Modernism and the Swimsuit: an investigation into the aesthetic, social and material properties of the interwar knitted swimsuit.

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Abstract

This thesis examines the interwar knitted woollen swimsuit, an extant garment that is a significant piece of material culture. Between 1930 and 1939; 180 outdoor swimming pools and lidos were built in the UK. Swimming became a 'democratic exercise' a means of keeping fit and healthy. The aesthetics of modernism evident in the architecture of the lidos demanded purity of form in both building and body. The swimsuit highlighted the uneven class landscape in which those ideals of 'democracy' and 'pure form' played out.

Anecdotal evidence and surveyed literature indicated that home knitted swimsuits sagged. An experiment was conducted to ascertain the material differential between manufactured and home-made swimsuits when tested in water. Archival research enabled the recreation of an expensive manufactured swimsuit and home-made ones from 1930s knitting patterns. The recreations were used to test the performative qualities of both when swum in. Narrative accounts from the swimmers, their embodiment of the garment and the re-enactment proved to be essential in determining class differential in the swimsuit.

The experiment revealed a material referent for the fact that claims for democracy in swimming were undermined by saggy home-knitted swimwear. Modesty, reliability and body-confidence were evidently only available to those who could afford a manufactured swimsuit.

Archival research into company advertising and women's magazines demonstrated that the bid to achieve the most glamourous figure-fit swimsuit was ongoing during the interwar period. The garment as material, as image (in both promotional material, documentary photography and memory) and in relation to the materials and surfaces of both the wearing body and the environments in which it was worn are central to the thesis.

The study took a multi-method approach, consisting of interviews, archival research, re-creation and re-enactment. It drew on fashion and textile history and theory, and social, philosophical, and political theory. The findings offer a different approach to garment study. Links have been made between the swimsuit and interwar healthy body culture but this thesis firmly locates the garment in ideas about hygiene, class, eugenics and the perfected body.

The thesis also explores the connections made through the metonymic meanings of surfaces such as purity and impermeability in concrete, chrome and the swimsuit as a second skin. The study finally considers the aspirations of interwar ideas about glamour in both body and building and the reality of maintaining these in daily life and for posterity.

For my parents, John and Ethel Brook, who took me on holidays to places such as Morecambe and Scotland, where I could swim next to, or inside Modernist buildings.

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Chapter 1: Introduction

Introduction

This thesis examines the flat knitted woollen swimsuit of the interwar period in the decades of the 1920s and 1930s in relation to theories of health and hygiene prevalent at the time and within the context of the lexicon of modernist space, locale and in particular, surface. The thesis primarily but not exclusively focusses on the British context for the swimsuit but the development of new forms of swimwear were international in scope and paralleled the new style of architecture. The cultural and ideological aspects of Modernism were deeply embedded in the 'new;' in qualities of light and space; in what was progressive; in what was clean and healthy (Hughes, 1991). New technologies and materials could capture the imaginations of architects and designers. There was a powerful belief in breaking with traditions of the past and forging a utopian future of better housing, better health, better, stronger bodies and ultimately a better quality of life. Wool as a fabric and the swimsuit as a garment do not immediately appear to conform to this vision. Not least because there is also a 'folk' knowledge evident in some people's living memories that hand-knitted woollen swimsuits sagged and this perception was the starting point for my research.

The aim of this thesis was to explore the ways in which the swimsuit is an exceptionally modernist garment not only in its contribution to the healthy body but also in the way that it situates itself within the modernist zeitgeist and is aligned to the vogue and glamour of the period. (Dyhouse 2011, Gundle 2008). As a garment it exemplifies the mood of the interwar period, reflected back in multiple images of the aspirational body by fashion illustrators, photographers and cinematic film. The aspiration of these images contradicts the reality of wearing the swimsuit and this is a central premise of the study. The thesis examines the garment as image versus the garment as material agent and the points at which these concepts converge or are in conflict. My research questions and objectives were as follows:

1. How did the swimsuit come to signify such a large range of meaning from the homespun, to the glamour of Hollywood and the Riviera; and become an emblem of health and fitness in the interwar period?

2. Why did wool become the prevalent fabric for swimwear during the decades of the 1920s and 1930s and how did this fabric, in the form of a swimsuit become a modern surface?

3. There was a significant difference in performance and wearability of swimwear according to how the garment was manufactured – how did swimwear evolve over this period and how did this affect purchase cost?

4. Swimming was claimed to be a healthy democratic exercise, it was widely promoted by municipal authorities and government, does this prove to be the case, or were there underlying class divisions with the practice of swimming and sunbathing?

5. Places of swimming and their locale were important spaces that the swimsuit clad body operated within, what was the aesthetic relationship between the building and body and how did that impact on actions and behaviours of swimmers?

The theoretical and practical exploration of this type of garment is commensurate with Walter Benjamin's survey of shops and signage in his 'One Way Street' (Benjamin, 1978) where the 'Stamp Shop' and 'No Vagrants' sign are replete with meaning. Clothing, objects and fragments that appear marginal and transitory in respect of the greater society often hold significance when examined and deciphered (Küchler and Miller, 2005). It is the intention of this thesis to examine the range of context and interpretation that surround the garment from a social, political and aesthetic perspective.

The relationship of body to building in a modernist environment is an important aspect of this research. Previous forms of the swimsuit were concerned more with modesty and concealment and therefore used greater quantities of fabric to disguise the female body in particular. During the modernist period a number of manufacturers worked to perfect the swimsuit through innovative technical development, often in competition with one another. The swimsuit was marketed in relation to its 'skin' like properties (Symington Collection, 1939). The concept of the garment as a 'second skin' suggests a relationship to the perfectibility of the modernist body. The idea of the swimsuit or underwear as 'second skin' has been explored and marketed before, but not in the context of the woollen interwar swimsuit or in the concept of body and building both having an aesthetic skin or surface.

This body had become a site of anxiety following the First World War in Europe and had returned 'injured and disturbed from the battlefields' (Ackerman, 2019, p.41). Henceforth social and political forces moved to create ideologies around the perfection of the body through exercise and fitness regimes. The stream lined aesthetic of this perfected body was often shared with the architecture of glamourous spaces such as the lido and the ocean liner. The perfect, modern swimsuit clad body was promoted through company advertising and achieved with the discipline of diet and exercise. Both genders were included in the interwar desire for the 'perfect' body and although the primary focus of the thesis is the female body and the swimsuit, the man's swimsuit is both researched and discussed in the context of the rolling down of tops for sunbathing and the development of the swimming trunk. The main governmental driver for health and fitness was to improve military capability and as a consequence of this, the male body becomes a lynchpin of establishment concern.

The idealised image was distinct from the reality of the diversity of bodies on the beach and in municipal swimming pools. There were the scrawny and fat as depicted in Donald McGill's seaside post cards. These had a 'carnivalesque' (Shields, 1990) quality that acted

as a counter to the ideal. Similarly high-end manufactured swimwear looked and behaved very differently from the hand knitted version that usually sagged when it was wet. Government initiatives promoted exercise, in particular swimming, for all as 'democracy' (Smith, 2005, p.128) however the cost of the manufactured swimsuit indicated that the garment worn for swimming was far from democratic, implying a class differential in what was worn. There is also the aesthetic presence, the goals and aspirations of modernism, the proponents of which believed that a 'tabula rasa' and new world order could be imagined.

This thesis exploring the flat knitted woollen swimsuit resonates in today's social and cultural climate with the significant amount of responsibility placed on the individual to keep fit and well. Prior to the establishment of the post 2nd World War National Health Service, medical care had to be paid for and this factor along with a prevalence of diseases such as tuberculosis caused the government to focus their attention on well-being. This was not entirely altruistic however as both military and civilian health had been a concern from the aftermath of the Boer War as historian Winter states 'What exercised many politicians and military men was the fact that between forty and sixty percent of recruits for the British Army were turned down as physically unfit for service' (Winter, 1980, p.212). The findings in the First World War were not a great deal better and the National Service Medical Boards were established after conscription was introduced in 1916 (Winter,1980) to diagnose and classify the levels of fitness of recruits. The types of procedures used and the photographic documentation employed have an eerie resonance with eugenic and Aryan classifications during the interwar period and in the Second World War (Clay and Leapman, 1995).

In the early part of the 20th Century Government initiatives encouraged and supported the expansion of exercise amongst the general population through building programmes of swimming pools and football pitches. It is estimated that 180 lidos were built in Britain between 1930 and 1939 (Smith, 2005) some of these have been restored, perhaps because of the movement for open air and wild swimming, but many are derelict or have been demolished and built over. Ideas about health, some of which were utopian and originated in Europe were adopted by the British Government and included in the Public Office of Works building programme (Smith, 2005). A parallel cult of exercise and healthy eating has emerged in the 21st Century but has much less institutional and establishment support.

Personal responsibility for health (Checkland, 2017) is very prevalent today just as it was in the early part of the 20th Century. Leadbitter, who is a significant voice in the personalisation agenda in public services states that 'Public policy increasingly needs to shape the choices people make about their lives, to reduce the risk that they will make a costly call on public services by encouraging them to take responsibility for their actions'

(Leadbeter and Lownsbrough, 2005 cited in Checkland, 2017, p.138). Checkland comments that 'Responsible' citizens will make 'the right' choices, disciplining their behaviour and ensuring that they avoid becoming a burden on the state' (2017,138). This sounds and feels like an early 20th ideal, the body as a disciplined machine for living in along the line of Le Corbusier's modular man. But as Checkland comments (2017 p.136) that personal choice requires agency then it also excludes those whom the early eugenicists also sought to marginalise such as those with mental and physical disability, mental illness the frail and elderly with diseases such as dementia that impair their 'agency'. The parallels are interesting and the current passion for health and fitness across the population, although laudable does not have its equal in intellectual development or pursuit, as was the case in the interwar period through Mechanics Institutes and Workers Educational programmes.

Inevitably the building programmes of the 1920s and 1930s led to the establishment of the Post War National Health Service and today's climate faces this in decline. Today taking responsibility for one's own health and fitness through diet and exercise sometimes involves costly gym membership and expensive performance clothing and equipment; although there is a growth in wild swimming and park running which are free activities, again, except for the cost of the garments. The thesis examines some of the complex issues raised by the interwar concept of swimming being democratic in access to spaces to swim but not in the comfort and confidence of what the swimmer wore.

The thesis will mainly concern itself with the swimming costumes and swimming sites in the United Kingdom but will also refer to Hollywood and other institutions in the United States and also aspects of European culture where it is deemed to be relevant and appropriate.

My research as, is shown, in the next section uses a combination of different methods and approaches to gain insight into the range of possible interpretations of the knitted interwar woollen swimsuit.

The Body

This next section examines the body through a modernist lens. It looks at relationship of the body to technology and machines, and also its relationship to architectural space. The healthy body culture of the interwar period was significant in creating the athletic toned form of the 1920s decade. This was a major shift from the 'classical' body of the Edwardian period with its soft outlines, and curves of antiquity for women (Carden-Coyne, 2009). Male bodies were equally trained and toned but from a much more complex outset following the bodily trauma of the First World War.

The body in the interwar period became a site of social and scientific enquiry. The progress of the use of the X-ray through the interwar period and a fuller understanding of the workings of the internal body as exemplified through the glass transparent body initially built for the Museum of Hygiene in Dresden in 1930 (Wilk, 2006, p.252), had enabled the general public to understand the inner workings of the respiratory system, bone and muscle structure of the human body. This apparently fascinated the spectators and presumably engendered some understanding of what previously had been the domain of the medical profession. (ibid).

In a fashion sense the body that became the 'modernist' body was seen as 'healthy, intelligible and progressive' (Liberty 20, cited in Wollen, 2008). The body, particularly when associated with the 'machine' analogy articulated by Le Corbusier and the Bauhaus school through the work of Schlemmer (Barnstone, 2019) could be viewed from the point of view of emotional detachment and its productivity measured in a number of scenarios including that of the workplace environment. This is successfully illustrated by the actor Charlie Chaplin in the film Modern Times (Chaplin, 1936) where he is used experimentally to test machinery to feed the employee whilst he continues to work, to ensure that the company management have even greater productivity. Eventually as can be seen in the film still in Fig. 1.1 He becomes so assimilated into the machinery that his body appears as a component part of the whole mechanism.

Fig. 1.1. Modern Times, 1936.

The body as a metaphorical machine appeared very progressive in the field of health, fitness and athletic prowess, however it should be viewed with caution when it is placed in an alienated context such as the industrial environment developed and created by Henry Ford's assembly lines (Nye, 2015).

The body, however, transformed by designers such as Chanel and Patou was a place to inhabit in a celebratory way, particularly for women. The figure had more freedom of movement in the knitted jersey sheathes that replaced artifice, ornament and corsetry. The 'androgynous' of look of the 1920s did involve a strict regime of diet and exercise to achieve that which the writer Colette writing in 1925 described as being 'short, flat, geometrical and quadrangular – the outline of the parallelogram'. (Wollen, 2008, p.21). An equation between the mathematical and the feminine outline seems astonishing until it appears that Patou writing in the same year suggested that 'we do not feel at home except in the midst of modern machinery' (Wollen, 2008, p.21). The body had been firmly situated in the machine age by some of its more eloquent commentators and practitioners. These ideas precipitated the cults of sunshine and physical activity and a body fit for purpose, healthy and working like a finely tuned machine for those who had the strength and vigour to enjoy it. The thesis claims that the knitted swimsuit has a prominent role to play in this new ideology. The garment enveloped the new androgynous body in the early 1920s; it was streamlined and sharp reflecting the changing mood and behaviours of the early modernist period. It was designed both for exercise and leisure, but the garment also complemented new technologies including the cinema, both in its exposure of ideal bodily form and as part of the progressive forward movement to technical perfection that was a feature of modernism.

The body is central to the thesis and is considered in all of the chapters, in the evolution of the swimsuit in both a glamorous and technological context; it also exists in the thesis as both a material entity and as a metaphor for healthy living and progress (Fraser and Greco, 2005).

The body was also a contested site in modernism because of the parallel developments between its ideology of perfectibility and that of the eugenicists as explored by design historian Christina Cogdell. She states that 'ideas promoted by the Eugenics movement in the 1920s retained their appeal throughout the 1930s' (Cogdell 2004 p.38) as she draws a parallel between eugenics and 'streamlining' in American design of the 1930s and 1940s. The language used to discuss ideas of the body in early modernism strongly resembles that of the eugenicists in the 1920s and it implies a relationship between the two from that period.

The swimsuit clad body has a relationship to the architecture and spaces that it inhabits which in turn have a relationship to the concept of the modern 'surface' (Cheng, 2011) and this will be examined in Chapter 5 and Chapter 6 of the thesis.

The relationship of the body to architecture.

The relationship between the swimsuit clad body and the spaces it inhabits both for swimming and sunbathing is a key concept within the thesis. Links have been made between the body and building by architects Gottfried Semper (cited in Loos, 1982) and Adolf Loos (1982) through the concept of 'cladding'. In his 1898 essay 'The principles of cladding' Loos considers Semper's idea of cladding as protection but develops the concept further and extends this to nature as well, describing the body being covered with skin and the tree with bark (Loos, 1982 p.67). Loos as an architect was a forceful advocate of hygiene and in particular the significance of plumbing as the nucleus of a building. His concept of 'Sachlichkeit' or factualness was a great influence on Modernist architect Le Corbusier. (Passanti, 1997). The concept of cladding as both covering the body and the building is a point of departure to examine that connection. Chapter 5 on Sites of Swimming and Sunbathing investigates this in relation to skin, swimsuit and the new, metallic gleams of chromium and celluloid lighting that are as Cheng suggests 'more synthetic, more properly a *finish*'. (2011, p.112). These suggest the impermeability of the steel reinforced concrete that adorned many of the modernist buildings such as hotels and lidos as show in Fig.1.2

Fig. 1.2. Frank Sherwin. Poster of the Midland Hotel 1934.

