fitted bodysuits popularised by fashion designers André Courreges and Pierre Cardin during the 1960’s, as slinky, clinging pieces that follow the contours and movement of the body seamlessly, becoming almost inseparable from the skin upon which they are situated. Alba D’Urbano’s project, Hautnah (Skintight, 1995) and follow-on collection, Il Sarto Immortale (The Immortal Tailor, 1995-2000) (Fig. 11), similarly use images of a fully nude female body printed on garments, but in contrast to Alvarez-Errecalde, D’Urbano looks exclusively to her own skin. Her couture collection garments (2007) are what she refers to as “skin-suits” consisting of multiple garments (jacket, t-shirt, blouse, skirt, pants, etc.) that can be worn together or separately. D’Urbano’s work focuses on the skin as an outermost border or external shell of the body. She envisions “slipping out of my own skin for just a moment and offering it to someone else... [offering another person] the opportunity to go through the world hidden within the ‘Artist’s Skin’” (1995-2000). Imme van der Haak’s collection of silk shift garments for Beyond the Body

![Fig. 11 – Examples of wearable artefacts that explore supplementary skins. (Top to bottom) Ana Alvarez-Errecalde, TALLAS (2008); Alba D’Urbano, Il Sarto Immortale/The Immortal Tailor (1995-2000); Laura Splan, Gloves (2009)](image-url)
(2012) (Fig. 2) also explore the potential for wearing a nude skin as outerwear, but instead of concealing the form or surface of the body underneath garments, she superimposes the printed image as a motile and translucent second skin. The sheer print on a sheer textile allows the surfaces of the two bodies (photographic image and lived body) to visually merge, creating a disconcerting double-image that transforms as the wearer (a dancer) performs: “the moving body manipulates the fabric so the body and the silk become one, distorting our perception or revealing a completely new physical form. The movement then brings this to life” (van der Haak 2012). Van der Haak’s collection explores the potential for a second skin to alter how the original skin is perceived, by physically layering different bodies, ages, and identities. In their respective explorations of second skins through dress, these practitioners highlight the uncanny nature of dressing lived skin with static representations of itself; the wearable artefact becomes a form of Körper, a flaccid and unsettling spectre that clings to the phenomenological body. Rather than seeking to create wearable artefacts that represent qualities of the skin as in these practices, in projects such as Gold Leaf and 100 Hand Sites, I have instead aimed to use materials that increase attention to fleeting details and movements of the Leib skin.

Engagement between skin and wearable artefacts can occupy an uneasy space between second skin and original skin that, for better or worse, carries the connotations and possibilities of both. Japanese fashion designer Issey Miyake is known for working with this space between dress and skin in innovative ways. Best known for creating clothes that are asymmetrical, loose, layered and draped, Miyake conceptualises the “essence” of clothing as a fluctuating, transformative boundary space between the worn cloth and wearer’s skin (English 2013, p. 20). His work is significant as an approach to design that, while exploring the possibilities presented by innovative and unusual use of materials, is fundamentally based on a consideration of how lived bodies can be dressed. Miyake’s garments represent a revolutionary approach to dress in Western fashion - liberation from the etiquette and traditions of haute couture, and the development of designs emerging in response to the movement of bodies and properties of cloth (Miyake 1999, p.28). Miyake’s pioneering attitude toward fashion stems, in part, from bearing witness to the May 1968 Paris riots, which coincided with his time in France as an apprentice to Guy Laroche and Givenchy. The spectacle of widespread self-expression, and the general zeitgeist of liberation from social constraints and conventions that he experienced in France, and over the following year while in New York, catalysed impetus to move beyond stereotypes of “the body”and to consider designing for people of different ages, sizes, and scales (Miyake 1999, p. 28). Miyake’s 1970 collection,
Constructible Clothes, represents a decisive new direction in fashion: an approach to dress through the philosophy that clothing is a part of every person’s life. While he has stated that his clothes are not for “everybody” or “anybody” – personal taste, access to fashion, and affordability preclude this – Miyake’s attitude is grounded in a desire to create clothing that feels natural to wear “regardless of origin or age” (Miyake 1999, pp. 18, 114).

Miyake’s clothes reflect a process of ‘simplifying’ by using the inherent qualities of materials, such as the set width of cloth or the capacity for a textile to shrink, to determine how garments can envelope and move around the skin, as with a kimono (Miyake 1978, pp. 55-56; Miyake 1999, p. 32; Kawamura 2004, p. 197). For example, in the collection Pleats Please Issey Miyake, garments are cut and shaped up to three sizes larger than the proper size, then are permanently pleated to simultaneously fit the body and allow a broad range of movement (Miyake 1999, pp. 20-24). The garment as second skin creates a space that absorbs and is absorbed; in motion, the fabric and body become one and “assert themselves, enabling the space between them to wave, flutter, and fold with each movement of the body” (Miyake 1978, p. 56). The revolutionary nature of Miyake’s East Meets West (1978), beyond the introduction of a Japanese mode of making and wearing clothing into a Western fashion context, is the emergence of a concept for clothes that looks to the mobility and diversity of bodies as a motivator for design (Miyake 1999, p. 38). It is this thinking that I find so meaningful to the development of my own skin-based practice: artefacts of dress can be developed in response to the transformative and temporal qualities of phenomenological bodies, and this does not discount engagement with the qualities of materials. In light of Miyake’s approach to fashion and clothing, I have come to see skin-based design as a progression of my object-based practice. I have not abandoned an interest in material properties and hand-making but have developed an alternate approach for applying these skills that focuses on highlighting momentary lived experiences and the unique, minute qualities of skin.

As well as looking to the fluid space between skin and wearable artefact, Miyake has explored second skin as the symbiotic aspect of dress. Some of Miyake’s garments reflect the designer’s attitude that clothing should not only respond to the body of the wearer, but fuse with the personality of the wearer to become part of the self.22 The centrepiece for Miyake’s Bodyworks exhibitions (1983-1985), the Bustier (2008) (Fig. 2) is one such example. Produced in collaboration with the mannequin manufacturer, Nanasai, Miyake’s bustier was widely published as both a sculptural piece moulded on the human body, as well as styled as a garment with a long pants-skirt to emphasise the

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21 In collections including Just Before and A-POC (A Piece of Cloth), Miyake explores the concept of a single piece of cloth enveloping a moving body as the fundamental element of clothing. Clients buy a tube of material and follow instructions to cut out a hat, gloves, socks, or a dress according to their whim (Miyake 1999, pp. 32, 109, 125).

22 Intimate personal relationships between dress and self also have strong precedent in jewellery. Jayne Wallace identifies that jewellery is “a particular, intimate form of object that has a strong role within our developing sense of self and within meaningful and personal human relationships” (2007, p. 6), a property also recognised by Cohn (2009, p. 48) who discusses the potential for jewellery to signify inner identity. Wallace, in particular, situates her research through a contemporary jewellery practice that is “centred on emotion as social, discursive and human-relational” (2007, p. 6).
contrast between hard and soft materiality (Hiesinger & Fischer 1994, p. 132). As part of the *Bodyworks* exhibition, the piece formed a part of Miyake’s research into the plasticity of the body using materials that had never been used to make clothing (Miyake 1999, p. 43). Fabricated using metal, polyester, and synthetic polymer resin, the bustier is a rigid exoskeleton (an example of Eicher and Roach-Higgins’ definition of a pre-formed body enclosure) that replicates and overlays the wearer’s original skin. Miyake uses materials that are far from the world of soft textiles to “reveal the existence and strength of the human form” rather than concealing the naked body (Kurimoto in Miyake 1983, pp. 83, 92-93).

Given my background in jewellery and object-based design, this is a point of great interest – I am far more familiar with rigid metals, plastics, resins, and moulding that I am with the supple language of textiles. Miyake’s *Bustier* is an example of a wearable artefact that bridges the gap between the hardness of polymers and the drape of cloth; it is a precursor to designers such as Iris van Herpen, who dress the body with a palette that incorporates hand-crafted and digitally manipulated cloth, metal, and polymers. *Second skins* and wearable artefacts do not have to be made of fabric but can incorporate or be comprised of what previously fell into the metier of ‘industrial’ and ‘object-based’ materials. Fashion designers such as Miyake and van Herpen, as well as contemporary jeweller Gerd Rothmann, demonstrate that the use of these materials does not preclude engagement with the lived body, and can in fact stimulate new approaches to how dress can be made, attached, and worn at the skin.

Rothmann, who has been developing wearable artefacts as second skins through metalsmithing techniques since the 1970’s, explores the physical and emotive terrain of skin by incorporating cast skin textures into commissioned jewellery pieces. Rothmann’s work often features haptic marks of the wearer as well as impressions of their loved ones, usually in the form of fingerprints, which he uses to symbolise close personal bonds. From my perspective, the most compelling feature of Rothmann’s practice is that his pieces are decorative embellishments for unusual body-sites including ear nooks or nostrils, and they are cast to follow the contours and markings of an individual’s skin intimately. Rothmann also captures the hollow spaces that manifest between skin surfaces in cast hand-held objects and wearable artefacts including *HAND-AXE, made by my hand* (1980) (Fig. 2). Like Rothmann, contemporary jeweller Lauren Kalman makes pieces that are cast using impressions and forms of the body. However, rather than reproducing existing skin details, her work can be understood as exploring the ‘expanded’ qualities of skin. *Lip Ornament* (Fig. 2), featured in
the Hard Wear series (2006), is an example of this. The piece is an alternative second skin that grotesquely encrusts the mouth in bejewelled, electroformed gold reminiscent of an ulcerous skin condition. Kalman’s practice employs a variety of methods for attaching wearable artefacts to the body, including piercing, temporary adhesion, fitted electroforming, and physically clamping pieces in place (using the teeth, for example).

The field of practitioners working with second skins also includes artist Laura Splan, who makes casts of skin by applying cosmetic facial peel masks to her body and peeling the residue off as a dry ‘hide’ that behaves as a sheet of fabric. She sews this second skin into wearable artefacts and decorative items, including Gloves (2009) (Fig. 11) and Negligee (Slipping Into the Skin of Another) (2007), which are delicately embroidered with details of tear ducts and other anatomical structures. The dried cosmetic peel residue preserves the impressions, form, and textures of Splan’s skin and body hair so that the garments evoke a metaphorically laden image of dressing in another person’s fragile skin.

This process is similar to how liquid latex is used in my own practice; applied to skin, latex peels away dead cells and wayward hairs. I use latex in two primary ways - to cast prosthetic appliances and to create life casts, techniques that are described through the series of Material Application Projects. My processes for making second skins are similar to how masks and fake wounds are made in special effects makeup, though I have adapted techniques from training in ceramics rather than makeup artistry. Fitted closely to the body, the prosthetics and casts can be incorporated into the wearer’s body image where they may play a role in temporal physical and imaginative transformations, as suggested by Van Beirendonck and Lady Gaga respectively.

Wearable artefacts can, then, function as a veritable second skin by being situated in close proximity to human skin, bearing its intimate marks, and by becoming enmeshed with its very materiality. Works including ‘body architect’ Lucy McRae’s Swallowable Parfum (2014) are an example of how temporal dress – in this case, scent – can undergo a transformation while embedded in the skin’s structure. McRae’s perfume is an edible capsule that secretes a genetically unique scent through the skin pores:

Once absorbed, the capsule enables the skin to become a platform, an atomizer; A biologically enhanced second skin synthesized directly from the natural processes of the body. Fragrance molecules are excreted through the skins surface during
perspiration, leaving tiny droplets on the skin that emanate a unique odor. The potency of scent is determined by each individual’s acclimatization to temperature, stress, exercise, or sexual arousal (McRae 2014).

The olfactory qualities of the perfume are generated through the shifting qualities of one’s own skin; the wearable artefact is in an intimate relationship with skin that extends both into and beyond the body’s surface as it is absorbed and secreted. Artist Paul Thomas’ Midas project (2009) has also explored porous nano-scale qualities of skin, collaborating with SymbioticA scientists at the University of Western Australia and Curtin University of Technology to amplify molecular aspects as skin and gold touch.

Crossovers between creative practitioners and scientists through forums such as SymbioticA have resulted in a burgeoning field of biotechnology art, with many projects exploring the growth of second skins through tissue and cell cultures. Artists such as Orlan and Svenja Kratz have carried out projects using skin cell and tissue cultures that complement scientific research as well as raise issues about bioethics. Orlan’s Harlequin Coat, developed in association with SymbioticA “is the prototype of a composite biotechnological coat, consisting of a custom-made bioreactor and cultured, in vitro skin cells embedded in a coloured life-sized mantle with diamond-shaped patterns, symbolizing cultural cross breeding” (Hauser 2008, p. 83). This follows Orlan’s manifesto that carnal art must engage with developments in medicine and biology to question the status of the body and pose ethical problems (Donger & Shepherd 2010, p. 29). In The Human Skin Equivalent/Experience (HSE) Project, Kratz (2013, pp. 142-143) produced personal jewellery items that incorporated a Human Skin Equivalent composed of surgically removed sections of her own skin, which were seeded with keratinocytes isolated from hair follicles of project participants. This complemented program research being carried out into Human Skin Equivalent models for tissue repair and wound healing.

While my research does not investigate biotechnology art, and this remains outside of the primary research focus, I do discuss my formative experience in a biotechnology art environment in the context of The Dust Project. Projects including those by McRae, Orlan and Kratz demonstrate that wearable artefacts are a mode of dress with the potential to explore the depth and qualities of the original human skin at micro and macro scales. Building upon these precedents, wearable artefacts are able to express or engage with the qualities of original skin through speculative and propositional second skins situated on the body’s boundary.
REVIEW OF THE SKIN-BASED FIELD

Overview

A review of the skin-based community of theorists and practitioners has revealed an imbalance between publications and creative practices across the skin-based field, particularly in disciplines producing wearable artefacts, such as fashion, contemporary jewellery, and art (Fig. 12-13). The distribution of publications across the field does not reflect the breadth and depth of current practice in these areas, and there are also relatively few publications written from a practitioner or practice-based research perspective. Skin-based publications across the humanities and creative arts primarily offer insight from a theoretical perspective rather than offering critical reflection on tacit forms of knowing. There is little communication of the embodied knowledge of practitioners who are actually working with dress and skin of the lived body, which suggests that critical discourse may be further enriched by incorporating practice-based knowledge. Surprisingly, publications in the field also rarely recognise modes of dress beyond a disciplinary-specific focus, thus overlooking the potential for critical reflection within the broader context of an emergent community of skin-based theory and practice.

It is suggested that critically reflective discourse can be expanded in the future through recognising shared interests across the skin-based community. Therefore, I have reviewed the field using different groupings to unpack disciplinary distribution; recognise emergent relationships between wearable artefacts and the skin, and reveal common themes explored across theory and practice. This review identified four functions of skin that are areas of interest in the field: physiology, subjectivity, sociological functions, and the propositional potential of human skin (Fig. 6). These functions are the cornerstones of the PhD, with projects mapped in relation to how they engage with one or more of these key qualities (Fig. 7-8). Through the projects, the research proposes an alternative model for development of wearable artefacts – a skin-based design practice that is about the skin as a body-site, taking place through the skin as a body-site. Shifting from a jewellery and object-based practice to this alternative skin-based design model has positioned my work in the midst an emerging community of skin-based theorists and practitioners (Fig. 12-13).

In recent years, a field of theorists and practitioners has emerged across the disciplines of design, art, philosophy, psychoanalysis, psychology, and sociology, forming a community that shares
a common interest in the qualities of human skin. Examples of work from this nascent skin-based field are shown in the accompanying depictograms, which map key theoretical texts and practice-based work related to the research focus (Fig. 12-13). Figure 12 shows publications in the skin-based field; texts concerned with phenomenology and the sense of touch (hapticity) are distributed in one column, and publications that explicitly discuss wearable artefacts are overlaid in a second column. Figure 13, illustrating creative practice in the field is limited to skin-based work with a particular focus on wearable artefacts; columns relate to the situation of wearable artefacts below, at, or beyond the skin surface. The overlaid frame distinguishes between what falls within the research field (dress as a temporal supplement at the skin surface) and outside of the research focus. As the depictogram is a visual device to illustrate the breadth of work that the skin-based field can include, it features examples of practices that span beyond what is discussed in the dissertation. Both figures (Fig. 12-13) also feature annotations that identify practice-based research in the field, primary work in the field (i.e. key books or practices focused on skin and/or wearable artefacts), and minor work in the field (i.e. an emerging practitioner, a section of a book, or a single artwork on skin/wearable artefacts).

Visual mapping of publications and creative practice across the skin-based community involved synthesising, annotating and arranging the work of theorists and practitioners in relation to the key research field. This process revealed key points of interest. The depictograms show theorists and practitioners arranged according to how they self-identify their discipline, for instance, sociology or art. This method revealed that many theorists and practitioners identify their work as crossing between multiple disciplines, such as sociology-psychoanalysis-fashion (North 2013), psychoanalysis-sociology-media theory (Segal 2009a, 2009b, 2013, 2014), fashion-art (practitioners include Imme van der Haak, Ana Alvarez-Errecalde, Alba D’Urbano, Patrick Hartley and Catherine Day), fashion-performance (Adele Varcoe), fashion-architecture (Hodge, Mears & Sidlauskas 2006), art-science (practitioners include Orlan, Stelarc, Heather Dewey-Hagborg, Sonja Baemel, Peta Clancy, Alexandra Ginsberg, Oron Catts & Ionat Zurr, Molly Epstein), and art-science-design (practitioners include Leah Heiss, Sophie de Oliveira Barata, Danielle Wilde, Lucy McRae). While I have endeavoured to depict these practices across disciplines as clearly as possible in relation to the research, the relatively high number of theorists and practitioners that self-identify across and between disciplines suggests that the skin-based field is not neatly circumscribed but is in fact a slippery space comprised of overlaid disciplinary interests.
This implies that the skin-based field has emerged out of a population of practice and theory that addresses concepts crossing between one or more disciplines. Working within this field there is the potential to bring together theories and practices originating in different disciplines, and in doing so to produce new hybrid areas that explore shared interests from a perspective that moves beyond disciplinary interests. The high proportion of hybrid practice and theory in the skin-based field can perhaps be attributed the nature of skin itself; as a feature common to all humanity, a visible self-boundary, and an anatomical organ, it offers many interwoven discursive openings. Therefore, I position my emergent practice in a field where layered, hybrid, and ambiguously aligned work fluidly move between and across disciplines. The skin-based environment fosters innovative, alternative, and intersecting modes of practice.

**Depictographic Review:**
**Skin-based Field of Creative Practice**

Spatial arrangement of creative practice in the field (Fig. 12) reveals affinities, themes, and shared interests across disciplines. The figure has been arranged based on research into the creative practices underlying the featured work, and so it has allowed me to identify common themes and shared interests across the skin-based field. While it visually shows a variety of work in the field, the primary function of the depictogram is as a research device.

Using the depictogram, I have grouped skin-based practitioners into categories based on the relationship of their featured work to the visible ‘surface’ (epidermis) of skin. The depictogram divides works into a topography of wearable artefacts positioned below, at, and beyond the skin surface, yet the reality is far more nuanced. Works featured in the depictogram demonstrate movement beyond what scholars Joanne Eicher and Mary Ellen Roach-Higgins define as modes for attaching supplementary dress to the body, namely pre-shaping, wrapping, suspension, inserting, adhering, and clipping (1992, p. 18). These modes of attachment are evident in the field (Fig. 12), for example, in work by jeweller Katharine Ludwig, emerging industrial designer Jake Li Evill, and fashion designers Issey Miyake and Hussein Chalayan. Yet, even in these examples, dress attaches to the body in ways that are considered unusual or innovative. Ludwig’s jewellery connects to the skin through a suctioned vacuum, a curiously symbiotic mode of attachment that is often used in

*Following page spread*

*Fig. 12 - Author’s depictogram of wearable artefacts and creative practice in the skin-based field*
*Fig. 13 - Author’s depictogram of publications in the skin-based field*
### RESEARCH FIELD

#### FASHION & TEXTILES DESIGN
- Icona Black
- Selena Wadlow
- Tiffany Parks
- Daniel Barsam
- Edoardo di Giusto
- Aidan Rankin
- Sarah Crowden
- Aimee Obrecht
- Alana Athanasiou
- Arlene Tan
- Eduardo Calzadilla
- Amanda Chaplin
- Alastair McQueen
- Miles Hargreaves
- Jay Alaniz
- Elizabeth N immersive
- Richard Cook
- Tegan Hiddleston
- Betty Blau
- Andrew Innes
- Lesley de la Haye
- Linda N. Young
- Olya Byrne
- Graham Stirling

#### CONTEMPORARY JEWELLERY
- Sarah Hogg
- Simon Baker
- Gerd Arntzen
- Gia Atwood
- Laurence King
- Horatio Zinman
- Stephanie Vogt
- Jennifer Cogli
- Katherine Lutting
- Hannah O’Ree
- Ayse Millman

#### ART
- Alba D’Urbano
- Daniel Ramos Obregón
- Sophie de Oliveira Barata
- Oron Catts & Ionat Zurr (2004-2013)
- MC10
- Issey Miyake (1970)
- Satsuki Ohata
- Daniel Ramos Obregón (2014)
- Andrew Krasnow (1992-1999)
- Laura Splan
- Levi Van Veluw
- Sara Naim (2010)
- Peta Clancy
- Francesca Voegele
- Jennifer Crupi
- Katharina Ludwig
- Tiffany Parbs
- Heather Dewey-Hagborg (2012-2013)
- Andrew Krasnow
- Laura Splan
- Levi Van Veluw
- Sara Naim
- Peta Clancy

#### PERFORMANCE ART
- Ariana Page
- Angela Diemer
- Richard Harvey
- Laura Spink
- Alice D’Oliveira
- Laura von Miller
- Rosa Alcalá
- Meng Qian Lee
- Petra Clancy
- Olivier Williams
- Becca Catherall
- Alba D’Urbano
- Daniel Ramos Obregón
- Andrew Krasnow
- Laura Splan
- Levi Van Veluw
- Sara Naim
- Peta Clancy

#### SCULPTURE
- Michael Harrison
- Anthea MacPhee
- Francesca Albers
- Andrew Krasnow (1980-1990)

#### BIOTECHNOLOGY ART & WEARABLE TECHNOLOGY
- Stefabie<br-
- Eoife de Roiste
- Leah Hess (2007-2008)
- Jake Eddle (2012)
- Alexio Borella (2012)
- Sonya Bernoff (2006)

#### OTHER
- Oliver Goulet
- Bart Hess
- Luci Mullen
- Danielle Wible (2011)

#### WEARABLE ARTEFACTS
- below the skin surface
- at the skin surface
- beyond the skin surface
- * Practice Based Research
- ** Student practice
- Bold: skin is a primary element
Chinese medical cupping but is rarely seen in jewellery. Evill’s prototype Cortex Cast (2013) utilises 3D scanning and printing to create a custom lightweight net that is clipped together over the skin in two parts, which drastically differs from the method plaster casts for broken limbs are currently made (draping and wrapping gauze and plaster bandages). Fashion designer Issey Miyake’s work is known for experimental shaping and construction of garments through an œuvre incorporating draping, wrapping, layering, pleating, and moulding clothing so that it fits and moves around the body like a fluid second skin, which differed considerably from Western modes of dress at the time of conception (Miyake 1978, 1983, 1999); and in recent years, Hussein Chalayan (2007, 2013) has explored interstitial spaces between dress and skin through garments that alter form by unfurling, expanding, and changing length in a matter of seconds.

These examples represent the integration of an awareness of skin into the development and production of creative, speculative, avant-garde, and commercially viable wearable artefacts. However, they also indicate that the act of temporally dressing in wearable artefacts has encouraged the development of work that attaches to skin in creative ways. Skin-based practices across fashion, contemporary jewellery, performance art, and wearable technology are pushing the boundaries of what can be done with skin, particularly in terms of temporal attachment and connection, demonstrating an observable interest in the development of innovative and novel wearable artefacts that engage with the human skin.

Practices that are exploring innovative modes for attaching wearable artefacts and skin at the skin surface include designer Satsuki Ohata, who has proposed shoes that are cast by the wearer on their own foot, by dipping it in a silicone “fondue” for a perfect fit (2014); Dr Manel Torres’ aerosol textile Fabrican, and MC10’s flexible electronic Biostamp sensor that seamlessly adheres to the skin like a temporary tattoo. Eliza Bennet’s A Woman’s Work is Never Done (2011) is hand-sewn into the upper, dead layer of epidermal skin cells, and jeweller Lauren Kalman creates pieces that pin into, stretch, or fit the skin closely. Kalman follows the experimental canon of contemporary art jewellers including Gijs Bakker (whose Shadow Jewellery [1973] temporally marks the skin), Emmy van Leersum, Otto Künzli and Gerd Rothman, in seeking to draw attention to the body’s form, conceptualisation, and potential as a site for invention and performance (Cohn 2009, p. 30). In addition, Molly Epstein’s Pulse Clip 2 (2007, 2010) and Angela Dorrer’s painted Handscapes (2010-2013) intensify haptic and visual awareness at the epidermis. Lucy McRae’s Swallowable Parfum (2013) that is

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24 These fashion designers both present innovative approaches to connecting skin and dress. Miyake’s work represents a challenge to the making and wearing of Western fashion. As one of the first avant-garde Japanese designers to enter the Western fashion system his work brought about a creative and stylistic shift - East Meets West - and an expanded understanding of how skin can be experienced, enveloped, and dressed in relation to the space between body and cloth (Miyake 1978). In recent years, Chalayan’s One Hundred and Eleven collection (2007) (Fig. 12) featured transforming dresses that used mechanized devices and built in technology to dynamically alter the spatial relationship between dress and the body; his subsequent Rise (2013) collection also included transforming dresses that could be tugged downward at the collar and dramatically change the aesthetic, and thus subjective experience of the garment through the body.
atomised through the pores, and Leah Heiss’ *Diabetes Jewellery* (2007-2008) - a jewellery applicator for nano-engineered insulin which is used to administer medication through the skin are each examples of wearable artefacts that function *through the skin surface*.

Reviewing publications and practice across the skin-based field through both depictograms and writing, reveals a network of common themes: in creative practice this includes the exploration of alternative skins, morphing skins, surface qualities of skins, and temporal skins. Wearable artefacts that perhaps propose alternative skins include fashion practices like those of Alexander McQueen and Walter van Beirendonck that have used special effects like prosthetics on the fashion runway, as well as the practices of ‘body architect’ Lucy McRae, practitioner Bart Hess, and their joint lucyandbart projects, Sophie de Oliveira Barata’s bespoke prosthetics through *The Alternative Limb Project*, and Levi Van Veluw’s transformative self-portrait series.

Wearable artefacts that morph the skin include work by designer Naomi Filmer, Adele Varcoe’s liquid latex *i-Fold* (2011) fashion interventions, Patrick ‘Paddy’ Hartley’s facial corsets, and jewellery pieces such as Auste Arlauskaite’s *Body Adjustment*. Danielle Wilde’s *hipDisk* (2011) does not manipulate the skin so much as encourage users to morph their own form and surface through movement, which creates points of contact between electrical circuits embedded in the disks, generating musical noises.

The work shown by transmedia artist Olivier Goulet, textile designer Zane Berzina, jeweller Stephanie Voegele, fashion designers Local Androids, and sculptor Jessica Harrison are all examples of creative practice exploring *representation of the surface qualities of skin*. Photographer Ariana Page Russell and artist Laura Splan also explore the *surface qualities of skin* by creating new surfaces through marking, chemically peeling, and reconfiguring images of their own skins.

The *temporal qualities of skin* are explored through practices such as fashion designer Pia Interlandi, who uses dissolvable fabrics to create clothing that decomposes and breaks down after death,25 Sonja Baeumele’s *Visible Membrane* (2009) body suit, embedded with growing bacterial cultures that naturally occur on the body’s surface, and photographer Sara Naim’s *Dawn to Dust* series (2010) that captures the moment as skin begins to break away from the body and self.

This review demonstrates a depth of engagement with the qualities of skin through wearable artefacts across diverse

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25 There are, in fact, a number of practitioners who have explored the temporal decomposition, dissolution or deterioration of clothing, including Helen Storey, Hussein Chalayan, Alexander McQueen, and Donna Franklin. I use Interlandi (2013) as a prime example as her work is intimately entwined with how this process unfolds in relation to the transience of bodies, and has sensitivity toward intermingling between dress and skin.
disciplines, showing the emergence of a new skin-based field of creative practice. It is also notable that there is not one type of skin nor one state of skin that comes to the fore in practice across the field, but the temporal and transformative *skin that wears* – embodied, perceptive, responsive, malleable, dressing in wearable artefacts, and wearing away into the world.

**Depictographic Review: Skin-based Field of Publications**

The depictogram of skin-based publications (Fig. 12) shows common themes emerging across the field. In disciplines across the humanities, skin-based studies are framed through Western cultural and medical history, continental philosophy and/or phenomenology, and often, French psychoanalyst Didier Anzieu’s (1989) concept of the “skin-ego” (effectively applied in sociology by theorists such as Naomi Segal and Stella North). The greatest depth of research is evident in sociology, including books by Claudia Benthien (1999), Steven Connor (2004), Maryrose Cuskelley (2001), Sara Ahmed and Jackie Stacey (2001). In this discipline, themes of perception, anatomy and the bodily interior, skin as a psychological self-boundary, surface modification, semiotic inscription, dressing practices, symbolic and allegorical meaning, gender, race, sexuality, and transformative states are recurrent within discussion.

The publication depictogram shows a significant volume of writing and exhibitions being produced out of art, which can be attributed to the enduring popularity of studies about art and anatomy, and the ongoing patronage of medical museums. While these art and anatomy publications do give great insight into the importance of skin within the context of a developing Western knowledge of the body, skin is, for the most part, conspicuously absent, with the exception of Mieneke te Hennepe’s doctoral dissertation and subsequent papers (2007, 2009), and Mechthild Fend’s *Fleshing out Surfaces. Skin in French Art and Medicine, 1650-1860* (2014). In art and anatomy, skin is a background to the exposed bodily interior, and a context for the historical development of a relationship between anatomical knowledge and the cultural emergence of individuality, a theme that I have explored in presentation papers (Handcock 2012, 2013c) and touch upon in the *Two Hands* case study.

Grouping of texts through the depictogram also reveals an interest in skin and hapticity, particularly across sectors of art and design. Publications across architecture, sociology, and cognitive psychology also touch upon this issue with reference to phenomenologists such as Maurice Merleau-Ponty (1958, 1964a, 1964b, 1968) and Edmund Husserl (1973, 1989, 1999). In art
and design, discussion of hapticity and skin is characterised by the relatively high proportion of publications by practice-based researchers.

Practice-based design researchers including Seçil Ugğer (2013), Adele Varcoe (2009), Zane Berzina (2004, 2008), Jayne Wallace (2007) and Leah Heiss (2006) all respond to the material, empathetic, and embodied qualities of touch through their respective practices and publications. This theme is also adopted by media art theorist Laura Marks (2000, 2004), who applies concepts of hapticity developed out of philosophy as a metaphor for particular experiences of 'haptic visuality' when viewing film, and Juhani Pallasmaa who writes about approaching architecture through touch rather than vision (2000, 2005, 2009).

Many publications also acknowledge the intimate and emotive personal relationships that arise between dress and self have great import, particularly in the disciplines of jewellery (Cohn 2009; Metcalf 2000; Wallace 2007), fashion (North 2013; Entwistle 2000a), and in areas with interaction design interests (Ugğer 2013; Heiss 2006). The relative number of practice-based researchers in this area is partially explained by the role of embodied making practices in the disciplines of fashion and textiles, contemporary jewellery, fine art, architecture, and interior design. Hand-making, craftsmanship, and hapticity are explicitly addressed by interior design professor Andrea Mina (2009), contemporary jeweller and art critic Bruce Metcalf (2000), sculptor Jessica Harrison (2013), and glass artist Naomi Hunter (2013) in their respective publications.

**Review Findings**

A comparison of the community depictograms (Fig. 12-13) reveals the third and most important finding: an imbalance between primary publications and practice across the emerging field. Collectively, the depictograms highlight the gap between skin-based practice and publication. They show a diverse and growing community of creative practice, particularly in disciplines that are developing wearable artefacts such as fashion design, textiles, contemporary jewellery, and art. However, the review of the field reveals that these disciplines produce very few publications that contribute to critical discourse, especially from the perspective of practitioners and practice-based researchers who are developing and making wearable artefacts. Doctoral dissertations by sculptor Jessica Harrison (2013), jeweller Susan Cohn (2009), and textile designer Zane Berzina (2004), as well as Masters dissertations by designer Leah Heiss (2006), fashion
designer Adele Varcoe (2009), product designer Seçil Ugür (2013), and artist Peta Clancy (2001) are notable exceptions. These publications are written in the context of research, framed through the individual’s practice, and relate to hapticity and/or the embodied qualities of skin (though are not necessarily specific to wearable artefacts). They represent an approach that pervades scholarship in the field – the fluid translation and application of skin-based ideas and concepts between disciplines - as well as framing this knowledge through the individual’s respective practice. Therefore, these dissertations offer valuable, and rare, insight into individual process underlying the development of work in response to particular qualities and functions of a phenomenological skin from the perspective of the practitioner.

While the negotiation and consideration of skin may be inherent to the practice of many creative practitioners, a review of the field shows that there is relatively little published material that addresses the role of skin in the development of wearable artefacts, and very little exchange of the tacit knowledge embedded in practices developing artefacts intended for intimate contact with the skin. This may, in part, be due to the difficulty of conveying what is implicitly ‘known’ by a practitioner as communicable knowledge, as well as practice-based knowledge exchange often being localised at events or exhibitions. I suggest that the exchange of practice-based knowledge through publication may encourage further development of the field in the future, by contributing to the expansion of critical discourse in a form that can be accessed by a diverse skin-based community, as well as practitioners and theorists with ‘hybrid’ interests including skin and dress.

The depictograms show that the greatest depth of scholarly engagement with the embodied, personal and cultural importance of skin is through sociology. The vast majority of publications across the overall skin-based field are also written or curated from a sociological, historical, curatorial, psychoanalytical, educational, or cultural studies standpoint. There are also a small number of publications emerging from art and design that engage with skin and wearable artefacts in the disciplines of interaction design, architecture, interior design, fashion design, textiles, contemporary jewellery, and fine art. These publications address similar themes to those raised by sociology, psychology, psychoanalysis, and philosophy, as well as contributing disciplinary specific historical, critically reflective, and embodied knowledge from the art and design domain. However, there is little critical discourse across the field that recognises dress as a practice beyond disciplinary specific interests. Publications located in fashion studies, such as Berg’s *Fashion Theory* journal

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26 As this research does not delve into the role of race and gender in design, texts that deal explicitly with these issues have not been included in the discussion. It should, however, be noted that post-colonial writing, feminist, and queer studies have significantly contributed to understandings and experiences of skin as a marker of identity, cultural or social belonging, gender and sexuality.
and book series (Steele 2010), fashion readers by Routledge (Barnard 2007) and ArtEZ (Brand & Teunissen 2006), as well as writing by scholars including Joanne Entwistle (2000a, 2000b, 2002), Joanne Eicher (1992), and Stella North (2013) highlight the material, embodied, and cultural relationships between clothing and the body or skin. Of the publications, in fashion there are only a few that acknowledge dress as encompassing a broad range of non-textile adorning and ornamentation practices, most notably Joanne Entwistle’s writing on dress as an embodied practice (2000a, 2000b, 2002), and Joanne Eicher’s writing on dressing practices (1992, 1995), which primarily builds upon ideas in sociology and anthropology. Similarly, publications located in jewellery that address the relationship between wearable artefacts and the body or skin are limited in number and disciplinary-specific. These include Liesbeth den Besten’s On Jewellery (2011), which contains an excellent chapter on the body; and brief chapters in Contemporary Jewelry in Perspective edited by Damian Skinner (2010), and Unexpected Pleasures edited by Susan Cohn (2012), all of which focus specifically upon contemporary jewellery as a form of dress.

A review of publications and creative practices across the skin-based field has demonstrated a perceptible need to build greater critically reflective discourse from the perspective of practitioners and practice-based researchers. While many publications include critical discussion of creative work, such as poetry, fine art, and performance, this discussion very rarely includes – or originates – from the perspective of a practitioner. Publications in the skin-based field are primarily written from a theoretical perspective that is concerned with the phenomenology of skin, sociological or cultural production of meaning about skin, the medical and natural history of skin, and psychoanalytical or psychological functions of skin. Even in creative disciplines such as art and design, the majority of publications are written from a theoretical perspective; creative work is critiqued rather than seen as offering insight into a negotiation of the complex network of meaning and embodied knowledge at the skin from a practitioner perspective.