In this poster (Fig 1. 2.) all the surfaces gleam and they are depicted as being equally dense in texture from the concrete rendered exterior of the building to the sheen on the swimming hat and the upper part of the swimmer's costume. Even the deflected point of light on the child's ball belies any idea of transparency whilst possibly attempting to suggest it. The surfaces are fairly consistently smooth with the appearance of impermeability and as Gabriele Mentges (2000) suggests certain types of clothing including the leather jacket and aviator's clothing were protective and mediated between the body and the immediate environment (Mentges, 2000). The idea of the swimsuit as protecting the body from its nakedness and vulnerability in the immediate environment connects the woman wearing the bathing costume and robe stylistically and metaphorically to the building.

Architectural theorist Wigley and Colomina (2016) describe architecture as a 'machine for enhancing the body.' (p.167) This is particularly pertinent in relation to spaces for swimming such as the lido and the modernist pools in the ocean liners that crossed the Atlantic during the interwar period. Mark Wigley in his critical writings about Le Corbusier's fascination with 'white wash' or Ripolin contends that it is the visual rather than the actual white surface that communicates ideas about cleanliness and hygienic properties, he states that 'Whitewash purifies the eye rather than the building' (1995, p.5). He also states that 'the white surface erects a screen" between the body and the onlooker, interrupting the eye's attempt to grasp the body' (1995, p.5). However, Wigley argues that the idea of the body is retained without it being any particular body that is imagined, as such, and this applies to a building also. The white modernist surface, clean and impermeable in its presentation is not according to Le Corbusier, a sign of modernity, but of a new civilised space uncluttered by decoration. The decorative surface being as Wigley contends the place and space where the body of the building and the body of the person disappear. In the white, modern clean surface the body of the building and of the person are apparent as ideas if not physical realities.

Both Wigley and Colomina (2016) state that 'Modern architecture presented itself as lean and fit, all the excess weight of neoclassical tradition stripped off to reveal a muscular and agile body in a white sports outfit' (p.167). Similarly, the healthy body and the fashion body divested itself of excess weight and became lean, fit and agile.

Chapter 5 entitled 'The Bathing costume, the body and its environs: 'Sites of swimming and sunbathing as heterotopic spaces', explores the places and spaces where people swam during the interwar period through the work of French thinker and philosopher Michel Foucault. His essay 'Of other spaces: Utopias and Heterotopias' published in 1967 was given as a lecture to a group of architects (Johnson, 2006, p.75). In this paper he explores what he terms as counter spaces that are outside of our ordinary and everyday life. These include such spaces as cemeteries, brothels, prisons, asylums and holiday villages. Heterotopias are spaces that are real in both location and time but operate either as a

deviation from, or counter to the normal functioning of society. There is also a suspension of the usual regulations of everyday life but also the opportunity to establish new rules and from that point of view; along with the ritual of entry and exit into heterotopic spaces. The beach and the lido were sites where new rules could be established, new patterns of behaviour accepted and the ritual for entry and exit via the beach hut and the changing room confirmed.

The beach is apparently a natural space bounded by sea, sky and sand but is also beset by rules and regulations some of which are imposed by authority and others that are common social practices. There is generally a routine for entry onto the beach even if this just involves the removal of shoes. Generally, people make changes to their apparel when leaving the beach as fits with Foucault's (1967) idea of the rituals involved with entry and exit of a heterotopia. The beach allows for an array of clothed bodies but the bathing costume appears to be the most desirable, allowing for, in principle, the bodies immersion in sunlight and water with the least interference from a garment.

Lencek and Bosker state that 'the beach became the geological setting for the pas de deux between flesh and fabric choreographed by the forces of concealment and disclosure' (1999, p.191). The beach is both a liminal space in our imaginations but has been a battle ground for propriety and moral behaviours. Except for specific beaches nude bathing is prohibited and it is very difficult to ascertain whether this is now social conformity or regulation, although one suspects that the police might be called if it did occur.

The lido, ocean liner and holiday camp are spaces for swimming and sunbathing with stronger, defined architectural spaces that the body can interact with both an aesthetic and athletic persona.

The number of lidos built in Britain, as previously mentioned were intended to help to improve the nation's health and fitness and as Fenner states, the lido was not serious like the indoor municipal pool (Fenner, cited in Worpole, 2000). The lido had facilities such as cafes, areas for sunbathing and for other activities including gymnastics and dancing. It also had spaces for spectatorship which led to some unlikely juxtaposition of the clothed and unclothed as can be seen in Figure 1.3.

Fig. 1.3. Morecambe Super Swimming stadium.

In this image of the Super Swimming stadium built in 1936 in Morecambe the lido spaces shows both swimmers and spectators. Fully clothed spectators sit in canvas chairs at the side of the pool, possibly looking out for children; however, on the upper balcony in the centre of the image clothed spectators peer down into the pool and make a distinctive juxtaposition with the swimsuit clad bathers. They appear to inhabit a differentiated and apparently voyeuristic space.

However, the smooth limbed swimsuit clad bodies with their streamlined appearance correspond well with the concrete clad covered walkway, grid like windows to the rear of the image and metal railings on which two young swimmers comfortably perch seemingly assimilated into the sunlight side of the photograph. In terms of heterotopic space this is a useful example of the different social practices that were engaged in the Lido – both within but outside of everyday life.

Foucault cites the ship or the boat as a heterotopic space 'par excellence' (1986, p.9). The ocean liner in the interwar period fired the imagination of the general populace. A space of dreams and escape it was nevertheless bound with class hierarchy within the demarcation of its spaces. On some liners the third-class cabins were kitted out in very modernist furniture of the Bauhaus style but the real relationship of body to building was established in First Class. The pools in all classes shared the vernacular architectural style with the lido – the chromium rails, diving boards were there as spaces to show off the quality and fashion of the bathing costume. However, the type of swimsuit would be determined by investment

and cost. There were of course on-board luxury shops where those who could afford it could purchase the most up to date apparel. The *Vogue* writer CP looked for dining rooms that would flatter her beauty with their interiors, thereby making a link between the architecture and fittings and her bodily self (Finamore, 2018, p.215).

The convergence of both body and architecture are examined in a significant part of the thesis along with their interactive relationship as explored by the work of Wigley and Colomina. Foucault's heterotopias in all its six principles are also investigated as part of the space and locale for swimming. Henri Lefebvre's heterotopias from his book Urban Revolution (2003) deal principally with temporal disruptions to urbanisation. His dialectical heterotopias consist of 'caravansaries, fairgrounds on the margins of cities' (2003, p.9), his particular take on heterotopia and Rob Shield's (1990) interpretation of this as 'carnivalesque' will be examined more fully in the next section and in Chapter 5.

Within the interrelationship of body and architecture the flat knitted woollen swimsuit becomes three dimensional – taking on form, shape and meaning.

Aspiration and reality: the bathing costume as perfected object.

One of the recurrent strands of the thesis is that of the modernist trope: perfectibility. Manufacturers in Britain during the 1930s competed to perfect the bathing costume as a fully functioning, wearable and glamorous garment. This is investigated in Chapter 6 that examines the marketing of the swimming costume and in the testing of swimwear in the chapter on Material Cultural analysis. The swimsuit developed during the interwar period through the use of Lastex and other elastomer yarns. Lastex was formed by 'extruding latex or the milk from the rubber tree.' (Journal of the Textile Institute Proceedings, 2009, [1935}). Invented by the Adamson brothers it was displayed by the US Rubber Company at a textile exhibition in 1931. Jantzen announced in November 1932 that next season's swimming suits would use Lastex to give two-way stretch. Horwood (2000) contends that 'Lastex was first advertised in a British Magazine in 1934' (p.665). Schmidt (2012, p 81) also cites 1934 as the date the 'miracle yarn' was introduced to Australia by the Dunlop rubber company

Incorporating the use of Lastex yarn Symington of Leicester's designer Martin White developed a telescopic swimsuit that was patented in 1937 using a revolutionary interlock technique for a collection known as 'Peter Pan (Symington Archives, LMS). This was marketed as 'fitting like a mermaid's skin' and the skin analogy is significant, like close fitting underwear, the swimsuit became a second skin.

John Smedley Ltd took the skin metaphor further producing a number of fashionable swimsuits including that were cream coloured in appearance and looked nude on the body. The bathing costumes however had the nudity of the statue and like the white garment

previously discussed by Mark Wigley (1995) communicated the idea of the body rather than its actuality. Both swimsuits were achieved by the use of knitting technologies and yarn construction to both fit and flatter the body to perfection.

Both Totora (2015) in her book 'Dress, Fashion and Technology: from 'Pre-History to the present' and Schmidt (2012) 'From Poolside to Catwalk' discuss the importance of Lastex yarn to create more figure hugging and ostensibly daring swimwear. However, the introduction of elastomer into hand knitting yarn was not possible as it needed the technologies enabled by manufacturing companies' machinery to incorporate it. Manufactured garments were expensive so the majority of the populace turned to the plethora of knitting patterns in women's magazines.

Social historian Catherine Horwood's journal article "'Girls who arouse dangerous passions': Women and Bathing, 1900-39" (2000) is essentially an historical survey and analysis of the legal regulations of social bathing and permitted apparel for both men and women. What Horwood does highlight along with Warner are the difficulties that public swimming involved particularly for women in this period and the unreliability of hand-knitted wool in the water. One interviewee for her paper stated that when she came ashore 'we had a plunging neckline down to our ankles'. (Horwood, 2000, p.665)

American writer Patricia Warner (2006) explores the significance of the swimsuit for acquiring a suntan when she notes that swimwear bared the skin for the first time outside of competitive sports exposing areas such as arms, backs and décolletage (Warner, 2006). She reports that evening wear followed sportswear and interestingly it is these areas that became the erogenous zones of the interwar period. Warner cautions that 'women of the period had to worry about shaving their underarms and legs' (2006 p.79). Warner points to the difference between the desired image of the smooth unblemished body and the painstaking methods of achieving it. Warner also comments on the attractiveness of knitted woollen swimsuits when dry but states that they were inclined to stretch, sag and on the beach and collect sand in a most uncomfortable way (2006).

Fig. 1.4. Advert for Crocus yarns in Stitch Craft.

The Crocus knitting yarn company uses the image of a fashionable woman in Fig.1.4. to sell their non-shrink knitting wool. The illustration shows a tall, slim figure briefly delineated in a blue swimsuit and clearly aspires to the same portrayal of the perfected body as many of the high-end manufacturers. The reality however as attested by Horwood and Warner was different and the thesis tests reports on the research of a reconstruction of both a manufactured swimsuit and a hand-knitted one. This experiment is written up in Chapter 7 on remaking and material cultural analysis.

In addition to the swimsuit, the reality of the body on the beach and in other spaces for swimming varies enormously from the ideal. There were the scrawny and the fat as depicted in Donald McGill's seaside postcards. The 'grotesque' and the humorous were part of the transgression from the desired aesthetic of the young, slim, streamlined body. (Shields, 1990).

The dissonance between the aspiration for aesthetic and stylistic perfection and some of the practicalities and reality of the wearing of the bathing costume is a major discussion point in the thesis.

Chapter Themes

Chapter 4 examines theories of health and hygiene during the 1920s and how the government and other bodies promoted ideological and practical solutions to the problems of the poor levels of health and fitness of the population, sanitation and the eradication of pernicious diseases such as rickets and tuberculosis. The chapter examines how the swimsuit and the body have agency within all of these discourses as shown across the thesis as a whole. The chapter shows how the European wide healthy body culture including Youth movements and Women's movements such as the Women's league of Health and Beauty were also instrumental in promoting ideas of health and happiness through exercise and clean living.

Chapter 4 also explores the link between eugenics and modernism through the work of Christina Cogdell (2004) in relations to the human body as a perfected machine that can be engineered and designed.

The chapter engages with the different types of hygiene including social/racial and physical. It looks at the writings of Calum Saleeby and the Sunlight League and the significance of sunlight/sunbathing in the promotion of health. It explores the work of architectural historians such as Overy (2007), Worpole (2000) and Wigley (1995) in the concept of architectural modernism at the cutting edge of 'healthy' buildings. The idea of 'light, air and openness (Overy, 2008) promoted by modernist architects with the perception that it would enable the individual to encounter space that would be sympathetic to their demeanour and welfare.

Cogdell's (2004) work examines post war designers but the link is apparent in early modernism too particularly in relation to the human body as a perfected machine that can be engineered and designed. The swimsuit is central to these arguments not just as a perfected garment but a garment that reflects the values of the time.

Chapter 5 develops the theme of exercise and health in relation to the swimsuit by examining the places where this took place. The Bathing Costume, the body and its environs focus in particular on the places of swimming and their relationship to swimwear in the context of the modern surface; in particular the relationship of new technological surfaces including metals and concrete to the stream lined body with its modernist aesthetic.

This chapter explores the beach, the lido, the ocean liner and the holiday camp as sites of what Foucault (1984{1967]) and Lefebvre (2003) describe as heterotopia, as temporal

disruptions to urban existence. Those whose bodies did not conform to the youthful and athletic silhouette did inhabit these spaces for leisure and pleasure but may have felt conspicuous and challenged by this and this will be explored through the concept of the 'carnivalesque' in the work of Bakhtin in Shields (1990) and Lefevre (2003).

Sites of swimming and sunbathing indicate some of the aesthetic considerations of the swimsuit, the next chapter examines these in depth in relation to marketing.

Chapter 6 investigates the concept of aspiration versus reality as previously discussed in the introduction. It draws out the theme with the analysis of the media and who was being communicated to and why. Class differential is explored by comparing swimsuits in magazines at different market levels. The marketing of swimwear through *Harper's Bazaar* and *Vogue* at the high end of the magazine spectrum is very different to the style of knitting pattern in periodicals such as '*Home Chat*' and '*Woman's weekly*'. High end manufacturing companies such as John Smedley Ltd and Windsor Woollies promoted their garments using photographic models and stylish studio backgrounds and these were often in contrast to the aspirational illustrations used by yarn companies to give the impression of the same quality of glamour.

Chapter 6 also examines the concept marketed by Symington of Leicester in their Peter Pan collection of the swimsuit being a 'second skin'. It further examines how the swimsuit perfected the body and smoothed out any natural imperfections that might be evident in the naked form.

Chapter 7 developed this theme and explored it through the re-creation of swimming costumes using archival garments and historic knitting patterns and through the re-enactment of a swim in the re-created garments. A range of methods previously mentioned in the section on the research process and methodology were employed to gather data from the swimmers and from observation of all aspects of the event. This enabled me to make a comparison from manufactured swimwear and hand-knitted versions in terms of their glamour, wearability and performance in water.

The introduction has intended to give an overview of the themes and directions that the thesis takes and how these are explored through the chapters. The next part of the thesis presents the methodologies used in the process of gathering evidence to support my objectives.

Chapter 2. The Literature Review

Introduction

My fascination with the aesthetics of modernism originally came from swimming in lidos constructed during the interwar period in the north of England and Scotland. This early encounter with their clean, streamlined environment was built upon at Art School: with exposure to the Bauhaus and a revival of a fascination with the interwar period during the 1970s, as in Walter Benjamin's 'Tiger's Leap' or the recycling of fashion (Ekhart, 2020). The thesis evolved from these experiences, and memories of wearing home-made crimplene equivalents of Quant/Biba style dresses in the 1960s that did not hang in the way they were supposed to. These ideas became the starting point to my research and reading.

The texts, and archival material, previously discussed in the methodology, that I consulted built upon my early ideas and hunches about the interwar period. My original thoughts about the differential between the manufactured and the home-knitted interwar woollen swimsuits elicited some complex ideas about class, healthy body culture, modern surface/aesthetic and glamour that needed to be addressed.

The literature review first looks at the interwar swimsuit as part of modernism and modernity. Many of the philosophical and sociological key thinkers were writing from the beginning of the 20th Century. Their observations reflect some of the dramatic changes in society that framed the experiences of those living in the pre and post First World War period and show their impact on the next two decades. Dramatic changes in women's dress and exposure of the body are part of this.

The next section looks at dress and class, class differential strongly emerged as a theme from my reading and the literature review looks at attempts to democratise fashion and where and how this does not always manifest itself without obstacles.

The European wide concern with improving the health of the nation state following the First World War is explored in the next section along with healthy body culture and its shift into an ideology of the perfect body both in fashion and also in eugenic form. The woman's body is particularly significant in this, as she was not only the breeder of future generations but also subject to more representation in the media than men and therefore a greater signifier of meaning.

Following on from the research outlined previously in the methodology, the section on Dress and Materiality shows how the swimsuit with its problems in water has been written about in histories of fashion and textiles. This section outlines the need for the re-creation of swimsuits and re-enactment in a pool was key to the understanding of the quality and safety of the interwar knitted swimsuit.

The final section looks at glamour and examines some of the features of the modern surface outlined by Cheng (2011) and other writers. As a concept, the modern surface weaves its way throughout the majority of the thesis either as a wipe clean, hygienic environment or the sparkling and dazzling surfaces of interwar glamour.

Dress and Modernity

The modernist swimsuit was a response to major shifts in society and the conditions of modernity. The literature that I examined in relation to modernity set out some of these shifts and conditions of modernity and reflected the societal and cultural changes it might be anticipated that the designer, manufacturer or wearer of the swimsuit would be aware of. The aesthetics of modernism and how this was reflected in the development of the swimsuit during the interwar period was an important part of my literature search.

Various writers that I have engaged with in the thesis including, social theorists, Simmel (1957, p.545 [1904]) and Veblen (2007, [1899]), philosophers from the Frankfurt School such as Walter Benjamin (1978) and Siegfried Kracauer (1995 [1963]) have each had their own particular take on modernity. The one writer whose definition of modernity resonates well with my own explorations of the social, economic and cultural aspects of the interwar knitted woollen swimsuit is that of fashion historian Elisabeth Wilson (2003). She tells us that modernity is an imprecise term and refers to both the intangible and the material, even down to 'its smell, its sounds and its rhythms' (p.9). The impact of nineteenth century industrialisation on society, its emphasis on progress, on speed, in both production and mobility, and the rise of capitalism might be a potential starting place but she cites Adorno (1984) as claiming that there is no chronology at all to modernity. Wilson also points out modernity's oppositional relationship to modernism which she states provides an 'enraged critique' of the economic and social order (2005, p.11). Modernism was the aesthetic and cultural part of modernity that reflected modern life but also opposed it; evident in many artists response to the First World War was the depiction of the trauma and horror of the mechanisation of the war machine.

Fashion and dress in the industrial period, Wilson argues, 'has been at least as likely to express a longing for the past of tradition and stability destroyed by industrial turmoil as an enthusiasm for the shock of the new' (2003, p.12). This would correspond with Benjamin's view that fashion is recycled (Ekardt, 2020, p.40), he was greatly interested in the idea of fashion reinventing itself and referred to this as 'The Tiger's Leap' (ibid), as a Marxist theorist he possibly equated the cycles of fashion with those of the economy but rejected the idea that fashion was mere commodification. Buck-Morss shows us that 'Benjamin opened up to philosophical understanding the phenomenon of fashion that is specific to capitalist modernity' (1991, P.97). These cycles of fashion have been evident throughout the 20th and 21st centuries but I would argue that the early part of the interwar period, dress

was definitely subject to the shock of the new. Parts of the body were exposed that had never been exposed before including legs, bare arms, backs; with shorter skirts and freer bodily movement. The swimsuit embodied these changes, previously an enveloping and voluminous garment, the swimsuit became a figure fit jersey knit that clung to the bodies of men and women alike.

Modernism, as part of modernity embraced this streamlined, androgynous bodily aesthetic and certain writers have made a link between the aesthetic of the body and the aesthetic of buildings (Wigley and Colomina, 2016). They tell us that architecture is a 'machine for enhancing the body.' (167). The lido is not specifically mentioned in this context but as a new interwar site for leisure and pleasure, its surfaces of concrete and chromium match the streamlined swimsuits of the interwar period. Wilson (2003) highlights Gerald Heard's text of 1924 whereby he makes an analogy between architecture and clothing as 'containers of the body'. The thesis will argue that this is a significant relationship in terms of spaces of swimming and the swimsuit. Wilk (2006), Wollen (2008) and Otto and Rôssler (2019) writing about modernism show the connections between the body, building and European wide cultures of health and fitness in response to social and political change.

Benjamin also writes about the 'fragment' in the context of modernity, the city and the street. The fragment is a sign or symbol that can have multiple cultural and societal meanings. He does not reference dress or fashion as such, however, what emerged from this reading of Benjamin's 'fragment' was the place of the swimsuit in interwar society. As a representation of exercise and healthy living, glamour, pleasure and escapism it touches on many layers of aesthetic, economic and even in the case of the healthy body culture, political meaning.

George Simmel's essay on fashion (Simmel, 1957, p.545 [1904]) suggests that the lower classes imitate the working classes particularly in the field of fashion. Frisby (1986) describes Simmel as the 'first sociologist of modernity' (p.39). This is discussed later in the thesis and whereas one would agree with this to a certain extent at the beginning of the twentieth century this idea, it could be argued, shifts somewhat during the interwar period where there is an opening up of opportunity for the 'lower classes' to access both clothing and places of leisure including the lido and the cinema. The new short dress and cropped hair symbolises the modern woman no matter if they are rich or poor. Veblen (2007, [1899]) similarly comments that ideas of dress and fashion trickle down from the upper classes (or aristocracy) to the lower classes in his Theory of the Leisure Class ((2009, [1899]). He shows that the lower classes imitate or emulate the upper classes in their dress. The thesis challenges this notion particularly in Chapter 6 where it is shown that new role models for the lower/working classes emerged from the cinema in the interwar period, glamour is the order of the day and can be achieved by the shop girl or factory worker, at least on the surface and superficially. Wilson (2003) suggests a contradiction in Veblen's theory when

she cites the photographer Cecil Beaton's comments about Chanel's suits and little black dress that 'the aim of this was to make the rich girl look like the girl in the street' (p.41). This demonstrates that there was a shift during the interwar period away from the aristocracy or upper classes as being the role model for the young working modern woman. This does preclude some of the barriers still existent in the class system, Chanel's suits and black dress were cut in such a way that they hung on the body perfectly as they were haute couture and out of reach of many modern women. The swimsuit was also expensive and the alternative was to hire (at the local pool) or home-knit one's own.

Kracauer (1995 [1963], p.324), sees the cinema as a firmament of sparkle, light and sheen and a distraction for white collar workers. The section in this literature review on dress and glamour looks at this more fully. These qualities of light and surface gleam and shine were very much a part of modernism and modernity. Marshall Berman (2010) writing on modernity cites Baudelaire's poem 'The Eyes of the Poor' as an example of where the new Hausman boulevards enabled poor people to traverse to parts of the city that were unfamiliar to them. Standing outside a dazzling new café, gas lighting shone on mirrors and gold cornices (p.149), the family of the poor remark on its beauty, however the son declares that it is not a place where they can go. This is not just an economic consideration but one of embarrassment because they do not fit. Baudelaire's mistress is horrified by their appearance in the dark outside and asks the poet to tell them to go away. Just as the 'poor' in the new Paris of the late 19th century were not used to encountering glamorous spaces similarly those of the middle classes were not used to unexpected appearances of those from the lower classes. There was still in post-revolutionary Paris a clear division between the classes.

What emerges at this point in relation to modernity and modernism from the literature surveyed is that despite modernist ideas about healthy body culture for all and experiments in social housing through modernist architecture (Wilk, 2006), the shift in class is beset with obstacles and boundaries such as those from the 19th century that leach into the 20th via obstacles to achieving a class equivalence. The swimsuit is a prime example of that; wet, saggy home knit versions of the figure fit manufactured swimsuit caused embarrassment and potential feelings of shame (Flugel, 1930). Another emerging factor is probably the 'shock of the new.' In relation to dress it certainly shows how clothes became more revealing and women's behaviour was rebellious, publicly smoking cigarettes, drinking alcohol and so forth in comparison to the strictures on the behaviour of a 'lady' in previous decades. The environment, the city and the street (and ultimately the lido and the beach) become places of mixed class where gaze and scrutiny occur. Benjamin's idea of the 'fragment' situates the swimsuit in the middle of a range of interwar ideological concerns. The meaning of the swimsuit as a fragment links it to ideologies about improved national health through fitness and exercise, to the modernist architecture of some of the swimming

places, to glamour and to ideas about the democratisation of dress and class. Clearly within the account of modernity issues of class have arisen and the next area of the literature review deals with this in some depth. Class differentiation emerges as part of the materiality of the swimsuit despite a move towards the democratisation of fashion as outlined next.

Dress and Class

Here are some of the writers that I consulted in relation to dress and class. Some of these writers speak about the democratisation of fashion in the context of the interwar period and outline some of the class division in dress.

Rachel Worth (2020) discusses the democratisation of fashion with regard to mass production and the high street, she cites her previous publication (Worth, 2007) in this context. She says about democratisation:

> ‘The term is generally used to describe an ‘eventual standardisation of clothing in which social class differences would be less visible or non-existent’, or, as the process by which fashion and style, rather than being primarily the preserve of the rich, become increasingly accessible to a broader range of people than hitherto, in a diverse range of social and economic circumstances’ (p.93).

Worth (2020) tells us that the interwar period was a time of expansion for the ‘multiple’ or expanded factory production of a manufactured garment. Many did emulate the clothing of the upper classes in style but not in quality or tailoring. Marks and Spencer and Woolworth were the key retailers at this stage for ready-mades and catered for the working classes. Social historian Juliet Gardiner (2011) who writes about the 1930s as a decade emphasises the formal dress of the lady featuring hats, gloves, tweeds and tartans for the country, fox fur stoles, and white satin evening dresses, halter necked, bias cut and clinging (designers, Patou and Molyneux led the style for those who could afford ‘haute couture’). Women in the middle-income range would generally have a dress maker or used a dress pattern themselves to ‘run something up’ or buy from a shop (Gardiner, 2011, p.529). Working class women generally, wore home-made clothes and jumpers; cardigans, hats and indeed swimsuits were hand-knitted. The poor however had to rely on hand me downs from relatives or second-hand clothes. The distinctions that Gardiner makes suggests a real class and money divide between the haves and have nots. This is replicated in the average cost of a manufactured swimsuit of 25 – 30 shillings (Fig. 7.4. *Harper’s* Bazaar, June 1932) compared to Gardiner’s estimation of a waitress’s wage of approximately 20s or a pound a week (20ll, p. 557). The outlay for a swimsuit here shown is equivalent to a week’s wages for the modern young woman. Those in the poverty bracket would earn considerably less.

Wilson and Taylor (1989) describe how changes were made to enable working women to dress much more fashionably. Art.silk later known as Rayon was being developed in the

textile industry from the early part of the 20th Century and was initially introduced for underwear and stockings. Developed from wood cellulose it became commercially viable in the interwar period. It was considerably cheaper (Wilson and Taylor, p.1989) than real silk or any other natural produce such as wool or cotton. In dress, it could emulate satin, silk, knit structures and had a substantial sheen (one of the gleaming surfaces of the interwar period). Rayon therefore gave the working-class modern woman an opportunity to emulate the style of the upper and middle classes including those of Hollywood Role models. Mass culture, advertising and the cinema promoted a look that women could aspire to. Wilson and Taylor comment that 'women in the audience who watch the talkies in their millions could identify with the stars, and learn from them how to dress, how to wear make-up, how to style their hair, how to smoke a cigarette, even how to kiss' (1989, p.99). It is apparent that working class women were enabled to access fashionable clothes and to have new, exciting role models.

Kelley (2009), tells us about a young woman who lived in Wapping Docks who had bought a bonnet for her new baby with a swansdown trim, when she hung it out on the line after washing it, the bonnet was covered in soot stains because of the environment she lived in. This cautionary story is indicative of some of the obstacles faced by working class people who aspired to have style and quality in their lives. The literature on class speaks of the democratisation of dress in the interwar period, however building on Kelley's example this thesis aims to evidence how the swimsuit demonstrates that the aspiration to the style and the reality of wearing it are two different things entirely. There is a clear gap in the literature here and it is the intention of the thesis to examine this in relation to materiality. The next section looks at the move to improve the nation's health as part of enlightenment thinking in the 18th century and also as a parallel to the changing societal patterns of modernity.

Dress and Health

The development of the swimsuit as a garment echo many of the practices of sea-bathing for a healthy constitution and the cleansing of water to help to eradicate disease such as cholera. The swimsuit foregrounds some of the conquest of disease by the early 20th century, showing off the straight limbed, sun-tanned body that is open to the elements of wind, fresh air and sunlight. Exercise was also going through a process of democratisation with a building programme of open-air pools and lidos and football pitches for the working classes.

The history and development of healthy practices of living, the fight for control of disease, the interwar concerns about healthy body culture, exposure to fresh air and sunshine appear to strongly underpin the developments in dress in the early part of the twentieth century. The swimsuit evolved from national beliefs (in Britain, Europe and America) that

sunshine fresh air and exercise could combat help to combat diseases such as tuberculosis, rickets and so forth.

Clean water, as Smith (2007) tells us in her historical account of hygiene, helped to reduce the impact of cholera national health. She tracks the significance of water in health and hygiene and the emergence of sea bathing and public bath houses in cleansing the body and promoting healthy living. Architectural historians Overy (2007) and Worpole (2000) examine the concerns about hygiene and healthy living in relation to modernism. They discuss how beliefs concerning the health effects of sunlight and fresh air became the framework for modernist architecture with 'its recurring utopian metaphors of the 'clean machine' and the model factory' (Overy, 2007, p.13). They suggested that the preoccupations of the period with hygiene, cleanliness, whiteness and wipe clean impenetrable surfaces were part of the world view of architecture that sought to control the pollution of body and mind. This world view believed that architecture and design could improve society and the lives of people.

Wilk (2006), similarly looked at modernism in relation to health and the impact of First World War and the subsequent Spanish Flu epidemic on public health policies. He examines the healthy body culture in relation to sports such as swimming, gymnastics, tennis and dance. Cogdell (2004) and Smith (2007) indicate how that healthy body culture and its aspirations towards a perfect society of toned, healthy people became an obsession with the eugenicists who made exclusions of people who did not 'fit'. It becomes apparent from reading these texts that fresh air, sunlight (Carter, 2007), fitness and exercise contributed to the constant renewal of the design of the swimsuit to enable decent exposure to sunshine and a good knit structure to support the movement of the body in water.