Currently, publications across the field do not reflect the breadth and depth of contemporary skin-based practice, particularly in regard to the range of work that is being generated in response to engagement between skin and dress (Fig. 12). Publications that do discuss dress in relation to embodiment and skin are often disciplinary specific, being limited to a discussion of clothing or contemporary jewellery, and don’t engage with the hybrid nature of skin-based practices which often operate between and across defined disciplines.
In *Fashion-ology*, Kawamura (2005, pp. 8-9) details the “academic devaluation” of fashion and clothing as research topics in social sciences, citing Niessen and Brydon (1998) as contemporaries who have also recognised this phenomenon. Joanne Entwistle (2000) has also identified a neglect of “the body and the things that bodies do” in classical sociology, literature, history, cultural studies, and psychology (which often recognise dress), as well as the overlooking of dress and fashion in sociology (even that which does recognise the body) (2000, p. 9). While there has been much development in the area of body and fashion related scholarship in the intervening years, particularly in the area of fashion studies, there are still few publications that discuss the particular relationship between dress and skin in the context of Western culture beyond textile-based clothing and body modifications.

Connor’s *The Book of Skin* (2004) and Claudia Benthien’s *Skin: On the Cultural Border Between Self and the World* (1999) are key publications that incorporate various artworks, medical illustrations, and film into their respective discussion of the historically varied meanings of human skin in Western culture, yet even in these texts there is little discussion of work from a practitioner perspective. Benthien (1999, pp. 222-234) however, does cite Australian artist Stelarc and new media artists Stahl Stenslie and Kirk Woolford in her discussion of teletactility, using quotes which offer insight into the practitioners’ approaches to creating and interacting with their respective skin-based work.

Maurice Merleau-Ponty (1958, 1964a, 1964b, 1968), Edmund Husserl (1973, 1989, 1999), and Jacques Derrida (2005) have significantly contributed to understandings of a phenomenological skin through their writing on touch. While Juhani Pallasmaa (2000, 2005, 2009) is more focused on the body than skin, his work includes extensive writing about hapticity and the hand that is highly relevant.

Connor (2002, 2004), Sara Ahmed and Jacqui Stacey (2001), Ashley Montagu (1971), Claudia Benthien (1999), Maryrose Cuskelly (2001), as well as Caroline Rosenthal and Dirk Vanderbeke (in development) have produced writing that explicitly address the cultural meaning of skin.

Marc Lappé (1996) and Nina Jablonski (2006) have produced monographs on the natural history of skin and its situational functions at the boundary of the body. The medical history of skin, including medical collections and representations of skin through anatomical illustration, moulage, and models, has been written about extensively in publications including Jonathan Sawday’s *The Body Emblazoned: Dissection and the Human Body in Renaissance Culture* (1995) – these publications are detailed further in Fig. 13 and the bibliography.

Didier Anzieu’s *The Skin Ego* (1989) has been highly influential in the skin-based field though Sheila Cavanagh, Angela Failler and Rachel Alpha Johnston Hurst (2013) have released a recent publication addressing relationships between skin, culture, and psychoanalysis.

In her doctoral dissertation on skin in contemporary portraiture, Heidi Kellet (2012, pp. 5-7) recognises that skin is a rising “genre” in the arts, with publications emerging out of an interest in skin across modern painting, designed objects and architecture, animal skins and taxidermy in art, film and multi-sensory media, virtual technologies, clothing, and “soft sculptures” including interactive garments. Of the publications cited by Kellet that discuss skin and dress (Newman 2012; Lurie 1982; Warwick & Cavallaro 1998; Gundry 2008), there are none written from a practitioner or practice-based research perspective. This is endemic of publications within the greater skin-based context - as there are very few publications written from a practitioner perspective there are also very few references to these publications in scholarly writing.
Review of the skin-based field has shown that there are many practitioners who defy categorisation into a single discipline, including body-architect Lucy McRae, who in the pursuit of inventing imaginary future worlds incorporates many mediums (film, performance, art, new-media) for speculating about synthetic biology and the body’s materiality. The review has also demonstrated that there are many practitioners who identify across design, art, and wearable technology that are pushing innovative or unusual ways of attaching or applying wearable artefacts to the skin. These practitioners have unique and insightful ways of negotiating the skin through their practice; thinking through the milieu of material, embodied and culturally situated relationships between the skin and dress is implicit to their ways of working. There is, therefore, a great deal that can be gained through the increase of publication from a practitioner perspective in the skin-based field. This includes the potential to enrich the field by encouraging different approaches toward embodied knowledge of skin, and contributing toward tacit knowledge about designing, making and developing wearable artefacts in response to the lived body. The sharing of practice-based knowledge has particular value in areas producing modes of dress, such as in fashion, wearable technology, design, and contemporary jewellery, but can also contribute to further development of the diverse cross-disciplinary and hybrid forms of theory and practice arising out of the skin-based field.
WEAR / WHERE

(I am wearing skin)
In the PhD research, critically reflective design is applied through a skin-based model to study the intermingling relationships of a skin that wears. Part 1 of the dissertation, Wear / Where (I am wearing skin), details the trajectory of my practice from an object-based approach to design through the investigation of phenomenological skin existing in states of Leib and Körper. Projects collectively form a layered topography of investigations into qualities and functions of skin and wearable artefacts, as well as drawing together a topology of related ideas from across disciplines including literature, philosophy and critical writing. In this section, the suite of Body-Site-Writing and Two Hands projects address key ideas about where wearable artefacts are worn by describing skin as an embodied context for the probable location of wearable artefacts, and as a body-site invested with cultural ideas and values. Processes developed through the Body-Site-Writing projects are refined in the case study of Two Hands, where textual description of the body-site is further supplemented with drawing and body casting processes. This forms a skin-based approach to practice as observed qualities of the body-site present potentials for conceptualising alternative ways of wearing, experiencing, and investing dress with personal and cultural value.

In the two Body-Site-Writing projects - Hand-writing and The Invisible Man - I develop observational and analytical processes of writing to describe skin as a body-site with embodied and culturally situated functions. The approach to studying skin in these projects has developed out of phenomenological methods of inquiry as conceived by Husserl (Casey 1976, p. 23): I use carefully selected examples to reveal and illustrate conditions that exist between skin and wearable artefacts. As Casey explains, phenomenological examples possess an indeterminate status that “is neither sheer fact nor pure essence, but something distinct from and located between these two polar terms” (1976, p. 24). The examples discussed combine the manner in which embodied and imagined experiences shape the ways the world is perceived (Merleau-Ponty 2002 [1958], p. xviii). In the context of a critically reflective design practice, I describe examples drawn from lived experiences as well as fictional examples, including Arthur Conan Doyle’s detective novel The Study in Scarlet (2009 [1887]) and H.G. Wells’ scientific romance The Invisible Man (2005 [1897]).

1 This enables me to approach the body-site from different perspectives, by making deductions based on observable ‘proof’ based on methods outlined by Conan Doyle (2005 [1897]), and by adapting a phenomenological approach based on interpretation when approaching Wells’ text (2005 [1897]).
These examples have been selected because they focus attention on conditions underlying a skin that wears. Lived examples offer subjective, sensory, and perceptive feedback, while the novels present richly detailed fictional worlds that epitomise how skin and wearable artefacts are culturally invested with meaning. Collectively, these examples demonstrate how body-sites can be imaginatively experienced and dressed, as well as the manner in which dress and skin can be semiotically encoded with personal and cultural ideas. Layering lived and fictional examples is a part of my approach to building a conscious understanding of the minute and ‘invisible’ conditions between skin and dress. This is a way to arrive at a description of skin as a body-site, but is also a critically reflective mode of practice. Through describing conditions between wearable artefacts and skin as a body-site, I have generated processes for ‘body-site-writing’. The incorporation of embodied processes such as drawing and writing are a skin-based approach to observing, analysing and describing the phenomenological body as a design context.

**Describing the Body-Site**

Body-sites are culturally situated and embodied contexts for dress and for designing artefacts of dress. As a body-site, skin is a complex relational milieu (a skin that wears) intermingling physiological, subjective, sociological and propositional functions. The physiological qualities of the body-site, such as its scale and location, present concrete parameters for how wearable artefacts can be worn or used. The sensory and perceptive experiences of the embodied subject, and the ideas and values of the cultural context this subject is located within, are additional conditions that can inform how wearable artefacts could be experienced and given meaning. I propose that increased knowledge about the underlying functions and conditions that constitute the body-site can supplement the designer’s propositional interest in developing wearable artefacts for the phenomenological body.

In the research, the process of body-site-writing is a way to build a detailed understanding of skin as a situational context for design and dress. Body-site-writing is a process for observing, analysing, and describing qualities of skin and its relationship to wearable artefacts.

Writing has emerged as a way to unpick the network of conditions that comprise a skin that wears in the Hand-writing, and The Invisible Man projects, as well as in the case study of Two Hands. The process of writing the body-site builds a layered understanding of the functions of skin and dress by describing conditions observed in carefully selected examples. In The Invisible Man project, I examine alternative ways that
dress could be situated, experienced and given meaning through critical analysis of H.G. Wells’ novel (2005 [1897]). In the novel, the protagonist modifies his body so he becomes invisible, and this act of dress irrevocably alters his body image and sense of self. Body-site-writing has enabled me to study how the invisible protagonist controls his appearance through wearing or removing clothing, which has built a greater understanding of how wearable artefacts can alter personal embodiment and interpersonal relations. The process has opened up avenues to conceptualise the ways wearable artefacts and temporal acts of dressing can shift personal experiences and the cultural meaning of the phenomenological body.

Body-site-writing is a process informed by Jane Rendell’s (2010) critical spatial practice of site-writing. Site-writing is a mode of art and architecture criticism that focuses on spaces of engagement with artworks and critical texts. Rendell challenges the concept of criticism as a “singular and static” form of knowledge by proposing that critical writing can take into account the critic’s position in relation to a work, which may draw on observed, remembered and imagined experiences (2010, pp. 18). She suggests that criticism involves movement between inner and outer states, as encounters with works “can take critics outside of themselves, offering new geographies, new possibilities, but they can also return critics to their own interiors, their own biographies” (Rendell 2010, p. 14). This concept acknowledges the means by which critics can look within themselves when engaging with works through writing, as well as how writing can move across territories shared with those who produce an artwork or encounter critical texts about an artwork (2010, pp. 14, 18, 66-67).

In Rendell’s practice, site-writing is a tool that traces and produces relational sites between artwork, critic and artist, as well as between critical text, critic and reader. I illustrate this relationship in Figure 14, which places emphasis on how Rendell positions artworks and critical texts as analytical objects. Site-writing becomes a critical practice to traverse relational sites as well as to ‘re-make’ objects or produce encounters with objects on the critic’s terms (Rendell 2010, pp. 2, 7). My concept of body-site-writing builds upon Rendell’s ideas about how critical writing can reveal and construct ways that artefacts are encountered and produced. In addition to describing observable conditions between skin and wearable artefacts through projects such as Hand-writing and The Anatomy Museum, body-site-writing enables me to speculate on imaginative scenarios in The Invisible Man, which has, in turn, led to writing being conceived as a mode for imagining in The Dust Project, which is discussed in Part 3 of the dissertation.
Fig. 14 - Author’s depictogram of Jane Rendell’s site-writing (2010), compared to the role of body-site-writing in the Hand-Writing and The Invisible Man research projects.
I depict how body-site-writing functions in *Hand-writing* and *The Invisible Man* projects in Figure 14. In *Hand-writing*, the process of body-site-writing is based on fictive observational and deductive methods that are outlined in Arthur Conan Doyle’s novel *A Study In Scarlet* (2009 [1887]). I adapt these fictional methods to describe a participant’s right hand as a lived body-site. The project is broken into two stages of writing: an objective ‘reading’ of the physical characteristics of the body-site that takes place through close observation, followed by subjective conjecture about what the observed qualities imply about the participant’s lifestyle. Through this process, I write my encounter with the body-site and produce a critical text that constructs and engages with an imagined ‘life’ of the body-site.

Figure 14 depicts the textual artefact emerging from *Hand-writing* as a reflective activity rather than a relational site. Produced out of the engagement between designer and body-site (not between designer and the subjective participant), I consider the critical text reflective because body-site-writing was carried out as a challenge to consider the way I could study a body-site in the context of critically reflective design; the critical text was never intended to be read by anyone other than myself. Figure 14 also depicts relational sites produced by the body-site-writing projects. In *Hand-writing*, the relational site has formed out of the process of body-site-writing in response to Conan Doyle’s novel (2009 [1887]). My understanding of ideas in the novel does not emerge in response to the historical context or narrative of the work, nor the author’s intention, but instead, is shaped through engaging with the work itself in the medium of my practice. I have actively interpreted the novel through the process of creating a critical text. Body-site-writing has evolved through *Hand-writing* as a process that can describe, reflect and produce critical meaning, which has transformed the ways I engage with skin and understand it as a body-site in my practice.

Figure 14 illustrates how the role of body-site-writing varies between *Hand-writing* and *The Invisible Man*. My critical analysis of H.G. Wells’ novel (2005 [1897]) describes a fictional body-site, namely, through a study of the invisible protagonist. In this project, I use body-site-writing as an analytical process to understand how the portrayal of skin and dress in Wells’ novel reflects – and constituted – prevalent Western cultural ideas and values. The analysis uncovers how skin and dress are symbolically encoded and culturally understood through visual semiotics, as well as the manner in which meaning is semiotically embedded within written texts. The process has revealed that wearable artefacts play a significant role in non-verbal communication of personal and social identity and values, and that a *skin that wears* is invested with aesthetic and moral ideals.
Body-site-writing *The Invisible Man* project has also produced critically reflective texts that demonstrate how writing can be a medium for understanding and imagining skin and dress. This is further discussed in *The Dust Project*, where writing is a vehicle for ideation and exploring speculative approaches through design practice. Textual artefacts coming out of *The Invisible Man* project have also been disseminated in conference presentations and in a journal publication. Dissemination has tested the research in the skin-based field and created a relational site where meaning can be generated and further evolved through discourse arising between the designer, critical text, and audience.

In my practice, body-site-writing has developed as a process for describing the intermingling conditions of a *skin that wears*. It is an intensive process that directs attention toward the qualities of the body-site through focused observation, reflection and critical analysis, which builds upon cultural critic Mieke Bal’s methods for *close reading* specific artworks. Close reading is a term that is typically used to describe the critique of language-based texts, yet Bal (1999b) asserts that all manner of cultural objects can be analysed, including images and objects. Furthermore, Bal suggests that detailed readings of objects propose “an interaction with and through meaning” (2009b, pp. 12-13), as cultural artefacts are imbued with significance and meanings that are actively shifted through encounters. I propose that body-site-writing is an act of close reading, given that meaning is constructed and construed through the act of description in the dynamic between body-site and designer. The process of writing through my engagement with a body-site guides the encounter.

In *Hand-writing*, and again, in *The Anatomy Museum*, I write the encounter by hand rather than typing it. As Susan Stewart (1993, p. 14) has stated, writing by hand is a deeply personal act that links our speed of thinking to the speed of the hand. The flow of ideas is mediated through the haptic feedback of inscription. Handwriting the body-site is a form of *reflection-in-action*; it is not only a description of observed body-site conditions but is also an embodied way of thinking through the encounter. Body-site-writing enables me to adopt different subjective and objective perspectives, and to describe conditions between skin and wearable artefacts from embodied and analytical positions. This is a skin-based approach to critically reflective design practice, as the production and layering of textual artefacts through body-site-writing builds a deeper understanding of skin as a phenomenological body-site. The process can be applied to develop wearable artefacts directly in response to present and potential relationships between skin and dress.

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4 In addition to Stewart’s sensitive writing on handwriting and the scale of the human hand in *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection* (1993), neurological connections between hand and thought have been discussed in great depth by Frank Wilson in *The Hand: How its Use Shapes the Brain, Language, and Human Culture* (1998). Juhani Pallasmaa also notably addresses phenomenological relationships between hands and creative practice in *The Thinking Hand: Existential and Embodied Wisdom in Architecture* (2009), where he cites examples of the hand’s capacity for doing and thinking in design and craft, and the genesis of this in the work of philosophers including Martin Heidegger and Michel Serres.
In *Hand-writing*, I respond to an excerpt from Sir Arthur Conan Doyle’s Nineteenth century novel *A Study in Scarlet* (2009 [1887]) through the process of body-site-writing. The passage is written from the perspective of the character Dr. Watson, whose critique of a scholarly article is unwittingly addressed to its author, the fictional consulting detective, Sherlock Holmes. I use the excerpt as an example because Holmes is an (if not the) archetypal detective, and an apt metaphor for the practice-based researcher.

In *A Study in Scarlet* (2009 [1887]) he demonstrates how diverse skills and processes can be used to gather evidence that will substantiate his hypotheses and support investigative conclusions. Holmes has developed a particular method for investigation, ‘the Science of Deduction and Analysis’, that has been cultivated by studying precedents, as well as honed through extensive application in the field. As Peter Downtown has noted, the detective tale has the potential to be useful for research “as it encourages jumping between items of knowledge and plundering whatever is available to a productive end” (2003, p. 13).

Conan Doyle’s detective tale is an analogy for my operational approach to design research: using a flexible, layered skin-based model to gather a topology of resources and techniques that expand the scope of enquiry beyond disciplinary interests, thereby generating alternative perspectives and openings for understanding how wearable artefacts can engage with skin as a body-site.
In my reading of the passage from Conan Doyle’s novel, I identify two provocations for body-site-writing: Firstly, Holmes issues the challenge for an enquirer to deduce the history and profession of an individual through close observation. Secondly, Watson challenges Holmes to uphold the credibility of his research methods by putting theory into practice. Holmes must evaluate how observation relates to his process of deductive reasoning and justify his methods by identifying particular forms of knowing, such as “where to look and what to look for” (Conan Doyle 2009 [1887]), p. 11).

This dissertation can be considered a response to Watson’s challenge, as I demonstrate the manner in which my ideas and methods have grown to constitute a skin-based approach to design practice and communicate my knowing as knowledge. **Hand-writing** is my response to Holmes’ challenge, for in the project, I aim to exercise my faculties of observation by describing the physical characteristics of a body-site and inferring meaning out of the process. I test the fictive ‘Science of Deduction and Analysis’ through a close reading of a willing hand (in keeping with Holmes’ reference to fingers, nails, and thumbs) by describing observed qualities and endeavoung to carry out the ‘elementary’ task of distinguishing the lifestyle of the participant through a process of handwritten deduction.
“Like all other arts, the Science of Deduction and Analysis is one which can only be acquired by long and patient study, nor is life long enough to allow any mortal to attain the highest possible perfection in it. Before turning to those moral and mental aspects of the matter which present the greatest difficulties, let the enquirer begin by mastering more elementary problems. Let him on meeting a fellow-mortal, learn at a glance to distinguish the history of the man, and the trade or profession to which he belongs. Puérile as such an exercise may seem, it sharpens the faculties of observation, and teaches one where to look and what to look for. By a man’s finger nails, by his coat-sleeve, by his boot, by his trouser knees, by the callosities of his forefinger and thumb, by his expression, by his shirt cuffs—by each of these things a man’s calling is plainly revealed. That all united should fail to enlighten the competent enquirer in any case is almost inconceivable.”

“What ineffable twaddle!” I cried, slapping the magazine down on the table, “I never read such rubbish in my life.”

“What is it?” asked Sherlock Holmes.

“Why, this article,” I said, pointing at it with my egg spoon as I sat down to my breakfast. “I see that you have read it since you have marked it. I don’t deny that it is smartly written. It irritates me though. It is evidently the theory of some arm-chair lounger who evolves all these neat little paradoxes in the seclusion of his own study. It is not practical. I should like to see him clapped down in a third class carriage on the Underground, and asked to give the trades of all his fellow-travellers. I would lay a thousand to one against him.”

“You would lose your money,” Sherlock Holmes remarked calmly. “As for the article I wrote it myself.”

(Conan Doyle 2009 [1887], p. 11)
Hand-reading

The facts are these:

The skin on her hand is so fair that the blue-green veins are clearly visible and raised softly on the surface. There are light freckles and sunspots toward her wrist.

Her knuckles are a deeper pink than the palm, especially on the index and middle fingers. These fingers have whorls on the knuckles of the second joint with dimples at the centre, which differ from knuckles of the other fingers. The other knuckles have creased lines.

Both the index finger and pinkie curve in toward the middle finger from the top joint.

Her nails are trimmed, not bitten, and there is a little dirt caught underneath each edge. The nail beds are pink, and there is a small white half-moon at the base of the thumbnail. The cuticles are not torn or trimmed or pushed down.
HANDWRITING

Maybe she rides a bike, that is why her hands are freckled. From the sun. It could explain why her knuckles are pink from the cold wind today. The rain, chilling down on exposed hands. Maybe she writes with this hand, + restrains her middle finger, + the curve of her fingers is from the gripping of a stylus against a table for years. Maybe she uses nail scissors; it would be hard to cut so neat a nail curve using clippers. Maybe her knuckles are scarred, + that is why they are simplified. And maybe she uses her hands a great deal - + the dirty nails + pockmarks from working + frequent washing. I can't even tell if this is her dominant hand, except that it was the hand she instinctively presented. I can't accurately deduce anything.
Discussion

While both Watson and I are willing apprentices, neither of us has had any great success in applying Holmes’ methods. Handwriting did not reveal any aptitude for detective work, as I was unable to confidently deduce any kind of meaning about the participant’s lifestyle based on her hand. However, the textual artefact revealed potential for body-sites to be studied in design practice through the process of body-site-writing. In Hand-writing, I endeavored to objectively portray physical characteristics of the body-site in my typed observational ‘reading’ and to deduce how these conditions might relate to the lifestyle of the participant through the more intimate process of handwriting. My encounter with the body-site was guided by the methods I adapted from Holmes, and so my understanding of the participant’s hand was shaped through a dual desire to textually describe observed physical characteristics and to imbue these qualities with significance.

Adapting Holmes’s methods to describe the hand as a body-site exposed previously unobserved physical qualities (her knuckles were pink and freckled), and so the writing process gave rise to what Merleau-Ponty terms a “knowledge-bringing-event” (1958, pp. 35-36). The hand was a motivation to pay attention to present but unperceived conditions. Merleau-Ponty (1958, p. 30) states that attention is a function that is like a searchlight revealing pre-existing data, but paying attention isn’t merely a case of elucidating what is already there, rather it is “the active constitution of a new object which makes more explicit and articulate what was until then presented as no more than an indeterminate horizon” (1958, p. 35). In the project, body-site-writing emerged as a reflective and productive act motivated by the desire to describe physical conditions, but self-awareness of the process has brought the body-site into perceptive and imaginative being.

In the act of body-site-writing, I came to recognise that my objective ‘reading’ and subjective handwriting approaches were co-responsive rather than separate. My role was that of the palm-reader, scrutinising creases and folds of skin for signs of the hand’s imagined past and future, which I brought into being through handwriting. Writing became a productive activity to generate speculative propositions based on observed ‘clues’ (her knuckles could have been pink due to cycling in the wind and rain that day). The project demonstrated that while body-site-writing can describe physical conditions of a body-site, this is not an objective process. Instead, it is framed by the writer’s subjective perspective, which I found to be my perceptive and
imagined experience of the body-site. During the writing process, I realised that deductive reasoning requires creative leaps of the imagination, in order to speculate upon the significance of what is “objectively” observed.

Investigative research, as epitomised by Holmes, results in fictional scenarios that are constructed to find plausible narrative pathways between concrete, observable evidence. This is an example of what Paul Carter refers to as the creative capacity of research: it can materialise something that was not there before, and through the “act of creative remembering” can imagine things that were always there but were merely lost or overlooked (2004, p. 7). Hand-writing enabled me to understand that body-site-writing could be an embodied process for imaginatively materialising ideas and testing scenarios through my practice. Hand-writing also led to increased awareness of how skin and wearable artefacts can be engaged through the process of writing text, as well as suggesting that skin and wearable artefacts can function as a form of non-verbal communication. This thinking has come about as I have revisited the excerpt from Conan Doyle’s novel and questioned the significance of Holmes’ assertion that an individual’s occupation and social status can be determined by observing hands, dress, and expressions (Conan Doyle 2009 [1887], p. 11).

Hand-writing revealed that body-site-writing can motivate astute observation and imagination of a body-site, and I found that critical texts have the potential to play a role in the way that skin and wearable artefacts can be encountered, understood, and invested with meaning. When I initially resolved to test body-site-writing, I decided to study a single feature – the hand – in response to Holmes’ challenge. While aware that the body-site would be more difficult than the united image of a whole body for gathering clues about the participant’s lifestyle, I felt the hand would be in keeping with the scale of body-sites in my practice. At the time of Hand-writing, I had felt that because my participant wore no wearable artefacts on her hands, this had been one of the reasons I found deductions based on the body-site so difficult. Yet, I did not describe this observation in the project text. It was only on reflection, that I realised the absence of dress was as eloquent as its presence, and I began to wonder about the importance of the hand as a body-site.

The repeated references to nails and fingers in Conan Doyle’s (2009 [1887], p. 11) excerpt suggest that hands could be considered a potent source of symbolic information about personal identity and social standing. As such, I revisited the

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\(^5\) Generating imaginative propositions, storytelling, and embodied methods for testing scenarios are methods that are recognised and utilised quite broadly across the fields of critical and speculative design (Dunne & Raby 2013; Sengers, Boehner, David & Kaye 2005; Schleicher, Jones & Kachur 2010).
passage in light of *Hand-writing* and recognised that Conan Doyle’s fascination with the hand, while not elucidated in the novel, can be seen as a cultural phenomenon: symbolic qualities of hands have been explored in depth by others including the poet Rainer Maria Rilke (1981, 2004) and in work by scholar Juhani Pallasmaa, who describes the hand as a unique:

... signboard of personality; it expresses social class, wealth, allegiance, occupation and association... Hands are also bearers of rings and bracelets that communicate numerous coded meanings, such as marriage, profession, or membership in societies (2009, p. 40).

Pallasmaa and Conan Doyle (through the character of Holmes) both identify the significance of hands within a socially symbolic context - a ring on a certain finger can indicate marriage, and calloused fingers can imply manual labour.6

Reflecting on the project brought to my attention that the deductive process I had developed in response to Holmes’ methods was fundamentally based on the idea that skin and dress are forms of semiotic communication. These findings prompted further investigation of body-site-writing as a process for critically reflective design in *The Invisible Man*, and in the case study of *Two Hands*. In these projects, I resolved to refine how body-site-writing could be applied through my skin-based approach to design practice. I decided to expand my process of body-site-writing in *The Invisible Man* by studying how cultural values and ideas are expressed through skin and wearable artefacts in textual artefacts. I would also test the process of body-site-writing through an in-depth study of hands, described in the case study of *Two Hands*, to more closely observe embodied and culturally situated qualities of the body-site, and the possibility for this knowledge to find application in conceptualising how wearable artefacts could worn, experienced, and given meaning.

6Pallasmaa, like Holmes, asserts that hands can “reveal one’s occupation and craft; just think of the robust hands of a steelworker or blacksmith, the often mutilated hands of a cabinet-maker; the hands of a shoemaker hardened and cracked by handling of the substances of the trade, the eloquently speaking hands of a pantomime artist, or the delicate, utterly precise and quick hands of a surgeon, pianist or magician. Hands are generic organs characteristic to *Homo sapiens*, but at the same time they are unique to individuals” (2009, p. 26).
THE INVISIBLE MAN

In this project, I expand on ideas established in Hand-writing through the process of critically analysing H.G. Wells’ novel The Invisible Man (2005 [1897]). Wells’ novel is a lens for body-site-writing that has rendered the culturally situated context of the phenomenological body ‘visible’ in my research. Body-site-writing is a process that has enabled me to study how textual representations of skin and dress express cultural values, ideas and meaning.

Through the course of the project I have produced a series of critical texts presented at Monash University’s Confession Culture - Postgraduate Conference in the School of English, Communications and Performance Studies (Handcock 2012b), as well as at the Nordic Design Research Conference, Nordes 2013 – Experiments in Design Research: Expressions, Knowledge, Critique (Handcock 2013e). The former presentation was developed into an article for the peer-reviewed journal, Colloquy: text theory critique (Handcock 2013a). This publication, Revelation and the Unseen in H.G. Wells’ The Invisible Man (Handcock, op. cit.), has been interleaved in the dissertation as a part of the project. The article studies key themes in the text including skin and dress as culturally encoded surfaces, ramifications of being revealed or unseen, and the body as an allegorical image.

Dissemination of the research into different disciplinary forums has tested the process of body-site-writing, and ideas developed through this process, amongst academic peers who specialise in studying literary texts using theoretical models, and amongst practice-based researchers in the field of critical design. This has refined the way that I consider body-site-writing, suggesting that it is a process for describing, and investing wearable artefacts and dress with meaning both within the context of my critically reflective practice and in the broader field of design practice research.
Revelation and the Unseen in H.G. Wells’s *The Invisible Man* ¹

Tarryn Handcock
(2013a)

This paper examines how both the primacy of the visual and the role of spectatorship are central to the interplay between revelation and the unseen in H.G Wells’s scientific romance, *The Invisible Man* (2005 [1897]). The novel poses the question: What might it mean to be invisible, and to pass through the world in a body that is in all ways corporeal yet remains unseen? Through an analysis of the text, the body and skin are considered as mediums invested with personal and social meaning. The Invisible Man is discussed as a literary figure that comes to represent how the human body may be read as a metaphorically laden site.

Skin, body and clothing may be understood as rich media encoded with symbolic information that enables individuals to communicate visually within a social context. Elizabeth Grosz (1994) asserts that the body as an inscriptive text arises through acts of body-writing. Social, surgical, epistemic and disciplinary agencies mark bodies in particular ways, effectively producing a palimpsest upon which textual traces may be “written over; retraced, redefined” (Grosz 1994, p. 117). The body is produced as a network of meaning that functions to communicate culturally specific symbolic information. As an unvisualised body, the Invisible Man is an allegorical articulation of imaginative possibility, social and personal fears, highlighting the importance of the visualised body in enabling social connectedness. In this regard, wearable garments provide heightened visual clues as to an individual’s lifestyle, habits, affiliations and desires, playing an important role in characterisation and individuation.

Through the figure of the Invisible Man, the novel opens up discussions on the nature of confessional culture, highlighting themes as relevant today as they were in the late-nineteenth century when the book was written. The unseen body—characterised by Wells not as transparent but as concealed, corrupt and transgressive—is a malignant presence that poses critical and moral problems. The interconnected relationship between revelation and the unseen in the text illustrates how the body may be loaded with meaning, and how literature might allow us to examine the body as a site of personal and social concerns.

Allegorical Bodies: Invisibility, the Gothic body, and Otherness

Originally serialised in 1897 and published as a book in the same year, Wells’s novel uses a literary trope—the character of the Invisible Man—to speculate on what the physical realities and psychological ramifications of living in an unseen state might be. The relation

¹ This journal article (2013b) was published in Monash University’s journal *Colloquy: text theory critique*. In this version of article, I have modified the referencing system to correspond with the system used for the dissertation text.
between the visualisation of the body on the one hand, and its visual absence on the other, plays a pivotal role in the novel, particularly in terms of the social isolation of the protagonist. He embodies the desire to move freely, unseen and unjudged by appearance. Yet at the same time the trope epitomises the base fear of being observed by an unseen presence, and of inadvertently revealing a hidden nature to an unknown audience.

In his introduction to *The Invisible Man*, Christopher Priest (2005 [1897]) discusses how invisibility in literature is generally treated in one of three ways: with an irrational or fantastical approach where invisibility is often supernatural; through psychological means whereby invisibility is felt or perceived at a social or personal level; or through a scientific approach with an established internal logic that explains the issues of invisibility.

It is evident in the text that invisibility is treated in all three of the ways outlined above. The simple townspeople are inclined to think of illogical explanations for the events in their midst until scientific reasoning takes hold; the protagonist made invisible is outcast from society and experiences a psychological disconnection from humanity; and the Invisible Man develops a way of lowering the refractive index of substances to that of air, rendering them unseen. Regarding the latter, the Invisible Man explains that “visibility depends on the action of visible bodies on light. Either a body absorbs light or refracts it, or does all of these things. If it neither reflects nor refracts nor absorbs light, it cannot of itself be visible” (Wells, op. cit., p. 90). Invisibility is rendered plausible through the known phenomena of light refraction and absorption, using explanations that draw on established scientific reasoning. This helps to situate the work as a scientific romance with a scientifically realistic treatment of highly imaginative scenarios. The story is established with a believable internal logic that accounts for the ways that the Invisible Man can remain unseen or be revealed. While the novel can be understood as an early form of science fiction, it can be argued that it has a gothic body at its heart. This is perhaps unsurprising given that as a scientific romance, it grew out of similar concerns to the gothic novels of the late nineteenth century. Both genres deal with romantic notions of the fantastical and with bodies as sites reflective of personal and social morality (Roberts 2000, p. 54).

The 1880s had seen a revival of the gothic in literature with the release of Robert Louis Stevenson's *The Strange Case of Dr. Jekyll and Mr Hyde* (1886), Oscar Wilde’s *The Picture of Dorian Gray* (1891), and Bram Stoker’s *Dracula* (1897), all of which are contemporary to *The Invisible Man*. These works have long been associated with the gothic literary canon, and the bodies depicted in them are typically gothic (Hurley 1996, p. 10). The characters named in each of the titles act as a device to represent the fears and social concerns of the era. They are transformative and uncontrolled, representing a threat to the established codes of reason and morality. As Dorota Wisniewska (2010, p. 10) addresses the abhuman in gothic literature by saying that “the Gothic represents human bodies as between species: always-already in a state of indifferentiation, or undergoing metamorphoses into a bizarre assortment of human/not human configurations.” Jekyll and Hyde take on qualities of the *doppelgänger* as multiple selves manifest, Dorian Gray’s deeds are unnaturally split between man and portrait, Dracula supernaturally shifts between states of fog and beast.
p. 192) explains, the nineteenth-century gothic bodies were made monstrous through excessive, amoral, and vicious behaviour as well as through the combination of race, class, and gender qualities perceived as undesirable. Within the socio-cultural context of both Victorian England and today, the Invisible Man is a body “painfully and violently out of control, a body ‘uncanny’ in Freud’s sense that should have remained repressed” (Wisniewska 2010, p. 191). His antisocial conduct that includes going naked into the streets, secretly observing others, terrorising, and causing anarchy, poses a moral and physical threat to both society and the individual. A product of the literary Zeitgeist of the 1880’s, the Invisible Man is characterised in a way typical of the monstrous and the gothic, insofar as he represents a clustering of various deviant qualities. He is “a threat to everything we hold dear” (Priest 2005 [1897], xvii); a disciplinary warning of what kind of corruption (and punishment) can occur when body and mind are not subject to self-control.

While the Invisible Man exhibits characteristics of a gothic body, he also represents Wells’s concern with the themes of scientific romance. A trained scientist himself, Wells was passionate about the need for widespread scientific education. Steven McLean (2009, pp. 71-72) suggests that the novel represents Wells’s desire for a society engaged in both the logic of scientific thinking and the potential of creative thinking, as opposed to the irrational reasoning demonstrated by the fictional villagers of Iping. McLean also poses that the contrasting characterisation of the ‘good’ scientist Dr. Kemp, who maintains connections to the scientific community and strives for the betterment of society through his actions, and the Invisible Man (as a scientist gone ‘bad’) expresses Wells’s attitude toward the social responsibility of scientific practitioners (McLean 2009, pp. 66-69, 87).

The Invisible Man is perceived as a threat partly because he defies social values and expectations in order to ruthlessly pursue personal desires. He is an anonymous and unfriendly arrival in the country town of Iping. The residents are initially baffled by his rebuttal of friendly advances and view his continued presence with unease. He refuses to entertain the customs of village life and confirms his position as an outsider by engaging in behaviour that is unfathomable to the townspeople:

The frantic gesticulations they surprised now and then, the headlong pace after nightfall that swept him upon them round quiet corners, the inhuman bludgeoning of all the tentative advances of curiosity, the taste for twilight that led to the closing of doors, the pulling down of blinds, the extinction of candles and lamps—who could agree with such goings on? They drew aside as he passed down the village, and when he was gone by, young humorists would up with coat-collars and down with hat-brims, and go pacing nervously after him in imitation of his occult bearing (Wells, op. cit, p. 23).