The swimsuit emerged from the first decade of the 20th century as another 'shock of the new'. Knit jersey that exposed legs, arms and backs was the radical new swimsuit design in the 1920s. As a garment it emerged from a history of interventions in women's dress from the late 19th century to the post First World War period. Both Stella Mary Newton (1974) and Wilson and Taylor (1989) show how aesthetic dress, dress reform, sanitarians and woolleners mirrored societal changes for women. There was a shift from the actual to the internal corset in the first decade of the 20th Century (the internal corset, achieved through diet and exercise became more prevalent in the interwar period). Newton (1974) shows us how women's access to exercise including cycling, mountaineering, tennis and swimming influenced the development of dress during this period. The design of the new swimwear in the interwar period progresses to reflect technological inventions that hug the garment closely to the body and aesthetically flatter the swimmer in some of the modernist lido environments that were built from the late 1920s onwards (Smith, 2005). I believe that this interrelationship between governmental and societal concerns about the health of the

nation post First World War makes a significant contribution to how the continued design and construction changes of the manufactured swimsuit (and sometimes the home-made version) advanced throughout the interwar period. It also suggests an investment in the body at a national level; healthy, fit, toned and athletic it symbolises the modernism of the nation, conversely it also highlights and diminishes those who do not fit that mould. The next section investigates what the literature tells us about the material properties of the swimsuit and how that may or may not contribute to divisions of class, or healthy versus unhealthy bodies.

Dress and Materiality

Key to understanding the swimsuit as a garment was research into its materiality. I have so far established that class was a differential in the materiality of the garment – the factory made as opposed to the home-made and I wanted to see where that had been outlined in the literature.

Within the discourse of fashion and textile history there is some discussion of swimwear and the materiality of the swimsuit. Sale (2018), Warner (2006), and Horwood tell us about the difficulties that women experienced when swimming in public during the early part of the 20th Century. Access to public beaches, swimming pools and the nature of the apparel that could be worn by both men and women were subject to legal regulations until the advent of lidos and outdoor swimming spaces in the late 1920s. Much of this writing tells us that hand-knitted woollen swimsuits were unreliable in water and that this knowledge came from anecdotal evidence. Horwood in particular notes that one of her sources stated that when she and her friends came ashore 'we had plunging necklines down to our ankles' (Horwood, 2000, p.665).

Sale (2018) also notes that the cost to working class women of a swimsuit often meant that they had to resort to the hand-knit (p.77). She tells us that these were inclined to sag and drag downwards when wet. The gap in the literature here is around the different knitting technologies that would have been used for the manufactured and hand-made swimsuit. It has been my intention to test out the materiality of the two different types of swimsuits in water to take the research beyond the purely anecdotal through practices of re-creation and re-enactment.

Certain writers including Totora (2015) and Scmidt (2012) discuss how the introduction of 'Lastex' an elastomer thread to the garment in the 1930s had an important impact on these problems. Lastex however could only be used in a commercial setting, there was no equivalent yarn or means introducing it into a hand-knit garment. Lastex created a more figure-hugging garment as Kennedy (2007) suggests, it satisfied the desire for the perfect swimsuit clad body with its associations of Hollywood glamour. Jo Turney (2004) looks at

present day home crafts in the context of 'value' and at the home as a site of production, some of which is applicable to the interwar decade. Turney (2009) examines knitting in differing contexts including gender, post-modernism, the 'unhomely' and the political dimension of knitting. This enabled me to look at hand-knitting in a metaphorical way and to see how it can be invested with power and also with love (knitting a bathing suit as a gesture of affection for a husband, partner or child might be an example of this). This does not digress from the material issues of the hand-knit swimsuit and its capacity to sag in water but the literature did explore some of the technical and emotional aspects of home-knitting and this contributed to the re-creation of the home-made swimsuit.

Texts on material culture and object study including Miller (2009), Miller and Küchler (2005) and Latour (2005) show us how garments and their materiality are positioned firmly in the study of objects and their relationship to other people, actions and organisations. All these interrelationships formed a significant part of the investigation in my thesis. Hodder (2012) similarly talks about entanglements, interactions that occur between objects, people and environments. These were key findings in relation to what happened during both the re-creation and re-enactment. Davidson (2019) tells us that the re-creation of an extant garment is a vital process in understanding how a garment was made and how it performed when it was worn. This was an analysis of the movement of a dry garment however not one that would perform in an environment such as water.

What has come from this literature is a thorough understanding of how material can be investigated in itself (as wool was investigated by Klepp and Hebrok (2014)) and how garments as objects interrelate with both people, society and environments. Davidson points to the benefits of the re-creation of garments in furthering our knowledge of their make-up and wearability. The gap in the knowledge evident in this literature however is the leap to testing though re-creation and re-enactment the differential in the material that this thesis investigated and also how the swimsuit sits as a reflection of societal barriers in its material wearability and performance in and out of water. Throughout the literature the theme of glamour emerges as a key factor in the figure-hugging swimsuit and the next section surveys the literature on glamour.

Dress and Glamour

What the 'family of eyes' encountered in Baudelaire's poem was a glamourous environment, that sparkled and glittered in the Parisian evening. Dyehouse (20ll), Gundle (2008), Brown (2009) and Brown (2015) all tells us that light, the reflection of light on different modern surfaces, shine and shininess become part of the experience of modernity in the late 19th and early 20th Centuries. In the interwar period the number of surfaces that shone or gleamed increased. Chromium, cellophane, and even the concrete of modernism had minerals mixed into it to cause it to sparkle in the sunshine (Brook and Guise, 2008).

Dyhouse refers to a glamorous woman who was ‘as slender as a flake of silver, as blanched as an almond, as platinum as a wedding ring’ (Glyn 1907 cited in Dyhouse 2011, p.7). Similarly, Cheng (2011) discusses Josephine Baker’s black skin in relation to its gleam and shine under camera lighting. As Brown (2015) states ‘Like Kracauer, Berman sees access to light as a driver for aspiration (p.65). Access to light for the working classes during the interwar period was available in department stores and the cinema. Kracauer (1995) shows us that the influence of the cinema on the working classes was profound. New role models were created for men and women, but particularly drove the aspirations of women to emulate their cinematic role models with varnished black bobs and shimmering blond hair, wearing fabrics that glowed in the cinematic light. This is an area of enquiry for the thesis that will generate ideas about the aesthetics of the interwar period encompassing more than the obvious shifts in dress and the environment.

Colin Campbell (2005), discusses how consumerism matched the aspirations of those who sought glamour. Consumerism spread across all of the social classes and increased during the interwar period and young, working shop and factory girls could indulge in glamorous clothing and make up if they had sufficient disposable income. Money and access to spaces of glamour, apparently opened up to the working classes during the decades of the interwar period are points for consideration and investigation.

Finally, Wright (2015) indicates a relationship between Hollywood, glamour and the swimsuit. It is one of the garments she says that conveys the sexuality of the modern woman. The swimsuit appears as a functioning garment in Hollywood and therefore it can justify states of undress and expose more of the body than would typically be allowed by the Hays code, operational during the interwar period.

Glamour as an entity played a key role in the interwar period and as a theme is worthy of investigation. It places aspiration at the centre of its operations and encourages emulation and consumption. It does indicate that there may be a difference between costly glamorous dress with its quality fabrics and cut, and inferior fabrics intended to hold the shape and movement of their superior models but without the resources to achieve it. This is particularly applicable to the swimsuit as a glamorous garment, where the knit structure is the key to its performative qualities in water.

Conclusion

What has emerged from the literature review is a variety of themes that surround the ‘fragment’ of the swimsuit as a garment in a particular time and place. The literature on modernity that was reviewed has shown the changes that manifested themselves, particularly at the beginning of the 20th Century and into the post-war period.

The gaps in knowledge that have emerged have principally involved class differential in attempts to democratise fashion and make more spaces (aesthetically pleasing or glamorous) available to working class people including the department store, the lido and the beach and the cinema.

Where the gaps occur are in relation to the barriers or obstacles to participation in these spaces – in other words, the reality for the working classes rather than the aspiration.

Kelley (2009 has shown the example of the baby's swansdown bonnet that could not be washed and dried clean in a docklands environment, presenting a great obstacle to the pride of the mother. The hand-knit swimsuit similarly is a great disappointment and embarrassment to the wearer when it sags as the swimmer emerges from the water. Literature has recorded this but from anecdotal evidence. This thesis intends to go beyond that to test and evidence that not only does this occur but that other material properties of the swimsuit might emerge in the testing. As outlined in the methodology, the way forward would be the re-creation of the swimsuits and the re-enactment of a swim.

Chapter 3. The Research Process and Methodology.

Introduction

Relatively early on in my research I realised that within the study of interwar swimming costumes, what was emerging, was the issue of class. Chapters 4 and 5 of this thesis show how, as part of modernity, there was a willingness on the part of the Government and the establishment to improve access to facilities for the working classes. These initially included clean water and later, access to sunshine and healthy exercise. The lido, in particular, as a space attracted a mixture of classes, that which Goffman referred to as 'mixed contacts' (Goffman, 1996) who would have different beach apparel. The thesis set out to evidence emerging findings that the manufactured swimsuit held up quite well in water but the home-knitted version sagged. This would have shamed the wearer of the latter through immodest exposure of their body (Flugel, 1930). During the interwar period exposure of different parts of the body, legs and back for example became acceptable but exposure of the breasts or in men's case their genitals would create feelings of 'shame and guilt that attaches to appearance or behaviour which is different from that of our fellows' (Flugel, 1930, p.56). These continued to be private and erotic parts of the body, not exposed to public gaze. Providing adequate first-hand evidence of this class differential was an important starting point for the methodology. My own background is working class, and although certainly not deprived in any great sense, I have and do, encounter barriers that have made me sensitive to class differential in a number of different situations. I have not used a Marxist historical perspective in this thesis but this is very much a part of my early theoretical development, understanding and reading of society and environment.

The methodological approach to the thesis sits within the tradition of visual and material culture using object study and visual methodologies. My work follows a trajectory from Walter Benjamin through material cultural study including Appadurai (1988) and Hodder (2012). It connects with design history through the work of Dick Hebdige (1988), in particular his study of the Italian Scooter Cycle, where he uses different lens to examine aspects of the object such as image, promotion and production. Vanessa Brown (2015), whose study of sunglasses takes a very similar approach to my own research methods states that thinkers such as Walter Benjamin 'analysed the seemingly insignificant fragments of modern culture as a way of revealing a complex web of underlying cultural, economic and ideological values' (2015, p.6). These 'fragments' often contain layers of meaning and in the case of my study required a mixed method approach.

The research process examines the interwar knitted woollen swimming costume through a variety of methods including the re-creation of an archival garment and the re-enactment of a swim in re-created garments. These particular methods were used to create, as far as possible, a means of demonstrating how both hand-knitted swimsuits from interwar knitting

patterns and high-end manufactured swimsuits performed in water with the hope that this would provide affirmation of class differential in the garments.

Other method's included the use of storytelling, archival work, visual analysis, re-enactment and re-creation. Storytelling was used to gather data about wearing historical swimwear; participant research allowed me to understand what the garment was like to swim in, archival research both of garments and contemporaneous magazines provided both material and visual information. The analysis of text and image was key to formulating theoretical insight. The research showed that the interwar knitted swimming costume connected to many of the sets of ideas current in the interwar period including the aspiration for perfected form in body and building; discipline, and rigour in exercise for health, and the aesthetics of glamour. The insight afforded by the re-creation and re-enactment pointed to a research process that could examine the material properties of the swimsuit alongside its place in fashion and textile histories, including what it was like to wear, to swim in and what it felt like on the body (itchy, warm, saggy?). My methodology therefore required an epistemological approach that was multi-layered and collected data from a variety of sources including interviews, archival documentation and photographs, images both contemporary and extant text, direct observation, and handling of materials.

My multi-method perspective includes material cultural analysis using re-creation, re-enactment, storytelling, participant research; some of which refers to archaeological methods; archival research and it also includes discourse analysis (with visual methodologies), providing the deductive aspect of the research project and theoretical underpinning.

Migiro and Magangi (2010) refer to a mixed method approach as a new research paradigm, they state that previously 'the idea of incompatibility between different philosophical world views' (p.3757) had inhibited any combination of methodologies particularly those of the sciences and humanities. They advocate the philosophical notion of 'pragmatism' as one which believes that the truth is 'what works best for understanding a particular research problem' (2010, p.3759). This seems both applicable and relevant to my study.

Analysing Text and Image.

The analysis of textual material was very important to the study, my literature review in the previous chapter outlines the range and scope of the texts consulted. Visual analysis of historic material from magazines, photographs, marketing material and illustrations informed my 'reading' and interpretation of the interwar swimsuit. These discourses communicated a cogent understanding of the key themes that my study addressed. By using the expression 'discourse analysis' I refer to Gillian Rose's (2023) contention that

‘discourses’ are ‘articulated through a huge range of images, texts, and practices’ (p.223). In the context of this thesis, it refers to the interpretation and analysis of written texts and visual images. Visual images gave me information not only about the ‘idealised’ form of the swimsuit in advertising and the media but also historical photographs showed wet swimsuits sagging and coming away from the body.

My initial approach to discourse analysis was to situate the swimsuit in fashion and textile histories such as those by Horwood (2011), Warner (2006), Arnold (2009), Schmidt (2012) and others, some of their findings suggested that the hand-knitted woollen swimsuit sagged and compromised the modesty of the wearer. These arguments were based on storytelling and written histories that gave some agency to the materiality of the swimsuit but did not provide much technical evidence of its propensity to sag. I believed I could use testing of knitwear in water to further substantiate this idea as discussed later. I also wanted to locate the swimsuit in overlapping layers of social and political theory, discourses of health and the body, modernist ideologies and ideas about architecture and surface.

Gillian Rose (2023) cites Foucault as having introduced a framework to analyse discourse, she states that: ‘An important part of that framework is how a particular discourse works to persuade. How does it produce its *effects of truth?*’ (p.237). Foucault on health and heterotopia formed a philosophical basis for some of my chapters on hygiene and places of swimming, I use this as an example of how I approached this methodology. In Foucault’s essay on heterotopia (1986 [1967]), he describes prisons, nursing homes and ships as places outside of everyday life, I came to realise that places of swimming including beaches and lidos could also be categorized within this discourse too. Lefebvre (2003) provides a counterpoint to this idea of heterotopia and this too contributed to a political and social understanding of places of swimming and sunbathing along with Johnson (2006) who offers a contemporary analysis of Foucault’s (1967) essay. Analysing a range of texts connected to and emerging from the reading helped to me to validate my research and persuade others of its veritas (Rose, 2023).

Reading meaning in texts confirmed and consolidated the triangulation between my different methods of research. Visual analysis is also an important part of that triangulation. Rose (2023) and Tonkiss (1998) both advocate the use of visual evidence and visual detail to support analysis. One example of this occurred when I came across marketing material in the Symington archive (LMS) that described a swimsuit as a ‘second skin’. The concept of ‘skin’ and swimsuit as second skin became integral to my research, Anna Anlin Cheng’s book ‘Second Skin: Josephine Baker and the Modern Surface’ (2011) verified not only ‘skin’ in relation to the thesis but also the idea of ‘surface’ in the context of modernism. Skin theories enlarged the parameter of this discourse and contributed not only to an individual chapter but across the study.

Reading the meaning in visual material was also an important part of this methodology not just in terms of its visual content (Rose, 2023, p.43) but in terms of Rocomara's idea of 'mediatization' (2017) whereby the social and cultural production of images particularly in the fields of advertising and cinema contributed extensively to this study. Reflections of the interwar concepts of 'glamour' both high-end and for the working classes became part of the discourse of glamour in the writings of Brown (2009) and Gundle (2009) contributing to a theoretical interconnection.

Discourse analysis underpinned and interacted with other methodologies that I used in the thesis and enhanced my ability to produce overlapping layers of meaning in the thesis.

Material Cultural Analysis

Material Culture is a term which refers cultural and social relations as being integrated parts of 'things' and that as humans we ascribe meanings to them (Woodward, 2020). It is also a field of scholarship whereby 'things' are studied within their human dimension. The swimsuit is a garment that has a human being wearing it an environment such as the beach, the lido and the swimming pool, all of which are loaded with cultural and social meaning.

Woodward (2020) also distinguishes between 'material culture' as a term and 'materiality', she states that:

'To think about materiality entails a consideration of both the materials of which things are made, as well as the material properties of things.' (P.179).

Object study and how objects have meaning confirmed my point of view that the interwar swimsuit existed within a particular timeframe that had its own cultural, social, and political parameters. Appadurai (1988) shows that objects have cultural, political, and social lives (p. 3). In social theory this has been built on by Latour, (2007) showing how objects have agency within networks and function alongside other 'actants' or 'actors', in the case of the swimsuit the relevant actants include people, wool and water. Hodder (2012) explores the dependency of humans on objects and how that interrelationship can bring about change. My research project involved object and people entanglements in both the recreation of the swimsuits and the re-enactment of a swim. Miller (2010), Küchler and Miller (2005) bring material cultural analysis into clothing, textiles, and fashion. These were useful studies both in defining the methodology and validating some of the techniques that I used including interviews, participant research, and re-enactment. They were important in shaping the findings of the thesis.

Although the thesis details research activities including interviews and the re-creation of the swimsuit it is appropriate to present the rationale behind using these. The interviews I

conducted at John Smedley Ltd on an ‘evidence gathering’ day gave me visual and spoken information about what wearing knitted woollen swimsuits was like in the interwar period. The embodied experience of some of the interviewees proved to be useful to my research as they corresponded to some of my analysis of text and later to participant responses. This was enabled by an open-ended questioning approach allowing the interviewee to be empowered (Pink, 2015). Believing a set questionnaire might have restricted some of the responses from the interviewees, we asked what the interviewee could tell us about themselves in relation to interwar swimwear, John Smedley Ltd and/or a photograph or object that they may have brought in. Prompt questions were used to further the interview.

The object/garment/swimsuit was ‘vibrant’ (Bennet, 2010) and offered up a range of meanings that would have been limited without some investigation into its materiality. Interpretation of text, interviews and visual images offered an epistemological assumption that we know the world in this way. I wanted to go beyond this and see what it looked like and how it behaved in on the body and ultimately in water. This was important to me in framing my thesis about class differential. The properties of the material, the feel of the fabric, the knit structure and stretch were all key understanding what the interwar swimsuit was like to wear. Testing it in water would give me information on what it was like to swim in and what it was like when the swimmer came out of the water and perhaps what it was like when they came out of the water more importantly. There is an anecdotal mythology that the home-made swimsuit would sag, however it seemed to be to be important to test that mythology to know and realise exactly in what way this would happen. I really wanted to find out what the inferior material properties of the home-knit swimsuit were.

It was the materiality of the interwar swimsuit that I felt need to be explored. I approached the archaeological department at Bradford University about testing the wool for its properties using their scientific instruments. I realised that the knowledge gleaned from that would not give me information about how the material performed in water. I decided to use re-creation and re-enactment for this.

My archival research discussed later in this section gave me information about the types of swimwear that were available in the interwar period. However, archival garments could not be used for testing in water, they need to be maintained for posterity. Re-creation has become a means of being able to explore and wear an historic garment in fashion and textile research (Davidson, 2019).

Subsequently with the help of colleagues from Nottingham Trent University an archival garment from John Smedley Ltd was transcribed and re-created. Using an interwar swimming costume knitting pattern a ‘home-knit’ was also re-created to compare its properties when wet with the high-end manufactured swimming costume. One swimsuit and a pair of swimming trunks in each category was made (the swimming trunks were

home-knitted and compared with a pair of manufactured Jantzen's swimming trunks). Compromises were made in terms of historical authenticity, the knitting wool used could not be an exact equivalent for example and some machinery no longer existed, so that the firm John Smedley Ltd could not accommodate the manufacture and it had to be done at the University. Samples were produced for the manufactured item to keep the replica in line with the original, where at all possible.

The re-enactment was staged as Woodward states:

'Re-enactments were used to allow the researcher to engage with the material experience of participants' (Woodward, 2020, p.124).

Assessing the material experience of the participants was a key aspect of the re-enactment and consequently became a form of 'cultural probe' (Woodward, 2020, p.58). These are methods she suggests are used to get people to respond in ways that other methods do not allow. Certainly, the observation, photographic evidence and participant responses were invaluable in establishing the differential between the high-end manufactured swimsuit and the hand-knitted one. The lido used for the re-enactment was a newly restored 1930's pool, this was a practical and pragmatic decision, the cost of hiring lidos would have involved seeking a large amount of research funding and this was not available to the project. I followed the object in 'one space' rather than a number of spaces (Woodward, 2020) but this was appropriate as it contained water, a necessary factor in my research exploration and it did give me an understanding of the practices of the space and the interaction between the swimwear and the pool.

The swimmers, (some of whom were professional and most of whom were very experienced) were photographed in the replica swimsuits, with their permission, both in the water and emerging from the water with their wet swimsuits. This gave me invaluable information about how the swimsuit or swimming trunks sat on the body and if, indeed, there was any sag, either in the water or emerging from the water. Some of this photographic evidence in used later in the thesis.

The swimmers were then interviewed with a series of prompt questions, but mostly I preferred that the responses flowed directly from their own thoughts and feelings. They often commented on how the swimwear compared with contemporary swimwear, a positive being, for example, the warmth of the wool when coming out of the water on the way to the changing rooms. These comments are detailed later in the thesis in the chapter on re-creation and re-enactment. The swimmers who wore the hand-knit suits testified to them being insecure in comparison to the manufactured costumes, to the extent that the male swimmer refused to get out of the water in his hand-knitted garment precisely for the reasons that were discussed earlier in this chapter, those of singular embarrassment.

The combination of the different methods used in the material cultural analysis resulted in a better understanding of the material properties of the object even though realistic compromises had to be made in terms of the making and the re-enactment. This open-ended, exploratory research did however, confirm that in modernist principles of health and democracy, the manufacture of the swimsuit was essential in maintaining one's dignity and comfort. Hand-knitted swimsuits did indeed sag and left the wearers having to consider how they would cover their modesty in a public situation. This was a significant finding for my research and suggested that there was indeed a class differential based on cost. A hand-knitted garment could be produced for a fraction of a manufactured item, which was more the price of a winter coat in present day terms.

Archival Methodologies

I engaged in a great deal of archival research to support the thesis and the methodological approaches were both inductive as well as deductive. I was able to induce knowledge about interwar swimwear from the archival research that I undertook that took a lead role in my understanding of interwar swimwear in terms of how knit structures and elastomer core yarns contributed to the fit of the garment. Marketing material, similarly enabled me, with the garments to correspondingly deduce and read the objects in relation to theoretical analyses of the interwar period. This along with women's magazines in the British Library highlighted the interwar period's obsession with glamour.

I researched a range of archives that held collections of interwar swimwear including Beecroft Art Gallery, Symington Ltd at LMS, Private Collection of Mark and Cleo Butterfield, Cliffe Castle Museum, Newstead Abbey and John Smedley Ltd, with whom I interacted on the re-creation of one of their archival garments and subsequently on the re-enactment. The relationship that I developed with the archivist in both these contexts was of paramount importance, her enthusiasm for my research was very productive, contributing to a joint funding application for the re-creation of a swimsuit and the swim. When the funding bid was not successful, she persuaded the company to donate the wool for the re-creation and used her local knowledge to help organise a lido for the swim. Although this relationship with archivist Jane Middleton Smith was not an intentional one (or part of my methodology) it was one of the serendipities that is a spin-off of archival research.

My approach to archival research was historiographic in style using formal analytic methods (Ventresca and Mohr, 2002), including archive catalogue entry, details, measurement, and description to maintain a comprehensive record of all garments and documents seen. Although my intentions were systematic, I was also aware of the paradoxical of this type of research in both being thorough but having what David Gold refers to as a 'beginner's mind'

being both open to ‘accidental discoveries and the expert knowledge necessary to recognise the significance of their discoveries’ (Gold in Ramsey et al., 2009). One example of this was the discovery that it was possible to hire swimwear in municipal pools and lidos. This linked to suggestions from my analysis of text that Local Authorities and Government were promoting swimming as a healthy exercise. As swimwear was either expensive or difficult to acquire (if you did not have someone to knit it for you) this appeared to be a democratic gesture to encourage healthy living, one of the concerns of the interwar period.

Strauss and Corbin (1998) advise that theory emerges from data in inductive approaches (in Thomas, 2006) and in my project, the data, in this context is the swimsuits studied. The important part of this for me was that the key archives I engaged with allowed me to handle the material and engage with the feel and stretch of the garment. This has a different character from the ‘emergent’ knowledge that Strauss and Corbin (1998) propose. What emerged in my case was that this sensory knowledge was important to understanding the materiality of the swimsuit.

The other archive I used extensively was the British Library – my research was much more deductive, often following findings in my theoretical reading, examining both high-end magazines such as *Vogue* and *Harper’s Bazaar* along with *Woman’s Weekly* and other working class women’s magazines. The library was much more neutral than other archives where collection policies and priorities (Tirabassi in Ramsey et al., 2009) occasionally impacted on me as a researcher. Transcription and photography were among the methods that were used to document much of this research. This contributed to my understanding of the differential between the glamour of the high-end manufactured swimsuit and some of the problems associated with the hand-knit variety. Here the use of visual methodologies intersected with archival research.

The Archive for Art and Design gave me access to material associated with another knitwear company, Windsor Water Woollies who do not have an archive and limited historical records. A collection of scrap books donated by one of their models, Alyson Lancaster was revealing in the way that the company used ‘fashion parades’ at Lido’s and municipal swimming baths to promote their swimwear. Promotional material included in the scrapbooks allowed me to determine this.

Overall, as Gaillet (2012) suggests ‘rigorous research paired with the sometimes-serendipitous nature of archival investigation’ (p.51), was my experience of working in different types of archives. Although the methods and approaches were fluid, the documentation and cross-referencing were solid; both of which have made a significant contribution to the thesis. This documentation is available in the appendices.

Reflections on the Research Process

My research methodologies involved layers of examination, sometimes built on a small hunch or observation. My methodological approach has always held rigour using defined structures such as creating personal catalogues in archives, but has been open to accident, tangent and discovery.

Readings of text and image effectively theorised the social and political landscape of the interwar period and its class differentiation. Investigating interwar knitting patterns demonstrated how aware women's magazines were of the problems associated with the hand-knitted garment, it was evident that they offered solutions to the wet hand-knit swimsuit. High-end women's magazines revealed the glamour and aesthetic of the manufactured swimsuit during the interwar period.

The re-creation and re-enactment were key methods in establishing my core 'hunch' or question about class differential. Both activities were very time consuming and involved negotiation with a number of people. On occasions there were obstacles to overcome and these are detailed in the relevant chapter. The enactment was particularly difficult to manage, as the pool was only available for the one session and the swimmers needed to be available and present at that time. I am grateful for the help and support with the organisation of the documentation, recording and interviews that was given on all occasions. The depth and richness of the findings from these methods has made a great contribution to thesis and helped answer my primary question about class.

Cross-referencing the research findings with theory gradually produced a volume of diverse evidence that became the structure for the thesis. This 'pragmatic' approach (Migiro and Magangi 2010) outlined in the introduction facilitated a richer depth of understanding of the garment.

My study of the interwar knitted woollen swimsuit is located withing the epistemological tradition of visual and material culture and as an object study it allowed the social, political and cultural dimensions of the interwar swimsuit to be foregrounded. The visible and emotional responses of the embarrassing home-knit as evidence in storytelling testimony and on photographs deny the dignity of being on the beach and on the lido in the memories of that generation. This is something that should be known about not just in terms of humour but also the opposite of that – the catastrophe of feeling out of place, stigmatised and embarrassed in a supposed place of pleasure and happiness promoted by the railway and travel companies.

Chapter 4 next examines the significance of developments in health and hygiene and their impact on the 20th Century in relation to water, bathing and swimming. It also looks at healthy body culture and its impact on ideas about the population's healthiness. The chapter also examines dress reform, its impact on exercise and women's movement.

Chapter 4: Theories of Health and Hygiene in the early part of the 20th Century and their impact on the Design of the Swimsuit

Introduction

Health and hygiene were major concerns of the interwar period, reflected in the ideology of architects and designers.This chapter investigates this, looking at the historical development of ideas of health and cleanliness and how these impacted on the interwar period both in terms of cultures of exercise and purity of the body at an individual and national level. The swimsuit is at the forefront of much of these beliefs, not just as a garment for exercise but also as a signifier of the perfect, healthy body of the 1920s and 1930s.

Some of my prior research into Modernist architecture focused on an architectural icon; the Midland Hotel, Morecambe. I was intrigued by how much reference was made to sunshine and fresh air in the construction of the building completed by Oliver Hill for the London, Midland and Scottish Railway company in 1933. Large areas of glass windows, balconies, and as shown in Fig. 4.1, a loggia intended for residents to enjoy the fresh sea air whilst technically sitting inside the hotel building.

Fig. 4.1. The Loggia, Midland Hotel, Morecambe.

The tubular steel furniture and large concrete unglazed window spaces lend a strong machine age aesthetic to the continental idea of providing shade. In Morecambe the area was most probably used for inclement weather.

In 1928 the Town Council devised a crest for the town shown in Fig. 4.2, celebrating not only the town's proximity to the Lake District, visible from the shoreline, but the health-giving properties of sea air and sunshine that could be enjoyed there.

Fig. 4.2. Town Crest for Morecambe 1928.

Morecambe, as a seaside town, followed through its architectural seafront modernism in 1936 with a local authority commissioned 'Super Swimming Stadium'. This was an open-air pool built to resemble its neighbour, the Midland Hotel. (Guise and Brook, 2008). Sir Josiah Stamp Chair of the L.M.S. Railway, opened the Swimming Stadium by mentioning both 'health' and 'enjoyment' (Smith, 2005). His full quotation can be found in Chapter 5 concerned with sites of swimming and sunbathing. The association of health and modernist building became firmly imprinted in my thinking at an early point in my research process. Later research equated hygiene in the form of sanitation, purity and impermeable clean surfaces with modernist thinking also. The health of the population had caused concern during the 18th and 19th centuries but it became paramount to Government in the 20th Century after those presenting for duty in the Boer and First World Wars were deemed 'unfit'.

In this chapter I examine some of the historical developments of hygiene. Health and hygiene are established as a link in modernist ideas and ideology in the early 20th Century. However, the pursuit of sanitation and public cleanliness had evolved through parliamentary bills and legislation in previous centuries. These developments were also linked to public bathing and swimming as the chapter will show.

Water was an important conduit of health (or illness) in the centuries prior to the 20th century. Hydrotherapy, 'taking the waters' for health benefits and sea bathing for the same purpose were important precursors to the swimming pool. This was advanced in 1846 by the Public Baths and Washhouses Act (Parliament UK, online) that gave the populace access to swimming and washing facilities. The campaign for clean drinking water in the fight against cholera was legislated for later in the decade also.

The chapter considers the Dress Reform movement and its impact on women and swimwear. This is followed by an examination of the impact of the Boer and First World Wars and the Spanish Flu epidemic on Government thinking and policy regarding the health and fitness of the nation.

The fight against infectious diseases seemed important to include here because of the link to modernist design through the sanatorium and the clinic (Overy, 2007). The concept of 'transparency' an idea embraced by architects in relation to the glass brick and all things glass, was also important to clinicians in the form of the X-ray, a diagnostic tool used in the treatment of tuberculosis (Hartzel, 2020).