This ‘inhuman’ disregard for social niceties confirms his status as an outsider. He unsettles and antagonises the local people and cuts himself off from them. He is secretive and fearful that the credit for his scientific discoveries may be stolen away
from him, and thus seeks autonomy from the scientific community, an act which reflects his separation from society on the whole. Mary Douglas (1966) addresses the acts of social ostracism and mocking that the villagers exercise upon the Invisible Man by identifying social pollution as the risks and problems particular to a culture. Cultures may find expression for these threats by attributing power to body margins so that their “deepest fears and desires take expression” (Douglas 1966, p. 121). By endangering the villagers’ way of life through his persistent belligerence and undisciplined body the Invisible Man is identified as separate to the social order and seen as a social threat. Through mirroring a situation that endangers social structures on the body’s borders, a culture can enact rituals of cleansing on a human scale in order to remove a posed danger. The Invisible Man’s body becomes an expression of social pollution that must be cleansed in order for the villagers to regain control and order. As a result he is made irredeemably ‘other’.

In the Victorian era, the figure of the ‘other’ arose in response to the projected values, desires, and anxieties of the time. It could apply to anyone who failed to conform to the accepted figure of the English subject (white, middle class, male), or it could refer to qualities recognised as strange and undesirable within the individuated self (Purchase 2006, pp. 106-107). The Invisible Man is identifiable as a differentiated ‘other’ in both senses of the Victorian understanding: he is a stranger in a new town and, moreover, has wholeheartedly embraced his morally ambiguous and recklessly impulsive qualities.

As Douglas illustrates, the Invisible Man presents a risk to the established order and boundaries of village life. He is a marginal figure who engenders social pollution by rejecting the accepted mechanisms and rules of the society he has entered. These are part of the symbolic space that the self must operate within, which Jacques Lacan refers to as the “big Other”. The big Other is “fragile, insubstantial, properly virtual, in the sense that its status is that of a subjective presupposition. It exists only insofar as subjects act as if it exists” (Žižek 2007). Thus in violating subtle social codes the Invisible Man endangers the very fabric and cultural language of village life. He is produced and read as “other” by a society that is unable to understand or accept him, much as he is unable to accept it.

The Invisible Man’s ‘Otherness’ is confirmed through his body itself. He longs to be extraordinary and has undergone a painful process in order to become an unseen entity. His physical manifestation is an expression of his pursuit of the extraordinary and his rejection of accepted social ideas and rules. Yet the Invisible Man’s desire to become extraordinary does not preclude him from being located within the symbolic framework of the big Other. Despite his transformation he remains a corporeal man with corporeal needs and his body continues to be invested with personal and social meaning, whether in a visualised or unseen state. He becomes “other” through alienation from himself, which occurs as the loss of his visualised body results in a blurring of self-perception. Simultaneously, his alienation from society manifests as a disaffection with social structure and order, and a bodily rebellion against the
established codes of social communication and cultural engagement. To the villagers his figure comes to embody the threat of what is unknown, uncontrolled, and concealed—something “other” than what is accepted and known.

The threat of the Invisible Man is intimated in the first pages of the novel. Glimpses of the emptiness beneath his layers of cloth are suggested soon after he arrives in Iping as an improbably dressed and bandaged blow-in. The hotelier Mrs. Hall sees “an enormous mouth wide open,—a vast and incredible mouth that swallowed the whole lower portion of his face. It was sensation of the moment: the white-bound head, the monstrous goggle eyes, and this huge yawn below it” (Wells, op. cit., p. 11). The sinister pall gathering about him after a series of such incidents, and the increased incidence of crime in the villages since his arrival, culminates in a horrifying public revelation of his invisibility and a violently enacted social ritual of cleansing. In the face of the threat embodied by the Invisible Man, the villagers band together to pursue and capture him, whereupon he is beaten to death. By beating him to death as a mob, the villagers perpetuate the understanding of the body as a moralised site of discipline and punishment on both a personal and social level. The Invisible Man’s failure to exercise self-control ultimately results in social ostracism, his becoming a hunted outlaw and the ensuing trail of destruction, his physical and psychological demise, and finally death.

As a moralised body, the Invisible Man is constituted in very specific ways. Wisniewska (2010, p. 193) states that characters such as “[Dr.] Jekyll and Dorian [Gray] are monstrous because an exterior hides a corrupt self. The monstrous body in this respect encourages readers to read themselves and their own bodies and scan themselves for signs of devolution”. As epitomised by Dorian Gray, the body is a surface that identifies and reveals qualities of ourselves to the foreign gaze, and as such is capable of being redefined, emphasised, effaced, and given false histories. Nina Jablonski explains:

Our skin talks even when we don’t; it is not a neutral canvas. Through the expressive functions of skin and body decoration, we have expanded the communicative potential of our bodies and reinforced the primacy of the visual sense in our sensory repertoire. Especially in industrialised societies, this may well be a response to the increasing importance of the sense of self and the identification of self at the level of the skin (Jablonski 2006, pp. 164–165).

The Invisible Man’s visualised form may be revealed, but the character of his surface is destined to remain concealed until his death. His living skin cannot be read as a text—it neither confesses personal qualities nor acts as a surface that communicates false information like Dorian Gray’s. His invisible skin is not neutral, but is a statement of rebellion against the reason and morals of society. At the point in the novel at which he dies, his skin is revealed to be an almost albino colour, and is taken as a further sign of Otherness. Albinism is used as a device to help explain how invisibility may be scientifically achievable. Bonnie TuSmith (1993, pp. 85-102) observes that
in contemporary literature human albinos are generally considered un-aesthetic, and writers who utilise albino imagery seem “to play off this anticipated response to defamiliarize the reading experience” of the body and skin, rendering them colourless, ambiguous texts.

**Socially Encoded Skin**

The absence of the protagonist’s visible skin and body is noticeable especially when revealed upon his death. This is so partly because bodies and skins function as important visual signifiers of age, ancestry, health, mood, cultural identity, experience, and aspirations. They are cultural texts encoded through marking, adornment, expressive gestural movements, and social readings of surface. In *Volatile Bodies*, Elizabeth Grosz (1994, p. 117) states that these messages or texts construct bodies as networks of meaning and social significance, producing them as meaningful and functional subjects within social ensembles. Unable to communicate through the medium of his own body, the Invisible Man is removed from the social milieu. He cannot be observed or read; he cannot be known from afar; and he cannot act as a mirror for others in the world, returning a projected image of the body to an audience who may perceive with empathy a flush upon his cheek or emotion in his eyes. His body does not remain untouched by depravity like Dorian Gray’s, and it does not contain conflicting sinful and moral selves like Jekyll and Hyde. The concealed monstrosity that Wisniewska (2010) highlights is the combined horror of his undisciplined conduct and unvisualised state. He has no visible skin at all, and as such, is unable to engage in a fundamental form of social communication.

Late nineteenth-century bourgeois attitudes towards the body were dramatically different from those prevalent a mere century earlier. Evolving medical practices had stepped away from bloodletting and instead advocated that ideal bodies were whole and unwounded. Subsequently, the skin was far less made up with cosmetics to conceal craters and pocks. The skin, made visible, was recognised as a surface upon which personality could be revealed. Nineteenth-century literature reflected this individuation through a preoccupation with detailed descriptions of the fleeting blushes and wan complexions that revealed one’s state of being (Benthien 1999, p. 239). Wells’s novel emerged in this era when the contemporary understanding of skin as a social canvas became prevalent. It is significant that skin is accepted as a socially communicative medium within the novel. The tramp, Mr. Thomas Marvel, variously assumes “a greyish tint between the ruddier patches”, and “a sporadically rosy face beneath a furry silk hat”, as a sign of his ongoing drinking habits (Wells, op. cit., pp. 62, 53, 63-64 respectively). Wells has called upon the ability of readers to interpret skin descriptions as visual clues that develop Marvel’s character. In supposing a visual absence of the skin when portraying the Invisible Man, Wells has taken a position that plays upon bourgeois fears of Otherness, developing a character who is threatening because he is anti-social, unknown, and inscrutable.
The Invisible Man actively rejects communicating through the visual codes that facilitate relationships and maintain continuity and stability between self and society. Even in his socialised bandaged form he is inscrutable, as observed by hotelier Mrs. Hall and Henfrey the clock-jobber, who “saw descending the stairs the muffled figure of the stranger staring more blackly and blankly than ever with those unreasonably large glass blue eyes of his. He came down stiffly and slowly, staring all the time; he walked across the passage staring, then stopped” (Wells, op. cit., p. 33). Driven to conceal and mask himself from others, the Invisible Man is a transgressive figure, an object of distrust capable of covert observation while giving nothing of himself away. His decision to forgo clothing in order to go unseen becomes a symbol of his detachment from society and his own fears of being truly revealed. His body can no longer be observed as a true reflection of the life he leads: after the protagonist turns invisible, the visual history of his misdeeds cannot be seen, so his corruption and true monstrosity are made internal.

Even when finally visualised upon his death, the Invisible Man retains a level of inscrutability, described as having a white beard and hair, “not grey with age but white with the whiteness of albinism, and his eyes were like garnets. His hands were clenched, his eyes wide open, and his expression was one of anger and dismay. ‘Cover his face!’ said a man. ‘For Gawd’s sake, cover his face!’” (Wells, op. cit., p. 148). He remains an evasive subject, his body still vaguely insubstantial with features visible in “dim outline” (ibid.). While it is ascertained that he is a young man, about thirty years old, severely beaten and lying pitifully naked upon the ground, it is not clear whether his hands are clenched in defence or attack, his expression one of rage or fright. The disquieting effect of his white hair and red eyes upon the crowd reinforces his position as Other, and the immediate call for his body to be covered reflects the desire for his Otherness to be concealed, or disappear, once more.

In the opening pages of Wells’s novel, the attire of the Invisible Man is described in detail. Emerging from the biting wind and driving snow as he makes his way into town, he is “wrapped from head to foot, and the brim of his soft felt hat hid every inch of his face but the shiny tip of his nose; the snow had piled itself against his shoulders and chest, and added a white crest to the burden he carried” (Wells, op. cit., p. 5). As a stranger arriving in Iping, he is presented through the eyes of the villagers, and it is through the act of their attentive spectatorship that he is initially characterised. There are slouching felts, crisp linen collars, silk mufflers, earthy velvets, and the sound of hobnail boots. But despite these costly materials, his ghastly white bandages, glinting blue lenses, layered clothes, and forbidding bearing mark him as an outcast to the villagers.

By refusing to observe religious days “even in costume”, and wearing full coat, hat and gloves while inside near a roaring fire, the Invisible Man casually violates subtle codes of acceptability (Wells, op. cit., pp. 21, 5-6 respectively). His improbable appearance and unsuitable attire have the effect of making him more visible, rather than being an inconspicuous presence. From the outset he appears a sinister figure:
All his forehead above his blue glasses was covered by a white bandage ... another covered his ears, leaving not a scrap of his face exposed excepting only his pink, peaked nose. It was bright pink, and shiny just as it had been at first. He wore a dark-brown velvet jacket with a high black linen lined collar turned up about his neck. The thick black hair, escaping as it could below and between the cross bandages, projecting in curious tails and horns, giving him the strangest appearance conceivable (Wells, op. cit., p. 7).

Despite this alarming first encounter, his unusual appearance is greeted by curiosity and initial surprise rather than outright fear. His covered face becomes the subject of great conjecture as the townsfolk draw on their limited experience to explain his bandages. It is supposed that he had an accident or operation, that he is a disguised criminal or anarchist, a harmless lunatic, or perhaps a piebald (Wells, op. cit., p. 23). As it becomes obvious that an explanation is not forthcoming, curiosity turns to unease. Children who see him after dark have nightmares and home-bound labourers are alarmed by his skull-like head emerging from the gloom on quiet country lanes (Wells op. cit., p. 22). He is seen to be concealing his identity, occupation, and origins, and as a result his presence steadily becomes more threatening.

Unlike Thomas Marvel, whom he takes on as an unwilling aide, the Invisible Man is seen as someone to be feared. While Marvel is also an outsider and stranger to Iping, he is immediately recognised and accepted as a tramp:

A person of copious, flexible visage, a nose of cylindrical protrusion, a liquorish, ample, fluctuating mouth, and a beard of bristling eccentricity. His figure inclined to embonpoint; his short limbs accentuated this inclination. He wore a furry silk hat, and the frequent substitution of twine and shoelaces for buttons, apparent at critical points of his costume, marked a man essentially bachelor (Wells, op. cit., p. 43).

Marvel is clearly poor, being first introduced while trying on pairs of “owdaciouly ugly” charity boots over his hole-ridden socks in a ditch by a roadside (op. cut.). He is an “unhappy-looking figure in the obsolete silk hat,” “unshaven, dirty, and travel-stained, ... looking very weary, nervous, and uncomfortable, and inflating his cheeks at frequent intervals” (Wells, op. cit., p. 62, 53, 63, 64 respectively). Upon being approached by the Invisible Man, he asks himself if he is plagued by visions brought on by alcohol. He is unable to trust his own drink-addled judgement, and thus is open to the possibility of an improbably invisible human (Wells, op. cit., p. 45). With very little concept of himself beyond what is expected in the role of “tramp” and a worldview that is confined to his immediate circumstances, Marvel fits the Jungian archetype of the Persona. Archetypes are the recurring images, characters, or motifs within myths, dreams, fantasies and religions that represent typical human experiences and concerns (Snowden 2010, pp. 63-65). Analytical psychologist Carl Jung poses that the Persona is “a mask that feigns individuality, making others and oneself believe that one is individual, whereas
one is simply acting a role through which the collective psyche speaks” (Jung 1971, p. 105). Marvel projects a particular archetypal image, that of the tramp, which is rendered as an immediately recognisable symbolic identity. As a foil and aide to the Invisible Man, Marvel provides comic relief and also represents the outcast capable of social redemption. His transparency as a character—with emotion ingrained in his shifting skin tone and notably shabby attire—serves to develop a humanistic character for whom we feel sympathy. Likewise, the descriptive passages that conjure up the texture and appearance of the Invisible Man’s attire develop visual imagery that is used to convey important information that fleshes out the character. These detailed descriptions of empathetic skin and expressive clothing exemplify how literature is capable of both developing and reinforcing the ways that bodies act as culturally communicative media. Both characters illustrate the importance of the visualised body as a symbolically encoded site of social exchange.

Revelation and the Invisible Body

The Invisible Man occupies a unique position in terms of the way he is characterised through wearable garments. He is known through the quality and cut of his clothes, and the act of wearing garments helps to visualise his body as a socially acceptable human form. Without clothes he must survive unseen, facing physiological and psychological hardships:

I had no shelter, no covering. To get clothing was to forgo all my advantage, to make of myself a strange and terrible thing. I was fasting, for to eat, to fill myself with unassimilated matter, would be to become grotesquely visible again. ... I could not go abroad in snow—it would settle on me and expose me. Rain, too, would make me a watery outline, a glistening surface of a man—a bubble. And fog—I should be like a fainter bubble in fog, a surface, a greasy glimmer of humanity. Moreover, as I went abroad—in the London air—I gathered dirt about my ankles, floating smuts and dusts upon my skin (Wells, op. cit., p. 116).

This passage, in which the Invisible Man explains his circumstances to his confidante Dr. Kemp, is particularly telling on a number of counts. Firstly, it highlights the difficulties of surviving unseen; secondly, it illustrates that he has no intention of assimilating into society, since he sees invisibility as having advantages over the natural state of man, despite certain discomfort; and thirdly, it shows that he identifies himself as monstrous, especially in a half-visible form. Unclothed, he may move freely and without being observed, but he is also vulnerable to the harsh English weather. He cannot eat without the unassimilated food being observed, and any passage through rain, dust, dirt, fog, snow and mud will render him in ghostly outline. Roaming the public realm sans clothes, he flies in the face of Victorian-era values, at a time when nakedness was associated with primitive culture. Unclothed and uncivilised, he is characterised as primal and animalistic, and when hunted, is driven to acts of survival in line with a fight or flight response.
Clothing provides much needed physiological protection—warmth and safety from the elements—as well as offering psychological protection from the dehumanising effects of invisibility. Claudia Benthien (1999) writes about how human beings have a base desire to "protect himself or herself against the penetrating gaze of others. That requires covering oneself—even if, as in many cultures, this is done merely through symbolic ornaments or a specific inner attitude that regulates the act of looking" (1999, p. 99). She goes on to explain that this is in response to an archaic fear of the possession-taking gaze of others. Clothing is usually seen as offering up a way to shield ourselves, but for the Invisible Man, it is also a symbol of human qualities. By donning clothes his body takes a visible form that is otherwise not afforded. It offers up a way to exist within society and be recognised as a human being, albeit an outcast.

Yet the Invisible Man has no intention of assimilating into society. He sees invisibility as having certain advantages and relates how he “beheld, unclouded by doubt, a magnificent vision of all that invisibility might mean to a man,—the mystery, the power, the freedom. Drawbacks I saw none. You have only to think! And I, a shabby, poverty-struck, hemmed-in demonstrator, teaching fools in a provincial college, might suddenly become—this” (Wells, op. cit., p. 92). Invisibility offers him an out of his menial existence, a chance to take what he wants and do as he wills. His intentions are far from noble— to rob a little, to hurt a little, and ultimately to begin a Reign of Terror. He does not wish to be a part of society so much as he wishes to dominate it, gaining power over a town by terrorising citizens and killing anyone that does not obey his orders. To achieve this, he needs an accomplice: he reaches out to both Marvel and Dr. Kemp in an effort to realise his plans, though neither are willing to play a part.

In confiding to Kemp, the Invisible Man wants to be known and understood and through this, we learn more of his identity—Griffin, formerly of University College. For the first time in the novel, he is transparent, speaking candidly about how he came to be transformed into a state of invisibility and his motives in doing so. It transpires that he has thrown himself into the act with no thought of repercussions, realities, or the ethical and social impacts of becoming invisible, or creating other invisible beings. His first experiments are carried out on a scrap of white fabric that vanishes and on an elderly neighbour’s white cat, which fades away except for the dark pigments in its claws and the reflective tissue in its eyes. Fuelled by stimulant drugs, anger at his prying landlord, and his relative success in lowering the refractive index of a creature, Griffin impulsively transforms himself into the Invisible Man. He relates to Kemp the horrible process which includes using drugs to bleach his blood and the help of a cheap gas engine that works two dynamos radiating a vibrational frequency:

A night of racking anguish, sickness and fainting. I set my teeth, though my skin was presently afire, all my body afire; but I lay there like grim death. ... I thought I was killing myself and I did not care. I shall never forget that dawn, and the strange horror of seeing that my hands had become as clouded glass, and watching them grow clearer and thinner as the day went by, until at last
I could see the sickly disorder of my room through them, though I closed my
transparent eyelids. My limbs became glassy, the bones and arteries faded,
vanished, and the little white nerves went last (Wells, op. cit., p. 100).

Becoming invisible marks the loss of Griffin’s fundamental connection to humanity
and his transition into monstrosity. It is a sign of his rash haste and rejection of social
values that, despite having mastered the skill, he does not make invisible clothes.
Instead, he chooses to cover his traces by burning his scientific equipment and the
Portland Street home, and then flees naked from the scene. Griffin’s rebirth as the
Invisible Man marks his definitive transformation into Otherness in the form of a gothic
body. He has lost the ability to see a face looking back at him in the mirror: he has
become anonymous, unseen and unaccountable for the actions he takes, which he uses
to exploit people around him.

Interestingly, it is not in an invisible state that he sees himself as monstrous, but
when he is made half-visible. As demonstrated in the passage cited above, it is when
the Invisible Man finds himself alone in London without shelter, covering, clothes and
food that he is confronted by his distance from being a socialised body and is forced
to consider himself as a subject. He must address the difficulty of fulfilling basic
human needs without the support of society — even Marvel, the tramp, has the ability
to beg for shoes and alms. Socially unacknowledged, the Invisible Man must learn to
survive without shelter or clothing, depriving himself of food so that the unassimilated
matter does not make him half-visible. When he does procure clothing, he must find
ways to use garments and props to conceal his invisibility in order to rejoin society.
He comes to recognise that invisibility may allow him to gain objects of desire, but
he personally cannot enjoy these spoils without being acknowledged within a social
milieu. The Invisible Man no longer envisages himself as a socialised individual but as
a subhuman, an inhabited space within clothing, a space around undigested food, and
a hollow amongst the elements. He sees himself as insubstantial: “a greasy glimmer of
humanity”, “a glistening surface of a man”, an outline, a bubble, a surface, and a grimy
skin (Wells, op. cit., p. 116).

As an invisible entity the protagonist is no longer able to experience what Lacan
(cited in Purchase 2006) describes as the “mirror stage”. The mirror stage occurs
when a pre-linguistic child recognises their reflection in a mirror and mistakes it
for a “coherent and unified self”. This image of the self can become the basis for
the construction of a united, fictional subjectivity (Purchase 2006, p. 243). As Sean
Purchase states, mirror images conceal “what is, for Lacan, a fundamental absence
or lack of self-unity, a divided, unconscious self, only upheld as ‘whole’ in maturity by
socially and culturally determined forces such as language” (2006, p. 243). While the
Invisible Man has matured beyond childhood, he is not necessarily capable of holistic
linguistic communication. Having lost a vital form of human language — the visualised
body as an expressive text — he does not have the ability to see his body and its
mirrored image. In the scenario that plays out in the novel, the collapse of the fiction
of the unified self most notably occurs when an incensed dog tears the Invisible Man’s
trouser leg. It is as if his own skin has been violated, and the dark emptiness revealed within is a sudden, visual reminder of his Otherness.

Science, Revelation, and the Possibility of Redemption

Part of the horror of the Invisible Man is that he is a product of his own creation. He embodies both the potentials and ethical pitfalls of scientific discovery. Through his confession to Kemp, he is revealed as a brilliant young scientist who has made a remarkable discovery but has been corrupted by his own power and selfish motivations.

Refusing to explain or share his research with the wider academic community and effectively alienating his peers, he is unable to secure funding. In order to continue his work, he resorts to stealing from his father, who commits suicide as a result. Steven McLean (2009, p. 87) posits that Griffin’s behaviour should in part be understood in the context of Wells’s insistence that scientists must endeavour to facilitate effective communication with the rest of society, or else risk alienating the ever-proliferating public sources of funding for scientific research. In support of this is the antithetical characterisation of Griffin and Kemp. Both are scientists and alumni of the same university, yet they stand in stark opposition to one another. Kemp is the ideal, socially responsible scientist, engaged with the broader scientific community through his work and practising out of a pleasant and orderly study (Wells, op. cit., p. 70). In contrast, Griffin is seen cloistered in his chaotic room, miserable, isolated and uncomfortable while the town’s Whit Sunday celebrations are underway outside (ibid., pp. 25, 35). Urged to redeem himself by Kemp, who encourages him to publish his results and take the world into his confidence, Griffin instead chooses to continue on his path of moral corruption in search of power:

Griffin tells Kemp that he is just an “ordinary man—a man you have known—made invisible” (ibid., p. 79). But he does not truly believe this. The casual violence and angry outbursts of the first half of the novel are contextualised within a wider series of events and selfish motivations. He feels no remorse for his father’s death and is indifferent to the suffering of others; he believes that the sundry beatings, burglary, arson, and amoral behaviour that have brought him to this point are acts of necessity that he has been driven to perform. He is outraged by what he perceives to be a great injustice: being denounced for the deeds he had to perform in order to survive. He has not simply retreated from society to withhold his work but has imposed his power upon others, expressing an inner attitude that belies his claims of ordinariness and instead shows that he regards himself as above common social values. This is highlighted in the dramatic public unveiling of his true form to the Iping people when the Invisible Man exclaims:
‘You don’t understand ... who I am or what I am. I’ll show you. By Heaven! I’ll show you’ ... It was worse than anything. Mrs. Hall, standing openmouthed and horror-struck, shrieked at what she saw, and made for the door of the house. Everyone began to move. They were prepared for scars, disfigurements, tangible horrors, but nothing! ... The man who stood there shouting some incoherent explanation, was a solid gesticulating figure up to the coat-collar of him, and then—nothingness, no visible thing at all! (ibid., p. 37).

The Invisible Man is aware of the horror that revealing his formlessness may induce. In this passage, he aims to reveal not his ordinariness but his extraordinary nature to the villagers. The villagers are understandably horrified by the invisible body in their midst. They have been provided with various sensory clues as to the Invisible Man’s form but in the early stages of the novel are unable to piece together the evidence at their disposal due to limited experience, imagination, and scientific understanding (McLean 2009, pp. 69, 71-72). This inability to move beyond the visual and make connections with other sensory evidence allows the Invisible Man to remain undetected for an extended period, but in placing such a primacy upon sight Griffin suffers his downfall. He does not account for the fact that the unseen can still be inferred through a combination of the other senses; his scent, sounds, actions, touch, and traces of his passage are discernible to a keen observer. The villagers place a greater value upon these forms of detection once alerted to the Invisible Man’s true state of being. In Chapter 15 they collectively identify the Invisible Man through the disembodied sound of the panting of breath and feet running along the road (Wells, op. cit., p. 71). This causes widespread panic, but marks the point at which the villagers as a group begin to draw upon the ability of their broader senses to reveal the unseen and enable them to track his passage.

Conclusion

Through the analysis of the interplay between revelation and the unseen in The Invisible Man, we are able to speculate on the ways that skin, body, and garments can be culturally communicative media that function at the forefront of social survival. Concealed from sight, the Invisible Man faces great difficulty operating within society. He remains unrecognized as a human being in need of shelter, food, and support. Without a visualized form, he is distanced from the subtle ways that bodies are encoded and interpreted within a social context. His invisible skin and body are inscrutable, inhibiting his ability to engage in exchanges of social dialogue. He is unable to convey visual information about his spatial location or presence, and cannot use emphatic gesture effectively: his expressions, state of health, and gaze cannot be observed or interpreted. He begins to lose his own sense of humanity and instead sees himself as a hollow glimmer of a man. His concealed, naked body comes to represent a threat to social values and order, and taps into the base fear of being observed or attacked by an unknown, unseen presence. The Invisible Man illustrates how the visualised
body is important as a symbolically encoded site of social exchange. Through acts of revelation, by donning clothes to be visible, and then by revealing his unseen form, the character renders the body a personally and socially invested text. However, the novel also establishes that while sensory primacy may favour the visual, the corporeal body cannot be considered solely as a visual text. The Invisible Man’s unseen body is extraordinary, but it does not preclude him from being revealed through keen perceptive awareness. He is most often detected through being felt or heard, or through observation of the interactions he has with the world around him. The novel highlights the ways in which the body may be loaded with meaning, and how literature, as a creative and critical forum, allows us to examine the body as a metaphorical site to address personal and social concerns.

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Discussion

Body-site-writing has diversified my skin-based approach to practice. Through the process, I have been able to critically observe and describe culturally situated qualities of a skin that wears that are embedded in written texts. As I discovered in Hand-writing, embodied qualities may be described through a process of ‘reading’ and writing an encounter with the physical body-site, but the cultural significance of a body-site might be more evident in the ideas and values expressed through a textual artefact. In The Invisible Man project, body-site-writing has enabled me to describe Western cultural ideas and values about skin and dress that are embedded in H.G. Wells’ novel The Invisible Man (2005 [1897]), including how skin can function as a semiotically encoded body-site.

The novel offers key insight into the textual production of skin and dress as surfaces for the performance of a deeper sense of identity. Social anthropologist Sophie Woodward (2005, pp. 22-23) has argued that in contemporary culture, dressing the body is a mediation of individual taste and cultural expectations, which collectively constitute how identity is self-constructed and visually understood in a social setting. The contemporary understanding of skin and dress as communicative mediums has developed out of ideas that became prevalent in Western culture during the Nineteenth century. During this era, personal appearance came to be seen as an outward expression of selfhood and social status (Teunissen 2006, p. 200). As a product of the Nineteenth century, Wells’ The Invisible Man (2005 [1897]) exemplifies the burgeoning cultural idea that the body is a text to be ‘read’.

The protagonist of Wells’ novel occupies a unique position in that wearable artefacts make the surface of his body visible and enable him to be recognised (and ‘read’) within the cultural environment. Conversely, when unclothed, the Invisible Man is rendered unseen, unrecognisable, and occasionally, monstrous within a social setting. In my literary analysis of The Invisible Man (Handcock 2013a), I identify how the character exemplifies ways that dressing skin can affect physical, psychological and social dynamics. The protagonist is presented as morally corrupt, socially detached and emotionally dehumanised through his appearance as well as his actions - his invisible skin and (un)dress are signs of social transgression (Handcock 2013a, pp. 46-49). In Wells’ novel, language represents and produces the cultural meaning of the Invisible Man’s appearance, both within the fictional world of the novel and in relation to the reader’s cultural knowledge of what modes of dress are considered appropriate for the particular social circumstances of the time.

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7 Woodward (2005) suggests that the assemblage of dress on the body in contemporary culture is in fact a complex construction of the body’s surface as a site where personal identity is constituted. She states: ‘The daily dilemma of assembling clothing involves the mediation of factors such as social normativity and expectations, as dressing involves not only individual preferences but fundamental cultural competences (Entwistle 2001, Craik 1993, Goffman 1971, Mauss 1973). As clothing is worn next to the body, such ‘external’ factors cannot remain abstract but are necessarily brought within the realm of the intimate, experienced as an internal dilemma and ambivalence’ (Woodward 2005, pp. 22-23).

8 Benthen claims that from the late eighteenth century and into the nineteenth century, cosmetic practices shifted toward naturalism and skin was constituted as a ‘surface that could bear semantic meaning and on which individuality could reveal itself’ (1999, p. 102).
This supports Entwistle's (2000a, 2000b) concept of dress as a situated bodily practice, as readers know through experience, and have reinforced through textual artefacts, that dress is symbolically meaningful and may feature in social narratives.

In the project, the process of body-site-writing has enabled me to identify how semiotic meaning can be entrenched in the portrayal of skin and dress. The symbolic meaning of the protagonist’s appearance in Wells’ novel (2005 [1897]) can be understood through French literary theorist and semiotician Roland Barthes’ (1983, 2013) ideas about how Saussure’s general science of signs (semiology) can be applied to dress. According to Barthes (1983, 2013), structures including language and writing attribute meaning to non-linguistic objects, and through their circulation, this meaning can produce cultural objects with additional symbolic values and abilities. For instance, fashion can move beyond the vestimentary functions of dress by being imbued with symbolic values that are produced through fashion writing and images, and these values are perpetuated through the construction of personal and cultural narratives that feature value-laden fashion items (Barthes 1983, p. 277).

Critical analysis of Well’s novel has revealed the value of visible skin and dress, and has exposed the invisible everyday values, ideas, and cultural systems for how skin and dress are understood visual symbols of self and social situation. Through body-site-writing, I was able to identify how skin and dress can be invested with culturally constituted meaning, and the manner in which this meaning can be expressed in textual artefacts.

Body-site-writing has also been a form of critical reflection in the project. Examining the cultural situation of skin and dress has shifted how I understand the potential for engaging with body-sites in my practice. It has brought attention to the power of body-site-writing to act as a reflective and analytical tool, but also made me aware that description of dynamics between wearable artefacts and skin is a meaning-giving activity. Body-site-writing can be applied to build knowledge, and can also open up avenues for building future relationships and meanings between skin and dress. Through the project, I have come to recognise that Wells’ novel is a fictional world, which has application in design practice. Dunne and Raby (2013, p. 70) suggest that fictional worlds provide opportunities for reflection, critique and inspiration, which can be applied to the development of design propositions through the process of making fictional objects, generating thought experiments, or ‘what-if’ scenarios.
The what-if scenario of Wells’ novel (what if a person’s skin is made invisible?) is a backdrop to explore symbolic functions of skin, and implications for embodied experiences in the world if one is unseen. In this capacity then, the novel is a motivation to critically examine complex relationships that form between body, culture and dress through the device of the invisible protagonist. This knowledge can be applied to write fictional worlds that contain propositions for the design and experience of wearable artefacts and imagined, alternative skins. This is a proposition that can be translated into designing wearable artefacts that are not in the here-and-now but could be in future.

In their paper on Reflective Design, Sengers, Boehner, David and Kaye suggest that critical reflection “provides a means to gain some awareness...as a first step toward possible change”, as knowledge of unconsciously held assumptions and activities can fundamentally alter perceptions and interpretations of our experience of the world, and the implications of our actions (2005, p. 50).

Thought experiments are a method to abstractly “test ideas, refute theories, challenge limits, or explore possible implications” through imagining scenarios outside of reality (Dunne & Raby 2013, p. 80). What-ifs are often used within the genre of science fiction writing and “allow the author to strip narrative and plot right down to basics in order to explore an idea” (Dunne & Raby 2013, p. 86).
REFLECTING ON BODY-SITE-WRITING

In the context of critically reflective design practice, body-site-writing has increased attention toward skin as a site for design consideration. The Hand-writing project demonstrated that body-site-writing could be a reflective ‘knowledge-bringing’ activity used to focus observation and describe physical characteristics of a body-site. Body-site-writing enabled me to observe, analyse and describe the phenomenological body as a context for the probable design of wearable artefacts by layering the different reflective and critical perspectives of the projects. Through the process, I came to understand that writing is an embodied process that can produce a relational site in the space where subjective and objective experiences and understandings of a body-site are overlaid or entwined. I realised that in my practice, body-site-writing is a phenomenological process that does not inscribe the meaning of skin so much as describe shifting meanings arising in the relational milieu between skin and wearable artefacts, between body-site and critical text.\(^\text{13}\)

I applied this knowledge in The Invisible Man project, where writing became an analytical process to describe hitherto ‘invisible’ symbolic meanings ascribed to skin and dress that were perpetuated through a cultural artefact, using the example of H.G. Well’s novel.

The project revealed how cultural understanding of skin and dress can be constituted through the process of writing. Through the projects, I came to understand that body-site-writing is a productive medium in my practice. Textual artefacts can offer critical insight into the cultural meaning and subjective (physical, perceptive, sensory, and imagined) experiences of embodied skin and dress. This has informed my skin-based approach to designing wearable artefacts. In critically reflective design practice, body-site-writing can be used to amplify exiting conditions that can form a launching pad to speculate on new types of engagement between skin and dress.

\(^{13}\) Grosz (1994, pp. 134-144) uses “body writing” to describe the inscription of cultural messages and meanings on the body, and so I make the distinction here that my practice is about description. Grosz elaborates her concept in Chapter 6 of Volatile Bodies (1994, pp. 138-159), in which she discusses the metaphor of the social inscription of corporeal bodies through body modifications, supplementary dress and adornment, systems of punishment, discipline and social power, as well as cultural institutions, race, sex and gender.
CASE STUDY: TWO HANDS

Research projects discussed in this section expand on ideas and processes developed in *Hand-writing* and *The Invisible Man*. Two hands are studied as a body-site through a suite of projects: *The Anatomy Museum (I & II), Lived Skin Studies,* and *100 Hand Sites*. In these projects, one hand (my own) is a lived, subjective, perceptive body-site (*Leib*), while the other hand is an objectified, anatomized, and static body-site (**Körper**).\(^{14}\) In *Figure 15*, the projects are depicted as a layered investigation that builds understanding of two states of the hand (*Leib*/**Körper*), as well as the relationships that might form out of an encounter between two hands in *Leib* and **Körper* states. The case study integrates embodied processes of body-site-writing, drawing and casting to describe and produce the encounter between two hands, which focuses attention on qualities of the body-site that could inform how wearable artefacts are designed to be experienced, located and given meaning. In *The Anatomy Museum*, I supplement body-site-writing with the addition of drawing, which becomes a mode for haptic engagement with anatomical hands in the setting of a university medical museum collection. The experience exposes differences between the objectified (**Körper**) and embodied (**Leib**) hands, and builds a

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\(^{14}\) I refer to definitions of *Leib* and **Körper* as outlined by Drew Leder (1998, p. 112) and Thomas Ots (1994, pp. 116-117).

*Fig. 15 – Layered structure of the suite of Two Hands projects*
greater understanding of how body-sites are constituted through medical representations of the body. In *Lived Skin Studies* and *100 Hand Sites*, I develop further processes for mapping temporal and transformative qualities of the lived hand, including observational drawing and the introduction of casting techniques.