Other elements also built on the health-giving properties of water including sunlight and fresh air. Exposure to the sun and Vitamin D was seen to be instrumental in helping the fight against tuberculosis and rickets, as was fresh, unpolluted air.

I then investigate the 'Healthy Body' culture both in relation to European wide ideologies, swimming as part of that culture and the rise of the open-air swimming pool. Finally, I look at how theories of health and hygiene became embedded in eugenic thinking and how this contributed to ideas about the perfected body and the imperfect one, that did not 'fit'.

Concerns about health and hygiene were central to the development of early modernist ideologies. Modernism itself was an early 20th century movement embracing arts, design and literature that sought to make a break with the past and tradition. The 'tabula rasa' or clean sheet that modernism proposed is applicable to both building and body and as these are the focus of the thesis it seemed important to address how both health and hygiene underpinned the rationale for both.

Foucault argues that the imperative of medicine should not just be about curing ailments but should 'embrace a knowledge of healthy man, that is a study of non-sick man and a definition of the model man' (Foucault, 1973, p34). Citing the ideas of Girondist Lanthenas

(1792), Foucault explores the role that the state (revolutionary) would take in relation to building the social construct of a well-functioning healthy individual who would contribute to the nation in various capacities including having a moral and physical imperative. This vision of the healthy individual has a strong correlation with the European wide healthy body culture of the interwar period. State intervention in the health of the nation is primarily for 'the vigour of its armies' (1973, p.34) as Foucault contends and I claim in this survey of health and hygiene. In his book 'The Birth of the Clinic' Foucault also refers to the 'clinical gaze' and advocates observing the patient at the bedside as well as listening to them before making a judgement about their condition:

'The clinical gaze has the paradoxical ability to *hear a language* as soon as it *perceives a spectacle*.' (1973, p108)

The *appearance* of health is worthy of attention in this discourse as it fits into the aesthetic of the modernist body discussed in this chapter and in the thesis as a whole. Fit, toned, slim and tanned, the swimsuit clad modernist body is a healthy spectacle.

The healthy man/woman, the healthy body, the healthy built environment and the healthy society became uppermost in the discourses of modernism. The agency of the swimsuit as a garment in modernist thinking and theories of health and hygiene embodies some intrinsic ideas about health, exercise, sunshine and improved physique. These are detailed in the chapter. The healthy body at first glance does not necessarily imply a fashionable body but some of the same principles occur. Regimes of diet and exercise that toned the bodily form enabled the wearing of the latest streamlined swimsuits. (Lencek and Bosker, 1999). Media advertising in the interwar period promoted these regimes along with their latest fashion garments, particularly in high end magazines. The complex overlap between fashion thinking about the body and the conception of the healthy body is discussed throughout the thesis. In some cases, these ideas are illusory; a sick body, for example can look fashionable and a healthy body look unfashionable. Appearance and illusion contribute to the development of a bodily ideal. Similarly, some of the lidos and outdoor pools that were designed and built during the interwar period followed not only the machine aesthetic of modernism but some of the precepts of hygiene too, as Chapter 5 shows. The relationship of the body to building in relation to lidos and other swimming sites through ideas about the impermeable modern surface are discussed at a later stage in the thesis in Chapters 5 and 6. These, too, are about 'appearance' and the interplay between body and building is further developed later in this work. This chapter, however, focuses on the historical development of ideas about health and hygiene and how these contributed to 20th century thinking about cleanliness, the body, the built environment, swimming and the swimsuit.

The term 'hygiene' had a two-fold meaning in the interwar period as Wilk proposes in his essay on 'The Healthy Body Culture' (2006). One of the categories related to social hygiene

and to the conditions in which working class people lived, he cites ‘alcoholism, crime, disease and poor housing’ (p.256) as significant causes for concern. These issues were also addressed by 19th century social reformers, however the unfitness of the nation following the First World War (Winter, 1980) and Spanish Flu epidemic (Spinney, 2017), (Overy, 2007), shifted the emphasis from the philanthropic, voluntary actions of the Victorian period to direct government legislation in both eliminating disease and providing social housing (Smith 2007, p.265). These campaigns intended not only to engender a fitter population for military purposes but also, as Mary Douglas indicates, that in creating a modern, clean domestic habitat we are ‘positively re-ordering our environment, making it conform to an idea’. (2002, p.3). Some of these ‘ordering’ activities included chasing dirt, papering, decorating and tidying. On a domestic sphere these activities counter the fear of disease and ‘pollution’ and her definitions of ‘clean’ and ‘dirty’, although useful, limit the types of ‘ordering’ embraced by the modernists. The range and scope of their ideas did not just include architecture and town planning but also body politics, in the shaping of the perfected ‘fit’ body.

The second meaning of the term ‘hygiene’ suggested by Wilk (2006) refers to racial hygiene, implicated in eugenics and closely associated with social hygiene but aimed at promoting the fitness and continuation of the race. The definition of ‘race’, however, is contentious and in contemporary terms reverberates with the elevation of white and European theories of racial, mental and physical hygiene (Overy 2007) relating to the ‘fitness’ of the body. This chapter investigates the implications of eugenics on representations of the body and the body in relation to functional design.

Physical hygiene is a discourse prevalent throughout the early modernist period across Europe and this is explored in this chapter and throughout the thesis where the focus is on swimming as a physical discipline. Physical hygiene is broad in its scope as shown below, whereas the physical discipline of swimming gradually emerged as a performance of hygienic measures, keeping the body fit and healthy, engaging in the interwar period with wool (in the swimming costume) and water. Both wool and water were associated with health in the interwar period as the chapter will show.

Overy (2007) also proposes ‘moral hygiene’ as a facet of global perceptions of physical hygiene. Overy examines architecture in his concept of ‘moral hygiene’ – the importance of separate gendered bedrooms in social housing for example. However, as writer Virginia Smith points out, moral probity exists in cleanliness through the Protestant ethic. ‘Cleanliness is next to godliness’ was the battle cry of many of the non-conformist religions such as Methodism, Calvinism, Baptism and others (Smith, 2007). Cleanliness along with productivity, good manners and obedience formed part of the teaching in the Sunday school movement during the late 18th century. Much later it was firmly embedded in the

precepts of the interwar period although as an ideal rather than a reality. Architect Le Corbusier, whose aesthetic views on the purity of 'whiteness' are fully discussed later, was a Swiss Calvinist and both the austerity of his design and its precision could be seen to evidence this background (Bayley, 2019). Le Corbusier was a significant influence on architectural practices in the interwar period.

John Smedley, whose knitwear company, John Smedley Ltd., who has played an important role in my research, was a Methodist. He established hydropathic baths in Matlock for the local populace and his workers.19th and early 20th century developments form part of this chapter including 'bathing' and dress reform as hygienic principles. This gradually led to the early 20th century changes in the perception of how the body functioned and was represented in modernism and its environments.

This chapter looks at aspects of health and hygiene in relation to the body. It examines how the element of water as a healthy entity finally emerges in the 20th Century as a site of swimming, not only for healthy exercise but for pleasure and leisure also. Heliotherapy and sunshine, although originally intended to treat the sick body, eventually contributed to the fashionable swimsuit through the rise of the suntan as a fashion statement. Swimwear accommodated this need by manufacturing briefer and more body baring swimsuits. The chapter looks at how ideas about the perfected body were honed through both exercise and freedom of movement, particularly how women's bodies were unwrapped from their restrictive garments of the previous decade, to reveal a streamlined form. It also examines other representations of a perfected body within racial hygiene and eugenics. I believe it is important to look at this in relation to the thesis as a whole as eugenic theory parallels the healthy body culture and both adopts and overturns some of the credo of this movement.

Origins of Hygiene.

Hygiene and cleanliness were significant parts of philanthropic thinking after the enlightenment. Many philanthropists including John Smedley himself sought to improve the conditions, the poverty and squalor in which many people lived. Not only the poor but also the middle and upper classes were exposed to pollutants from industry and had domestic environments that harboured bacteria and caused disease (Forty, 1986). For social reformers and medical professionals, the dangers of faecal contamination (Overy, 2007) that harboured the microbial origins of typhoid and cholera became a major concern.

In 1858 concern was raised in the Houses of Parliament about the 'Great Stink' caused by effluent flowing into the river Thames from cesspits and water closets in the city. The association between smell and health was predicated upon beliefs in 'miasma' causing disease. Miasma theory was founded on the idea that disease was caused by toxic air emitted by dead or decaying matter, thereby foul smells were associated with contagion

(Ashton, 2017). Disraeli introduced a bill to reform the sewage system and appointed engineer Joseph Bazelgette, to complete the scheme. Bazelgette's Crossness pumping system for London and the Thames was celebrated as a great achievement. (ibid). The thesis later shows that Adolf Loos believed that good plumbing was essential to modern architecture (Loos, 1898) and subsequently to town planning. The concept of waterborne disease was established and methods to eradicate sewage from the Thames were developed through Bazelgette's sewage system (Smith, 2007). This bid to stop the spread of cholera gradually expanded via the Public Health Act of 1875 and the responsibility for many health associated reforms including slum clearance and housing, were as Smith states, accompanied by a 'hygienic cultural programme of public libraries, museums, parks and baths' (Smith, 2007, p.286).

The miasmic idea that corruption and contamination existed in the ground did not entirely go away as is shown below and could be presumed to have lingered into the 20th century. Similarly, the association of smell and dirt (or worse) continued to exist as George Orwell outlines in his novel 'The Road to Wigan Pier.' He says that in his childhood he was taught that the lower classes smell and are dirty. Orwell states that 'Very early in life you acquired the idea that there was something subtly repulsive about a working-class body; you would not get nearer to it than you could help' (1937, p.112). Despite the Public Health Act (1875) and philanthropic and state interventions to benefit working class people they did not eradicate class distinctions, smell being one of those, according to Orwell. Even those who were known to be clean 'servants, for instance – were faintly unappetizing' (1937, p.113). Stink and smell remain in the popular imagination until the present day as the emanation of something dirty, diseased or contaminated.

Miasma theory was superseded by germ theory in 1861, helped by the improvement of microscopes (Smith, 2007). Louis Pasteur's initial experimental work on germs was further developed by Robert Koch who began to identify specific disease bacilli (ibid). By the 1890s, germ theory had become credible as Smith contends:

> 'Germs were now the visible enemy, fought at every turn. Germ theory reinforced every single lesson of the old gospel of cleanliness, but the external vigilance now required made housecleaning a heavy burden of responsibility; its neglect akin to murder. In the new procedures of 'domestic science' the basic old routines of the 'home hospital' were to be applied to every room, but especially to kitchens, water closets, and bedrooms. (2007, p.299).

This became increasingly important in the early 20th century when architects and designers began to adopt the ethos of hygiene in public and private spaces. Environments needed to be light and airy, dust free, sterilised and wet cleaned (Smith, 2007, Forty 1986).

Forty argues that this became the campaign of middleclass and social reformers who believed that health and hygiene 'lay at the root of all social problems' (1986, p.159). In line with the Protestant ethic, this had a moral dimension too, such things as alcohol and prostitution were equal concerns.

Consequently, architects and designers of the modern movement began to adopt a similar view. Wilk states that the assumptions of modernist architects were that 'Architecture and design should be socially emancipatory, not just responding to the existing needs of society, but contributing to revolution or change' (2006, p.154). This world view is discussed throughout the thesis and it is something that underpinned many of the ideologies of the interwar period. Water, sunlight, air and openness were the features of the toolbox that modern architects employed in their buildings. Overy notes the significance of the wash basin at the entrance to the Villa Savoye, built as a country home for the Savoye family, by Le Corbusier in the Poissy region of France. Completed in 1928 the house was built on 'pilotis' or columns with the living area in an elevated position looking out over the countryside. According to Overy (2007, p.180), Le Corbusier raised the building away from the ground because of his belief that it was 'contaminated' (lingering miasma theory?). Overy says that the function of the entrance wash basin was to wash away the 'corruption and contagion of the ground floor' (2007, p180), before rising to the upper floors where Madame Savoye could get 'neat and clean' and sunbathe in the nude (Jencks in A Clean White World, 1995).

Le Corbusier, like many of the architects and designers discussed in this thesis was building on not just an ideology, but legislation established in the early years of the 20th Century.

In 1904 a permanent committee was established in Europe entitled 'The Congress Internationaux de Hygiene et de Demographie' to look at hygienic instruction and regulation with the aim of providing social housing 'by the state, by municipal authorities, private employers and by charities and trusts.' (Overy, 2007, p49). The establishment of the Office International d'Hygiene Publique in Rome 2007 ensured that legislation was introduced into most Western European countries in the early years of the 20th Century. The state legislature was reinforced by the church through the Protestant ethic, school teaching on hygiene and sanitary living was reinforced, as previously mentioned through Sunday school teaching and sermons. The shift from the voluntary and charitable interventions of earlier centuries was in progress.

Concepts of hygiene, particularly relating to bathing and water, were originally found in both Greek and Roman culture. The Greek 'baleneion' or public bathhouse was available through advances in hydraulic engineering and was provided for their citizens from the 5th century BC (Smith, 2007). Servants and slaves were not allowed to use these as they were

classed as non-citizens. The hypocaust method of underfloor dry heat was copied by the Romans (Smith, 2007) The baths were predominantly used by women with male attendants but gradually the bathing experience became segregated. Interwar public swimming pools and beaches were segregated in a similar way even after the advent of the lido (where gender intermingling was encouraged). Shrines to Apollo were healing sanctuaries and used water as part of the process. His descendant Hygeia, the goddess of hygiene, 'represented intelligent wholesomeness, purity, and well-being and must have been entirely virtuous, since so little is known of her.' (Smith, 2007, p.81).

Hygeia can be seen in Fig 4.3 below.

Fig. 4.3. The Goddess Hygiea in the Window of the John Smedley Hydro at Matlock.

In Fig 4.3 she is shown holding what appears to be a chalice in one hand and possibly a mirror in the other but the meaning seems to be unclear. The window is on the landing following the entrance to the original John Smedley Hydro at Matlock, which like the Greek Apollo sanctuary at Cos contained swimming pools, immersion baths, sweat rooms and fountains (Smith, 2007).

Interestingly, ‘Hygeia’ was the title of a 1923 journal published by the American Medical Association that contained articles on health, cleanliness and nutrition (Overy 2007). The goddess continued as an emblem for health and hygiene into the 20th century.

The Romans developed the Aqueduct system and often had ‘balnae’ or public baths with exercise yards attached. The private Villa Romana Casale situated three miles from the Sicilian town of Piazzo Armerina (Ramage and Ramage, 1995) has mosaics that show young women in two-piece garments that suggest swimwear but is most probably dress associated with athletics as shown in Fig. 4.4:

Fig. 4.4. (4th Century AD) Mosaic at Villa Casale, Sicily.

‘Gymnos’ was the Greek word for naked and naked exercise as Smith (2007, p.90) states was much the preferred form of exercise. It may, however, have been inappropriate for young women to exercise naked, hence the ‘bikini’ like coverage of breasts and genitals. The modern swimsuit fulfilled a similar function, although not as a two-piece until much later in the 1930s.

The Roman public baths and gymnasium baths were also sites of pleasure and entertainment according to Smith (2007), places where gossip, politics and business prevailed in addition to health and cleanliness. These constructs and behaviours were picked up again in 18th and 19th century Spa Culture.

Hydropathy

Water is the conduit that connects the next sections of the chapter. I wanted to establish the important relationship of water and health and how this was developed throughout the eras preceding the 20th century. It lays out the normative associations of water as a health-giving force that so clearly contributed to the popularity of swimming as an exercise in the interwar period.

Across Europe and the British Isles, the popularity of the medicinal spa bath flourished. 'Taking the waters' either digestively, as a drink, or more usually through a range of water therapies such as showers, plunge pools, heat rooms and Turkish baths, became popular amongst the middle classes in the 18th and 19th centuries. Treatment with thermal spring water was said to cure all manner of ailments and inland spas such as Bath, Harrogate and Buxton in Britain offered elegant surroundings and additional entertainment to attract visitors to their water cures (Lencek and Bosker, 1999). The centrality of Spa culture to the middle- and upper-class social calendar is evident in the novels of Jane Austen (Northanger Abbey, Sense and Sensibility and Persuasion). Health is certainly on the agenda but the reader is made aware of other factors such as the all-important marriage market and the reinforcement of social standing amongst one's peers (Wheeler, 2004).

John Smedley Ltd hold a collection of knitted woollen swimsuits from the 1930s in their archive which have formed an extensive part of my research as shown later in the thesis. I was therefore very interested when I learned that not only did, he become a great exponent of hydropathy but he had financial connections with Florence Nightingale in that the Smedley family leased both their home and their mill from the Nightingales (Oakes, 2009). Florence Nightingale 'used scrubbing brushes and cleanliness to reduce the death rates at Scutari hospital in the Crimean War of 1854' (Smith, 2007, p.285). It is unlikely that they met (Oakes, 2009) but it is thought that they would have known of one another. The association of swimwear and two major advocates of 19th century hygiene in a small place in Derbyshire was nevertheless intriguing.

John Smedley (1803-1874) was a knitwear manufacturer who established his factory in Lea Mills, Lea Bridge, Derbyshire. It is one of the oldest manufacturers in England still in production. His first encounter with hydropathy took place in 1851 when he visited Dr William Macleod's hydropathic institution in Ben Rydding near Ilkley (Oakes 2009). Fed by natural spring water from Ilkley Moor the Victorian Hydropath was comfortable – a mixture of hotel and hospital with elevated bedrooms to 'increase the air quality' (Oakes, 2009, p.69). Margaret Oakes comments that it was still prevalent in the medical establishment that disease was caused by foul air (miasma). The ground was generally thought to be contaminated.

Smedley experienced cold water therapy and believed himself to be cured, although of what he was cured is not explicit. After a second visit, three months later, he was determined to set up a similar establishment for his workers. The free hospital was established on Matlock Bank, on a small scale (Oates, 2009) and later expanded to the 76-bedroom Smedley Hydro in 1859. The expansion of the railway to Matlock helped with bringing a greater number of visitors to the hydro and when Smedley died in 1874 there was an annual attendance of 3,000 visitors. John Smedley insisted on a morning service and no alcohol or tobacco on the premises in line with his Methodist beliefs. The cold-water treatment regimens that Smedley first encountered at Ben Rhydding and so favoured by protestant ideas about hygiene (Smith, 2005) were superseded by radiant heat baths, mild water cures and, eventually, Turkish Baths.

Fig. 4.5. John Smedley's Hydro now Derbyshire County Council Offices. Matlock.

The imposing building of the Hydro shown in Fig. 4.5. and its extensive gardens and grounds were finally closed in 1955. However, Smedley's contribution to hydropathy was significant and his establishment was patronised by eminent Victorians such as Thomas Carlyle, Alfred Tennyson and Charles Darwin (Oates, 2009).

Sea Bathing

Water as a provider of health and vigour was the key aspect of sea bathing during the 18th and 19th centuries. Sea bathing, and some of the regulations surrounding mixed bathing and what should be worn whilst taking the 'plunge' give some historical context to the practice of swimming and the design of swimsuits in the 20th century. Cold water bathing was advocated by medics such as Galen and Hippocrates from antiquity (Lencek and Bosker, 1999) and when added to the qualities of salt-water enthusiastic doctors such as Sir John Floyer and Dr Richard Russell promoted it as nature's own best medicine (ibid). Susie Parr in her book 'The Story of Swimming' claims that research undertaken by NASA and the British Heart Foundation demonstrated that volunteers whose blood was tested after daily cold baths over a period of twelve weeks showed a reduction in cholesterol and blood pressure (Parr, 2011, p.46.); unfortunately, this is not referenced by her or her source. Many open water swimmers though do testify to an improvement in health and well-being through regular cold-water swimming.

The first therapeutic bath was established at Scarborough in 1667. Mineral water in the Spa towns and resorts was drunk for its healing properties and bathing or 'dipping' was the most common therapeutic practice. Men's bathing often took the form of swimming clubs and swimming as a competitive sport (Horwood, 2000). Women, however, were obliged to use bathing machines as shown in Fig 4.6

Fig. 4.6. Bathing machines in Morecambe.

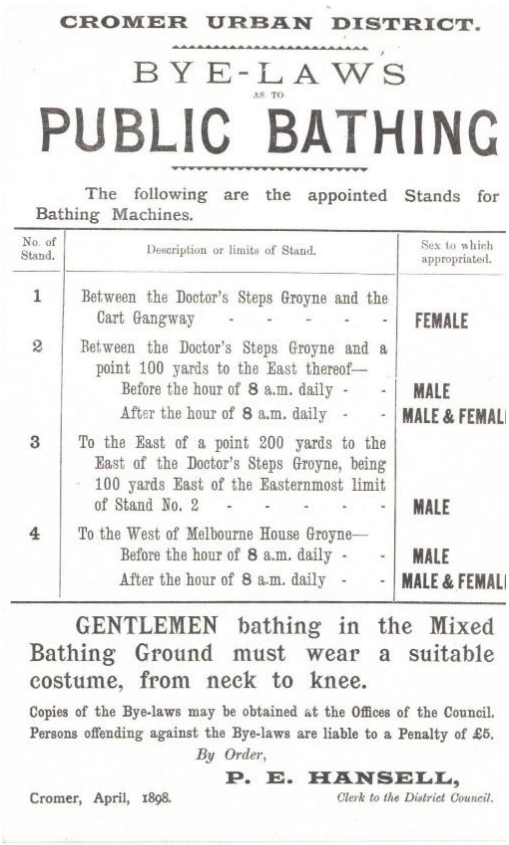
The bathing machines were usually horse drawn down to the water's edge and an attendant would 'plunge' or 'dip' the incumbent into the sea. Catherine Horwood writing about women and bathing machines argues that regulation required women to wear a 'suitable gown or other sufficient dress or covering to prevent indecent exposure of the body' (2000, p.656), which I am sure was true in the late Victorian era. Lencek and Bosker however claim that in the 18th century nude bathing was usual:

> 'True some women bathers donned calico or flannel gowns, and customs varied from beach to beach. At Margate, Blackpool and Scarborough total nudity was the norm at least until the last decades of the eighteenth century. Then, if the evidence of the period is to be trusted, prurience reared its head and nudity fell from its state of grace' (1999, p.83).

Nudity would certainly make swimming easier than large, body-covering gowns but as Lencek and Bosker point out, women were then prey to Peeping Toms as shown in the illustration in Fig. 4.7.

Fig. 4.7. 'A peep at the mermaids' William (?) Tegg, 1819.

Despite the 'peeping toms' on the cliff top there were often strict regulations about male and female bathing. Late 19th Century bathing, was strictly patrolled along the lines of gender segregation as shown in Fig. 4.8.



CROMER URBAN DISTRICT.

BYE-LAWS
AS TO
PUBLIC BATHING

The following are the appointed Stands for Bathing Machines.

No. of Stand.	Description or limits of Stand.	Sex to which appropriated.
1	Between the Doctor's Steps Groyne and the Cart Gangway - - - - - -	FEMALE
2	Between the Doctor's Steps Groyne and a point 100 yards to the East thereof—	
	Before the hour of 8 a.m. daily - -	MALE
	After the hour of 8 a.m. daily - -	MALE & FEMALE
3	To the East of a point 200 yards to the East of the Doctor's Steps Groyne, being 100 yards East of the Easternmost limit of Stand No. 2 - - - - - -	MALE
4	To the West of Melbourne House Groyne—	
	Before the hour of 8 a.m. daily - -	MALE
	After the hour of 8 a.m. daily - -	MALE & FEMALE

GENTLEMEN bathing in the Mixed Bathing Ground must wear a suitable costume, from neck to knee.

Copies of the Bye-laws may be obtained at the Offices of the Council. Persons offending against the Bye-laws are liable to a Penalty of £5.

By Order,

P. E. HANSELL,

Cromer, April, 1898. *Clerk to the District Council.*

Fig. 4.8. Bye-laws for Mixed Bathing in Cromer 1898.

It can be seen in the image above that the regulations require that not only were the different genders to swim at different times but in specified places too. The recommended neck to knee costume differs in style and modesty from the triangular swimming trunks worn by men who belonged to swimming clubs in the late 19th century as shown in Fig. 4.9.

Fig. 4.9. Men's Swimming Trunks 1890 (L.C953.1978.1).

These swimming trunks display the club motif and are brief for minimum modesty, made of cotton and tied at the sides. Men's swimming clubs, as Horwood states, contributed to the establishment of swimming pools nationwide through the Public Health Act of 1848-9. (Horwood, 2000). This allowed for the provision of public baths and wash-houses along with parks and libraries. The act intended to provide slipper baths for overpopulated urban areas (Clarkson 1989). In Keighley, baths and wash-houses were opened in 1876 and included 2 swimming pools, 28 slipper baths, a radiant heat room and Turkish bath (Keighley News, May 25th, 2019). Clearly water, health and cleanliness were combined in the new municipal swimming pools. These became new sites for swimming (mainly for men until 1900) and access to heat treatments and hydropathy as in the Spa Towns. Some of these treatments migrated to the new Lidos of the interwar period of the 20th century. Spa treatment continued into this period, for health and beauty along with diet regimes and exercise.

The seaside continued to be a popular place for swimming along with the municipal baths. Resorts were established around these early bathing places and the orientation of the buildings shifted to face the seashore to enjoy the beauties and drama of nature (Lencek and Bosker, 1999). The seaside, the beach, evolved and grew during the 20th century as a site of pleasure, leisure and health. Sites of swimming, discussed later in the thesis, embrace a whole range of social attitudes and behaviours: the beach, the lido are metaphors for happiness and relaxation. These metaphors can also cause discomfort and apprehension due to the body, self-image and shifting social mores.

Dress reform movement – impact on swimwear.

The often dangerous and challenging (See Fig. 4.12.) clothing worn by women for swimming up until the turn of the 20th Century caused enormous 'drag' in water due to the voluminous amount of cloth. This inhibited their freedom of movement in this as well as in many other sporting activities. Embarrassment at unwanted erotic attention whilst swimming would have caused many women to avoid it completely.

The 1884 International Health Exhibition in 1884 had a section on hygienic dress. 'The main purpose of the exhibition was to awaken the people of England to the importance of healthy living in every aspect of their lives' (Newton, 1974, p.91). Any detailed study of the corset and the crinoline is outside the remit of this thesis although these garments caused medics the most concern about female health. The X-ray invented in 1895 (Bynum, 2012) was used by Ludovic O'Followell in his text 'Le Corset' to show the damage that the garment caused to the structure of the ribcage, the spine and the internal organs. Restrictive and constrictive clothing did much more than damage a woman's sense of freedom of movement.

Philanthropy and reform movements were synonymous with the Victorian middle class – the idea of 'doing good' for those less well off than oneself is evident in the novels of Dickens, Trollope, Gaskell and so forth. The Society for Rational Dress was formed in London in 1881, opposing tight corsets, high heels and unwieldy skirts. It was supported by many significant figures of the day including William Morris, a great believer in natural form and his relationship with the Pre-Raphaelite movement whose images depict women who are unencumbered with the trappings of Victorian dress. (Newton, 1974).

The 1884 International Health Exhibition was held in London at the Albert Hall and had a section on healthy and hygienic dress. It did of include a History of Dress mounted on full size wax models designed by Madame Tussaud and arranged chronologically (Newton, 1974, p.93). There were promotions of waterproof clothing including India rubber, fireproof dress and suitable clothing for the tropics and Empire. Among the exhibits were hand knitted socks and stockings made like gloves so that each toe was separately covered and useful for wearing with sandals or wide shoes, seen as better for the feet than narrow pointed shoes with high heels (ibid).

Another belief, promoted by the exhibitor Dr Jaeger, was that the body should be completely covered in a layer of wool to be hygienic. He believed that natural, undyed wool knitted by hand or machine worn next to the skin was an improvement on flannel. He wrote extensively about this in journals such as 'Health Culture' and had advocates such as the playwright George Bernard Shaw who used the Jaeger system in his underwear (Newton, 1974). John Smedley Ltd, whose Lea Bridge factory continued after his death in the 1880s, also produced knitted woollen underwear. Fig. 4.10 below is an advertisement for Dr Jaeger's woollen underwear.

"JAEGER" Special Pure Wool Underwear for Fall and Winter

In all SIZES, STYLES and WEIGHTS for Men, Women and Children

The "Jaeger" System of clothing is the natural and, therefore, the most comfortable and hygienic clothing for the human body. It not only enhances your health and comfort; and protects your system against disease, but in the end it is by far the most economical form of dress. Jaeger wear is in itself very durable and fewer garments are required.

Jaeger Pure Wool is the most Comfortable Durable and Hygienic

Underwear for Fall and Winter

Thus for you to wear Jaeger Pure Wool Underwear day and night is to have increased vitality, better health and immunity from many a cold and chill. ¶The "Reason Why" is told in Dr. Jaeger's book on "Health Culture" (200 pages, cloth bound). A copy of this interesting book, together with our descriptive catalogue, will be mailed free to any address.

TRADE MARK

DR. JAEGER'S CO., Ltd., 316 St. Catherine St. W., Montreal, 286 Portage Avenue, Winnipeg

Fig. 4.10. Dr Jaegar Advert.

Both John Smedley Ltd and Dr Jaeger's Co., Ltd., went on to produce interwar knitted woollen swimsuits. Their attachment to hygiene and the wicking properties of wool makes it appropriate that this material would be useful for both garments worn next to the skin. It is also entirely possible that wearing wool next to the skin stayed in the popular imagination until the interwar period, thereby promoting the swimsuit as a healthy garment in the activity of swimming and the wearing of wool.

Many of these ideas became influential but it was not until after the First World War that women sought more freedom of movement in their clothing and had the imposition of the 'internal corset' with regimes of diet and exercise to create a figure appropriate for wearing Chanel's wool jersey outfits and increasingly tubular forms in dress.

The 'bloomer' and the wearing of trousers.

American Amelia Bloomer introduced the garment shown in Fig 4.11. in 1851 based on the idea of the Turkish pantaloon which she wore under a loose tunic. Her volition was that:

‘We should like to see a radical reform in women’s costume, so that she might be the free, healthy being that God made her instead of the corseted, crippled dragged- down creature that her clothes have made her (Bloomer, 1895 in Petrov, 2016, p.383).

The ‘bloomer’ was associated with the women’s rights movement in America and was often worn as a symbol of pride by radical women in America and in Britain (Petrov 2016). It was a subversive garment that was seen by many as socially, sexually and gender deviant (Petrov 2016) and eventually tended to be used mainly for sporting activities.

The ‘bloomer’ was mocked, even by women, and much denounced in satirical magazines at the time including Punch but was very practical for bicycles. The image in Fig. 4.11. shows a date of 1896 indicating the popularity of ‘bloomer-like’ trousers despite popular dislike of the garment.

Fig. 4.11. Woman wearing ‘bloomers’ on a bicycle. 1896, Creative Commons license.

Certainly, the gestures and facial expressions of the male characters in the image above suggest amusement tinged with a good amount of outrage, indicating the controversy the garment continued to provoke until the turn of the century.