Two hands (*Leib/Körper*) have a metaphorical function in the research. A dialogue between two hands has the potential to produce new, alternative, or hybrid approaches to practice through the exchange of ideas coming from different perspectives. This structure is apparent in instances of philosophy; phenomenologists including Husserl and Merleau-Ponty have used two hands as a sign of discourse in their work. Husserl (1989, §36) assumes the device of “on one hand” and “on the other hand” to present alternate perspectives in his writing, while Merleau-Ponty draws on Husserl’s precedent to position tactile encounters between two hands as an immediate form of self-reflection between subjective “touching” and objective “touched” states (Merleau-Ponty 1958, p. 93; Husserl 1989, §36-§37). The motif of the two hands enables me to build a layered understanding of a complex phenomenological body-site through projects that describe discrete *Leib* and *Körper* qualities, as well as how these states intertwine. The projects demonstrate how a skin-based approach to practice can open up conceptual discourse about the nature and qualities of a body-site. This process of description identifies conditions that have the potential to inform ways that future wearable artefacts could be worn, experienced, and understood. Furthermore, the projects have directed attention toward the means by which two hands function in my practice.

Hands recur as a body-site throughout the projects, initially propelled by Holmes’ challenge to deductively ‘read’ the hand, which I addressed in *Hand-writing*. However, in the course of the research this motivation has evolved. Two hands have become an example of how the body-site can play an active role in a skin-based approach to practice. I use the motif of two hands to illustrate the ways the body-site can actively support the exchange and development of design ideas. In the acts of studying, designing and making, two hands are coordinated and cooperative; they engage in continual evaluative to-ing and fro-ing. The case study of *Two Hands* has been a means to reflect on how body-site-writing, drawing and making are embodied processes for critically reflective design thinking and practice. The projects explore how the designer can engage in relational and reflective discourse through processes such as body-site-writing, in which the body-site is a provocation for attentive observation and description that can inform the development of wearable artefacts.

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15 Jacques Derrida (2005) also writes about hands and touch in regard to work by Husserl, Merleau-Ponty, Immanuel Kant, and Jean-Luc Nancy.
Harry Brookes Allen Museum of Anatomy and Pathology
Melbourne University
18 August 2013
It is a rare public open day at Melbourne University’s anatomy and pathology museum; clusters of fellow visitors are blocking the entry hall. The main room is busy with attendant students explaining displays to a crowd circulating through the pillars. Large high windows overlook cabinets that punctuate the floor; glass shelves crowded with clear containers and jars of samples.

Fragments of sinewy flesh seamed with fat are positioned in dense resin blocks. Specimens hang in a haze of discoloured fluid, the edges pale and feathered. Preserved under glass, they are deep raw red, purpled, peach, tan, ivory, russet, and grey. There are whole organs, sectioned organs, bodies dissected and disassembled. Dozens of diseased and deformed samples are grouped, puckered by ulcers, tumorous excess, and growing calcification. The signage is sporadic, overly technical and sparsely annotated: ‘Flexor and extensor tendons, flexor and extensor retinacula, nerves, vessels and intrinsic muscles’ (The University of Melbourne 2012b). Spleen. Displays of laminate images show pink cells and pores enlarged under the microscope. It is not always clear what specimens, if any, are healthy examples of the human body.

Against one wall heavy waxed bases support engraved plates, skulls in high domes are screwed into place. Inside a line of glass and dark wood cases complete skeletons are suspended in tension by small brass springs, bolts and hooks. One towers over the visitors, the bones separated and spread by thin metal rods. Nearby, a neat cross-section shows a grey and pink mass surrounded by a sheath of thin bone and tissue. It is a slice of a man’s head, the skin almost translucent, with a strip of scalp covered in stubble that emerges from exposed follicles. Fine red hairs protrude from the bisected eyebrow. Beyond this is the skin of a flayed face, all hollow nose and orbits with low eyelids; deep, tired bags droop over the curve of the cheeks. It is displayed so the viewer approaches it like a mask, from behind or beneath the skin.

On a desk lies a plastinated collection of lungs and hearts. The lungs are bulky and inflated, mottled blue-grey with small purple capillaries. The undersides are contoured with the impressions of ribs. The biggest heart is larger than a hand: it is a taupe, cavity-riddled thing sectioned open like a book. On a white shelf rest two plastinated hands, the first large and cut through the bone at the wrist. The skin is mostly removed and the thin, hard edge of the cut exposes bright muscle beneath. The ring finger is flayed to the tip, leaving only the cap of skin from the knuckle and the nail intact. Next to the slack, tanned crepe of the plastinated skin the bared tendons are pearl coloured and taut. At the joint of the index finger is the indented print of a rubber band or cord once tied around the hand. The skin puckers wetly but does not move.

The other hand is small and light to hold. The nails are carefully shaped and trimmed, except one, which is chipped and split at the end. The fingers are slim, petite, and relaxed into a curled position. They are perfectly preserved, but the skin is yellowing. It ends below the knuckles on the palm, relaxing into pleats that exaggerate the grain and texture of the fingerprints, pores, wrinkles, lines. Smooth bones show between the fibrous red-brown muscles exposed along the palm and forearm. The hand is hard and static, and cold to touch. The textures differ but the tissue and muscle, the tendons, bones, nails, and skin all feel the same. Everything leaves a residue behind.
I: Body-site-writing a Relational Space

The Harry Brookes Allen Museum of Anatomy and Pathology at The University of Melbourne has a collection of approximately 12,000 specimens and artefacts that form an important resource for researchers and students of the medical sciences, but these are rarely available for viewing by the general public. Project I documents my first visit to the Harry Brookes Allen Museum, although I had previously viewed several items from the collection featured in the series of exhibitions entitled *A Body of Knowledge* (Atkinson et al 2012a, 2012b). The critical text emerging from the project does not preserve my embodied experience in the museum; rather, it communicates a series of impressions about my experience that invite imaginative and conceptual engagement with the museum context and collection. Written after the fact, the text describes my engagement with the museum collection on Open Day (18 August 2013). It pieces together observations from notes carefully taken on the day of the visit and incorporates retrospective reflection on the experience.

As I later discovered, the process of body-site-writing entwined the subjective fragments of my memory and perceptive experience with a dose of imagination. A second visit to the museum confirmed that I had embroidered the setting - the cabinets were neither as grand as I remembered nor the room as spacious. This, Rendell (2010, p. 7) suggests, is an instance of how critical writing can be a productive practice bringing objects or encounters into being - the textual artefact can remake the experience on the terms of the critic/designer. This approach to body-site-writing, in which I jointly reflect and imagine the encounter, has produced a relational space concentrated around the most vividly recalled moments of the museum visit. As a result, the structure of the textual artefact has taken on the form of a discontinuous narrative. It focuses first on one particular feature of the encounter then another, while all else fades into the background. The spaces this creates in the narrative are conscious; through these gaps, I invite the reader to project their own knowledge and imagination into a textual encounter with the anatomised body.

The relational space of the anatomy museum emerges foremost in this example of body-site-writing. I was (and remain) awed.

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*A Body of Knowledge* (The University of Melbourne 2012a) encompassed a series of exhibitions celebrating the 150th anniversary of Melbourne Medical School. I was primarily interested in *The Anatomy Lesson* (Atkinson et al 2012a) and *The Art of Teaching: Models and Methods* (Atkinson et al 2012b).
at the collective corporeal body that the museum taxonomy represents. In the text, I concentrated on capturing my sense of wonder at the first sight of the collection, while also emphasising that without medical knowledge, much of it was impenetrable to my eyes. I was unable to understand the technical and scientific terms that annotate the specimens, and, as a result, many appeared abstract material artefacts to me, rather than tissue with a human origin. However, during the Open Day visit, I had the opportunity to handle body parts preserved through ‘plastination’.17

Originally developed by controversial anatomist Gunther von Hagens (2006-2014) in the 1970’s, this method is now a widespread method of preserving real human bodies as anatomical models for teaching and exhibition (Valdecasas, Guerrero & Juez 2009, p. 835).

In project I (page 93), I describe the experience of approaching the plastinated specimens, which unlike many specimens in the collection, I was able to recognise as specific body parts and encouraged to closely scrutinise and haptically explore. In the text, I introduce touch as an integral part of the museum experience: The other hand is small and light to hold / The hand is hard and static, and cold to touch / The textures differ but the tissue and muscle, the tendons, bones, nails, and skin all feel the same. There is intimacy in this encounter as touching reveals what vision could not: the materiality of the specimens resembles cold wax or hard greasy rubber that is not like living skin, flesh or bone at all. Through body-site-writing, I was able to reflect on the experience of touch and identify the encounter as a primary example of the body-site rendered in states of stark relief. My perceptive Lieb hand encountered the anatomised Körper hand. The project increased my interest in the potential for textual and visual artefacts to produce understanding of the phenomenological body-site through practice. This was an idea developed both through body-site-writing the project and, a paper that I presented at the IDEA 2012 symposium, Interior: A State of Becoming.

The paper for IDEA 2012, Transgressing Boundaries: Skin in the Construction of Bodily Interior (Handcock 2012), argued that contemporary conceptions of a bodily interior - of skin bounding a space inhabited by the individual - have been produced as evolving cultural attitudes, scientific advances, and
In addition to work previously cited, I refer here to research by Joanna Ebenstein (2009), Kathryn Hoffman (2010), Benjamin Rifkin, Michael Ackerman and Judith Folkenberg (2006), Drew Leder (1998), Lucinda (Lucy) Spencer (2006, 2008), Dolores Steinman and David Steinman (2010), Mieneke te Hennepe (2007, 2009), Renée van de Vall and Robert Zwijnenber (2009). In my review of the skin-based field, works by these scholars have emerged as notable examples that build discourse around how medical representations of the body at the intersection of art and anatomy have shaped contemporary Western cultural understandings of the body.

The field of art and anatomy has long recognised that anatomical models (both artificial and corporeal), medical illustrations, museum displays and radiographic imaging are fundamental tools for building understanding of the corporeal body. Bringing together collections of corporeal matter and representations of interior anatomy and pathology, the medical museum is a site for encountering and producing understanding of the visceral nature of the human body.

In their article on the subject, Steinman and Steinman (2010) highlight how representations of scientific data through anatomical imagery have been shaped not only through technological advances but also through the role of the artist. They suggest that artists play a pivotal role in approaching and addressing clinical aspects of the human body from different perspectives, by combining subjective perception and methods that merge “expression and interests from apparently unrelated fields” (Steinman & Steinman 2010, pp. 39-40). This enables the artist to freely conceptualise, represent and produce knowledge of physiological phenomena from a range of viewpoints. Steinman and Steinman identify the potential for alternate ways of representing and interpreting scientific data through collaborations and dialogue between art and science; they suggest this could “eventually create a new visual paradigm for medical representations of the human body” by generating alternative visual tools that move beyond ingrained ways of thinking (2010, pp. 40-42). Building on this observation, I propose that designers as well as artists can create tools to conceptualise and represent the corporeal body from alternative perspectives. In my practice, body-site-writing is one such tool. Through the body-site-writing project, I have been able to evaluate ideas developed through my IDEA 2012 paper in the context of design, and in the context of a medical museum collection. In combination with Hand-writing and The Invisible Man, it has highlighted ways that bodies can be understood through textual and visual artefacts invested with personally and culturally produced meaning.
This skin-based approach has the potential to shift how body-sites are engaged through practice. Through project I, body-site-writing increased awareness of culturally assumed knowledge and can expose alternative avenues for building understanding. The process enabled me to critically reflect and ‘re-make’ the relational experience of the anatomy museum, which suggests that it may also have the potential to describe and produce encounters between body-sites. In this way, embodied encounters – in addition to medical and cultural representations of the body – could become a source of knowledge that can inform the development of wearable artefacts.

To test this idea, I organised a second visit to Harry Brookes Allen Museum (11 December 2013), facilitated by curator Dr Ryan Jefferies. The return visit was an opportunity to spend dedicated time studying all five plastinated hands held in the museum collection, and to investigate the potential for engaging with the specimens using body-site-writing and drawing as complementary methods of inquiry. I was not interested in revisiting project I by writing a further account about the encounter between lived and plastinated hands, but instead aimed to write the encounter itself. Two hands are intrinsic to the way that I operate as a designer. My hands are mechanisms for perceptively exploring, experiencing and evaluating ideas through reflection-in-action. In project II, the encounter between two hands (Leib and Körper) is perceptively experienced through the touch of my hands, and through the combination of body-site-writing, drawing and seeing. I describe the subjective encounter with each plastinated hand through these complementary methods of inquiry as a way of not only relating to the observed hand but also, as Rendell (2010, p. 7) has suggested, as a way of creating it.
Hand #1

35 cm long
16 cm around arm
13 cm around wrist
2 cm short bone
4 cm large bone
8 cm wrist to middle knuckle

Ivory
Milky sheen
Peach white
Purple brown. Muscle.
Ivory silk sheen into solid soft brown
The translucency and opacity of the tissues
Pale opaque grey nails – stand out against the ochre fingertips

Roots
Ridded
Fly away
Interleaved
Whorled tissue
Fibrous fan... frayed edge

Meaty
Clipped nail
Wrinkled prune skin
Rubbery collar of fat
Skin creased, pleated
Long muscle separates
Bone? Tendon? Sheathed & smooth
Little finger has pressure lines from resting flat
Between thumb & forefinger the skin looks torn
Top of hand translucent membrane rubbery fat
Stiff – pale shiny ribbons. Strong. Corded. Tendons bunched
Rough cut edge on skin in sections, then a hard decisive line
Shine of tendons visible underneath. Skin looks dry & papery on top

Rubbed smooth & dirty
Delicate threads bounce back
My thumb-pad fits perfectly in the end
Press down on skin – it flexes in one section with a soft Velcro crackle

Like curdled latex pilled on the surface
Tiny pieces of dust & detritus trapped between fingers
Soft sun spotted ivory – my own hand looks impossibly pink
Hand #2

Spots
Chipped
Tips stippled and wrinkled
Gathered. Wrinkles pleat out from the mark
Fluffy white marrow in the hollows of bones, aerated.
On flayed finger the tendons float, suspended over the surface & tethered by the band/layer of fat at the knuckles.

Passionfruit skin
Hand #3

Structural qualities
Marks of two bands at wrist
A single green cord is knotted & stitched carefully into the muscle
A black rectangular magnet tracker is on the back in the middle of the hand
Layer of skin at back of hand 3mm thick at wrist. At fingertips <1mm
Sawn rings of bone. Compact muscle & compressed tendons
Flesh of fingertips removed

Messy raw pads
Crusted dry tips dark purple
Skin on back flat. Leathery. Flaked
Ivory at wrist to deep red brown at fingertips
Nails clipped angularly, smooth surface. Taupe
Layer of pale membrane over most of finger structure. Fat?

Tendons like suspension lines on bridges. Come away from middle of fingerpad. Meet at centre of palm

I close my eyes & my fingers explore – complex junctions. Tensions. I must judge my touch carefully.
Hand #4

Only Left Hand
Black magnetic barcode tracker
Some clear silicone visible at end over anatomical structures – exposes process

Skin on thumb not joined to skin on 4 fingers.
Cut on both sides of thumb - so flap on underside

Peach yellow
Puckered with red edges

Dessicated, dry fingertips
Curved lined fingernails. Opaque, solid.

Skin as a coating or loose glove
Hand #5

77 cm long
Whole arm. With muscle from over ribs and shoulder
Delicate!
A pin at the elbow
Hard wood dowel

Waxy
Papery
Threads
Rubbery
Semi flexible
Dry bark edge

Powdery looking muscles
Vulnerable exposed fingerpads. Look soft.
Woven tendons and muscles lifting away from the arm
Corded deep purple vein wrapped around pale large vein
Tendons stringing from them and cut and hanging between the bony fingers. Soft pink. Pale.
The muscle from the ribs is thin & brittle – it flares out like bird feathers. It looks like a wing.

Gradations of colour & texture
Dark deep brown & purple at shoulder and ribs to pale white and peach at fingertips
In the crook of the wrist wrinkled brown flesh seeps into smooth creamy membrane over bone
II: Embodied Encounter as a Textual Artefact

The textual artefacts created in this project form a descriptive ‘portrait’ produced through the embodied encounter between two hands. For each hand I have curated the body-site-writing generated through the encounter and extracted key observations about the body-site. These have been compiled into concrete texts structured by line length. I refer to the texts as ‘portraits’ because this is a recognised format for subjective descriptions of the skin. Benthien (1999, pp. 103-109, 121-131, 179) cites textual skin portraits in the literary work of Denis Diderot, Honoré de Balzac, Sylvia Plath and Toni Morrison, amongst others; and in her study of embodied representations of skin in contemporary portraiture, Kellet (2012, pp. 21-22) recognises that in visual and media arts representations of skin render it an affective surface. Furthermore, Kellet (2012, p. 22) suggests that skin portraiture in which the body is fragmented, magnified, and the subject anonymous, can “provoke a consideration of the sensuous, visceral nature of our own experiences in skin,” allowing viewers to experience their own embodiment as well as promote empathetic relations between bodies.

I propose that the process of producing descriptive portraits has the potential to amplify subjective experiences and embodied encounters through the body-site, with application in critically reflective design practice. The process of description increases attention to the encounter of the body-site through writing and drawing, which constitutes a skin-based approach to observation. The textual artefacts form an alternative description of the body-site that places emphasis on the poetics of skin, and is produced through embodied experience rather than through ingrained medical or cultural representations of the body. This demonstrates that a skin-based approach to design practice can be an alternative mode for building knowledge and understanding of skin in Leib and Körper states, which can open up opportunities to develop wearable artefacts in response to previously unrecognised qualities of the body-site.

II: Producing the Encounter

The Harry Brookes Allen Museum is one of those exceptional places that make an explicit feature of the fleeting encounter: entering its space is an encouragement to be present, to focus on engaging with the artefacts and build knowledge through the experience. It was made clear before my return visit to the museum that the collection is of a sensitive nature. Anatomised bodies in the museum’s care are sourced for scientific education and research through the Department of Anatomy and
Neuroscience’s Body Donor Program (The University of Melbourne 2012b). As well as controlled admittance, there is a strict ban upon taking photographs, film and images in the museum itself, in accordance with the ethics of the body donor program. The only records that could be made and taken away from the encounter in project II were those that could be generated by hand, either by writing or drawing. I was informed that the museum’s policy on making the collection available to artists (as I was considered) was under review; leaving the impression that art for art’s sake was not encouraged. As I aimed to build a deeper understanding of the body-site through the production of textual artefacts in project II, while using hand drawing and body-site-writing as embodied processes to mediate and produce the encounter, it was a strategic decision to privilege textual artefacts in the project rather than drawing. The textual artefacts form a series of descriptive ‘portraits’, each distilling and producing an embodied encounter between two hands (Leib and Körper).

My encounter with Hand #1 was guided through the process of drawing.21 The movement of the pencil directed my gaze toward details of the Körper hand, which I also explored with my fingertips. Through writing, I was able to describe the observed conditions and my sensory experience, as well as reflections and emotive responses (Fig. 16). The drawn artefact from this encounter, shown in Figure 16, was not intended as a realistic representation of the Körper hand but instead functioned as a process for focused attention during the encounter, and a mnemonic device for later reviewing the project. In the museum, I found that sparse use of colour in the drawing helped to distinguish areas of skin from areas of tendon, muscle and bone, but I reflected that switching between pencils distracted from the process of body-site-writing. Since I was aiming to generate textual artefacts rather than a suite of drawings out of the encounters, I decided that for the encounters with Hands #2-5 (Fig’s. 17-20), drawing would function as a notational device. Simple sketches enabled me to situate body-site-writing in relation to zones I was actively engaging with. I discovered that with less emphasis on the role of drawing in the project, the perceptive and sensory experience of two hands came to the fore.

Examining the specimens in project II was an opportunity to gain a greater understanding of the physical composition of the hand through the process of body-site-writing. Following the first museum visit, I was prepared for the uncanny sensation of touching the plastinated hands and vividly recalled the waxy feeling of the Körper skin from the previous experience. However, in the course of project II, I reassessed my initial observation

21 Hand #1 is the ‘other hand’ referred to in The Anatomy Museum (I).
Process Notes
Harry Brookes Allen Museum of Anatomy and Pathology
Melbourne University
11 December 2013
Process: Hand #1

Drawing annotations on hand #1

<table>
<thead>
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<th>Touch</th>
<th>Comparative</th>
<th>Objective</th>
<th>Appearance</th>
<th>Speculative:</th>
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</thead>
<tbody>
<tr>
<td>• Delicate threads bounce back</td>
<td>• Like curdled latex pilled on the surface</td>
<td>• Tiny pieces of dust &amp; detritus trapped between fingers</td>
<td>• Pale opaque grey nails – stand out against the ochre fingertips</td>
<td>• Rubbed smooth &amp; dirty</td>
</tr>
<tr>
<td>• Stiff rubbery collar of fat</td>
<td>• Wrinkled prune skin</td>
<td>• Chipped nail</td>
<td>• Ivory silk sheen into solid soft brown</td>
<td></td>
</tr>
<tr>
<td>• Rubberized</td>
<td>• Fibrous fan... frayed edge</td>
<td>• Ridges [nails]</td>
<td>• Peach white</td>
<td></td>
</tr>
<tr>
<td>• Rubbery flexible fat</td>
<td></td>
<td>• Long muscle separates</td>
<td>• Ivory</td>
<td></td>
</tr>
<tr>
<td>• Stiff – pale shiny ribbons. Strong. Corded. Tendons bunched</td>
<td></td>
<td></td>
<td>• Milky sheen</td>
<td></td>
</tr>
<tr>
<td>• Bone? Tendon? Sheathed &amp; smooth</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• My thumb pad fits perfectly in the end</td>
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Written notes on hand #1

<table>
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<th>Touch</th>
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<th>Objective</th>
<th>Appearance</th>
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<tbody>
<tr>
<td>• Press down on skin – it flexes in one section with a soft Velcro crinkle</td>
<td>• Soft sun spotted ivory – my own hand looks impossibly pink</td>
<td>• 3.5 cm long 16 cm Ø @ arm 13 cm Ø @ wrist 4 cm large bone 2 cm short bone 8 cm wrist to middle knuckle</td>
<td>• The translucency and opacity of the tissues</td>
<td>• Between thumb &amp; forefinger the skin looks torn</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Top of hand translucent membrane rubbery fat.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Shine of tendons visible underneath. Skin looks dry &amp; papery on top</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Little finger has pressure lines from resting flat</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 16 – Process work for The Anatomy Museum (II), showing notes and drawings of Hand #1
## Process: Hand #2

### Drawing annotations on Hand #2

<table>
<thead>
<tr>
<th>Touch</th>
<th>Comparative</th>
<th>Objective</th>
<th>Appearance</th>
<th>Speculative:</th>
</tr>
</thead>
</table>
| • Rubberised film between the fingers  
• Hand plant over fatty parts like pressing into an inflated rubber ball.  
• Fluffy white marrow in the hollows of bones, aerated. | • Passionfruit skin | • Gathered  
• Chipped | • [Finger] Tips stippled and wrinkled  
• Gathered. Wrinkles pleat out from the mark of the removed [object that has left an impression] | • White, pale neutrals. Dehydrated & drained of blood. |

### Written notes on Hand #2

<table>
<thead>
<tr>
<th>Touch</th>
<th>Comparative</th>
<th>Objective</th>
<th>Appearance</th>
<th>Speculative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Flat on knuckles/back of hand from pressure</td>
<td>• On flayed finger the tendons float, suspended over the surface &amp; tethered by the hand/layer of fat at the knuckles.</td>
<td></td>
</tr>
</tbody>
</table>
| | | | | • Darker skin  
• Pronounced marks. Spots.  
• White white nails with a black bruised tone showing from underneath |
### Process: Hand #3

### Drawing annotations on Hand #3

<table>
<thead>
<tr>
<th>Touch</th>
<th>Comparative</th>
<th>Objective</th>
<th>Appearance</th>
<th>Speculative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>• A black rectangular magnet tracker is on the back in the middle of the hand&lt;br&gt; • A single green cord is knotted &amp; stitched carefully into the muscle&lt;br&gt; • Marks of two bands @ wrist&lt;br&gt; • Sawn rings of bone. Compact muscle &amp; compressed tendons.</td>
<td>Layer of skin @ back of hand 3mm thick @ wrist. @ fingertips &lt;1mm</td>
</tr>
</tbody>
</table>

### Written notes on Hand #3

<table>
<thead>
<tr>
<th>Touch</th>
<th>Comparative</th>
<th>Objective</th>
<th>Appearance</th>
<th>Speculative</th>
</tr>
</thead>
<tbody>
<tr>
<td>• I close my eyes &amp; my fingers explore – complex junctions. Tension. I must judge my touch carefully.</td>
<td>• Flesh of fingertips removed – tendons like suspension lines on bridges. Come away from middle of fingerpad. Meet at centre of palm.</td>
<td>• No skin&lt;br&gt; • Structural qualities of the hand</td>
<td>• Crusted dry [finger] tips dark purple&lt;br&gt; • Skin on back flat. Leathery. Flaked. Ranges from ivory @ wrist to deep red brown @ fingertips&lt;br&gt; • Mesy raw [finger] pads&lt;br&gt; • Nails clipped angularly smooth surface. Taupe.</td>
<td><em>Layer of pale membrane over most of finger structure. Fat?</em></td>
</tr>
</tbody>
</table>
Process: Hand #4

Drawing annotations on Hand #4

<table>
<thead>
<tr>
<th>Touch</th>
<th>Comparative</th>
<th>Objective</th>
<th>Appearance</th>
<th>Speculative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Only left hand</td>
<td>Peach yellow</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin</td>
<td>Curved lined fingernails. Opaque, solid.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Band of skin wraps around [the base of the arm where cut]</td>
<td>[cut on thumb] Puckered with red edges</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin on thumb not joined to skin on 4 fingers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[skin] cut on both sides of thumb, so flap on underside – except on back side of thumb this cut doesn’t reach the nail or the edge of skin.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Black magnetic barcode tracker</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Some clear silicone visible @ end over anatomical structures – exposes [plastination] process</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Written notes on Hand #4

<table>
<thead>
<tr>
<th>Touch</th>
<th>Comparative</th>
<th>Objective</th>
<th>Appearance</th>
<th>Speculative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Skin as a coating or loose glove.</td>
<td>Dessicated, dry fingertips. Fat sucked away from under skin – makes nails look long, wrinkled skin</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 19 – Process work for The Anatomy Museum (II), showing notes and drawings of Hand #4
### Process: Hand #5

**Drawing annotations on Hand #5**

<table>
<thead>
<tr>
<th>Touch</th>
<th>Comparative</th>
<th>Objective</th>
<th>Appearance</th>
<th>Speculative</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Rubbery</td>
<td>[As with touch]</td>
<td>77 cm long</td>
<td>Threads</td>
<td></td>
</tr>
<tr>
<td>• Semi flexible</td>
<td></td>
<td>Whole arm. With muscle from over ribs and shoulder</td>
<td>Powdery looking muscles</td>
<td></td>
</tr>
<tr>
<td>• Dry bark edge</td>
<td></td>
<td>A pin at the elbow</td>
<td>Corded deep purple vein wrapped around pale large vein</td>
<td></td>
</tr>
<tr>
<td>• Papery</td>
<td></td>
<td>Hard wood dowel</td>
<td>Woven tendons and muscles lifting away from the arm</td>
<td></td>
</tr>
<tr>
<td>• Waxy</td>
<td></td>
<td></td>
<td>Vulnerable exposed fingertips. Look soft. Tendons stringing from them &amp; cut &amp; hanging between the bony fingers. Soft pink. Pink.</td>
<td></td>
</tr>
</tbody>
</table>

**Written notes on Hand #5**

<table>
<thead>
<tr>
<th>Touch</th>
<th>Comparative</th>
<th>Objective</th>
<th>Appearance</th>
<th>Speculative</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Delicate!</td>
<td>The muscle from the ribs is thin &amp; brittle – it flares out like bird feathers. It looks like a wing.</td>
<td>Gradations of colour &amp; texture</td>
<td>Dark deep brown &amp; purple @ shoulder &amp; ribs to pale white &amp; peach @ fingertips</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>In the crook of the wrist wrinkled brown flesh seeps into smooth creamy membrane over bone</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Threads</td>
<td></td>
</tr>
</tbody>
</table>

*Fig. 20 – Process work for The Anatomy Museum (II), showing notes and drawings of Hand #5*
from project I that: the textures differ but the tissue and muscle, the tendons, bones, nails, and skin all feel the same. Through careful observation, I was able to haptically distinguish a range of surfaces that I described variously (Fig’s. 16-20) as rubbery, brittle, smooth, flexible, stiff, corded, wrinkled, ridged, pliant, aerated and delicate, as well as drawing comparisons with leather, dry bark, paper, wax, passionfruit and prune skin; an inflated rubber ball and curdled latex. Reflecting on the process, I found that for many of the hands, my body-site-writing shifted between two or more types of observation that I determined could be divided into approximate categories. For instance, of Hand #1 (Fig. 16) I wrote that the wrist had a diameter of 13 centimetres (an objective measurement), some tendons felt bunched (tactile sensation), while others appeared shiny (visual perception), I likened one anatomical structure to a fibrous fan (comparative statement), and suggested that the skin looked torn in one area (speculative statement).

On review of the process, I realised that this approach had largely developed in response to the inability to describe what I was perceptually experiencing. Stewart suggests that:

> When language attempts to describe the concrete, it is caught in an infinitely self-effacing gesture of inadequacy, a gesture which speaks to the gaps between our modes of cognition – those gaps between the sensual, the visual, and the linguistic (1993, pp. 52-53).

This “inadequacy” of language was most striking in the notation I made on Hand #5: Gradations of colour and texture. While I did not have the words to communicate the colours, translucencies, textures and transitions that I observed during the encounter, I did build an embodied form of knowing through the process. To communicate this tacit knowing as knowledge, I have, as previously mentioned, adopted a skin-based approach to practice. Through layering many different processes, such as body-site-writing, drawing and casting, I am able to re-make the encounter in communicable ways. This layered approach has the potential to produce observations about and through the phenomenological body that might otherwise be overlooked; a significant capability that can inform how wearable artefacts are conceptualised in response to the qualities of the body-site.

Touching the plastinated specimens in The Anatomy Museum projects highlighted the differences between two hands in Leib and Körper states, as defined by Husserl (1973, p. 57). The Körper hands were purely physical, dead, inanimate, and used in the museum as representational objects to build knowledge.
about the lived body; my own Leib hand actively produced the encounter with the Körper hands through the sensation of touch and intentional processes of body-site-writing and drawing. Close contact with the Körper hands in project II contributed to my understanding of the physiology of the body-site, as I was able to not only see but also touch anatomical structures normally enfolded within layers of flesh and skin. Experiencing Körper hands through my own two Leib hands also increased my attention to haptic sensation. I recognised that touching my own two hands together allowed me to experience myself as the perceiving subject (I could feel myself being touched as well as touching), while only the lived hand experiences a touch between Leib and Körper hands.22

This enabled me to identify that the lived body is also a Körper body, although in The Anatomy Museum, the dialectic between these states was emphasised through distinct examples. I realised that when I shake hands with another person’s hand, we each experience a subjective sensation of touching (Leib), but the other’s body is experienced as a purely physical object (Körper).23 The intersubjectivity of this scenario raises the issue that there is no simple distinction between Leib and Körper, as subject and object states can be interchangeable or even concurrent. This understanding enabled me to identify that the ‘uncanniness’ I had felt upon encountering the museum’s plastinated hands was in part a product of knowing that they were not abstract Körper models representing anatomical structures, but to some extent remained parts of a formerly living body, toward which I felt some empathy and ethical responsibility.

These experiences suggest that embodied processes can be used to observe physical structures of the body-site as well as build understanding of subjective states of sensory perception. Embodied knowledge of the body-site has the potential to inform the development of alternative ways for wearing and attaching wearable artefacts as well as conceptualising how they are haptically experienced.

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22 This is what Merleau-Ponty terms “double sensation.” He states, “two hands are never touched and touching at the same time with respect to each other. When I press my two hands together, it is not a matter of two sensations felt together as one perceives two objects placed side by side, but of an ambiguous arrangement in which the two hands can alternate in the role of ‘touching’ and ‘touched.’” (Merleau-Ponty 1958, p. 93).

23 On this note, Husserl asserts that the body is in an absolute position where “I am” simultaneously located as a lived body (Leib) and physical entity (Körper) and perceptions of the world are oriented around this ‘bodily space’ (Leibesraum) at a given moment (Casey 1997, pp. 220-227). This concept incorporates perceptive, emotive, embodied functions of the personally lived body (Leib), and the physical emplacement of the anatomical and physiological body (Körper).
LIVED SKIN STUDIES

When I contemplate an object with the sole intention of watching it exist and unfold its riches before my eyes, then it ceases to be an allusion to a general type, and I become aware of each perception, and not merely that of sights which I am discovering for the first time, re-enacts on its own account the birth of intelligence and has some element of creative genius about it (Merleau-Ponty 1958, p. 50).

The Anatomy Museum project indicated that body-site-writing and drawing are embodied processes that can be used to study and produce encounters between two hands, as well as describe the body-site through textual artefacts. The project also suggested that there are limitations to these processes; writing and drawing cannot wholly capture the subtle shifts in colour, texture and touch revealed through perceptive or sensory experience. Through the Lived Skin Studies, I expand my ‘toolbox’ of embodied processes to develop a deeper understanding of two hands as a body-site, focusing on ways to observe and describe the nuanced and fleeting qualities of lived skin. Beyond the anatomy museum context, where there were constraints on photography and film as well as the time that could be spent with specimens, two hands can be studied in a greater diversity of ways.

Fig. 21 – Cropped photograph of a participant’s hand
Lived Skin Studies began with the intention to simply observe the body-site. Initially, I employed photography to visually capture unique qualities of hands, including markings and textures that emerged through aging (Fig. 21), and the folds or lines distinct to an individual (Fig. 22). Photography enabled me to record subtle changes in colour, which I had difficulty describing in The Anatomy Museum. It could also zoom in on areas less readily seen with the naked eye. However, during the course of inquiry, I realised that I was using photography to document the body-site rather than to contemplate it. While the camera could visually capture and reproduce an image of the hand, I found that it was not a form through which I could be attentive or critically reflective. This is a quality that Bachelard identifies in his discussion of the miniature, where he argues that, “to use a magnifying glass is to pay attention, but ... Attention by itself is an enlarging glass” (1994, p. 158). In my practice, the camera was a magnifying glass but the immediacy of the photograph meant that I paid less attention to specific details of the body-site and instead favoured the visual record. Reflecting on previous projects, I determined that the drawing could act as a lens to direct attention toward existing conditions and qualities of the body-site.

Drawing

Pallasmaa states that drawing fuses external and internal realities of perception and thought, and that sketching is a kind of caress, a way of feeling the “surface of the subject of my attention,” internalising its character, and mimicking the rhythm of its lines with the movement of muscles (2009, p. 89-90). He identifies hand drawing as a direct haptic connection between the object, its representation, and the designer’s mind.

Fig. 22 - Cropped photograph of palm with thin layer of dried clay highlighting markings
Fig. 23 – Observational pencil drawings of small zones of skin on the lived hand, and an inscribed clay drawing of a skin detail
(Pallasmaa 2009, pp. 95-96) – a concept that strongly resembles Rendell’s (2010) relational space. The observational drawings I have produced substantially magnify the scale of the body-site, so that the lines made by my hand amplify the lines observed on the model’s hand. The drawings (Fig. 23) focus on small areas of the lived hand and map transformations of the skin that occur as the body-site changes. *Figure 23* shows a series of detail drawings (left) as well as a sequence that describes an aperture appearing when the thumb and forefinger move apart (top right). Drawing guides the encounter by slowing my hand and gaze so that I linger over details, but the process required a constant negotiation between hands and eyes and any lapse in concentration easily disrupted this dynamic. During the process, I sometimes become lost amongst the network of faint skin contours before locating a familiar landmark and finding myself back within the space of the body-site.

Bachelard suggests that, “one must love space to describe it minutely as though there were world molecules, to enclose an entire spectacle in a molecule of drawing... In looking at the miniature, unflagging attention is required to integrate all the detail” (1994, p. 159). I was conscious in making the drawings that they do not integrate ‘all detail’ of the lived hand but instead focus on engaging with small zones of the body-site and even smaller details within these zones. Through the drawings, I concentrated on describing wrinkles and creases of the skin through carefully weighted line-work. What I discovered through this approach was that pencil, while an expressive medium, was often insufficient for indicating subtle variations of depth in the lines of skin. For this reason, I created a small series of drawings inscribed on clay tablets (Fig. 23, bottom right), which enabled me to work in relief form. Drawing also had other limitations. The time required to describe the lived body through drawing, especially through a consciously slowed process, was substantial. While a helpful tool for identifying and contemplating small details of the body-site, it was not always a comfortable experience for the life model. As an alternative, I began to make casts of volunteers’ hands.

**Body Casting**

Casting has enabled me to reproduce the surface qualities, proportion and form of lived body-sites in exacting detail (Fig. 24). I make skin-safe moulds using both alginate (a compound derived from seaweed extract) and silicone. The different properties of these materials are suitable for creating moulds of a range of body-sites. Silicone moulds can be re-used, and I have found the material more suitable for making larger
casts that require reinforcement. Alginate moulds are single-use, hypoallergenic and set extremely quickly (in under three minutes), so I use the material to cast complicated forms such as hands, as well as to take impressions of sensitive areas such as the face. The relatively short time required to make the moulds means that participants do not have to hold a set position for a long period while the body-site is studied. Casts made in the moulds are three-dimensional, so I am able to materialise the lived body-site and retain its reproduction as a durable reference. In my practice, the casts are used as models for developing wearable artefact designs. I design directly in response to observed qualities of the cast, and often build ideas straight onto the model.

The quick set time of alginate means that it can capture fleeting conditions. As participants determine the form of the cast through the position of their body, de-moulding is often the point when the final form is revealed to the designer. When using alginate, the cast is removed from the mould by breaking or cutting away the substrate (Fig. 25). Over the course of the projects, I have de-moulded many hands and it is one of the most personally rewarding moments of the casting process, when embodied observation is a visibly productive and creative activity. The outcome is frequently a surprise – the participant may have contorted their hand to emphasise a certain feature, or might have curled their fingers so air bubbles form and the cast is only partially complete. These are serendipitous moments in the process of body casting. Incomplete casts present openings for design inquiry; cavities or missing parts invite speculation.
about what wearable artefacts could be developed to replace or augment the existing form. Deconstructed moulds also reveal negative spaces formed around and by the lived body, as well as uncovering the positive cast (Fig. 26).

As a part of the Lived Skin Studies, I created a series of liquid latex casts of hand spaces (Fig. 27-28). In the negative casts, I have rediscovered the terrain of the lived skin as a situational context for wearable artefacts. Negative casts defamiliarise the body-site and highlight skin details; the palm is transmuted and raised into a mountainous form. Rilke describes this as a mutable landscape that, wandering, ends its journey in other hands and “with arrival fills them” (1981, p. 95). In the research, contemplation of the hand has constituted an ‘arrival.’ I now know that understanding of the lived body-site can be built through layered inquiry with embodied processes of drawing and casting that can be applied to observe shifting forms, spaces, and surfaces of the hand. This skin-based approach can move beyond ingrained everyday conceptions of body-sites as general zones by directing attention toward the particular conditions of the body-site. Applied in critically reflective design practice, this approach can be used to reveal nuanced characteristics of the lived body-site, and inform how zones of the body are considered an embodied context for design through interaction with the cast and drawn artefacts, which can be used to explore alternative ways of attaching and locating wearable artefacts.

Fig. 27- Dyed latex casts of the interior space of a hand
**Palm of The Hand**
Rainer Maria Rilke

Palm of the hand. Sole that has ceased to walk on anything but feeling. That faces up and in the mirror receives heavenly streets, in themselves mutable.
That has learnt to walk on water when it fetches water; that walks over wells, transmuter of every way. That appears in other hands, turning its own kind into a landscape: wanders, arrives in them, with arrival fills them.

*October 1924*

(Rilke 1981, p. 95)
MATERIAL SAMPLE
The human body is enveloped by its largest organ, the skin. In the average adult, skin covers an area of around 2 metres square, varies in thickness from 0.5-4.0mm, and weighs between 4.5-5 kilograms (Tortora 1996, p. 124).

100 Hand Sites emerges from the Lived Skin Studies as a process to study transformative and transient qualities of the body-site. The project consists of a series of casts made from liquid latex that map the surface conditions of a single hand (Fig. 29). Dyed a jewel-like hue, the casts range in colour from bone to amber and blue, which places the details of skin in sharper relief (Fig. 30). Each cast maps a small zone, ranging in size from a pinpoint to a whole palm. Contemporary jeweller Gerd Rothmann’s ‘body-prints’ are a precedent example of how practice can meaningfully engage with skin as a body-site through casting techniques. Rothmann’s work is characterised by jewellery pieces that integrate cast skin surface details that often signify personal and cultural connections, so that “the remembered impression, in its changed form, takes on greater significance than the original, often overlooked, details of the body” (Miller 2009, pp. 7, 15). In my practice, casting body-sites is a process that increases attention to overlooked and minute details of skin. Iterative casting in 100 Hand Sites visualises how a body-site is continually changing, which can inform how designers develop wearable artefacts out of the observed potentials for attaching and experiencing supplementary forms of dress.

Through casting, I have been able to consider skin as a site for design. In Lived Skin Studies, casting captured the form of the lived hand and visualised interior spaces where wearable artefacts could be located. Body-sites mapped through 100 Hand Sites are an example of what Connor (2004, pp. 41-42) describes as a “topology of coordinates” that are spread across the body’s surface but are in communication with one another. I depict this relationship in Figure 29, where body-sites are overlaid and distributed across a single hand. Different conditions across the form are visualised through this constellation of points. However, as a static and two-dimensional image, the depictogram cannot capture how body-sites function in the context of the lived body, where movement alters the space between points; for instance, a point on one finger can be brought into contact with a point on the palm, which then might be in contact with a point on the thumb. 100 Hand Sites includes many casts made as multiple points converge or layer – it shows what a two dimensional
The casts do not reproduce the hand as a whole form, as in *Lived Skin Studies*, but instead they collectively build a description of the transformative body-site and reveal subtle variations in its surface conditions. For this reason, on the occasion of exhibition [See footnote 26], I have emphasised the role of the project as a process for understanding the body-site, rather than the casts being objects unto themselves. The *100 Hand Sites* are a process for building knowledge about how a body-site can transform.26

Many of the casts need to be viewed closely or with a microscope in order to recognize their origin as human skin (Fig. 31), but it is by virtue of their small scale that the casts become powerful tools for design inquiry. In my practice, smallness has been a way to approach the scale of the phenomenological body – I make small artefacts situated in relation to small body-sites. While the casts are not miniatures (they do not symbolise a larger scale ‘thing’), I have found that their role is akin to what Susan Stewart recognises in relation to the miniature:

> In approaching the miniature, our bodies erupt into a confusion of before-unrealized surfaces. We are able to hold the miniature object within our own hand, but our hand is no longer in proportion with its world; instead our hand becomes a form of undifferentiated landscape, the body a kind of background (Stewart 1993, p. 70)

The smallness of the casts enables me to view the body-site with renewed vigour. Against the scale of my own two hands, the casts offer access to a realm that Gaston Bachelard eloquently terms an “intimate immensity” (1994, pp. 183-210). Bachelard (1994, pp. 148-182), Stewart (1993, pp. 65, 67), and interior architect Andrea Mina (2009) each recognise the capacity for small things to catalyse imagination through inner contemplation or the act of making. I, too, have found that engaging with body-sites on a small scale has the potential to transform the everyday encounter with skin into a reflective experience. *100 Hand Sites* has shifted my design thinking by enabling me to observe qualities of the body-site that are both intimate in proximity and experience, and vast in detail. In the project, casting is a skin-based approach that has revealed that a body-site may be small and it may be fleeting. This suggests that temporal wearable artefacts could be developed in response to transforming spaces and surfaces of skin produced as points are overlaid or converge, as well as in response to enduring characteristics of the body-site, as observed through the *Lived Skin Studies*.
Fig. 29 – Author’s depictogram of 100 Hand Sites. Each latex cast records the fleeting surface conditions of a small body-site located on a single hand.

Fig. 30 (next page spread) – Latex casts of 100 Hand Sites, shown with detail of the skin surface texture.
The project has motivated a re-perception of skin as a body-site. This builds upon conceptions of skin developed through *Handwriting* and *The Invisible Man*, which revealed that skin and dress surfaces could be visually and textually encoded with meaning, as well as in *The Anatomy Museum*, which demonstrated that the layered anatomical topography of bone, flesh, connective tissue and skin that constitute a hand can also be invested with meaning. In *100 Hand Sites*, the skin is neither an enclosing envelope nor an anatomical topography, but is instead conceived as a series of interrelated points of contact. The casts represent a fragmented skin - a skin shed in pieces. In the process of peeling each cast from the hand, the latex naturally removes a fine layer of dead skin cells from the epidermis, which become embedded in the cast surface. Furthermore, removed from skin, the casts read like flaked scabs; they are membranous and their edges hint at openings in the body’s surface, like the apertures Lacan describes as “erotogenic” zones, which build a sense of the skin as a boundary between an internal and external self (Stewart 1993, p. 104; Handcock 2012).

This is a project that conjures an ‘invisible body’ into being; there is an eerie sense that the casts are fragments separated from their source. Yet the pieces evoke an *absent* body rather than indicating the limits of a transparent form like the Invisible Man’s. The collection maps moments that have passed, and materialises fleeting conditions that have briefly existed as the body transforms and ages. The casts, too, will continue to change over time. Latex is an organic material prone to wear, hardening and deterioration when exposed to skin oils and sunlight. This has created new ways to conceptualise wearable artefacts, by suggesting that a skin-based approach to practice could integrate knowledge of the temporal and transformative nature of the lived body-site as well as temporal and transformative materials. For the skin-based field, this suggests that there are openings for the development of supplementary modes of dress that utilise the duration of contact between material and skin as a part of the experience of the wearable artefact. In my practice, this also marks a significant shift as I expand my thinking beyond the idea of static and enduring wearable artefacts and conceive of designs that could be changeable and fleeting. This is elaborated upon in Part 2 of the dissertation, where I investigate how a range of temporal wearable artefacts is made, worn, and subjectively experienced.
Fig. 31 – Sample scale of cast body-sites in relation to the hand, and enlarged microscopic detail
Through the suite of projects in Part 1 of the dissertation, I have come to realise that an in-depth understanding of the phenomenological body-site requires extensive physical mapping as well as knowledge of how it is subjectively and culturally invested with meaning. Through the process of describing embodied and culturally situated body-sites in the Body-Site-Writing projects, and studying Leib and Körper body-sites in the case study of Two Hands, I recognised that this depth of information could not be gathered through any one process or approach. In the 100 Hand Sites project, for example, I found that describing the body-site through casting was a process that could conceivably continue without end, because of the difficulty of mapping a continually transforming lived hand. Rather than trying to capture the totality of the body-site in one large project, I have instead drawn upon many projects to collectively build an understanding of subtle states and small temporal changes in skin. Through the series of small projects, I have been able to accrue a collection of studies that, when unified, constitute expanded knowledge of skin as a phenomenological body-site.

*Fig. 32 (left) – Johann Heinrich Füssli (1778-1780), Der Künstler verzweifelnd vor der Grösse der antiken Trümmer ('The Artist Moved to Despair Before the Grandeur of Ancient Ruins')
*Fig. 33 (right) – Palm of the hand cast in dyed liquid latex

27 This concept was presented in my paper entitled *Life Drawing / Life Writing: Studying the body as a site for/of design*, at the international *Drawing Out* symposium hosted at RMIT University’s Design Hub over 17-18 April 2013. Here, *The Invisible Man, Lived Skin Studies*, and *100 Hand Sites* were tested amongst academics from RMIT University and University of the Arts London, who specialise in drawing, art criticism and practice based research.
I have reflected on this approach using the analogy of Johann Heinrich Füssli’s (1778-1780) drawing Der Künstler verzweifelnd vor der Grösse der antiken Trümmer (The Artist Moved to Despair Before the Grandeur of Ancient Ruins) (Fig. 32). In Füssli’s drawing, the past is conceived as a monumental stone figure that has collapsed into abstract dismemberment (Harbison 1991, p. 108). Yet even though the artist despairs at the task of reviving the ruins, the separated fragments retain a sense of belonging to a ‘whole’, even if this whole is unattainable. I use the image to describe the nature of what the Body-Site-Writing and Two Hands case studies have produced, and what this enables me to do. The suite of projects have shown that a complete or ‘whole’ image of skin as a body-site is irreconcilable with the nature of a phenomenological body, and to paraphrase Holmes (Conan Doyle 2009 [1887], p. 11), a mortal life is not long enough to attain the perfection of skills required to do this.

However, the projects collectively form a description of the qualities of a body-site. This knowledge has been built through the skin-based model of practice, which has layered different approaches to studying the body-site. This process has equipped me with critically reflective tools for observing and communicating observable qualities of body-sites, including body-site-writing, drawing and casting. The tools can be used to draw out ‘invisible’ information embedded in culturally constituted textual and visual artefacts, as in Body-Site-Writing, as well as to engage with Körper and Leib bodies at a range of scales, as in Two Hands. The projects demonstrate that understanding of a body-site can be produced through the embodied processes of a critically reflective design practice, and that this knowledge can be built through embodied encounters as well as through critical analyses of medical and cultural texts. This has enabled me to build a layered understanding of subjective, physiological, sociological, and propositional functions of skin as a body-site (earlier depicted in Fig. 5). Through the projects, I have been able to develop ways to critically and reflectively engage with the skin as a body-site, and to observe ‘invisible’ qualities that can suggest alternative ways for how wearable artefacts could be subjectively experienced, attached to body-sites, and textually or visually attributed with meaning. This mode of practice positions body-sites as a source of conceptual impetus for wearable artefact design. Body-sites become a focus for encounters between the skin and wearable artefacts, rather than reinforcing the body as a reductive background for made artefacts.
WEARABLE ARTEFACTS

(I am wearing artefacts on my skin)
In the following suite of projects, skin is dressed with temporal wearable artefacts developed in response to observed qualities of the lived body-site. Discussion of the Material Application Projects builds upon ideas outlined in Part 1, in which layered inquiry revealed that the body-site can be embodied, culturally situated, and simultaneously Leib and Körper. The following projects represent a skin-based approach that moves beyond object-based practice by focusing on small body-sites as a context for designing and wearing temporal artefacts of dress. Building on the embodied processes of description established through Part 1, the process of applying or engaging with wearable artefacts for a brief duration is conceived as a simple way of increasing attention to the conditions and experiences arising in the intermingling space of a skin that wears.

The preceding projects revealed that phenomenological skin is a transformative body-site. Lived Skin Studies described the shifting surface and forms of hands at different scales and in different mediums, while critical analysis of The Invisible Man showed that alternative skins could be produced through cultural texts and imaginative speculations. The studies revealed changeable qualities of skin and developed processes for observing and describing these conditions. This has broadened my approach to practice through suggesting that there is potential to design and make wearable artefacts in response to transient or evolving qualities of the body-site. In the following projects, I place lived skin at the centre of practice: the process of dressing is a means to engage with fleeting, subjective experiences of wearing artefacts in brief contact with the skin, which could inform the design of future temporal wearable artefacts.
Gold Leaf emerged out of interests shared with 100 Hand Sites. Through the project, I aimed to draw attention to small surface details of the skin and to experiment with temporary methods of attaching wearable artefacts to the body-site. Considering zones of the body as an exploratory site for design has precedent in the work of contemporary jewellers such as Gijs Bakker and Gerd Rothmann. From the 1970’s, their practices marked a departure from the previous conception of bodies as a series of basic geometric shapes encircled by jewellery, through experimenting with alternate modes for connecting bodies and wearable artefacts (Van Zijl 2005, p. 33). During the 1980’s, at the height of the contemporary jewellery movement, they sought to draw attention to the body’s potential as a site for invention and performance (Cohn 2009, p. 30). This approach is also evident in the work of contemporary practitioners including Naomi Filmer (2012), who has designed wearable artefacts that suggest prosthetic functions, visualise extended or absent body spaces, and explore inversions of dress by supposing that the body could be an embellishment for non-human objects. While these practices are examples of how the body-site can be a formative space for conceptualising and situating enduring wearable artefacts, I propose that there are additional
Documentation through film, photography, and sound recording, as well as interviewing and questionnaires was approved by the Human Research Ethics Committee, in addition to body casting with alginate and silicone, and material application tests using commercially available cosmetics, liquid latex, gold and silver leaf.

In the Gold Leaf project, participants selected body-sites that would be dressed through the application of a temporal wearable artefact. These were made in response to observed forms and surface features of the chosen body-site, as well as the wearer’s personal preferences. Sites that were elected for adornment included ears, nostrils, hands and arms, breasts, fingers, toes, cheeks and lips. For the most part, participants were interested in adorning readily accessible and publicly visible areas. The material application process, depicted in Figure 35, involved the skin of the body-site being dressed with a base application of Vaseline or special effects quality liquid latex, which was then overlaid with gold leaf. Excess material was brushed away from the base, leaving the body-site covered in a gilded veneer. The wearable artefact was temporarily attached to the body-site using the adhesive qualities of the materials. Over the course of being worn, the wearable artefacts changed in response to conditions of the body-site. The metal leaf perceptibly shifted with the wearer’s actions, settled into grooves and lines with repeated gestures, and cracked in response to skin stretching (Fig. 36). The wearable artefacts took on surface qualities that mirrored those of the skin and directed attention to particular qualities of the surface, particularly its texture and movement. Gold Leaf acted as a medium that slowly visualised the skin’s muscle memory and elasticity.

Participant feedback on the subjective experience of the material application was primarily verbal, as I found that few people returned written questionnaires after the event but would otherwise freely share their thoughts in discussions during and after the actual application process. Many participants expressed fascination at how the gold leaf moved with the skin of the body-site (Fig. 37), and would manipulate the area repeatedly to see what visual changes occurred (Fig. 36). Some also associated the temporal wearable artefact with particular types of jewellery commonly worn on the body-site, stating, for instance, that the wearable artefact appeared similar to a ring on the finger (Fig. 37-39).

A surprising outcome of the verbal feedback was that participants often shared stories about the chosen body-site. These included imagined modes of adornment, favourite jewellery pieces, and emotive feelings about the body-site. In one case, the participant explained that they had chosen the body-site (a scar) because it was a perpetual reminder of a frightening and
painful ordeal; they felt that the material application had helped them to see the scar in a new light, as the smoothness of the tissue became a beautiful feature that contrasted with the rougher skin surrounding the area. This response epitomised the wonder that some participants expressed upon perceiving small details and spaces of their skin that had previously gone unnoticed. The material application was a simple mechanism for drawing attention to existing conditions through the novelty of wearing a gold leaf design as well as through the act of asking participants to choose a body-site that would become a locus for practice. This suggests that there is potential for wearable artefacts to be developed in collaboration with participants to encourage greater perceptive engagement with their own skin.

The temporal nature of the materials used in the project meant that wearable artefacts only existed in relation to the application of dress on the body-site. Unlike enduring wearable artefacts such

*Fig. 37 (top)* - Subjective reflection on the experience of Gold Leaf between fingers  
*Fig. 38 (middle)* - Gold Leaf application between fingers  
*Fig. 39 (opposite page)* - Detail, liquid latex and gold metal leaf peeling from skin
as clothing and jewellery-objects that persist before and after the act of dressing, the temporal wearable artefacts were produced through the material application process and had an ephemeral lifespan; they collapsed when removed from the body (Fig. 39). Despite being made aware that this was a temporal mode of dress and being given instructions on how to remove the latex, some participants found the material wear unnerving, as the gold leaf began to peel away from the skin. Situated so closely to the skin, the wearable artefact was not only a form of dress but became integrated with the wearer’s perceptive experience. The materials warmed to the temperature of the body and moved seamlessly with the skin, and so the disintegration of the piece, though expected, was not always a pleasant experience for wearers who had come to consider it a part of their body image.

The project’s skin-based approach builds upon a concept expressed by contemporary jewelers including Rothman (2009, p. 386) and Cohn (2009, pp. 75, 78), who suggest that an artefact is only fully realised when the wearer places it on the body, where it is invested with personal and cultural meaning. In Gold Leaf, the wearable artefact was produced through the context of the body-site. Akin to how the Invisible Man’s skin defines the boundary of the otherwise formless fog and dust with which he comes into contact (Wells 2005 [1897], p. 116), the skin of the body-site gives the material application form and meaning. Through the project, I was able to test how simple supplementary modes of dress could encourage subjective contemplation of the body-site, and experiment with temporary modes of attaching materials to the skin. The process enabled me to develop wearable artefacts that changed as a result of the skin’s transformative qualities, and drew participants’ attention to dynamics between their phenomenological body and dress. It clarified that temporal acts of dress can subtly affect subjective experiences of skin and open up opportunities for investigating how wearable artefacts can increase a qualitative perceptive engagement between skin and dress.

“This sentiment is reflected in the relationship between Theresa Iten and her ear ornament made by Gerd Rothmann. Iten (cited in Rothmann 2002, p. 28) states, “I have a constant feeling that ‘something is missing’ when the ‘strip of gold’ is not on my ear. It is the most precious of all the jewellery that I possess, and I suppose that, over the years this feeling of indispensability must have grown of its own accord.”
Gold Leaf Photo Essay:

Fig. 40 - Detail, Vaseline & gold metal leaf application between fingers

Fig. 41 - Liquid latex & gold metal leaf application, ear conch

Fig. 42 - Detail, application on ear conch

Fig. 43 - Detail, application on ear conch

Fig. 44 - Liquid latex & gold metal leaf application, bent elbow

Fig. 45 - Detail of application, straight elbow
Fig. 41 (opposite page)
Fig. 42 (top)
Fig. 43 (bottom)
Fig. 44 (opposite page)
Fig. 45 (top)
Following *Gold Leaf*, the *Tanlines* project developed out of an interest in subverting existing modes of temporally dressing skin. I became interested in how artificial tanning products are used as a cosmetic way to mimic the aesthetic of skin darkening through exposure to ultraviolet light. The contemporary popularity of tanning in Western culture largely traces back to trend-setting celebrities including Coco Chanel, who reputedly returned from a luxury vacation on the French Riviera in 1923 sporting a “holiday tan” that thereafter became synonymous with leisure and a privileged lifestyle (Jablonski 2006, pp. 159). While tanned skin remains popular, in the last twenty years medical authorities have warned of probable links between skin cancer and premature ageing due to sunbathing outdoors or at tanning salons, which has spawned a market for artificial tanning products (Brooks et al 2006, p. 1060; Jablonski 2006, pp. 159-160). These products include cosmetic powder bronzers as well as lotions, gels and sprays that chemically react with the skin to impart a longer lasting sunless tan. Stanley Levy (2001, p. 339) reports that over 20% of young adults in Australia and the United States have used artificial tanning products, while a study of 1509 Australian respondents by Girgis et al (2003, p. 530) ascertained that approximately a third endorsed the appearance of artificial tans.

*Tanlines* addressed the ways that temporary artificial tanning could alter the subjective experience of skin. The wearable artefact took the form of a deeply tanned ‘body-suit’ that covered my skin from neck to ankles and wrists. As the project was staged over winter, when a natural tan is less likely to occur,

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5 Dihydroxyacetone (DHA) is the active ingredient in artificial tanning solutions. It stains the *stratum corneum* (the uppermost layer of the epidermis) through a reaction with amino groups that produce melanoids, (Levy 2001, pp. 339-340).
the idea was to create a defined junction between my natural skin and the wearable artefact in zones that could be seen by others and myself when I was fully clothed. For the project, makeup artist Lee Norris applied an artificial tanning solution to my skin over a latex resist (Fig. 46-47). Areas covered by the liquid latex retained the naturally pale tone of my skin, creating ‘tan lines’ that contrasted with the darker colour effected by the cosmetic product.

Anecdotal evidence suggests that artificial tans carry a certain taboo: a ‘bad tan’ is one that appears unnaturally dark, uneven or overly orange. Commercial cosmetic tanning solutions first appeared in the 1950’s but only gained widespread popularity in the 1990’s when improved formulations meant that they appeared less orange-brown and created a more natural finish (Levy 2001, p. 339). The packaging of the product chosen for the project (ModelCo’s Tan Airbrush in a Can) boasted a “unique blue-green colour base” intended to combat “that unwanted fake tan look”, though it appeared far from natural when applied to my own skin (Fig. 47), at least partly due to the body glitter deposited by the solution. In producing the wearable artefact, I aimed to subvert the culturally accepted practice of cosmetically adorning skin with artificial tanning products for a ‘natural’ look. I initially experimented with a range of artificial tanning products including lotions, mousse and aerosols, to find a solution that would contrast with my tone of skin (Fig. 48-50). I also tested a variety of materials that could be used as a resist to create a patterned sunless tan.

Fig. 47 - Artificial tan application process (Makeup Artist: Lee Norris; Film: Louise Simpson)
Fig. 48 (top) - Tests with artificial tanning mousse
Fig. 49 (bottom) - Tests with artificial tanning lotion
Fig. 50 (opposite page) - Test with artificial tanning aerosol
The pattern developed for the project was based on the anatomical structure of sudoriferous (sweat) glands, as depicted in Henry Gray's *Anatomy of the Human Body* (2000 [1918], fig. 946). Touching upon the interests of *The Anatomy Museum*, my sudoriferous lace design (Fig. 51) magnified minute physical structures of the body and arranged representations of these forms into two designs: a strip that would be used as lace edging on the neck, wrists and ankles, and a larger set of motifs that could be applied across a broader expanse of the tanned area. The sudoriferous lace was printed onto carbon transfer paper, which is most often used for placing tattoo linework on the skin. In preparation for the application, I had followed instructions on how to have a 'good' (evenly coloured) spray tan by showering, exfoliating and shaving. Dettol was applied to transfer the carbon print onto my skin, and the lace design was traced in liquid latex (Fig. 52).

The process of transferring the design, outlining the latex resist, and spraying the artificial tan took almost eight hours. During that time, my movement was severely limited to prevent the latex adhering to itself and distorting the pattern. I did not find the experience physically comfortable, nor was I used to being almost naked while working with clothed people. In the days following the application, the feeling of discomfort prevailed: documenting the tan required me to again undress, this time in front of a photographer, but even when I was fully dressed, I felt uneasy exposing just my neck and actively disliked the staining on my feet. While I did begin to like the effect of the tan on my arms and legs after the first few days, it still felt like I was not 'in my own skin.'
When I began the project, I didn’t expect that I would feel so uncomfortable as a result of the experience. Yoo and Kim (2012, pp. 14-18) identify that consumers of artificial tanning products are largely guided by interpersonal motives. The comments of friends, family members and partners plays a significant role in tanning product consumption and consumers weigh up a series of perceived risks, including the social risk of not appearing tanned, whether the tan will look unnatural, and the risk that their psychological self-image may be adversely affected (Yoo & Kim 2012, p. 15). Apart from benign looks from curious strangers, I only encountered interest and support from other people, and my discomfort wasn’t a result of those surrounding me. Surprisingly, my discomfort was due to the affect of the wearable artefact on my self-image. It took until the fourth day for me to adjust to the two-tone colouration of my wrists, marking the slow integration of the artificial tan into my body image. However, the continual change and deterioration of the artificial tan (Fig. 53) made it difficult for me to fully accept it as a part of my skin.
In photo-documentation of the project (Fig. 53), it can be seen that the carbon transfer residue disappeared by the third day, and by the tenth day, the tan had significantly faded and begun to form patches of uneven pigment. The soles of my feet, elbows and knees stayed deeply tanned for much longer than the rest of my skin. Stanley Levy states that the stratum corneum (the layer of dead epidermal skin cells where artificial tan is produced) is thicker and more densely packed in these areas, and its uneven texture often leads to a blotchy appearance. Furthermore, he suggests that artificial tan may be used “as a measure of stratum corneum turnover time” (Levy 2001, p. 341). This means that the fading and mottling of my skin was an indicator of tanned dead skin cells being shed from my lived body and being replaced with new cells.

I had originally staged *Tanlines* with the intention of exploring how the encoded semiotic meaning conveyed by cosmetics might be subverted. Naturally tanned skin has the potential to visually communicate time spent outdoors or on a sunbed, but skin dressed using artificial tanning products only communicates a desire for a certain aesthetic or for the socially symbolic connotations associated with that aesthetic. The wearable artefact can be a means for constructing a particular appearance (a ‘natural-looking’ tan), and associating it with a particular scenario suggested by that appearance (healthy, outdoor, sun), if only for the brief period of time before the tan begins to flake away. However, I have found that if not in accord with self-image, the use of temporal wearable artefacts may have a detrimental impact on subjective experiences of dress. Artificial tan is a temporal wearable artefact that is commonly used to embellish skin and attain a socially desirable aesthetic, but rather than subverting the perception of skin by others, I found that my own perception of my skin was altered. The project also revealed the potential for wearable artefacts to respond to, or reveal the temporal lifecycle of skin as it breaks away from the body, which I explore further in *The Dust Project*. 
Pre-application: In the struggling light I am preparing to create a new skin for myself – an artificially tanned one, at odds with the Winter freeze and my current pale visage.

Today’s new skin requires a smooth canvas, so I am minutely examining what I normally only glimpse in passing... I scrub, take up the razor, remove the stubble from my legs, and smooth on cooling ointment. I notice pinkened bumps and mottled tones and a rising ridge of blued veins through the steam...

I like my arm hair. It’s long and pale gold and soft. I shave and dread the future regrowth. The pale hair lies in a grey clump that vaguely disgusts me, but I can’t bear to throw it away... I’m not entirely sure that I like being hairless. The smooth, flawless female body is not an ideal that I have ever aspired to, and I have liked my hair; and my freckles and moles and scars and marks for the most part. So this hairlessness of my arms, the part of me most often seen unclothed (other than my face), leaves me feeling not more feminine, but rather revealed, uncomfortably naked or bald...

Post-application: My skin smells of something like marshmallows and I’m afraid to turn my head because the latex on my neck keeps sticking. My whole body, except my face, feet and hands, is an unsettling colour. It’s not so much a tan but more a strange orange with a deep green undertone and a sparkly finish. I’ve lined my bed with old towels because I have to sleep coated in the latex and tanning solution overnight to allow it to develop. I’m terrified it either won’t work or will rub off on one side.

Day 1: When I looked down in the studio my whole body seemed more compact or defined somehow, like tanning has toned my skin or made it stand out in greater contrast to the world...

Day 4: Odd looks on the tram from some girls staring at my arms. Made me smile at the time, but I also couldn’t bring myself to make eye contact. I feel uncomfortable with this strange discolouration, mostly the irregularity of it. I’ve been keeping my neck covered and hate the dark patches on my feet and elbows most of all.

Day 8: The colour has mellowed on my arms and legs, and there is a clear distinction between my natural pale wrists and the tanned lace design that I like the appearance of. On my neck it’s not as neat, and I feel self conscious because it’s already looking mottled. The soles of my feet look like they’ve been stained in dark coffee, and the colour hasn’t budged at all in over a week, like they’re constantly dirty... I’ve noticed the stippled irregularities near my armpits where my bra rubs, like my skin has some sort of disease.
Tanlines Photo Essay:

Fig. 54 (opposite page) - Artificial tan applied over liquid latex resist (Photographer: Louise Simpson)

Fig. 55-58 - Details of Tanlines 1-2 days after application (Photographer: Matthew Burgess)
Fig. 57
FINGERS

‘In addition to whorls and loops, fingerprints contain visible openings for the pores of sweat glands as well as end points and branch points that are located in unique places and orientations. The overall patterns never change throughout a person’s life’ (Jablonski 2006, p. 101).

The wearable artefacts in the Fingers project are, in a material sense, ‘second skins’. They are thin, flexible, hollow forms that reproduce surface details of the lived hand. Volunteers’ fingers are cast in alginate moulds to produce plaster replicas that are dipped into dyed liquid latex. This method is used to make colourful latex casts that preserve surface details of the original fingers on the interior surface, where they are not readily seen but can be felt. Multiple skin-like latex casts are joined together in tactile arrays that are arranged by size (rather than the sequential order of the hand), and these arrays are grouped by tonal gradations of green, blue, purple, red or yellow (rather than by individual identity). The result is a series of wearable artefacts that combine the personal markings of many individuals. The artefacts are a hybrid collection of skins that have become intermingled and collective through the process of body casting.

While casting can be used to create wearable artefacts that are perfectly fitted to a person, in the Fingers project, casting is used as a process of re-production. Multiples are derived from the original lived hands and the process of fusing these casts together creates an artefact that everyone and no one has ownership over. While a bespoke made-to-measure piece would normally be distinguished by its perfect fit to one individual’s body, Fingers combines the physical measurements and unique markings of many. Building upon the interests of Hand-writing and the case study of Two Hands, the wearable artefact is focused on how meaning can be generated out of close engagement with the hand as a body-site, but rather than reading or body-site-writing this understanding, it is built through the haptic encounter.

Fig. 59 (opposite page) – Material samples, dyed liquid latex. Image detail of oil deposited from a fingerprint on cast latex
As a project intended for interactive exhibition, *Fingers* invites users to actively engage with the cast artefacts, but the pieces do not correspond to the form of an existing hand. The latex arrays include a range of different shaped and sized casts taken from many different participants, and in each piece, the cast fingers outnumber the fingers of an individual hand. Cohn states that “reproduction technologies have the potential to symbolically remove the ‘I’ from equations of authenticity and ownership in art activity” (2009, p. 174), and in this project scenario the repetitive act of casting literally begins to degrade individual identity. Using the same moulds over and over again leads to the deterioration of the fingerprints and individual surface markings embedded in the casts as the plaster slowly breaks down.

Simultaneously, the reproduction and arrangement of the latex cast fingers generates a hybridised form that is an alternative to the personal identity of a single wearer. By incorporating the fingers of many hands, the project confounds how wearable artefacts might be worn. Faced with an excess of fingertips, users are encouraged to consider specifically how to use the wearable artefacts. This propositional scenario draws attention to the act of dressing as users manipulate the artefacts and engage with how the pieces could relate to the body-site. This skin-based approach to practice, in which the body-site and wearable artefact are defamiliarised, has potential as a way to conceptualise different forms and ways of dressing.
At NORDES 2013 in Copenhagen, Sweden, both Fingers and Prosthetics were presented at the conference exhibition and discussed in the accompanying paper (Handcock 2013e). It was observed that of the attendees interacting with the Fingers, the majority digitally manipulated the flexible forms by tentatively inserting first one finger and then another into single openings before experimenting with different arrangements of the excess fingers in relation to their own hand. In my design statement accompanying Fingers at the exhibition, the method of wearing the project artefacts was not explicitly outlined. Instead, I suggested that wearers would encounter ‘unfamiliar bodylines’ within the interior of the artefacts, a statement intended to encourage tactile exploration. Through touch, the fingers are realised as palpable hollows with detailed interiors that are embossed with the textural lines, prints and skin folds of the cast volunteers. The subtle differences between these details are not revealed until the Fingers are held and felt.

The project is a discursive avenue to address emergent relationships between skin and wearable artefacts. Fingers function as props with the potential to offer insight into the role that touch may play in how we relate to our skin and the skin of others. The materiality of the wearable artefacts brings into question not only how something might be worn, but also what is being worn. Dressing the body in a skin-like material can be an uncanny experience, and wearing the skin of another (or multiple others) holds connotations about personal identity as well as the negotiation of skin as a boundary site. In The Dust Project, the concept that a skin that wears could intermingle many individuals’ body-sites is further elaborated. This becomes a speculative context for a skin-based approach to design practice.
In Prosthetics, I adapted special effects makeup materials and casting processes to develop temporal wearable artefacts that could dress the body-site and produce an ‘alternative skin’.

My drawings for the project (Fig. 64) overlaid artistic renderings of the body-site with creative images. This process resembles what Bryan Lawson (2012, pp. 43-44) describes as a “fabulous drawing”, in which the drawing process functions as a way to organically develop and imaginatively explore ideas. In the project, I worked between fabulous drawings and clay models, which allowed me to incrementally evaluate and alter design ideas in an evolving two-dimensional and three-dimensional form. I also made moulds of the body-site and created positive plaster replicates. The plaster body-site was used as a base for sculpting directly onto the skin and creating fictional objects. It enabled me to respond to the qualities of the observed, underlying skin while building alternative forms and textures on top. Some of these models were retained as sculptural pieces (Fig. 65-66), while others I deconstructed and re-used as a base for further haptic thinking. Through the skin-based process, I was able to utilise drawings, models and casts as speculative devices for imagining how wearable artefacts might emerge from (or merge into) the body-site.

This layered mode of design led to the creation of a series of jewel-like prosthetic appliances (Fig. 67, Fig. 69). I cast a thin ‘second skin’ of dyed liquid latex in plaster moulds made from the sculpted models. The small, flexible prosthetic pieces could easily be attached to lived skin in order to effect a temporal transformation of the body-site’s appearance (Fig. 68).¹

¹ I use liquid latex as an adhesive rather than spirit gum, which is favoured by makeup artists, because it is easier for participants to remove.
Fig. 64 - Speculative drawing of prosthetic wearable artefacts on the hand
Fig. 65-66 (following page spread) - plaster cast hands with liquid latex prosthetics
Fig. 69 (top) - Cast and modelled prosthetic forms
Fig. 70 (bottom) - Depictogram shown at NORDES 2013 with the prosthetic appliances
In the process of material testing for 100 Hand Sites and Prosthetics, I gained a substantial understanding of the properties of liquid latex. It can be cast to appear glass-like or matte, opaque or translucent, and can be coloured with a range of dyes. In Prosthetics, as well as in Fingers, dye was used to variously distinguish or blend wearable artefacts with skin, to either amplify the effect of the prosthetic as an artefact of dress, or to disguise it so that it appeared like a morphed crystalline growth emerging from the body-site, as shown in Figure 68. However, I also found that changes could be produced in the wearable artefact through the process of wear. Latex is an organic material that breaks down over time, a process that is accelerated with exposure to heat, sunlight and oils. I found this an interesting tension as it meant that in addition to being temporally worn on the skin, the prosthetic appliances also wore out in response to the natural excretions of skin.

Furthermore, the act of wearing the prosthetic artefacts was revealed as an embodied process with the potential to create alternative skin textures. In 100 Hand Sites a thin mix of liquid latex enabled me to study the changing morphology of skin in fine detail but the delicate casts often tore if the skin moved while the latex was drying. The latex mix applied to the skin in Prosthetics was substantially thicker than the latex used in the earlier project, and had the surprising result of capturing mobile qualities of the lived skin on the exterior of the wearable artefact as the application dried (Fig. 71-72). Rather than tearing the latex, the movement of the body-site became a means to create alternative skin textures; the process could be further utilised in future to develop a skin-based range of textured finishes.

The Prosthetics project was presented at the NORDES 2013 exhibition under the title Hands On. A depictogram (Fig. 70) and design statement invited participants to experiment with the form of their own hands by developing a wearable artefact using provided prosthetic appliances and materials, and to document their creation on camera. Some attendees left comments on the work, enquiring about the materials and showing an interest in whether the process could be applied to other parts of the body (in compliance with ethics parameters, I had only recommended the hand as a body-site). While most of the participants’ photos were blurred because of dim lighting at a close range, images showed that attendees actively used the exhibition materials to speculate on how and where the skin of their hands could be dressed. During the exhibition opening, I observed that haptic play was the primary method that participants used to creatively generate ideas for their wearable artefacts: people squeezed and twisted the prosthetic appliances, tested the liquid latex colours...
before choosing one, and rearranged the materials in different combinations on their body. The exhibition setting revealed that self-directed material applications could prompt participants into creating a range of temporal wearable artefacts that transformed the appearance of small body-sites.

Through drawing, model-making and casting, I have placed lived skin at the centre of practice, as a means to develop propositions that could inform the design of future temporal wearable artefacts. Modifying special effects makeup processes to create prosthetic appliances has been a skin-based approach for imaginatively developing ‘alternative skins’. Working with liquid latex in the project has enabled me to make skin-like forms and textures that can be used to temporally dress lived skin, generating imaginative and material relationships with the body-site that have the potential to subtly shift subjective experiences, as revealed in *Tanlines* and discussed in *The Invisible Man* project. Tested in the exhibition setting, it was also revealed that *Prosthetics* could function as a prop to encourage speculation about how wearable artefacts relate to the skin. This approach could be utilised as way to conceptualise alternative forms for wearable artefacts that are in close contact with the skin, and to create temporal transformations of the body-site that encourage imaginative engagement with the skin.

*Fig. 73 (opposite page) - Cast latex appliances shown with cast gold embellishments*
WEARING SKINS

(I am a skin wearing away into the world)
NOSTALGIC SKIN

In the PhD research, skin has been studied as a phenomenological body-site for the probable situation and development of wearable artefacts. I have investigated the conceptual and corporeal potential of skin as a body-site through the device of a skin that wears by proposing a series of scenarios: firstly ‘I am wearing skin’, then ‘I am wearing artefacts on my skin’, and finally ‘I am a skin wearing away into the world’. In the process of navigating my design practice through studies of ‘lived’ (Leib), ‘object’ (Körper), and speculative states of a skin that wears, I have developed a layered knowledge of skin as a body-site. In this final project, I study how the embodied totality of the lived body’s surface becomes a subtle, un-unified Körper through the course of its natural lifecycle. The Dust Project draws together interests from across the PhD, including; study of physiological qualities of skin (The Anatomy Museum, Lived Skin Studies), reflection on the miniature (100 Hand Sites), themes of revelation and the unseen (The Invisible Man), and the possibility of designing for ‘other’ skins (Prosthetics). The Dust Project progresses this research by challenging the notion that wearable artefacts should be designed for a spatially unified skin with a cohesive form and defined surface. This invites thinking about how practice can explore the durational and situational limits of dress in relation to skin as a body-site beyond a unified corporeal body.

In The Dust Project, textual and conceptual artefacts study the qualities of an extended skin and its potential to form new relationships with dress. Skin is studied through the process of collecting dust, which becomes a microcosmic representation of how lived bodies temporally break down and intermingle with the environment at a minute level. Collecting dust is a speculative investigation of the spatial and temporal extensity of skin as it transitions from Leib to Körper. In the research, I distinguish between bodies of dust and bodies as dust, a concept that is further elaborated in the interleaved publication, The Eternal Grind (Handcock 2013b). The corporeal body as dust is the focus of this project, which engages with the poetics of dust as a catalyst for considering skin as a hermitic and transformative body-site. It explores the final stages of a skin that wears by proposing: I am a skin wearing away into the world.
This premise is based on the lifecycle of skin: as a matter of survival human skin cells peel from the lived body after twenty-eight days, at which point they are reduced to dust (Kristeva 180, p. 3; Powell 2006, p. 130). The process produces an extended body as dust that expresses the transience and ultimate mortality of the lived human body. This idea has been explored by scholars including Joseph Amato, who states that human bodies are living "dust mills" (2000, p. 17), and poet George Herbert, who pronounces that "flesh is but the glasse, which holds the dust / That measures all our time; which also shall / Be crumbled into dust" (1941, p. 65). Herbert suggests that dust is not only a symbol of the passage of time, but time is enfolded into the phenomenological body. This follows Merleau-Ponty's (1999, pp. 155-156) statement that bodies combine and include space and time. Rather than being a simple symbol of skin wearing away into the world, dust is a fragile quasichoate skin in a state of active transition.¹

Dust cell cultures collected through The Dust Project have shifted my thinking about skin as a body-site. The act of collecting dust has revitalised the body-site by demonstrating how skin can exist in states that are intermingling, extended, and transformative. In the research, dust is a means to contemplate corporeal change and to shift between different scales and perspectives. It is a medium for imagining what lies in the realm of the microscopic and unseen, as well as a metaphor for what intermingling states of skin could offer for design practice. The nature of the body as dust suggests that designs could develop in response to new relationships that might emerge across a topology of skin fragments. The project gives rise to speculations about how wearable artefacts might respond to a body-site with an ambiguous form and boundaries. The Dust Project is a stepping-stone to cogitate upon the way critically reflective design can respond to this challenge through applying the metaphor of dust as a topology for practice. Engaging with the poetics of dust - its capacity for embodying corporeal temporality, fragmentation, imagination and transformation - I have developed a conceptual nostalgic skin that is spectral and diffuse. Through this chapter I present nostalgic skin as a concept to speculate on how a critically reflective design practice skin might apply the poetics of dust to an extended body-site.

¹ Connor uses the term "quasichoate" to describe the condition of "a body that is as diffuse or scattered as it is possible to be while yet maintaining a minimal or even imaginary cohesion" (2008, p. 7).
The Eternal Grind: Bodies as dust, bodies of dust

Tarryn Handcock
(2013b)

Abstract

“There was nothing on earth so big that it might not be made small”
(Amato 2000, p. 17).

Dust is an unsettling and permanent presence, marginal and transitional, without site or bounds. It engenders a fear of the unseen, an anxiety and horror at the dissolution of matter to a minute scale; it is amorphous, all pervading, and knows no boundaries. This chapter explores bodies that are decentralised and in a state of dusty disintegration. The skins and cells of our moving, breathing bodies disperse into the world, mingling with foreign matter and waste as we pass through space. Through a discussion of dusty bodies - bodies of dust and bodies as dust - the corporeal body in a state of dissipation is addressed by asking: where and when does the body begin? Where may it end? The first section of the chapter examines the body’s relationship with dirt and dust, the concept of social pollution, and cleaning rituals. The second section explores the skin as a flexible boundary and the ways that bodies may be reduced, extended, and transformed. In the third section this transformative body is discussed in terms of fear and abjection as it is reduced to an undelineated, dusty form over time. Finally, the question of how the body’s flexible boundaries might offer up positive possibilities is addressed, with examples of dust used in productive, creative practice.

1 This e-book chapter (2013b), has evolved of a conference paper (2013d), and was selected for development for the forthcoming edited hardcopy publication, Body Tensions (Buccieri 2014). In this version of the e-book chapter, I have inserted footnotes with additional information supporting the primary discussion, and modified the referencing system to correspond with the system used for the dissertation text.
Dusty Bodies, Dirty Bodies

In this chapter, dust is discussed as a substance generated through the dissolution of a unified form, specifically the grinding away of dander and dandruff (dead skin cells), nails, and hair from the living human body. Within the context of the body, dust represents the entwining of human physiology with the world over time, a blurring of where the self begins and ends, and a simultaneous rejection and affinity between the body and its waste.

Dust is a complex and changeable substance that is both omnipresent and minute, meaning it is a constant presence with a tendency toward invisibility in everyday life. It goes unnoticed or unseen by existing at the very edge of what can be seen with the naked human eye. On occasions that dust is brought to our attention, perhaps as bright motes floating in a beam of sun or as a powdery slick gathered on an exploratory finger, the human response can vary a great deal: a moment of wonder at a shift of light suddenly revealing an invisible world, or disgust and guilt at encountering unwelcome grime.

This chapter is concerned with the process of the corporeal human body as it is reduced to dust over time. The phenomena that occur in relation to the body as dust are discussed in relation to a broader body of dust and ways that ideas about dirt, pollution, and cleaning are constructed. This is positioned as a social and personal concern with ramifications for how bodily boundaries are produced at the porous margins of the body and skin. The flexible and transformative nature of the body in living and dusty forms is examined firstly as an object of fear and threat, through the lens of abjection, and finally as a positive medium with the potential to drive productive, creative practices.

The eternal grind refers to the creation of dust through the slow reduction of matter into a small and dissipated form. The integumentary system, which comprises the protective layers that surround the bodily interior (skin, hair, and nails), is the primary source of the matter produced by living human bodies that is reduced to dust. The cyclical re- and de-generation of the integumentary system produces a constant turnover of new cells to replace old and degenerating cells that are discarded as waste. A substantial amount of this cell waste is produced by the body’s largest and most visible organ – the skin. It is estimated that humans shed around seven billion scales of skin every few days from the stratum corneum, the outer layer of the epidermis. These skin cells are dead, flattened and ‘horny’ and they flake off after a twenty-eight day lifecycle, as new cells push the dying cells to the surface (Horsfeld 1998, p. 186; Powell 2006, pp. 130, 132).

However, the integumentary system is not the only source of the living body’s waste. Joseph Amato (2001, p. 17) quite rightly observes that people cannot help but make dust whatever they do. As well as generating skin-dust as they move, and leaving hair and nail fragments in their wake, people produce tooth-dust as they eat and excrete various wastes that are not particulate when they separate from the body but are worn down to dust over an extended period of time. This includes “wax from the ears; mucus from the nose; phlegm, saliva, and vomit from the mouth; dandruff from the hair” (Amato 2001, p. 17). Through the process of this eternal grind, the living body and all its wastes are reduced to the body as dust.
By contrast a 'body of dust' is a collective gathering of particles that may have had diverse origins and modes of production but are present in a particular place at a particular time. It is worth noting that not all dusts are equal, nor do they share the same composition. Domestic dust, with which this chapter is primarily concerned, is found around the home, office, or other bounded spaces that have high human occupation or traffic. It is heavily laden with human body and waste particles. Estimates suggest that in a household body of dust, dead skin cells (dander) may constitute between 70-90% of the content (Horsfeld 1998, p. 186). This means that if an adult can hold around 300 cubic inches of air in their lungs, and over 1000 motes of dust are in every cubic inch of air (Ogden 1912, p. 16), a single deep breath in a domestic environment may hold up to 270,000 skin particles amongst other particulate matter.

The same is not true of street dust, which contains a higher concentration of ecological, environmental, and geographical elements (Gissen 2009, p. 90). Dr John Ogden's list (1912, pp. 13-14) of the composition found in a sample of street dust in 1912 includes leather, textile scraps, wood, metal, stone, hair, animal and human excrement, paper, clay, sand, scrap from wagons and horse tackle, mould, and bacteria among other things. Ogden notes larger, more recognisable forms of waste in the sample (including human body waste like hair) but not skin particulates, perhaps due to the limits of available microscopy technology at the time or because his focus on dust is at an environmental scale. A sample from a different area during Ogden's time would differ considerably from the content of this list, as would a sample sourced in the same area many years later. This is because dusts undergo changes as commonly used materials, local industry, lifestyle, food, clothing, agriculture, technology, and transport evolves (Amato 2000, pp. 7-9). As these change, the bodies of dust produced by them develop into differently balanced compositions. Emerging fields lead to entirely new dusts, and dying fields likewise mean that many dusts cease to exist. Because of this, it is possible for isolated bodies of dust to acquire a temporal and spatial vintage. Fine and Hallett (2003) identify this as the ability of dust to act as a medium that expresses the wear of time upon all matter, and it may operate in the capacity of sociological miniaturism. This means that dust could reflect the broader conditions present in a society on a smaller scale:

Dust... is not something that happens. It is something with which groups must deal. As groups deal with dust, they reproduce the larger cultures in which they are embedded, they demonstrate processes of contention and control, and they negotiate meanings through similar processes that occur in larger units (Fine & Hallett 2003, p. 12).

Dealing with dust is, then, not so much a case of dealing with isolated encounters or instances but of recognising the underlying phenomena that drives the way that individuals and societies process and respond to it. Dust is loaded with symbolic value for both self and society. The feelings of unease, disgust, or guilt that are sometimes evoked by dust and dirt are in fact a reflection of social values and ideas. The desire to clean dust away is not a spontaneous response to the substance but is informed by the established social milieu in which it arises. Its archaic names, which include beggar's

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Ogden was a professor of physics and chemistry yet his work is described as "one of the most remarkable non-technical books written" (Popular Mechanics 1912, p. 166), and positioned as one of the Popular Mechanics Company's handbooks "written so you can understand it". Directed at a general audience, his publication reflects the moral interest of disseminating science to the broader public, which grew out of the nineteenth century surge in "popular science" books, periodicals, lectures, and informal classes in England and America (Hinton 1979, pp. 25, 138-166).
velvet and slut's webs, imply immorality. They are linked to the lower social class of workers who were steeped in the growing levels of dust and debris generated by industrial development in the mid-nineteenth to early twentieth century (Amato 2000, p. 18). Joseph Amato (2000, p. 11) observes that the rise of dust as a "dirty" compound is implicitly associated with the social aspirations and moral concerns of this era, as well as being historically tied to the fear of invisible carriers of disease that emerged at the time. Along with Fine and Hallet (2003, p. 3), Amato (2000, p. 11) notes that the desire to clean and be clean is a pursuit largely enacted by individuals within the home. The cleanliness of bodies and homes is often founded on moral judgement based on the idea that cleanliness is next to godliness, a concept in turn perpetuated by values present as western society emerged out of the Middle Ages. At this time dirt and dust were accepted in the everyday, as filth was an enveloping and embedded part of life. In the following Age of Enlightenment cleanliness was a way of showing good manners and it reflected the ideal of "moral and materialgood" (Amato 2000, pp. 74-75). The eradication of dirt and dust from body and home was a luxury that one could strive toward, a way of elevating one's status above the muck of the peasantry.

Anthropologist Mary Douglas (1966) recognises that ideas about dust and dirt are constructed around society's values and beliefs, knowledge of hygiene, and fears of pollution. Due to its minute scale, dust can come to represent an anxiety or horror at the dissolution of matter and the unknown horrors its gathering piles may contain. It can be seen as a disruptive, undesirable moral and environmental threat, endangering the established order of a society. The desire to attain a level of moral goodness and social standing lies in diffusing its presence and confronting fears of disorder and the unseen. For Douglas (1966, pp. 2, 35, 160), pollution is determined through differentiating between matter that is ordered and "belongs" in a place, and matter that is disordered and rejected as "out of place". Douglas identifies two stages that rejected matter goes through. The first stage is when matter is separated from its origin and is still recognisable, but becomes classified as unwanted and is obviously disruptive to an imposed sense of order within its surroundings; an example might be the disgust felt if you came across toenail clippings left on a kitchen floor. The second stage occurs as the displaced matter disintegrates and its identity and origin are obscured. Ground down and incorporated with other particles it becomes undifferentiated "dirt" or "dust" rather than recognisable matter (Douglas 1966, p. 160).

In this formless state dust and dirt is a collective of particles accumulated from the deteriorating surfaces of all things. Dust compounds incorporate organic, environmental, industrial, animal and human body waste indiscriminately. A body of dust does not take a cohesive form but is transformative, adaptive and divisible, capable of invisibly inhabiting and populating all manner of spaces. It is pervasive, amorphous, and transient. Bodies of dust have no bounds but contain particles small enough to pass through skin pores and transgress into the human body's internal cavities. It is little wonder that the desire to clean and be clean exists. To clean is to performatively enact the desire for symbolic control of the body and the environment to regain order, to reinforce boundaries, and to be morally and physically purified (Douglas 1966, p. 2).

3 Historian Kate Flint (2000, pp. 44-45) elaborates that as the nineteenth century understanding of bacteria and disease transmission grew, dust came to be seen as a source of many ills; dust settling on food could cause sickness from bacteria, workers suffered ailments and lung disease from inhaling dust, and some green wallpapers gave off deadly arsenic dust. In addition, some wools, hides, and leathers were steeped in anthrax spores (Steedman 2001, p. 24). Flint (2000, pp. 43-45), and fellow historian Carolyn Steedman (2001, pp. 20-21), cite nineteenth century miners, knife-grinders, needle pointers, quarrymen, stonemasons, millers, paper-makers, rag-traders, upholsterers and bedding makers, leather-workers, spinners and weavers, button-makers, printers, and clothing manufacturers as among those most likely to suffer from the ill-effects of inhaling dust.
Flexible Bodily Boundaries

Cleaning rituals go some way to address the threat that dust poses to social and personal values. Dusty bodies, whether a body of dust or the body as dust, present particular challenges to corporeal boundaries. Dusty bodies challenge the concept of human bodies as unified and bounded. They have the potential to bring into question where the limits of the body lie. As previously discussed, the human body breaks down into dust, is surrounded by dust, absorbs dust through the skin, and inhales it with every breath. A body of dust can bring to light the porosity of the living body’s boundaries, while the body as dust is increasingly minute and indistinct, a symbol of the human form at its most dissipated, intermingling and motile.

In a contemporary setting the question of where and when bodies begin and end has become increasingly complex. The living body of today has boundaries that shift as it physically regenerates, degenerates, and transforms; as it forms relationships in the world; as cultural attitudes and knowledge of the body change; and as medical paradigms and technologies evolve. As the integument that contains and protects the body’s inner structures, skin has long represented the primary boundary of an individual’s form, but it is by no means a fortification or a definitive envelope. Skin is physically porous, and its opacity has been overcome with the advent of X-rays, 3D scans like MRIs, and digitally accessible body data sets like The Visible Human Project, meaning that anyone with internet access and a computer can view what is contained inside a real human body. It is now common for the everyman to have traversed the bodily interior without even rupturing the skin.

Furthermore, the fragmented populations of cells and tissues used in scientific research have brought into question the issue of the living human body’s boundaries. Biotechnology projects like Oron Catts and Ionat Zurr’s The Extended Body (2006) engage with the ethical debate surrounding what may constitute life, as well as questioning location, identity, and what a body may be. The extended body in question is the collection of lab cultured cells and tissues used in biotechnology research. These cultures are without a bounded form or identity. The bio-matter is disparate, distant, and disassociated from the human bodies that originally produced it. The cultures must be kept in a semi-living state using technological means, meaning that they are capable of continuing to exist for years after the original body is gone (Catts & Zurr 2006, pp. 1-7). Through drawing out relationships between these disconnected but related biocultures, Catts and Zurr’s project has produced a collective conceptual extended body that symbolises the corporeal body’s indistinct boundaries, both in determining where the body ends, and when.

Corporeal bodies, and dusty bodies for that matter, are not just spatially constituted but are strongly tied to temporality. It seems apt here to draw upon Will Johncock’s chapter in this volume, and his argument that the inherent temporality of the body is tied to its corporeal, spatial, material, and perceptual incarnation, which “manifests time and/as Being”. Johncock (2013, p. 5) illustrates how “embodied perception is an incarnating process which only occurs because it is of the world”, using Merleau-Ponty’s

4 See Catherine Waldby’s The Visible Human Project: Informatic Bodies and Posthuman Medicine (2000).
5 Oron Catts and Ionat Zurr’s The Extended Body project (2006) comes out of the Tissue Culture & Art Project run by their lab, SymbioticA, at University of Western Australia.
6 Direct quotations refer to Johncock’s hardcopy chapter in Body Tensions (Buccieri 2014). His conference paper, Social Bodies, social time: The matter of the human knowledge of time (Johncock 2013) provides an outline of the issues addressed in the later publication.
example of hands pressing together, which is developed out of Husserl’s idea of bodies being touching/touched. Johncock notes that in the moment that the hands take on the position of touching (exogenous) and touched (endogenous) a blurring of body and world, inside and outside, occur. In the moment of double touch the roles of perceiver and perceived manifest “co-constitutively and concurrently”, and the corporeal body experiences the production of agency within and without (Johncock 2013, pp. 5-6). The subject and object are simultaneously constituted in and through time. The temporality of dust and living body, their transience and transformability, are manifestations of the face of time. They represent a blurring of states, boundaries and edges, a merging of materials and experiences and forms that takes place in a space and in a moment, or in a million spaces and over a million moments - the infinitesimal, eternal grind that blurs body and world.

This blurring takes places through a material and psychological embodiment. The flexible spatial and temporal constitution of the body’s boundaries is also evident in the psychological production of body schema. The body schema is an understanding of the body created and maintained through external self-perception (Schmitz 1982, pp. 11-12). The field of the schema incorporates a general sense of the body in space as it is passively or generally felt and known, and this field expands or contracts based on active sensory perception. Subsequently, it may expand to parts of the body that are not actively felt (like nails and hair) but can be externally perceived; and the schema may even incorporate things that are not a part of the body but are included in the body’s sensory perception of self or world (e.g. tools). The latter quality is also true of body image, which Elizabeth Grosz defines as “the result of shared sociocultural conceptions of bodies in general and shared familial and interpersonal fantasy about particular bodies” (1994, p. 84). Body image may be even more flexible than body schema, as it is capable of accommodating a range of objects that support imagined narratives and fantasies about the self. These might include things like glasses, jewellery, garments, and even distant artefacts like cars. Grosz outlines that the issue is often how to use these sorts of artefacts, not only in a physical sense but “also the libidinal problem of how they become psychically invested” (1994, p. 80). The constitution of body and self is a matter of blurring boundaries as much as reinforcing them, about the material experiences as well as the senses and dreams of the individual.

Is it possible that the body schema could extend and expand spatially and temporally to the point of including the dusty body? Could the body constitute itself through incorporating dissipated and ambiguous corporeal matter into the sense of self? It is tempting to speculate that as dust already sits on our skins, occupies our lungs, and is lodged in our clothes the body schema does in fact already do this, that perhaps all it would take is a concerted nudge to achieve a momentary sense of collective affinity with extensive body matter. Should we then perhaps abandon the idea of the living body as a bounded form and identity? It seems that the corporeal body may exist as an extensive, ambiguous, or self-produced entity with the possibility of autonomy from the skin as a border. Human cells already may detach and exist independent of the living body. Living and dead body fragments can mingle with the world and become incorporated into extensive semi-living or dusty bodies. While not a definitive boundary, nor even an assurance of a unified body, the skin may in these cases function as one of many possible indications of the corporeal body’s locatedness. It remains a site of the living body at which divergent states meet and interconnect, a bridge engaged in constant exchange between interior and extensive world.
Keith Peiffer’s chapter, *Mass Intimacy*, explores similar ideas in terms of the interactions between bodies and architecture. Architecture becomes a site of interaction for bodies, constructed using knowledge of their physical, sensory, and psychological needs. In Peiffer’s discussion of the body he identifies that individuals exist as hybridised, spatially extended entities that are known not only through their corporeal presence but through “the assemblage of information existing about them in virtual spaces” (2013, p. 1). This dissipated data body draws on conceptions of the cyborg, which he frames through Mark Wigley’s architectural mode of thinking, but which also harks to Donna Haraway’s (1991) influential Cyborg Manifesto. The cyborg body, or data body, exists beyond the boundaries of the corporeal body and its physical limits, engaged in extensive networks and interactions that in turn may shape the physical and social spaces that it occupies. What is of particular interest is Peiffer’s (2013, p. 1) observation that this extensive data body cannot ever be autonomous, as “the physical and virtual are so intertwined as to be rendered inseparable”.

The complete dissolution of skin as a bodily boundary is, then, unrealistic and perhaps undesirable. Skin remains a reality of the corporeal body. While individuals may be able to temporarily and temporally move beyond its bounds into extensive, ambiguous, and collective forms, it will always mark the meeting point of self and world. However porous the boundary, it must continue to function as the gateway and its removal may have the potential to result in abject collapse.

**Abject States**

Julia Kristeva (1980 pp. 4, 9-10) explains that “the abject” is what occurs as separate states collide at the boundaries of things, resulting in ambiguity and tensions. Abjection is first and foremost a violent reminder of the body’s limits in time and space. Kristeva (1980, p. 3) notes that as the eternal grind separates excreta, waste, remains, refuse and dander from the body it demonstrates what the body must withstand in order to live. The living body is a continuum that generates new cells and replaces old, shed cells. Its existence is based on the cyclical production of life and removal of the burden of deteriorating or dying matter. The body’s detritus and wastes are a form of abjection that visualises the steady removal of dead matter from the living form over a lifetime, and beyond.

Dust is habitually coupled with symbols of deterioration and death because it releases its hold upon the body through a temporal process of slow pulverising. The reduction of body refuse, waste, and matter will continue throughout an individual’s life as the body ages, but the production of dust will continue beyond this into death until there is nothing more of the body left to remove. The biblical phrase “from dust to dust” refers to this cycle as the human cadaver is finally reduced to dust and wholly reabsorbed into the soil of the earth. While this passage is often invoked for assurance - that the body remains a part of the world and its atmosphere, that it will wholly return from whence it came - the phrase essentially sums up what underlies the horror felt in the face of dust. It is a horror of bodily disintegration and the imminent bodily transition that all people must face. It represents the fear of mortality that rears its head at the inevitable progress of time. Dust is evidence of time’s passage manifesting
in and through the corporeal body, it is time’s passage, and it also marks things that are neglected or perceived as having fallen out of time.

However, the abjection of dust is not limited to bodily dissolution. Dust is an inherently abject substance in its own right; it resides in a perpetually indefinite, undefined, and intermingling state. Through reducing living bodies to a form that is ambiguous, uncontrolled, and amorphous it violates personal and social systems of order. As a collective body of dust it gains the power to encroach upon boundaries, swallow up forms, and erode or encase artefacts. Its sheen evokes dry degradation, age, and disuse. The body as dust and bodies of dust signify corporeal survival and death as they combine the matter that the body must resist to live. Dusty bodies are thus disruptive intermediate states that have the potential to be seen as agents of body horror or agents of production. At its most abject dust may still be understood as a medium of life and transformation. In the next section it is these productive, poetic qualities of dust that will be discussed.

**The Poetics of Dust**

The qualities that render dust horrifying can be seen to manifest as social ideas and practices that aim to make order of the body’s transformation, abjection, and pollution. Ideas (like pollution) are enacted upon dusty bodies through practices (like cleaning) that exercise control over the amalgamated, ambiguous form of the body of dust, and the detritus of cells and human waste that make up the body as dust. As far back as the 1860’s art critic John Ruskin took great interest in dust as a medium, and in the series of lectures that make up *The Ethics of Dust* (2003 [1866], Lecture 8), uses the persona of the Old Lecturer to unpack the relationship between dust and disorder:

> You will always hear people talking, as if they thought order more wonderful than disorder! It is wonderful - as we have seen; but to me... the supremely wonderful thing is that nature should ever be ruinous or wasteful, or deathful! I look at this wild piece of crystallization with endless astonishment.

Ruskin’s observation posits that disorder is no less wonderful than order, and so he celebrates the occurrence of ruin, waste, wilderness, and death in nature. In the same body of writing he recognises that the conception of disorder as an undesirable state arises from its disruptive occurrence “among things that are naturally orderly”. Despite this, disorder is capable of “wonderful” manifestations in the form of crystals and dust, which are capable of “gracefullest and happiest caprices” (Ruskin 2003 [1866], Lecture 8). Ruskin recognised that the temporal cycle of nature is one of being, becoming, and breaking down - the poetics of dust may lie in its ability to express the lifecycle of material forms. His work embraced the idea of pollution, dirt, and dust as *time stains* that marked the historical, temporal, and spatial lifetime of architectural edifices. This was a point refuted by Ruskin’s contemporary, Venetian conservator Camillo Boito, who denied the productive or expressive power of dirt and dust, and instead dubbed *time stains* as extrinsic filth. Boito launched an aggressive campaign to restore the architecture of the city by cleaning building facades (von Habsburg 2009, p. 21). Despite this, the value of time-stains has continued to be recognised, hundreds of years later in the fields of art, architecture and contemporary experimental conservation.
practices. Conservators such as Jorge Otero-Pailos have revived the idea of dust and pollution as valuable social documents, a record of historical and environmental conditions that can be preserved and studied (Ebersberger, Zyman & Thyssen-Bornemisza Art Contemporary 2009). Otero-Pailos’ series of projects, also entitled *The Ethics of Dust*, involve the removal of dust from building facades using enormous latex sheets that capture the deposits of pollution as they are removed. These sheets are reinstalled in the space and exhibited publicly, allowing the dusty deposits to be appreciated as temporal expressions of the history of the space (Gissen 2009, pp. 96, 99).

As much as it is associated with neglect and aging, disease, degradation and abjection, the ambiguity of dust in many ways may act as a blank canvas. Douglas observes that dirt and dust in a formless, undifferentiated state is able to become as apt a “symbol of beginning and of growth as it is of decay” (2002 pp. 160-161). This is perhaps what is most obvious in the work of Ruskin, Otero-Pailos, and others who engage with dust as a medium. Dust is not a substance with irredeemably negative connotations; its transformative nature can also be considered in terms of wonder, imaginative possibility, and an ability to redefine boundaries. Steven Connor’s (2008) example of fairy dust encapsulates how dust is a substance with the power to transform the everyday. Connor’s example may be tied to the capacity of dust to wrought transformation, and this being historically equated with the magical. Dust can be precious, fertile, and regenerative; it can come to represent a conceptual framework of growth, change, and exchange (Connor 2008; Steedman 2001, p. 164). Dust is a valuable component in cosmetics, which allow humans to transition into different guises (Connor 2008). In the form of pollen it is a hermetic medium of regeneration, fertilising soil and plants, and raising up crops and gardens (Connor 2008). As a compound it gains alchemical properties used to tend to the ills of the body, whether as a ground aphrodisiac made from pearls, gold, and animal parts, or as a chemically produced powder used in modern medicine (Connor 2008).

This magical appreciation of dust is also evident in John Ogden’s opening passages in *The Kingdom of Dust* (1912), which celebrates its immensity and wonder, rather than dwelling on horror and degradation. Ogden’s captivation is contagious as he extols the virtues of this transient, minute world:

> Vast is the kingdom of dust! Unlike terrestrial kingdoms, it knows no limits. No ocean marks its boundaries. No mountains hem it in. No parallels of latitude and longitude define its boundless areas, nor can the farthestmost stars in the infinitudes of space serve other than as a twinkling outpost of a realm as vast as the universe itself (Ogden 1912, p. 1).

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9 Notable current theorists responding to Ruskin’s concepts include historian of architecture and urbanism, David Gissen, whose book on *Subnatures* addresses disjunctions between urban environments and “those forms of nature deemed primitive (mud and dankness), filthy (smoke, dust, and exhaust), fearsome (gas or debris), or uncontrollable (weeds, insects, and pigeons)” (2009, pp. 21-22); also architectural theorist and critic Teresa Stoppani (2007a, 2007b), whose writing on dust in Bataille and Walter Benjamin’s *Passagen-Werk* situates dust as a material agent for both undoing and evolving architectural form. Practitioners working with dust that raise ideas in relation to Ruskin’s work include architectural conservator Jorge Otero Pailos, who responds directly to Ruskin’s *The Ethics of Dust* (2003 [1866]), as well as artist Catherine Bertola, who uses dust in site-specific installations as a way of intimately connecting the contemporary existence of spaces with their history.
To hark back to the opening example in this chapter, it only takes a shift in light to reveal golden motes of dust dancing in the atmosphere and this revelation is often cause for joy or wonder. Like Ogden, Blaise Pascal (2006 [1958]) recognises that dust occupies a position that may reduce the human species to humbleness and wonder at the world. Pascal suggests, “let him lose himself in wonders as amazing in their littleness as the others in their vastness” (2006 [1958], p. 17). Historian Kate Flint (2000, pp. 55-56) also explains that encounters with dust can be a catalyst to ponder the human place in the world and the scope of individual existence. For the Victorians, and for those that came before them, dust was the smallest thing that the naked human eye could discern. It was the visual limit of the seen, and beyond it lay a wondrous, invisible world that could only be imagined or shaped through conjecture. Because of this, dust became an emblem representing the vastness of both the universe and the human capacity to imagine, a sign of growth and expansive thought, and a symbol of “the invisible behind the visible” (Flint 2000, p. 63).

Dust is thus a gateway to the far-reaching realm of the microscopic, and within the universe it is pervasive and always present. Dust marks our temporal passage in this world, and it is a body that predates us and will survive us. A particularly lovely expression of this is Rupert Brooke’s poem, *Dust* (1908-1911):

...When we are dust, when we are dust!  
Not dead, not undesirous yet  
Still sentient, still unsatisfied  
We’ll ride the air, and shine, and flit  
Around the places where we died  
And dance as dust before the sun,  
And light of foot and unconfined  
Hurry from mad to road, and run  
About the errands of the wind.

In this excerpt the bodies of two dead lovers have been reduced to dust yet their essence remains “not dead, not undesirous yet” (Brooke 1908-1911). Brooke’s deeply romantic poem represents the lovers as free and motile, passing across the world upon the wind as dissipated particles of dust. Later passages celebrate the moment when these separate particles of the lovers encounter one another within the greater atmosphere. A cataclysmic expression of their love results in metaphorical fireworks flying so that “weak passionless hearts will burn/ and faint in that amazing glow” (Brooke 1908-1911). The poem simultaneously depicts dust as a sign of the human body’s abjection, disintegration and death, and dust as a positive, productive and inspired catalyst within an extensive network of bodies. It touches on dust’s ability to collectively combine multiple transformative identities, to connect with the natural world, to expand, and to engage with imaginative possibility. The lovers in the poem abandon the constraints associated with the corporeal body - individuation, a united form, fear of mortality, and systems of control - and in doing so come to represent freedom, passion, and extensity. The dusty body’s flexible boundaries are positive

10 This is, of course, in reference to the naked eye. With the advent of microscopes, from the seventeenth century dust was transformed from something “hermitic and magical” into “thousands of different particles, each worthy of its own legion of scientific experts” (Amato 2000, pp. 17, 128). Microscopy allowed the world of the minute (and hitherto invisible) to be opened up, and this goes some way to explain Ogden and Pascal’s fascination: “A grain of house dust is roughly halfway in size between a subatomic particle and the planet Earth” (Jeffrey Burton Russell in Amato 2000, pp. x-xi). What is the scale of the human body compared to the greatness of the microcosm of dust and the macrocosm of the universe?
and productive because they allow new connections to be made between the lovers and the world they inhabit; the emotions they experience upon being reunited are then transmitted to a broader group of living people. In many ways this harks back to Peiffer’s (2013) discussion of the fields of data generated by bodies in virtual spaces. The lovers are spatially extended bodies united through the shifting currents of the wind, and their interactions and connections influence the social space around them.

The Dust Settles

Having examined the body in a state of dissipation, as an abject and disruptive presence, we have gained a modicum of understanding about pollution and the human desire for cleanliness and order. Having explored dust in the work of Ruskin, Otero-Pailos, Ogden, and Brooke, we have also seen examples of how dust may represent states of positive transformation, the breaking free of boundaries, an acceptance of natural processes, and an embracing of human extensity in the world.

Douglas states that “reflection on dirt involves reflection on the relation of order to disorder, being to non-being, form to formless, life to death” (2002, p. 5). The process of the living body being reduced to dust, and the subsequent ways in which dust is socially dealt with, very much support this. Dust represents the dissolution of the living body’s unified form and begs contemplation of our ultimately mortal fate. It signifies the body’s form and identity being incorporation into a collective morass of undifferentiated particles, and requires reflection on the point at which parts of our body are no longer considered a part of the self. It arouses morbid fear at what unseen horrors or disease might lurk in the very air around us, and through virtue of its minute scale is capable of infiltrating even the smallest of pores and spaces as it transgresses boundaries. The formlessness of dust can, as Douglas (2002) suggests, become a symbol of beginning, growth, and temporal transformation as much as it is a symbol of decay.

Dust, in the examples discussed in this chapter, does not exclusively operate within the dichotomy of order/cleanliness or disorder/pollution but is an agent of the far murkier matters of transience, imagination, and connectivity. Much of the value of the work is that it makes dust visible within the public realm, catalysing discussions on these issues in a wider forum. In exploring how dust can bring into question where and when the body might begin and end, and how it may become dissipated or extensive, we have been able to gain insight into the flexibility of bodily boundaries.

It has been established that the qualities of ambiguity, dissipation, and transgression that render dust horrifying can also be considered in terms of the body’s ability to respond to perceptive and imaginative possibilities, to extend beyond its bounds, and to assimilate artefacts into the sense of self or body schema. The eternal grind is perhaps then not a process to be feared but one that humans have cause to rejoice in. Through the reduction of living bodies to dust we are temporally located and may become entwined with the broader spatial world; we may come to embrace bodies as flexible, hybridised entities engaged in continual transformation, capable of operating within the world in an infinite number of ways.

*
Let him lose himself in wonders as amazing in their littleness as the others in their vastness. For who will not be astounded at the fact that our body, which a little while ago was imperceptible in the universe, itself imperceptible in the bosom of the whole, is now a colossus, a world, or rather a whole, in respect of the nothingness which we cannot reach? He who regards himself in this light will be afraid of himself, and observing himself sustained in the body given him by nature between those two abysses of the Infinite and Nothing, will tremble at the sight of these marvels; and I think that, as his curiosity changes into admiration, he will be more disposed to contemplate them in silence than to examine them with presumption (Pascal 2006, p. 17).
In 2010, I attended a weeklong workshop at the Department of Medical Biotechnology, Flinders University. At the time, I was exploring a number of avenues including biotechnology art for engaging with the potential of the lived body and skin as a site for design. Biotechnology art, otherwise known as SciArt or Art Science, is an area of scientific and art crossover that brings together practicing artists, designers and scientists to explore creative public engagement, science communication, generate innovative outputs, and encourage cross-disciplinary collaborations (Glinkowski & Bamford 2009, pp. 7-10). Practitioners are often embedded in the laboratory environment and produce outcomes that typically explore ethical implications and issues, collaborative innovations, and fresh perspectives across art and science. The SymbioticA research laboratory at The University of Western Australia places emphasis on experiential practice to encourage “better understanding and articulation of cultural ideas around scientific knowledge and informed critique of the ethical and cultural issues of life manipulation” (SymbioticA 2014). Le Laboratoire in Paris, established in 2007 out of the international Artscience Labs network, also has a strong presence and brings together artists and designers to experiment and develop “cultural humanitarian and commercial works of art and design” (Le Laboratoire 2014).

At Flinders University, the RiAus Biotech Arts Workshop brought together artists, designers and scientists from across South Australia and Victoria, offering occasion to examine the application of scientific practice within an arts context, as well as gaining hands-on experience in a working biology lab.\(^7\) By the end of the workshop, I had genetically modified an organism through gene transference. This opened up a way of thinking about what Oron Catts and Ionat Zurr (2006) have termed the “extended body” - the fragmented populations of lab cultured cells and tissues that are disassociated from the bodies that originally produced them (See Handcock 2013b). The RiAus workshop presented an opportunity to observe a biotechnology art environment, to trial techniques for studying skin at a micro-scale, as well as to gain experience working with minute cell cultures. Reflecting on the experience in the weeks that followed, I determined that biotechnology art would remain outside the research scope. The research direction I wished to take could not be reconciled with manipulating semi-living cell cultures.

\(^7\) The RiAus Biotech Arts Workshop was hosted by Artist in Residence Niki Sperou, in association with the national science hub, Royal Institute Australia (RiAus).

Fig. 74 (previous page) – Dust on skin
in the isolation of a laboratory environment. Instead, I wanted to study an extended skin in the context of the previous research: in relation to the inherent qualities of the phenomenological body. Rather than manipulating semi-living skin cells, which has previously been explored by artists including Orlan and Stelarc, I decided to investigate another form of cell culture – one produced through the lifecycle of lived skin.

The cells that formed the focus of my study are located at the outermost strata of the human skin’s epidermis, the stratum corneum. Here, scaly dead cells are continually sloughed off and replaced by new cells rising from deeper strata, a process that takes between 2-4 weeks from formation to shedding (Totora 1996, pp. 124-128; Gray 1858, pp. 542-544). I proposed to propagate these cells as a culture by collecting shed skin scales, which could cumulatively form an extended body-site. Akin to Catts and Zurr’s (2006) observations about the “extended body,” my fragmented populations of cell cultures would outlast the bodies that produced them. Unlike Catts and Zurr’s concept of an “extended body” that must be kept semi-alive in a sterile lab, my population of cells would require no such care. The cultures would naturally ‘grow’ through accumulation, and would become hybridised as skin cells mingled with the environment around them over time. I proposed that micro-scale exploration of skin in the research take place not through the cutis (living skin) or through semi-living cells, but through the pellis (dead or flayed skin). I would cultivate and collect skin cells as they were shed as dust.

Fig. 75 – Dust on skin
Ethics of Dust

At RiAus, I was highly aware of the ethical significance of using human or animal tissue and cell cultures in biotechnology art. Use of these cultures takes place in the context of shifting moral and ethical boundaries that Svenja Kratz (2010) has very clearly outlined in regard to her own experience in the field. At the time of the RiAus workshop, I was also awaiting another review of the Human Research Ethics application for my Material Applications Projects. Proposing to work with the skin of living people, to apply temporal wearable artefacts to their skins for Gold Leaf, Tanlines, Fingers, and Prosthetics, had resulted in an escalating risk classification. My ethics application covered the exact materials to be used: how they would be applied and removed from skin, where they would be applied to skin, the length of time wearable artefacts would be in contact with skin, the age and number of participants, how they would be recruited, who could not be involved, how the results would be recorded and used, where the project would take place, and included a detailed first aid plan including allergy surveys and medical practitioner contacts.

While I had been prepared for the possibility of negotiating ethical implication in working with living participants or biotechnology art, I had not anticipated the ethics of working with naturally discarded dead skin cells. It transpired that ethics applied to dead skin cells as much as to embodied or semi-living skins. Ethics for the formative Dust Project proved to be challenging, and applications to gather skin particulates from historical garments were fraught with institutional roadblocks. For many of the museums and galleries that I applied to, dust was the domain of conservators – both a threat to the long-term survival of historical items, and a source of potentially valuable information. Dust could neither be collected directly from the skins of living people, nor from their garments.

The ethics process denoted certain implications to cultivating dust. The suggested scenario of collecting dead skin cells at a distance from the lived body would also involve collecting the dust these cells were mixed with. However, as Ogden (1912), Amato (2001), Ruskin (2003 [1866]), and the Human Research Ethics Committee (HREC) overseeing my research identified, dust can incorporate molds, bacteria, mites, and other invisible threats that could pose a danger to living people. This meant that the project would have to minimise exposure of participants to dust, and only gather particulates that were inherent to an environment.
The ethics process also indicated that the exfoliated *stratum corneum* remained in a relationship with the lived skin; dust was perceived by HREC in terms of its affect on **lived** skin, and so remained invested with the lingering values of *Leib*. This concept has been addressed extensively in writing by Grosz (1994) and Kristeva (1980), who build upon Lacan’s concept of *objet a*. They establish that wastes, excretions, by-products, and deteriorating body matter are forms of “abjection” that can be a horrifying reminder of morbidity and mortality (Kristeva 1980, pp. 4, 9-10; Grosz 1994, p. 81).

Furthermore, “detachable” parts of the body can never be distinctly separated from body image - they will always retain some value of the original subject and body part (Grosz 1994, p. 81) (See Handcock 2013b, 2013c, 2014 for further discussion). This suggests that dead and discarded skin, even in a fragmented and extended state, has the potential to remain in a phenomenological relationship with the lived body through subjective association or imagination. The ethics process consequently revealed that dust could be as valuable to study as lived skin. Studying the body as dust has the potential to engage with the phenomenological body by encouraging attention to the invisible and minute, to act as a medium for imaginative speculation, and to highlight the lived skin’s cycles of deterioration and regeneration.

**Collecting Dust**

In response to the issues raised by ethics and the RiAus workshop, I developed dual courses of action: 100 Hand Sites and The Dust Project. Iterative casting of 100 Hand Sites physically documented a single hand, and the dry liquid latex also peeled away dead epidermal cells and fine hairs. This allowed me to incidentally collect skin from lived bodies. The Dust Project, on the other hand, allowed me to collect skins that had been amalgamated into the world. The Dust Project involved distribution of one hundred collection packs containing instruction booklets and Petri dishes in labelled archive boxes to participants across Australia (Fig. 76-77). Volunteers placed Petri dishes in domestic environments, such as their home or office, to collect dust over a period of two months. The dust cell cultures were grown in a way that was opportunistic and unauthored; in compliance with ethics, the collection process involved waiting for the dust to settle. While participants did not ‘actively’ collect the cultures (i.e. through means of extraction or cleaning), they did make particular choices about where dust would be collected. In doing so, they determined parameters for what might become a part of the sample collected in the Petri dishes.

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5 Participants were instructed to collect **domestic dust** as this is the environment where the body as dust is most strongly manifested through a high concentration of skin cells and shed body matter.
Fig. 76 – The Dust Project collection packs sent to participants: labeled box, two Petri dishes, and an instruction booklet containing information on the project.

Fig. 77 (following page spread) – Constituent components of The Dust Project collection packs, in the process of assembly. Packs were designed for safe dissemination through the post. The boxes were manufactured from hardy mailing tube with steel end-caps, to which the adhesive labels containing sample information were attached. Plastic (rather than glass) Petri dishes were sourced for collecting the dust cell cultures, as they are lightweight and suitable for postage. The instruction booklets were designed to fit in the packs, and to sequentially guide participants through the project interests and their role as ‘dust collectors’.
Thank you for your interest in becoming involved in The Dust Project. Your participation is a valuable part of this research.

Participants for this project are being sourced through snowball sampling. This means that you are encouraged to invite interested individuals from among your acquaintances to become fellow participants in the research. Sourcing participants this way means that a wide range of environments is examined. The project aims to gather dust as it is presented in your familiar environment, not to throw light on a history of dust. This project serves as a research document.

Exposure to dust may have an adverse effect on health, and can cause things like sneezing, a running nose, or itchy eyes. If you have a history of experiencing these conditions or have an allergy to dust, you should not participate in The Dust Project. Participants remain anonymous and may exit the project at any stage.

Participants who are interested in voluntary participation are required to sign a consent form. This document acknowledges that participating in the research is voluntary, and that you may withdraw at any stage. It also requests that participants do not contact the researchers with questions during the study period, nor should you share information concerning your role in the study.

A DUST COLLECTION PACK includes two Petri dishes for dust collection and instructions for your role in this project. Refer to the guidelines for petri dish locations and specialist consultation services when needed. Before beginning please thoroughly read the instructions required of you in order to make a difference.

Due to the nature of this research, the samples are likely to be allergens that may cause people with respiratory allergies to experience symptoms such as sneezing, a running nose, or itchy eyes. Participants are encouraged to note the end sample collection on the archive label. It is recommended that you minimise your contact with dust and consult with your doctor or allergist before and during the sample period.

For inquiries please contact:
Tarryn Handcock
Master of Design Candidate
School of Architecture and Design
RMIT University
0404 643873
tarryn.c.h@gmail.com

Getting started:
Included in this pack are two Petri dishes for dust collection and instructions for your role in this project. Refer to the guidelines for petri dish locations and specialist consultation services when needed. Before beginning please thoroughly read the instructions required of you in order to make a difference.

Consultation costs incurred as a result of dust build up and modify the house environment to reduce allergen exposure. All Australian citizens are eligible for government run Medicare health system. Consultation fees incurred as a result of dust can be covered indirectly through the Pharmaceutical Benefits Scheme and consultation fees for specialists. Some General Practitioner schedule fees and ongoing medication are covered. Any other out of pocket expenses should be reviewed for potential insurance coverage.

The initial dust sample is important in establishing a baseline for your environment and helping to plan and implement strategies for dust reduction. You should continue to clean and dust with your normal routines. Depending on your location, you may notice some dust build up and a corresponding increase in symptoms. After the dust collection period, you should contact your doctor or allergist and provide them with information on your role in this project.

Sampling is due by 30 September 2011. Please make sure to return the dust samples by this date. The dust samples should be packed in the dust collection pack and returned to:
360 Swanston Street
Building 8, Level 10, Room 03
RMIT University
Tarryn Handcock
Melbourne VIC 3001
Australia

Samples are due by 30 September 2011. They should gather dust for 3 months. The Petri dishes must gather dust for 3 weeks indoors or outside, but should be places where dust visibly gather. These areas may be chosen after considering accessibility and contamination. Choose locations where you will not come into frequent contact with them, and you should not leave only the Petri dish to collect dust. You should continue cleaning and dusting with your normal routines. Depending on your location, you may notice some dust build up and a corresponding increase in symptoms. After the dust collection period, you should contact your doctor or allergist and provide them with information on your role in this project.

The Petri dishes must gather dust for 3 weeks indoors or outside, but should be places where dust visibly gather. These areas may be chosen after considering accessibility and contamination. Choose locations where you have noticed dust visibly gather. These areas may be indoors or outside, but should be places where dust visibly gather. Consider the accessibility of your samples - where will the dishes be placed? How will you know if they have been disturbed? You should continue to clean and dust with your normal routines. Depending on your location, you may notice some dust build up and a corresponding increase in symptoms. After the dust collection period, you should contact your doctor or allergist and provide them with information on your role in this project.

This project is funded by a grant from the Australian Research Council. It is a collaboration between the School of Architecture and Design, RMIT University and the School of Health Sciences, La Trobe University, Melbourne. The Dust Project is an initiative of the Nostalgic Skin team.

Joseph A. Amato
Dust: a history of the small and the invisible

* "Its rising particles, appeared and disappeared before one's eyes."
For instance, placement in a shared office could lead to a culture that incorporated the skins of every person passing through the space, while placement in a home bathroom could integrate dried vapours and fluids as well as the bodily wastes of cohabitants.

The project methods were influenced by practices I had observed in the RIAus lab, namely repetition and iteration. In the projects, processes of repetition and iteration resulted in arrays that showcase subtle differences between discrete studies. In the research, repetition is a topographical process that builds cumulative knowledge, generates records of the design process, and encourages critical reflection on the project processes and findings. Downton (2003, p. 99) suggests that in design disciplines, repetition of an inquiry has an evaluative function by building a context for design speculations and offering insight into the significance or success of a design outcome or strategy. The projects demonstrate that repetition and iteration through design can enable the honing of processes as well as generate outcomes that draw attention to subtle variations between findings. Iterative casting of 100 Hand Sites resulted in a cumulative collection of site studies that record detailed information about the transforming surface and spaces of the body. Repetition evolved the practice by providing evaluative and reflexive feedback that technically refined my use of materials, as well as sequentially developing conceptual and corporeal understanding of the hand as a body-site.

In The Dust Project iteration had a divergent function. Preliminary dust collecting experiments determined that the project warranted further investigation, and this perceived significance led to replication of collection methods on a larger scale. I scaled up the study by designing and manufacturing one hundred collection packs (Fig. 76-77) for distribution to project participants. Iteration and dissemination meant that dust could be concurrently collected at two hundred geographically distant sites, and distributed across a greater variety of domestic environments than I could personally have gained access to. The magnitude of this operation resulted in a collection that incorporates a truly extended skin distanced from its diverse corporeal and spatial origins.

Collected Dust

The Dust Project has been a catalyst to consider the lifecycle of skin and to wonder at the scope and scale of an individual existence. The dust collection has been a means to study the durational and situational limits of relationships between skin and dress, and it has highlighted the fragility and transience of
skins wearing away into the world through natural transitions from *Leib* to dusty *Körper*. The collection intermingles skin cells from countless anonymous individuals with particulate elements of the unique environmental matter from each site, but these nuances verge on the unseen unless viewed through a microscope. Scientific methods of iteration and repetition were ideal for collecting the body as dust, but after *The Dust Project* packs were returned from participants, I decided against photomicrography and analysis of the final collected samples using the Scanning Electron Microscope. I realised that scientific analysis of the Petri dish contents was of less significance than the implications dust has had for my design thinking. The value of the dust collection cannot be adequately described through scientific analysis because in the context of the project, I am not directly concerned with the exact composition of the body of dust. Instead, my design thinking has shifted in response to studying the ambiguous and intermingling nature of the body as dust. In the research, dust is as an object imbued with emotive poiesis. The scale of the body as dust has directed attention to the complexity of small and subtle states of skin and the ability for bodies to be enmeshed in the world. I have elected to examine these states not in relation to the scale of science and technology, but instead, to study them in relation to the scale of the body.⁸ This has cultivated speculation on body-sites as something that could be collective, extended, and existing in a minute form that permeates the world and settles upon wearable artefacts.

⁸ Amato suggests that there will always be “two kingdoms of the small: the small defined by the human body and the small as created by science and technology” (2000, p. 176). He notes that scientific knowledge of the microcosmic - the ability of scientific technology to break down the composition of dust, for instance, has not diminished the capacity for human imagination to explore the world of the small and unseen as “human beings are fastened to the old order by bodies and sense, which remain the first gauges of smallness and greatness” (Amato 2000, p. 175).
Studying dust through textual artefacts including *The Eternal Grind* (Handcock 2013b) and through the returned dust collection packs has shifted my understanding of how skin can be an extended body-site. Perhaps one of the most significant outcomes of the dust collection is the sense of responsibility I have developed toward it. I have become the custodian of a population of skin cells shed by hundreds of living people, and in this capacity, I feel an ethical obligation to care for the collection by ensuring the cultures are safely stored and preserved. For the period between collection and installation at the PhD exhibition, the cultures have been carefully packed away lest they be contaminated by extraneous microscopic particulates.

Despite the cells being dead, intermingled, and virtually invisible, I have invested the collection with the persistent values of a lived skin, as Grosz (1994) and Kristeva (1980) have suggested can occur. Yet not all of the dust cell cultures collected during the project have come back into my care. At the end of the collection period only around half of the participants returned packs – a possibility that I had anticipated. Of the packs reported missing some were never used, some had been disposed of while changing jobs and moving house, and some had been lost – the participants simply forgot where they placed the Petri dishes. Ironically, whether unutilised, discarded or forgotten, these packs continue to gather dust: beyond the bounds of the project, the extended skin has unfettered growth.

*The Dust Project* packs are eloquent objects. The Petri dishes contain an extended skin, and the pack labels detail information about its span, namely where and when it was collected. The labels reflect choices made about where dust should be collected and details about the location that participants felt were relevant to the project. The label descriptions are generally relative to the domestic environment and specifically detailed (e.g. ‘on top of the crystal cabinet in the lounge room’, Fig. 78), rather than generic (e.g. ‘Melbourne, Victoria’). Two packs even feature small diagrams. In forgoing microscopic analysis, this information is a guide for imaginative speculations about what the individual Petri dishes might contain. Amato (2000, pp. 7-8) describes how dust has a vintage that varies by activity and place, and so can become extinct as technology and modes of living evolve. *The Dust Project* thus forms a micro-social historical record containing dusts that intermingle people with their different living and working spaces. In the dishes are dead skin cells and microscopic clues about current domestic conditions including traces of manufactured materials, food, textiles, pet hair and dander, industry wastes and dead insects (Fig. 78).9 In one Petri dish, a collection of noticeboard pins makes a suggestive

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9 These types of particulates can be expected in domestic scale dust. Amato describes earthly dust as comprising of products of human fabrication and industry as well as "minerals, seeds, pollen, insects, molds, lichens, and even bacteria... bone, hair, hide, feather, skin, blood, and even excrement" (2000, p. 4). See also *The Eternal Grind* (Handcock 2013b).
statement about shared office conditions. The Dust Project has brought together an extended skin but it represents something beyond the body - it is a microcosm of contemporary living.

Gary Alan Fine and Tim Hallett (2003, p. 1) suggest that domestic dust can provide a window to explore micro-social issues. While Fine and Hallett examine how dust and techniques for its control are linked to sociological matters, I propose that cultivation of the body as dust can be a stepping-stone to speculatively explore relationships between skin and wearable artefacts at the micro-scale. I suggest that dust holds the potential to act as an agent of design, both as a medium and a metaphor for practice. In this assertion, I look to the precedent of practitioners including architectural conservator Jorge Otero-Pailos for how collection of dust can operate in practice as a medium for shifting perspectives.

In his The Ethics of Dust series (2008-2012), Otero-Pailos peels away dust from the walls of a factory, a palace and a mine using monstrous sheets of latex to form an archive of dust that embodies the history of a city’s living (Ebersberger, Zyman & Thyssen-Bornemisza Art Contemporary 2009, p. 42). In Otero-Pailos’ work, the impression of dust in latex sheets offers the opportunity for people to witness a hitherto invisible history, and it allows viewers to inhabit the space between pollution and architecture. Dust is a material that subtly shifts the ways in which viewers situate themselves in relation to previously unseen conditions. The Dust Project has shifted my perspective as I have come to understand that body-sites can exist in transitory and un-unified states. Collecting dust has resulted in a ‘non-linear’ record of skin that, while collected at a particular place and time, combines many past and present skins. Through collecting dust, I have come to understand that an extended skin can exist in a state that is not clearly spatially and temporally located.

The Dust Project has altered my thinking about how wearable artefacts could be situated and experienced in relation to a transforming body-site by visualising an alternative scenario – an extended skin that is fragmented and intermingling with the world. This has supplemented the study of discrete, bounded body-sites taking place through the case study of Two Hands by impacting upon my understanding of how wearable artefacts could be situated in relation to skin as a body-site. The poetics of dust have also been cause to critically reflect on the nature of my topology of design practice. Through the research, dust has become an agent for design thinking. It has come to embody the topological stratum of my skin-based model for design practice (Fig. 2), where ideas arise, evolve and grow. This is a capacity that Teresa Stoppani (2007a, 2007b) identifies...

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10 This differs from my collection process in 100 Hand Sites, where dead skin cells are removed from the lived body and preserved during the process of casting arrays of micro-sites using liquid latex. The latex captures an impression of skin, and only incidentally becomes embedded with the dead cells during a single moment in time.

11 In Figure 4, the upper stratum of the skin-based model is depicted as the stratum corneum – a regenerative zone where ideas arise and actively evolve out of the research, and are introduced through porous openings in the projects. This is also where avenues for future growth of the practice out of the primary research interests emerge.
Fig. 79 - Dust clouds
through her discussion of dust in writing by Georges Bataille and Walter Benjamin. Stoppani’s concept of “Architecture Dust” is of particular interest to this research as she situates dust as part of a strategy for practice: dust is unstable and fragmented, and so loses any reference to a sense of wholeness and form; this ambiguity allows it to be redefined as a generative possibility for the production of objects and spaces (2007a, pp. 554-555). This is akin to how The Dust Project has functioned in my own practice. Dust is a metaphor that has allowed me to reanimate the body-site as an area for design consideration, to affirm that practice is not limited to investigations at, below, or beyond the skin surface, and that designing can engage with potentials that might transcend these distinctions. I have drawn parallels between my skin-based model for practice and the use of dust as a metaphor for intermingling states through the concept of a nostalgic skin. The idea of a nostalgic skin has encouraged me to imaginatively speculate on how extended body-sites could be dressed in future. This has affirmed that, in my practice, dust is a medium with the potential to evolve ideas and open up new areas of investigation.

**Extended Skin & Extensive Dress**

In the PhD I have adopted the term ‘critically reflective design’ to represent how my practice incorporates reflexive processes for studying skin as a body-site and generates propositions out of observed conditions. A skin-based approach to design through critically reflective practice could form a basis for possible future engagements between skin and wearable artefacts, as well as influence the way that people locate, use and experience dress. Through such a defined skin-based approach, my practice has grown to integrate processes for haptic thinking, embodied making, and reflecting on speculative scenarios to imaginatively explore design possibilities. This is a translatable approach incorporating flexible processes that can be adapted and applied by others outside of the research to study body-sites as a context for locating design processes and artefacts.

Furthermore, the research has also shown that wearable artefacts can temporally dress skin in ways that transcend Eicher and Roach-Higgins’ (1992, p. 18) system for defining how supplementary dress attaches to the body. Creative practices producing wearable artefacts have expanded beyond pre-shaping, wrapping, suspension, inserting, adhering or clipping dress to the skin, and have begun to explore ways that supplementary dress can engage with porous, extended and speculative skins. As a skin-based approach uncovers embedded, and often invisible qualities of a body-site, it can be
used to facilitate critically reflective thinking about how wearable artefacts can be situated in relation to a body-site; for instance, by being located below, at, beyond, or through the skin surface, or in relation to skin in an extended and fragmented state.

Alternative ways of physically attaching, generating, and experiencing wearable artefacts in relation to the skin as a body-site are exemplified by precedents including Lucy McRae’s Swallowable Parfum (2013), MC10’s Biostamp, and Jayne’s Unpicking the Digital locks (2011), which I identified through the deictographic review of the skin-based field of creative practice (Fig. 12) outlined in the Introductory chapter of the dissertation. The review additionally revealed that across the field of practice there is not one particular type or state of skin that is predominantly explored. Rather, through diverse interests the community of skin-based practitioners collectively builds knowledge of a temporal and transformative skin that wears. In this context, the textual, wearable, and iterative artefacts produced through my research projects should be understood both as a means to engage with skin as a body-site that exists across a spectrum of diverse states (Leib, Körper, and speculative), and as a means to build knowledge of these states. The project artefacts are alternative modes for experiencing ‘engagement with’ and ‘attachment to’ a changeable skin. This is demonstrated through the Material Applications Projects, in which participants gained a greater understanding of the body-site through the lens of the temporal wearable artefact, which acted as a catalyst for interacting with and focusing on subjective experiences of the skin in the past and present, as well as speculating on future states.

As these research projects and precedents in the skin-based field illustrate, detailed knowledge of the physical, embodied, social, and speculative functions of the body-site can lead to the development of innovative ways to attach, use and experience wearable artefacts. The PhD research has built a layered study of skin from objective, embodied, culturally situated, and speculative perspectives, which enhances shared knowledge of the phenomenological qualities of skin as a body-site for locating wearable artefacts. This skin-based approach to practice has fostered a deeper understanding of the relationships between skin and wearable artefacts, and has built a foundation for future work that can respond to these qualities.

In Part 1 of the dissertation, skin was studied as a body-site through projects that offered critical insight into its functions as a physiological organ, and developed knowledge of the culturally situated milieu between skin and dress through the process of body-site-writing. Part 2 expanded on these findings through an
investigation of skin as an embodied surface for the situation and experience of temporal and transformative wearable artefacts. Projects such as *100 Hand Sites, Fingers,* and *Gold Leaf* demonstrated that the fragmentation of skin into areas for design consideration did not have to reduce the phenomenological body to a canvas-like background condition, but could highlight the transience, delicacy, movement, and details of small and overlooked body-sites.

In the third part of the dissertation, skin has been studied as an extended body-site that is neither a surface of the lived body nor a unified ‘whole’, but instead is spatially and temporally ambiguous and arising out of states between *Leib* and *Körper.* I have suggested that in addition to the processes for engaging with skin as a defined body-site that were explored in Parts 1 and 2 of the dissertation, there could also be strategies for approaching body-sites that are extended, minute or fragmented. *The Dust Project* has been one such strategy – using dust as a medium and metaphor to shift design thinking.

*The Dust Project* has opened up expanded possibilities for conceptualising *when* and *where* skin is situated, and for understanding how skin can be a spatially and temporally extensive body-site. Dust has been a medium to envision a transformative and diffuse skin that interacts with other elements of the world. This indicates areas for future exploration, including how wearable artefacts might relate to an extended body-site: could wearable artefacts be imaginatively inhabited, minute, or fragmented? In response to an extended skin, wearable artefacts could be conceived as a spatially or temporally extensive form of dress. Wearable artefacts that are powdered, vaporised, or otherwise spatially dispersed could be used to adorn skins as they wear away into the world. Micro-scale wearable artefacts could be absorbed or atomised through fragmented skin cell populations using nanotechnology. Speculative wearable artefacts could also be developed that defy spatial location in favour of a temporal experience of dress - dress could be an imagined or purely fictional fabrication. Framed through a skin-based approach to practice, wearable artefacts could emerge that hybridise or layer these potentials in response to an in-depth understanding of the phenomenological possibilities of body-sites that can be bounded, extensive, or in transition between these states.

The project has enabled me to conceive of alternative modes of attachment between body and artefact beyond the unified or object. It has demonstrated that bodies and artefacts can become ‘attached’ through the process of being invested with personal meaning, memory or emotive associations, as well
as contact with the body’s physical matter, which can exist in alternative states and dissipated forms. This has shifted my thinking away from the conception of the body as a static and self-contained background canvas for situating wearable artefacts. I have come to realise that some modes of attachment between bodies and wearable artefacts can be purely speculative; connections between the body-site and wearable artefact can be conceptual as much as physical. The Dust Project has enabled me to recognise that body-site-writing is a particular method by which alternative connections and relationships can be produced between wearable artefacts and skin.

This particular project has explored the potential to engage with skin as an extended body-site by studying the poetics of dust through the collection process, but also through textual artefacts including a conference paper, an electronic article, and a book chapter. Peer review of these publications formed a testing ground, while writing allowed a free conceptual reign to study the temporal and transformative qualities of a skin that wears through the motif of dust. Through this process I have discovered that as well as being a medium to analyse and record phenomenological experiences of dressing from a range of perspectives, body-site-writing holds the potential to generate alternative experiences and modes of connection between body and artefact. It could be utilised in my future practice to explore wholly new states of the body through a range of genres including fiction.

Through writing, I have developed a speculative concept, a nostalgic skin, that is a vehicle to explore how wearable artefacts could, in future, be engaged in relationships with temporally and spatially fragmented phenomenological skin. Emerging from The Dust Project, nostalgic skin is an idea that engages with the qualities of an extended body-site by imagining how skins could inhabit past and future spaces or intermingle with dress and the world.

A nostalgic skin is neither perceptive nor sensorial; rather, it represents a deeply ingrained longing expressed through skin as a body-site. The nostalgia of skin is a desire to embrace temporality and the dissipation of self. It is a seductive longing for another skin - for something fictive and utopian - whether decorated, dressed, youthful, freckled, extended, animal, machinated, or hybridised. It is not a desire to return to what has come before, but is instead a longing for reinvention or
transformation into an ideal state that is not confined by the constraints of corporeality in space and time. I do not use *nostalgia* in the sense of homesickness or melancholia. Instead, *nostalgic skin* as an extension upon what Susan Stewart (1993, p. 23) and Svetlana Boym (2007, p. 7) identify as an ideological desire and yearning for a past that may no longer exist, or indeed, never existed. Both Stewart (1992, p. 23) and Boym (2007, p. 9) identify nostalgic longing as something that can not only be concentrated on the past, but also directed towards something *sideways*, *before* or *after* lived experience.

*Nostalgic skin* conforms to Boym’s definition of *reflective nostalgia*, which thrives on longing, lingers on ruins, and “dreams of another place and another time” (Boym 2001, p. 41). The *Dust Project* has explored these ideas by materialising reflective nostalgia as the diaspora of a *skin that wears away* into the world. Dust is a *nostalgic skin* that exists in a state other than the lived here-and-now. It is a spectral skin with a great capacity for haunting and inhabiting spaces; for lingering before and after events, for carrying uneasy connotations of decay and death, and for conjuring forth the unseen, remembered, or imagined. These collective qualities have positioned dust as an ideal medium for speculative investigation of skin as a nostalgic, *quasicohate* body-site. The detritus of the lived skin thus becomes a sign of embodied transformation and temporal location, as its exfoliations expand outward from the body to caress the world. In the research, dust is a sign that bodies exist in simultaneous *Leib*, *Körper*, and *speculative* states: lived skins are perpetually shed and renewed, and they enfold fragmented perceptive, imaginative and remembered experiences, a premise that permeates phenomenological philosophy (Merleau-Ponty 1958; Husserl 1989; Bergson 1991).

Boym suggests that reflective nostalgia can present “an ethical and creative challenge” to prompt exploration and inhabitation of many different places and times at once, by embracing the inconclusive and defamiliarised (2007, pp. 13-15). I propose that *nostalgic skin* is an incentive to imagine other states of being. It is a concept that has encouraged me to speculate on the nature of lived body-sites: how could body-sites be extended, dissipated, distant, or microscopic? How could wearable artefacts evolve in response to these types of body-sites? *Nostalgic skin* embodies the ways conceptual and corporeal fragmentation can bring into question the relationships between skin and dress,
and how they might be situated in relation to one another. In the future, wearable artefacts could be developed in response to nostalgic qualities of skin by focusing on material possibilities for how fragmented skins and wearable artefacts could be situated in relation to one another – for example, through absorption, splicing, embedding or intertwining – but also by emphasising the fragmentary and fleeting experiences of subjective embodiment, namely, imagination and memory. As Pallasmaa states in *The Thinking Hand*:

> The capacity to imagine, to liberate oneself from the limits of matter, place and time, must be regarded as the most human of all our qualities... the capacity of imagination does not hide in our brains alone, as our entire bodily constitution has its fantasies, desires and dreams (Pallasmaa 2009, p. 17).

In the research, *nostalgic skin* has been a way to consider in what manner qualities of dust could relate to qualities of a lived skin. This strategy, of applying metaphor in practice, has unlocked new areas of investigation and actively evolved the topology of research ideas. Dust has acted as an open and continuing speculation on ways and means I can propel the boundaries of my design practice.
CONCLUSION
Approaching Design as a Skin-Based Practice

In her book *Fashion Thinking*, Fiona Dieffenbacher (2013) describes the work of two students to demonstrate very different approaches to design thinking through practice. Jovana Mirabile’s project, *Neurovision*, explores the theme of skin as protective barrier within and without the body. Mirabile’s concept development is primarily informed by material experiments and an interest in textile innovation (Dieffenbacher 2013, pp. 32-37). Janelle Abbott’s project, *Hope for the Future*, uses dance and drawing as processes to inform her understanding of motion and how it can be expressed through a designed form (Dieffenbacher 2013, pp. 21-25). The qualities of the active, lived body become a means to develop a design concept and produce initial material experiments.

I use this example as an analogy for the changes that have been wrought in my practice through the research. Prior to the PhD my design process could be likened to Mirabile’s approach: it was ‘object-based’ as it was directed towards material making and materiality. I construed the human body as a static and abstract concept, primarily developing designs that were focused on communicating intricate concepts, and I was engrossed in material explorations, all the while overlooking the context in which these small-scale wearable artefacts would be used and worn – on the body. I was situated as a jeweller and object maker, and I was surrounded by people who worked in similar ways that were exploring their ideas at a range of different scales, from wearable to sculptural and architectural. Post-PhD my practice has expanded and the projects I have been producing can be considered ‘skin-based’. I am now equipped with a toolbox for developing design ideas and concepts through embodied engagement, as well as critically and reflectively looking to the body-site as a source of design thinking.

Ironically, it was not at the intimate scale of jewellery that I first began to think of the body as a context for design, but instead was drawn into it through exposure to architectural theory and the writing of phenomenologists including Juhani Pallasmaa (2000, 2005, 2009). I thought that finally here was something that truly resonated with my aspirations for future practice – a consideration of the experience of the designed space and responses to the materials used within it. I began to wonder what this might look like at the small scale that I worked. How could a jeweller and object maker begin to
develop wearable artefacts that were sensitive to these ideas? After an Honours project that sought to address some of these concepts through the process of designing forearm crutches for long term users, I accepted that this undertaking would require a more focused examination of my practice and took the leap into postgraduate research.

The PhD has evolved my practice. I have come to integrate a new model for approaching the process of design, and my way of working has grown to include new materials and equipment. It has expanded into areas that I had never previously considered to be a significant part of my designing. These have emerged primarily in the forms of body-site-writing and depictographic drawing. I have arrived at a stage where I have developed an understanding of what this type of practice involves, how it can look, and what it might produce. Through undertaking the PhD I have additionally gained an awareness of the intermingling, changeable states of the human body. I can now conceive of how the body’s variable conditions, including the phenomenological context of the body-site, can feed into the development of a skin-based approach to practice.

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**Fig. 81 – Conditions to consider when designing in relation to the body-site**
The PhD research has enabled me to identify that many of these variables are constant considerations that I take into account when in the process of designing. In fact, the mode of practice I have worked to establish has developed in response to the strategies I have employed in order to address these variables (illustrated through a concentric depictogram). I have been able to both account for and open up multiple perspectives and approaches to the scenario of designing for a changeable body-site by deploying and refining a particular toolbox of methods and strategies. This manifests as a series of concrete conditions that can be addressed through the process of designing, including:

- Defining the scope of the project by determining the scale, boundaries, transformative potential, and duration of the body-site

- Considering the body-site in relation to:
  - The body (lived, object, speculative), and
  - A broader context (e.g. socio-cultural situation, location, precedents in the field)

- Evaluating the embedded functions of the body-site (subjective, sociological, physiological, propositional) through the overlaid topographical and topological structure of the skin-based model of practice. This framework builds upon my object-based approach to practice and proposes that the designer follow multiple pathways to draw out information about the design interests and functions of the body-site.

- Strategies such as:
  - Observation of the body-site
  - Subjective feedback
  - Interaction with the body-site
  - Evaluation and analysis of representations of the body-site
  - Developing propositional scenarios and objects

- Methods for engaging with functions of the body-site across multiple pathways such as:
  - Body-site-writing
  - Drawing (observational, creative, ideographic, depictographic)
  - Casting and moulding
  - Temporal material applications
  - Textual analysis
  - Creating speculative prototypes
  - Exploring ideas through the use of extended metaphor and analogy
  - Testing ideas across different fields and disciplines
  - Critically reflecting upon the collective outputs of this layered practice
Through the research it has been demonstrated that knowledge of the body-site can be accrued through implementing strategies that address these conditions. This knowledge can collectively constitute a study that builds a multi-modal understanding of the body-site and can be applied into the design of wearable artefacts, the making of creative works, as well as the production of critically reflective texts.

**The Role of Critically Reflective Design in a Skin-based Practice**

At the beginning of the dissertation I detailed how the “canvas fallacy” prompted change to object-based practice, and I posed the questions: *What is the role of a design practice that addresses the embodied, transformative relationships between skin and wearable artefacts in relation to the lived body? What could the outcomes of a skin-based design practice be?*

While the research commenced with the aim of making wearable artefacts that engage with lived qualities of skin, and envisioned a final collection of beautifully resolved jewellery-objects, this objective has shifted significantly through the course of the projects. Informed by the investigation of skin as a body-site, I became focused on processes for designing and design thinking as the research contribution. This has evolved into the expansion of practice-based knowledge through engaging with skin as a body-site and the setting up a skin-based model for design practice research. The critically reflective practice that has developed as a result of this approach integrates embodied processes for thinking and making that respond to the potentials of the body-site as a context for design.

Over the course of the PhD, I have expanded my design practice by incorporating methods for engaging with the body-site. A skin-based approach to design practice has enabled me to identify inherent potentials of skin through body-site-writing, drawing, and making. Using the framework of a *skin that wears*, embodied processes have driven this PhD and built an understanding of skin as a context for design. As part of a flexible skin-based model, these methods could be applied by other practitioners as strategies, or tools for exploring the capacities of the phenomenological body.

The research projects epitomise a skin-based approach by combining an interest in the qualities of skin with a model for design practice research that is structured around the anatomy of human skin. Through this approach I have been able to gain a deeper understanding of skin as a locus for design investigation and to enhance knowledge in the community of contemporary skin-based practitioners and researchers.
The PhD presents a precedent for design practice research that engages with skin-based interests and additionally proposes a skin-based approach to design process and thinking. This is demonstrated in the investigation of *Two Hands*, which acts as a case study for how a skin-based approach can produce knowledge through critically reflective practice. Information about the body-site is sourced using multiple methods that facilitate active engagement with the body-site, a strategy structured around the layered topology and topography of the skin-based model of practice. This intensive, interactive process amplifies understandings of skin as a body-site as the researcher’s knowledge grows to incorporate objective, analytical, tacit, and subjective viewpoints. Through this approach I was able to advance my thinking beyond an initially dialectic understanding of two hands (*Leib* and *Körper*) and to open up alternative avenues for investigation and development of wearable artefact design.

The research establishes that a skin-based approach can be applied to draw out nuanced characteristics of body-sites as well as reveal and account for a complex variety of perspectives. Furthermore, the outcomes indicate that interactive methods can build an embodied understanding of how body-sites are experienced and attributed with diverse meanings and functions. Knowledge gathered through a critically reflective skin-based approach can form a rich basis for designing wearable artefacts in direct response to existing and future conditions of the body-site.

**Outcomes of a Skin-based Model for Practice**

The skin-based model for practice is characterised by an overlaying of ‘topological’ and ‘topographical’ research approaches that equate with the structure of human skin. My ideogram of the model (See Fig. 4) conceptualises practice as a series of layered elements built around a core research proposition, connected through shared pathways and thematic concerns that pass into and beyond the scope of inquiry. At the uppermost epidermal layer, the topology of skin-research is constantly evolving; ideas are perpetually renewed, integrated through porous openings, and promptly shed if obsolescence eventuates. In the deeper layers, complex interwoven relationships develop across spaces for research testing, reflection, evaluative feedback, and growth.

The skin-based model has demonstrated how a design practice can adapt to shifting research conditions, using complementary processes to studying the skin in a range of phenomenological states. For instance, in *The Dust Project* extended skin was studied through dual approaches – the cumulative topography of the dust collection and the conceptual topology of nostalgic skin – with one process arising out of the other. The research projects uncovered a depth of knowledge
of the body-site through overlapping and interconnecting research interests. Projects have generated wearable artefacts and designed objects, as well as produced publications that communicate research knowledge in complementary ways. The projects have supported a number of peer-reviewed publications and textual artefacts coming out of the research (Handcock 2012a, 2012b, 2013a, 2013b, 2013c, 2013d, 2013e, 2014), which has demonstrated that a skin-based model can be adapted to evolve ways of understanding body-sites through different processes of thinking and making, and to generate a range of practice-based outcomes.

The PhD has enriched my practice by building a critically reflective understanding of how I design. I have been able to consciously re-define the scope and processes of my work. Where once I was principally focussed on designing wearable artefacts by looking to tangible material properties and technical construction methods, I now incorporate processes that address the corporeal and conceptual qualities inherent to body-sites. I have not abandoned materiality and fabrication as motivations for design, nor have I discarded jewellery and objects as outcomes of my practice, but rather, have developed ways to gain understand how skin functions as a body-site and a context for designing wearable artefacts. In the next stage of practice, it is my intention to explore how the merging of my object- and skin-based approaches can be integrated to create wearable artefacts and objects at a body scale. I will continue to test the potentials of temporal artefacts and materials, but will supplement techniques built through the projects, such as body-casting and making prosthetic appliances, with my metal-smithing and ceramics expertise.

In reflecting on the contribution of the skin-based model, I realised that drawing and writing can be integral to how designers think and make. I now understand that haptic and embodied processes can enable ways to test key ideas, observe body-sites, and develop speculative metaphors. This forms a critical part of skin-based methodology: drawing and writing enhance designing by evolving diverse methods of thinking through practice.

Expanding Practice through Embodied Processes

In the PhD, embodied processes have focussed attention on the skin’s transformative qualities. Body-site-writing, depictographic drawing, and hand-making have been methods to study how skin is understood and experienced from different objective and subjective perspectives, as well as at different scales. These processes have become a ‘toolbox’ for analysing, imagining, and reflecting through engagement with the body-site, each offering a different approach to gaining insight into the qualities of skin. Through the skin-based model, layering the elements of critically reflective design has
produced a greater depth of knowledge and formed a launching pad to conceptualise alternative ways that wearable artefacts could be situated and experienced in relation to the body-site.

The research has expanded my practice to include body-site-writing as a way to gain insight into how wearable artefacts are invested with meaning. This has played a vital role in growing understanding of skin by encouraging the adoption of different subjective, objective, and imaginative perspectives. In The Invisible Man project, body-site-writing revealed that practices of dress could play a role in signifying information about subjective and social identity. I discovered that altering the appearance of the body could be as much about effecting a fictional or fantastic skin as it could be about communicating an inner sense of self. Body-site-writing unravelled the means by which visual and textual depictions of dressed and undressed bodies can constitute the personal and cultural meaning of wearable artefacts and skin.

I realised that critically studying relationships between skin and dress through textual artefacts exposed ‘invisible’ conditions that unconsciously underlie the use of wearable artefacts. This application in design practice is a way to increase awareness of how dress functions, and to develop scenarios that propose alternatives. Furthermore, in The Dust Project, body-site-writing became a means to study the lifecycle of a body-site shifting between Leib, Körper, and speculative states. Through writing, I was able to explore the extended metaphor of the ‘body as dust’, and to conceptualise ‘other’ skins that were intermingling and un-unified. This approach presented pathways for imagining additional ways of dressing skin. I came to understand that writing was an outcome of design practice, and textual artefacts could play a role in critically analysing, reflecting, and speculating on relationships between skin and wearable artefacts.

In addition to body-site-writing, my practice has grown to integrate what Laura Marks calls a “tactile epistemology,” in which knowledge is gained through sensory and perceptive experiences of touching and thinking with skin (2000, pp. 138, 190). Through the research, my body has emerged as a site for reflecting and knowing through action. While I am certainly not averse to using machinery and digital technology, the projects have amplified the position of hand-making and drawing as haptic methods for thinking in my practice. Using my hands to make, touch, and mould has also been a way to reflect through practice. Ideograms such as Figure 4, and depictingograms such as Figure 7, were tools to ideate, order, and communicate design thinking. Drawing and making built knowledge through the physical form of the lived body, which is entwined with the manual manipulation of materials and the mental negotiation of ideas. In the act of making Prosthetics, my two hands became a mechanism for imagining new forms and surfaces of skin. A greater understanding
of the body-site was gained through casting, moulding, and modeling in response to observable physical qualities. In *The Anatomy Museum*, my haptic encounter with the plastinated medical specimens resulted in a more nuanced understanding of different phenomenological states of the body, and how these states could coalesce. My thinking was shaped through the touching of two hands.

Researching this PhD has made me aware of the potential for design to temporally engage with skin, particularly in response to fleeting and subtle states of being. Through embodied processes, the designer can direct attention towards the body-site as both a temporal and uniquely corporeal function of self-image and awareness. Working with participants and my own body in the *Material Application Projects* shifted thinking. My role was to invite participants to spend time focused on their lived body through the haptic experience of temporally dressing skin. In *Gold Leaf*, dressing small body-sites was an act that engaged participants with details that would otherwise have been overlooked. Dressing was an intimate and sensitive act that increased perceptive awareness of the skin surface for a brief period of time. Immediate verbal feedback also became a valuable way to concentrate participants on the subjective experience, guiding them towards a greater knowledge of their own skin.

While my own emotive response to *Tanlines* was not altogether pleasant, it did highlight how subtle changes to skin through dress could alter subjective experiences of dress. The projects, as well as the *Lived Skin Studies* and *100 Hand Sites*, uncovered pre-existing ‘invisible’ nuances of the skin surface, as well as relationships between skin and wearable artefacts. A skin-based approach to practice could privilege the wearer’s experience in the production of wearable artefacts. The simple, temporal application of materials concurrently produced the wearable artefact and the body-site; it demonstrated the performative capacity of dress and the potential to make people feel ‘wonder(ful)’ about their own skin while supporting feelings of being more attuned to their body. In the skin-based field, this could, for instance, be used in practices with therapeutic interests. Temporal wearable artefacts could be a medium for mindfulness and attentiveness to particular body-sites.
Significance of Studying Skin as a Body-Site

In the context of design practice research, critical reflection on the qualities of skin is embedded in recognising that the body exists across a spectrum of states of being. As demonstrated in The Anatomy Museum and The Dust Project, the qualities of skin can differ between lived, object, and speculative bodies, and the distinction between these states is not always clearly defined. Collectively the research projects have revealed that these states are facets of a temporal and transformative skin that wears. Positioning projects through this conceptual framework has demonstrated that wearable artefacts can engage with body-sites in Körper, Leib, and alternative states of being.

I can now identify that at the outset of the PhD I harboured an expectation that the lived human body would come to the fore through the research projects. I envisioned that in the process of seeking to overcome the canvas fallacy I would be producing dynamic designs that enhanced the appearance and experience of the lived body’s movements and surfaces. Certainly for participants in Gold Leaf, Tanlines, Prosthetics, and the casting projects, lived skin has been rendered meaningful through studies of the body-site. These projects served to focus participants on the physicality of lived skin as well as haptic experiences, associations and emotive responses. Interaction with the body-site through wearable artefacts and the body casting process became a gateway to know the lived skin in greater depth and to imagine new ways of dressing. For many participants it was also an opportunity to reflect on an embodied experience of the skin with clarity. These projects enabled both the participants and myself to gain a greater understanding of lived skin, and contributed to the growth of knowledge that can inform wearable artefact design. However, the projects also led to the realisation that skin could expand beyond the conditions of the lived body, leading to my research interests and design practice concurrently evolving.

The PhD projects exposed opportunities for wearable artefacts to be developed in response to a diverse spectrum of objectified, embodied, and speculative qualities of skin. Through investigation of the body-site I have expanded beyond object-based interests and an initial focus on the lived body, growing my skin-based approach to practice by integrating methods such as body-site-writing and drawing. This has enabled me to understand and speculate on alternative relationships between body-sites and dress, which has revealed the potential for design to address not only embodied skins but also skins in propositional and Körper states.
The Anatomy Museum showed that haptic observation could build an embodied understanding of Körper qualities that inform how wearable artefacts are attached or located in relation to the body-site. Furthermore, through the research I found that textual artefacts could produce relational encounters between Leib and Körper skins. Hand-writing and The Invisible Man exposed how the (in)visibility of skin and dress can be entwined with assumptions and expressions of identity, which suggests that wearable artefacts could be developed in response to semiotic signs that affect how lived and objectified bodies are given meaning within a cultural context. In Lived Skin Studies, 100 Hand Sites, and the Material Application Projects the Leib body was described as a dynamic subjective context for dress, while Prosthetics and The Dust Project explored how body-sites could exist in alternative states between Leib and Körper, and beyond the skin surface.

Initially introduced as a conceptual provocation, a skin that wears has been instrumental in shifting my approach to practice by drawing attention to unconscious or invisible conditions that arise between skin and dress. Through this device I have been able to identify openings for design that move beyond the lived body, and have developed a critically reflective mode of skin-based practice. Projects show that a skin-based model can generate design artefacts and speculative scenarios for imagining pathways for practice, including ways that skin could be temporally dressed. Across disciplines such as fashion, contemporary jewellery, and special effects makeup, studying body-sites could also innovate alternative modes of dress, or even imagine alternatives types of bodies. A skin-based model is a platform for identifying relationships between skin and wearable artefacts to which future designs can respond.

Research Dissemination

I have identified a growing cluster of skin-based practitioners and theorists through a review of the community of practice. I have also demonstrated that across skin-based theory and practice, there is an evident imbalance of publications from a practitioner and practice-based research perspective. While it was not my initial intention to address this disparity, through the arc of the projects I have planted a seed in the skin-based field to develop discourse around the design of wearable artefacts in relation.
to skin as a body-site. This has responded to the perceived need to build shared knowledge from a practitioner perspective and has taken place through dissemination of research across a range of forums and disciplinary contexts.

The PhD has tested research through five peer-reviewed papers and additional conference presentations. Two papers were selected for development into a published journal article (Handcock 2013a) and an e-book chapter (Handcock 2013b) that was later refined into a hard copy book chapter (Handcock 2014). Peer-selection has shown a demonstrable impact on and interest in the research, which has taken place across a range of disciplinary forums. I have presented work at postgraduate symposia on design and about literature; at conferences for interior design, critical design, cross disciplinary research, drawing and writing; through a fashion design exhibition; and a collaborative workshop bringing together artists and designers. It has also had applications in design teaching, where it has built shared knowledge about relationships between bodies, artefacts, and spaces. In these forums, I have been able to share tacit, embodied knowledge through making, as well as to stimulate discourse around design process through the wearable, textual, and iterative artefacts. In these forums, dissemination of the research has functioned in diverse ways.

For example, the nascent *Lived Skin Studies* and sculptural *Prosthetics* projects were presented at *Drawing Out*, an international symposium at RMIT University’s Design Hub, presented by RMIT University and University of the Arts London (Handcock 2013d). In this forum, professors specialising in drawing formed the majority of those presenting. I used the symposium for feedback on the process of body-site-writing (conceived and referred to at that juncture as ‘body-writing’ and ‘body-reading’), which I positioned as an embodied way of observing and studying skin through drawing, writing and casting. The project was *in progress*, which was an invitation to question the role that drawing and writing could have in actively developing *reflection-in-action* through practice. This diverged from proceedings that were primarily concerned with critical analysis of other people’s practices, and *reflection-on-action* that looked back over long-established practices.

Similarly, I presented the still-developing *The Invisible Man* research to postgraduates at the *Confession Culture - Postgraduate Conference* running out of Monash University’s School of English, Communications and Performance Studies (Handcock 2012b). Here, my analysis of H.G. Wells’ *The Invisible Man* (2005 [1897]) was tested amongst academics and candidates specialising in texts that can be read as cultural artefacts. The presentation was developed into a double blind peer-reviewed article for *Colloquy: Text Theory Critique*, a journal operating from Monash University’s Literary and Cultural Studies Graduate...
Research Program (Handcock 2013a). This resulted in an article published alongside three other essays in an issue of the journal showcasing works that “make critical use of a variety of theoretical models in their explorations of literary and philosophical texts” (Cash & Cuff Snow 2013, p. 2). The peer review publication affirmed that analytical methods and meaning evolving out of textual analysis in *The Invisible Man* project could form a foundation for further research – some of which was situated beyond design disciplines - and served to position the publication in an open-access forum.

The capacity for *The Invisible Man* analysis to be applied back into design was studied at the Nordic Design Research Conference (*Nordes 2013*). Here, I presented a paper (Handcock 2013e) on the potential of literary analysis to form part of a skin-based critical design approach that increased awareness of ‘invisible’ conditions between skin and dress. This was accompanied by an exhibition of work (See Footnote 2) including *Fingers and Prosthetics* that could be applied by participants. Testing the research in a critical design context resulted in visual, written, and verbal feedback about the wearable artefacts, with many participants interested in what materials were used to make the pieces and whether the wearable artefacts could be applied to other areas of the body (in compliance with governing ethics, I had made a depictogram encouraging participants to use liquid latex and prosthetic applications on their hands). In this forum, I determined that while many designers developed work that critically highlighted previously unobserved conditions though the design process or interaction with the designed outcome, others focused on criticality as a creative ‘problem solving’ activity, for instance, to generate imaginative ideas for innovative product design, or to resolve issues in teamwork dynamics. At *Nordes 2013*, my paper activated two avenues of discussion – one about the pragmatics of applying the research methods as a ‘problem solving’ activity with industrial design applications, the other concerned the ways observational and analytical processes could further critical reflection through practice, which would potentially awaken a rich depth of knowledge about phenomenological bodies.

I aimed to clarify the research position as a ‘critically reflective practice’ while preparing *100 Hand Sites* and a life cast hand for *The Matter at Hand* exhibition.³ The exhibition explored the relationship between contemporary design and current social issues, and showcased a range of design work that engaged with this concept. In the exhibition statement accompanying the work, I described the casts as a process to focus attention on body-sites rather than being a ‘final’ artistic outcome or a problem solving strategy. The fashion forum recognised how artefacts can form part of an integrated process for designing in response to phenomenological conditions of a body-site.

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³ *The Matter at Hand* exhibition (March 25 – April 4, 2014) was held at First Site Gallery, Melbourne as part of the 2014 Virgin Australia Melbourne Fashion Festival Cultural Program.
The peer-reviewing process also addressed interests spanning different disciplinary areas. Research underlying the *Two Hands* case study was presented at the Interior Design/Interior Architecture Educators Association’s *IDEA 2012 Symposium - Interior: a State of Becoming* at the School of the Built Environment, Curtin University in Bentley, Western Australia (Handcock 2012a). At *IDEA 2012*, I presented a paper on the role of skin in constructing a corporeal interior (Handcock 2012a). The paper addressed the cultural production of dialectic boundaries between interior and exterior body spaces by evaluating the development of this understanding in relation to medical knowledge of skin. Presented in an interior design context occasioned feedback on how the research addressed the convergence of places and spaces, thus establishing a definition of skin as a body-site, and framing how *skin that wears* can be an intermingling milieu.

The reception of the work in this range of forums has demonstrated a heretofore-unheralded breadth of interest in skin-based practice. This was particularly evident in the uptake of the research through a paper presented at the joint *Body Horror: Contagion, Mutation, Transformation / Time, Space and the Body* conferences held by Inter-disciplinary.net in Sydney (Handcock 2013c). In this self-proclaimed inter- and trans-disciplinary forum, practitioners, researchers and theorists come together to share research, making it an ideal setting to test research ideas in a group with diverse disciplinary backgrounds and interests. In this forum, I presented a paper (Handcock op. cit.) on dust as a manifestation of the temporal and spatial extensity of skin, and how this natural process has been construed variously as both horrifying and wonderful – ideas underlying *The Dust Project*. The paper garnered interest from academics across fashion, physics, interaction design, art and architecture that perceived parallel interests in how themes in the paper could have return application into their own work.

This research was subsequently selected for development into chapters for an e-book and hardcopy publication, alongside researchers that identify across and between many different disciplines, which affirms the span of skin-based interests. Connections made at the conference also led to the conception of the *(IM)MATERIAL BODIES* workshop.4 This workshop represented a cross-disciplinary forum to communicate tacit knowledge through making and share embodied processes for working with skin as a body-site. Experimentation and conversation instigated by the workshop built a dialogue for critical reflection through practice and for sharing knowledge that participating art and design practitioners implicitly ‘knew’. The group of participants were eager to take away making and thinking processes from the workshop and to apply them into the methodology of their own work. The workshop indicated a network of practitioners, not all of them researchers, keen to

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4 *(IM)MATERIAL BODIES*, a collaboration between doctoral candidates Anastasia Joannides, Naomi Hunter and Tarryn Handcock, RMIT University Design Hub, Melbourne, September 19, 2013.
collaborate to build shared knowledge and to apply a skin-based approach to practice.

Communicating research ideas across the skin-based field has played a vital role in expanding critical discourse beyond a bounded disciplinary system of practice, perpetuating a diversity of voices in the skin-based field that together, can build collective knowledge at both an individual and community scale. Publication of the PhD research has contributed toward knowledge that can be shared across and between the diverse community of skin-based theorists and practitioners; it strengthens the network of interests that convenes this community. This holds significant value in the skin-based field, as review of publications and creative practice has established that the community of theorists and practitioners spans across and between diverse disciplines including art, design and sociology. These disciplines do not necessarily share physical forums such as conferences, as places of critical discourse. However, review of the skin-based community has revealed that many theorists and creative practitioners in the field do share interests that span across disciplines, meaning that publications are integral to sharing knowledge between different sectors of the community. In addition, I have found that research presented through workshops, exhibitions, and teaching has been an effective means to share tacit and embodied forms of knowledge for my own professional objectives.

Over the past three years, a skin-based model has been employed in the undergraduate design studios I have taught in and across the respective fields of Interior Design and Fashion & Textiles. In these studios, students have been guided through processes for developing their own ‘body-site analysis’ techniques that they then use as methods for designing in response to surfaces and spaces of the phenomenological body. In the Fashion & Textiles domain, this has encouraged attention toward the ways design can affect movement; how wearable artefacts can be attached, or situated in relation to the body, and it has also drawn attention to haptic sensations and embodied experiences of wearing garments and accessories. In Interior Design, a skin-based model has encouraged students to consider the ways design processes can be applied or transferred across different scales, by shifting their attention between environmental and body scale, and macro and micro details. In design teaching and learning, a skin-based approach has resulted in students gaining skills with which to engage with the body proper. Students have developed projects that explore the potential to temporally transform appearances, experiences, sensations, movement, meanings, and modes of interaction at the human skin.

Through a skin-based model, students have also integrated ideas, materials and methods that commonly fall ‘outside’ of their discipline; for instance, using casting techniques to create clothes,
and pattern-making practices to design interior ‘soft spaces’, in response to studies that have focused on embodied sensory perception. The research methods and model have the potential to be applied in a range of different contexts; to enable new collaborative or hybrid relationships across fields with an interest in dressing and designing for the surface of the human body, to expand discourse beyond the discipline, and to overcome the “canvas fallacy” of skin as a background for design. A skin-based approach can encourage attention to the qualities and functions of an embodied, lived, corporeal and conceptually meaningful human body through design, and across disciplines.

A Situated Practice

Project dissemination has proven to be an effective method for ascertaining the landscape of the skin-based field as well as to test research ideas. The acceptance of the research into this diversity of domains has demonstrated a range and depth of peer interest in skin-based theory and practice in disciplines across the humanities, art and design, suggesting that there is a place for skin-based practice across and between more formally defined fields.

In light of the knowledge built through the research process, I now situate my practice within a skin-based community of theorists and practitioners. My approach shares interests with disciplines that produce wearable artefacts out of creative practice, such as fashion design, contemporary jewellery and art, as well as disciplines that explore ideas about wearable artefacts and skin, including sociology, anthropology, and fictional writing. The PhD research has also furthered conceptual and haptic understandings of skin that originate in sociology, anthropology, philosophy, psychoanalysis, art, and anatomy. As such, my practice is now situated within a skin-based field that is fluidly transdiscipline. This allows my emergent practice to launch into new areas of investigations at the boundary of the human body speculating new body forms and haptic experiences for a diversity of applications. A skin-based approach has potential for design areas concerned with developing objects for use at the boundary of the human body. The methods that have developed from the research can be used to speculate and conceptualise new body forms and haptic experiences, as well as original ways to temporally dress and interact with artefacts at the surface of the skin.

Through the PhD, I have come to locate my practice in the dynamic, intersecting space between dress, design, and the phenomenological body. Here, it can actively bring together interests from many distinct areas that could produce new forms of knowledge, generate alternative ways of working, and build collaborative networks or hybrid relationships that expand discourse beyond disciplinary limits.
and interests. This has placed me at a nexus for launching into new areas in my postdoctoral work, which I conceive as extending the phenomenological and design interests of a skin that wears. The PhD process and its outcomes have confirmed that my interests lie in states that exist between things: between skin and wearable artefacts, between defined disciplinary interests, between Leib and Körper.

Subtle conditions that arise between clearly described things are, I believe, a challenge for design. Transformation and ephemerality are difficult to capture, and the qualities that arise out of incremental variation are sometimes so subtle as to seem insignificant. Through the lens of my practice, I have aimed to draw out these fleeting and fragile states, to visualise, materialise or otherwise express the shifting and sometime invisible dynamics between skin and dress.

Rather than adopting a generalised approach to the phenomenological body, I have focused on the nuances that comprise our experiences with wearable artefacts, by asking: what transpires as skin and dress caress? I have found that there is tremendous value in critical reflection on these seemingly small and intimate moments. Bodies are always between states, intermingling perceptions and sensory experiences, and being simultaneously lived, imagined and remembered. Looking forward, then, it is my goal to design for bodies, to continue developing approaches for producing wearable artefacts that engage with conceptual and corporeal skins, and that are sensitive to the dynamic of existing between states.
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Fig. 1 - Author’s ‘depictogram’ of the properties of a body-site

Fig. 2 - Author’s depictogram of wearable artefacts as a category of body supplements. Joanne Eicher and Mary Ellen Roach-Higgins (1992) define body supplements and body modifications as key modes of dress.

Fig. 3 - Author’s depictogram of an overlaid topology and topography of research

Fig. 4 - Author’s ideogram of a skin-based model for design practice research

Fig. 5 - Linear and flexible evolving models of research practice

Fig. 6 - Author’s depictogram of skin functions

Fig. 7 - Author’s depictogram of projects by type

Fig. 8 - Skin That Wears – Author’s depictogram of projects distributed across the dissertation

Fig. 9 - Tiffany Parbs, Blister-ring (2005); Orlan, photograph from 7th Surgery-Performance: Omnipresence (1993)

Fig. 10 - Walter Van Beirendonck for the Oxfam Fair Trade “I’m in the mood for fair trade campaign” (2009); Lady Gaga, still frame from Born This Way (2011)

Fig. 11 - Examples of wearable artefacts that explore supplementary skins. (Top to bottom) Ana Alvarez-Errecalde, TALLAS (2008); Alba D’Urbano, Il Sarto Immortale/The Immortal Tailor (1995-2000); Laura Splan, Gloves (2009)

Fig. 12 - Author’s depictogram of wearable artefacts and creative practice in the skin-based field

Fig. 13 - Author’s depictogram of publications in the skin-based field

Fig. 14 - Author’s depictogram of Jane Rendell’s site-writing (2010), compared to the role of body-site-writing in the Hand-Writing and The Invisible Man research projects.

Fig. 15 - Layered structure of the suite of Two Hands projects

Fig. 16 - Process work for The Anatomy Museum (II), showing notes and drawings of Hand #1
Fig. 17 - Process work for The Anatomy Museum (II), showing notes and drawings of Hand #2

Fig. 18 – Process work for The Anatomy Museum (II), showing notes and drawings of Hand #3

Fig. 19 – Process work for The Anatomy Museum (II), showing notes and drawings of Hand #4

Fig. 20 – Process work for The Anatomy Museum (II), showing notes and drawings of Hand #5

Fig. 21 – Cropped photograph of a participant’s hand

Fig. 22 - Cropped photograph of palm with thin layer of dried clay highlighting markings

Fig. 23 – Observational pencil drawings of small zones of skin on the lived hand, and an inscribed clay drawing of a skin detail

Fig. 24 - Plaster casts of hands moulded from the lived body

Fig. 25 – The process of demoulding a cast from an alginate substrate

Fig. 26- Plaster cast of a hand partially embedded in an alginate mould

Fig. 27- Dyed latex casts of the interior space of a hand

Fig. 28 – Material sample, body-site cast with liquid latex. Image detail, dyed latex casts of the interior space of the hand

Fig. 29 – Author’s depictogram of 100 Hand Sites. Each latex cast records the fleeting surface conditions of a small body-site located on a single hand.

Fig. 30 – Latex casts of 100 Hand Sites, shown with detail of the skin surface texture

Fig. 31 – Sample scale of cast body-sites in relation to the hand, and enlarged microscopic detail

Fig. 32 – Johann Heinrich Füssli (1778-1780), Der Künstler verzweifelnd vor der Grösse der antiken Trümmer (‘The Artist Moved to Despair Before the Grandeur of Ancient Ruins’)

Fig. 33 – Palm of the hand cast in dyed liquid latex

Fig. 34 – Material sample, gold metal leaf. Image detail of Golf Leaf application on elbow
Fig. 35 – Process of applying Gold Leaf to participants’ skin

Fig. 36 - Gold Leaf cracked as the skin shifted

Fig. 37 - Subjective reflection on the experience of Gold Leaf between fingers

Fig. 38 - Gold Leaf application between fingers

Fig. 39 - Detail, liquid latex and gold metal leaf peeling from skin

Fig. 40 - Detail, Vaseline & gold metal leaf application between fingers

Fig. 41 - Liquid latex & gold metal leaf application, ear conch

Fig. 42 - Detail, application on ear conch

Fig. 43 - Detail, application on ear conch

Fig. 44 - Liquid latex & gold metal leaf application, bent elbow

Fig. 45 - Detail of application, straight elbow

Fig. 46 - Tanlines material application process

Fig. 47 - Artificial tan application process (Makeup Artist: Lee Norris; Film: Louise Simpson)

Fig. 48 - Tests with artificial tanning mousse

Fig. 49 - Tests with artificial tanning lotion

Fig. 50 - Test with artificial tanning aerosol

Fig. 51 - Sudoriferous lace designs

Fig. 52 - Sudoriferous lace application using carbon transfer paper and liquid latex

Fig. 53 - Abridged photo-documentation of Tanlines (Photographer days 1-2: Matthew Burgess; all other images author’s own)

Fig. 54 - Artificial tan applied over liquid latex resist (Photographer: Louise Simpson)

Fig. 55-58 - Details of Tanlines 1-2 days after application (Photographer: Matthew Burgess)

Fig. 59 – Material samples, dyed liquid latex. Image detail of oil deposited from a fingerprint on cast latex

Fig. 60 - Interior & exterior details of cast latex Fingers
Fig. 61 - Selection of plaster finger moulds with dyed arrays of latex casts

Fig. 62 - Cast latex Fingers with gold leaf

Fig. 63 - Wearing an array of Fingers

Fig. 64 - Speculative drawing of prosthetic wearable artefacts on the hand

Fig. 65- 66 - plaster cast hands with liquid latex prosthetics

Fig. 67 - Cast latex prosthetic appliances

Fig. 68- Undyed latex prosthetic appliances

Fig. 69 - Cast and modelled prosthetic forms

Fig. 70 - Depictogram shown at NORDES 2013 with the prosthetic appliances

Fig. 71 - Dyed liquid latex prosthetic application

Fig. 72 - Detail, textures produced by hand movement in the cured latex prosthetic

Fig. 73 - Cast latex appliances shown with cast gold embellishments

Fig. 74-75 – Dust on skin

Fig. 76 – The Dust Project collection packs sent to participants: labeled box, two Petri dishes, and an instruction booklet containing information on the project.

Fig. 77 – Constituent components of The Dust Project collection packs, in the process of assembly. Packs were designed for safe dissemination through the post. The boxes were manufactured from hardy mailing tube with steel end-caps, to which the adhesive labels containing sample information were attached. Plastic (rather than glass) Petri dishes were sourced for collecting the dust cell cultures, as they are lightweight and suitable for postage. The instruction booklets were designed to fit in the packs, and to sequentially guide participants through the project interests and their role as ‘dust collectors’.

Fig. 78 – The Dust Project collection Sample # 8, Petri One: ‘On top of the crystal cabinet in the lounge room’

Fig. 79-80 – Dust clouds

Fig. 81 – Conditions to consider when designing in relation to the body-site
In addition to works cited in the dissertation, I have included additional sources that have comprised my review of the skin-based community of practice, as well as been utilized in research publications and presentations during my doctoral candidature. This more fully illustrates the scope of the research.

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