The original conception of the ‘bloomer’ as an ensemble of ‘pantaloons’ and a tunic, rather than the jacket and trousers shown in Fig 4.11, suggests an overlap with swimwear of the same period as shown in Fig. 4.12:

Fig. 4.12. Windsor Water Woollies' models jeering at costumes from the previous century. (1930s, LCM).

Here Windsor Water Woollies' models, in their sleek 1930s swimwear, point to and mock swimwear from the previous century in one of their fashion parades at a lido on the west coast of Britain. The Victorian figure of Mrs Grundy, a person who uses moral probity to keep a critical watch on others (Collins English Dictionary, online, n.d.) represents the outmoded ideas of the previous century. The photograph indicates the type of swimwear that was popular in the final two decades of the 19th century. The voluminous mob-capped apparel of the 1880 model is replaced by the 'bloomer' type garment consisting of sleeveless tunic and pantaloons in 1890. Nautical stripes are introduced into this garment connecting it to the beach and the sea. The garments are made of cotton as is the swimsuit shown in Fig 4.13.

Fig. 4.13. Cotton women's swimming costume with white braid, (Date unknown, Bradford Museums).

Although the date for the garment shown in Fig 4.13. is not known it can be presumed to be around the late 19th and early 20th century. It is an all-in-one piece and probably would be less voluminous in the water than a two piece with a shift worn over trousers. Cotton retains water more than wool and as with the swimwear shown in Fig 4.12, would still have a significant drag factor whilst swimming. Horwood (2000), Parr (2011) and others have successfully documented the evolution of the swimsuit and the fight for mixed bathing during the first decades of the 20th century. The battle for unsegregated swimming places was eventually won when mixed bathing became 'an accepted, indeed vital, ingredient of the new cult of health and efficiency' (Horwood, 2000). Mixed bathing was integral to the cult of the lido from 1930 onwards, but separated gendered sessions continued to exist for those who preferred them as shown in Fig 4.14.

BOROUGH OF
MORECAMBE and HEYSHAM
BATHS DEPARTMENT
SUPER SWIMMING STADIUM

REMEDIAL AND
SLIPPER BATHS
(OPEN ALL THE YEAR ROUND)

Beneficial, Invigorating and Pleasurable

FOAM BATH - - 4/-
STEAM BATH - - 3/-
LUMA BATH - - 2/-
SEAWEED PINE
or AERATION - 3/-
SHAMPOO
& FRICTION (Optional) 1/-

Winter Hours : 9-30 a.m. to 6-0 p.m.
Summer Hours : 9-30 a.m. to 8-0 p.m.
(Last Ticket issued 1 Hour before Closing Time)
Tel. MORECAMBE 1018 For APPOINTMENT

LADIES : MON., TUES., WEDS., FRIDAYS
GENTLEMEN : THURSDAYS & SATURDAYS

SLIPPER BATHS (Warm) - - 1/6

Fig. 4.14. Segregated Swimming in Morecambe's Super Swimming Stadium opened in 1936. LCM.

The swimsuit along with other sporting garments, such as tennis and golf wear led the way to nuanced changes in both appearance and acceptability of womenswear.

After the First World War the movement for garments to be less cumbersome, lighter and freer in wearability accelerated in the 1920s, occasioned by radical changes in design by the fashion industry.

Fashion houses such as Poiret had introduced unstructured garments prior to the First World War and Chanel had experimented with knitted jersey, a fabric that created a tubular shape useful for skirts and dresses. After 1910, Coco Chanel adapted a sportswear look for daytime fashion (Wilson, 2003). According to fashion historian Elizabeth Wilson, the materials that she used such as jersey and flannel, created that which Cecil Beaton referred to as 'a poor look' in sweaters, jersey dresses and little suits that emulated the clothing of shop girls and clerical workers (Wilson, 2003, p.41). Although she may have simulated the appearance of poor and working people in her clothes, she operated in the world of 'haute couture' and the cost of her models were beyond the reach of even the middle classes. A copy of one of her suits by Matita in 1927 is shown in Fig 4.15.

Fig. 4.15. An imitation Chanel suit was produced by Matita for the British ready to wear market in 1927.

These were aimed at the middle classes but the 'look' that can be seen in Fig. 4.15, encapsulated the style of the 1920s with its short, pleated skirt, knitted jersey top, cropped hair and cloche hat. The 'look' suggested freedom of movement and combined with women being permitted to drive, drink and smoke cigarettes in public, gave the illusion of emancipation. Copies of Chanel and Jean Patou models proliferated in Britain, France and America enabling those 'who wanted Chanel clothes but could not afford them' (Hawes in Pel, 2016), to be able to achieve the style of 'haute couture' and the appearance of the sleek, streamlined emancipated body.

Wilson and Taylor argue that although the idea of liberation and equality in clothing was a 'myth' as women did not have the vote in Britain until much later in the decade, however they contend that:

> 'Despite the vast differences in the quality of the actual clothes, the myth had its own potency, and may even have contributed to a subjective feeling of emancipation for women, while physically the lightness and comfort of the actual

clothes must have made a difference to the women who wore them, whatever the price.' (Wilson and Taylor, 1989, p.89).

The idea of 'democracy' in the fashion system as the concept of the 'modern women' emerges during the 1920s as suggested by Wilson and Taylor, appears to be the consensus of opinion about this period. Pel also argues that the simplicity in style and minimal fabric 'facilitated inexpensive ready-made dress and easy home dressmaking, making fashions available to the mass market' (Pel, 2016, p.7). It is true that copies of this style of garment appear in women's magazines during the decade for the home-made market. There was no 'high street' as such but there were department stores that would stock a range of garments including the cheaper ready-mades. However, the difference in quality of fabric could undermine the achievability of the 'look'.

For the working classes in the 1920s imitations of the Chanel knitted jersey suit or 'little black dress', would not I believe have the same 'appearance', and for those lacking the resources to dry clean, it would mean problematic maintenance. Although, as, Wilson and Taylor have shown, lightness and comfort was the ideal, as was the representation of liberation, but these were perhaps compromised by inferior fabric and pattern cutting.

The swimsuit also became a contested garment during this period. Claims for democracy in swimming (Smith, 2005) were challenged by the cost of manufactured swimwear as the thesis examines. Fig. 4.16. shows the swimwear equivalent of the 1920s 'look', made of knitted jersey with a modesty skirt; it was classically androgynous in a style worn by both men and women.

Fig. 4.16. Photograph of swimmer in 1920s wool jersey swimsuit, 2019.

Knitting patterns were also available in women's magazines to create an equivalent swimsuit. Here the difference between knitted jersey swimsuit and hand-knitted version clearly demarked those who could afford a manufactured garment and those who could not. The thesis shows how the hand-knitted swimsuit, even with the most skilled and experience knitter, would be inclined to sag when wet, causing consternation when getting out of the pool. Thereby, the bodily experience of class differential is established in the wearability of the garments for the 'modern woman'.

However, to wear the new tubular look encased in knitted jersey and soft, unstructured fabrics and to uncover legs to short hemlines required a rigorous regime of diet and exercise. Many older women refused to wear short skirts and continued wearing adaptations of Edwardian styles into the interwar period (Wilson and Taylor, 1989). Many poor women (seen in documentary photographs of slums) who bought second-hand clothing also continued to wear outdated clothes, possibly because these were all that was available (ibid.).

The aesthetic was about youth and where the internal corset was needed to keep the body in shape, it was also about health. The perfected fashion body equated to many of the ideologies about the body in this period. The aesthetic lent itself to sport and exercise, some of which is discussed later in this chapter, and it also fitted into the zeitgeist of the time. Health and fitness became the byword of the interwar period in its fight against infectious disease and desire for improved military capability.

The impact of the First World War and the Spanish Flu Pandemic on decisions about public health.

It is important to look briefly at some of the causes of anxiety in the establishment and the authorities about the health and fitness of the population as these pointed to the governmental rationale for improvements in the vigour of the nation. The next sections of the chapter consider some of the factors that precipitated changes in policy and legislation to promote healthiness not just nationally in Britain but also in Europe, America and most of the Western world.

Many writers on health and the body cite the First World War as the catalyst for ideologies about health and hygiene to become embedded within governmental thinking in those nations who had participated. (Wilk, 2006, Overy, 2007, Atkinson 2019). It was not just concern about those presenting for duty who were clearly unfit but the numbers who had been killed, some 8 million by 1918 (Wilk, 2006, p. 251). There were also those who

survived ‘returned and were unable to work; some wore masks to hide their terrible injuries, others were crippled by what was then known as shell shock’ (Hollis, 2022, p.7). The war has been described as both traumatic and a wound on masculinity.

Volunteer recruits were accepted into the army based on their physical fitness and good physique (Winter, 1980). By the time conscription was introduced in 1916 the physical deterioration in those presenting for duty was a concern in Britain for not just for national efficiency but also for imperial strength. Winter (1980) states that between 40 and 60 percent of recruits for the British Army were turned down as physically unfit for duty. (p.211). Foucault’s ‘docile’ body of the military machine had evaded the authorities in its ability to become ‘the body that is manipulated, shaped, trained, which obeys, responds, becomes skilful and increases its forces’ (Foucault, 1977, p.136). Although there were many who were fit enough to fulfil the requirement of the ‘docile’ body outlined by Foucault, the military machine itself was far from optimised, causing great consternation to those in power.

There was a call for a permanent anthropometric survey to monitor the extent of physical deterioration in the male populace of recruitment age and this was carried out under the auspices of the War Office medical boards (ibid). Anthropometrics became associated with eugenics as shown later in the chapter. The military classifications ranged from A1 to C3 at that point in time; Lloyd George had declared ‘I solemnly declare to my countrymen that you cannot maintain an A-1 empire with a C-3 population’ (Times, 1918 in Winter, 1980, p.211). In a speech to Parliament in 1918 he argued that another million men could have been put into the armed forces if they had not been medically unfit to serve!

The types of ailments that excluded men from service were ‘respiratory tuberculosis, epilepsy, severe spinal curvature, and acute valvular diseases of the heart’ (Winter 1980, p.222). The requirement that men were able to walk 5 miles also precluded a number of recruits from active service due to deformed feet, hernia or varicose veins. Many of these in the C3 classification were assigned clerical or work as cooks but later in the war were passed for duty after the appalling number of casualties meant that the classifications had to be revised (ibid.) The metaphor of man and machine to which Foucault refers, the tight ‘corps’ of the army, is first compromised by the ill-health of the population and later by fragmentation. The advance of technology in warfare causes bodies to be scattered and maimed, mutilated by shells, bombs and machine guns. Prosthetic and surgical technologies developed to deal with dismemberment and facial reconstruction (Armstrong, 1998). The link between man and machine, the body and technology was established at this point in history. The body was already subject to political intervention, and bodily experience as Armstrong contends, is ‘already penetrated by the desiring machines of modernity’ (1998, p.105). Post-war the aim of the ‘desiring machines’ was for improvement

rather than destruction but the state had stepped in with its power and control over discourses of the body.

After the horror of the Great War concerns about the fitness of the general population emerged in the post-war landscape but not until after a devastating virus spread amongst civilians by the mobilisation of returning troops (Spinney, 2017).

In 1918 the poet Guillaume Apollinaire died of the Spanish Flu at 38 years of age. An avant-garde thinker and the person that coined the term 'Surrealist' he was a significant contributor to the early Modern Art movement (Spinney, 2017, p.10). He had fought in the Great War and survived a shrapnel wound to his head.

The Spanish flu is often missed in historical records as the major force of death that it was. The first case was recorded in March 1918 and the epidemic lasted until the same month in 1920. Estimates suggest that it killed between 50-100 million people or between 2.5 and 5 percent of the global population' (ibid). The numbers surpassed those killed in the First World War globally but France, Germany, Britain and Italy lost significantly more people to the war than to the flu.

Spanish flu is an airborne disease transmitted by infected drops of mucus in coughs and sneezes. It does not travel more than a few metres however, much like the advice given to the population during the recent Covid pandemic. It spreads quickly where people live in close proximity to each other. America entered the war in 1917 and military camps were set up on the eastern seaboard to train troops for overseas duty. The flu was already endemic in some of these camps and eventually it reached the trenches of the western front in 1918. (Spinney, 2017). From there, by the armistice, it had travelled all over Europe and beyond. Bacterial pneumonia complications caused most of the deaths from the flu, trouble breathing was one of the first symptoms, as with Covid 19.

Spinney tells us that Spain was the first civilian population noted as having the illness in Madrilenos. Spain had been neutral during the war. Unaware that their troops were infected in the trenches in France 'the French, British and Americans started calling it the 'Spanish flu' (2007). However, BBC journalist Eimar Flanagan (BBC, 2020) explains that it was the Spanish newspapers that were the first to report it, because they were not in the war they were not subject to censorship. The flu unusually affected the young and fit and came in three waves. (ibid).

Viral infections were not fully understood in 1918 and therefore the usual practices for epidemics were put in place including quarantine, (Australia managed to avoid it completely because of its maritime quarantine), isolation and 'cordon sanitaire' or the prevention of people leaving an area known to be infected with disease. (Spinney, 2017) Face masks were also advised for those who were in close proximity to others as shown in Fig 4.17.

Fig. 4.17. Office Workers in Belfast 1918, Getty Images.

Parallels with the recent Covid pandemic not only include the wearing of facemasks but also the closure of large places of gathering including schools, theatres, sports grounds, churches, and cinemas (BBC, 2020).

The devastation of the First World War and the Spanish Flu pandemic are noted by Overy who links hygiene to architecture and argues that:

> 'The traumas of death and destruction of the First World War, as well as the filth and disease, and the deaths of millions just after the war as the result of the so-called Spanish Flu epidemic, produced a renewed preoccupation with the intimate relationship between health and hygiene. International hygiene exhibitions continued to be organised throughout Europe and North America during the 1920s and 1930s' (Overy, 2007, p.50).

Wilks also agrees with this view. He quotes the architect Raymond McGrath as saying: 'The effect of that time of destruction seems to have been a burning desire for sunlight and clean air and clean thought' (McGrath, 1934, in Wilks, 2006, p.251). Modernist architects promoted sunlight and clean air in their manifestos and buildings along with clean lines, smooth surfaces and polished finishes. Their contributions along with those of medicine and government led the campaign in post-war period against the tyranny of disease that affected the inter-war years.

Cleanliness and the fight against infectious disease.

Sanitation measures established in the 19th century, and as discussed earlier in the chapter, had effectively reduced the spread of waterborne diseases such as cholera. However, there were other diseases such as rickets and tuberculosis that, as yet, had no cure, only treatment. The treatment of tuberculosis caused by the microbial Mycobacterium tuberculosis, discovered by Robert Koch in 1882 (Spinney, 2017, p.219) was immensely helped after the 2nd World War by the introduction of Streptomycin, one of the first aminoglycoside antibiotic drugs (NIH, online). However, the continuation of sanatoria treatment for pulmonary TB, including isolation, fresh air and bedrest continued into the 1950s and early 1960s (Bynum 2012). BCG injections introduced in 1954 into Britain helped the post 2nd world-war generation (including myself) to have some immunity against it (ibid).

The National Association for the Prevention of Consumption and other forms of Tuberculosis, henceforth known as the NAPT, produced a film entitled the 'Invisible Enemy' in 1925. It concluded with a black (medieval like) figure who instructed the audience to teach their children:

'the benefits of open air and the consequences of bad habits. Teach them to protect themselves from dirt. Hygiene in living, hygiene in the house. Air, light, cleanliness, the human flower is of all flowers the one that needs the sun the most. Give your children health, that most precious of possessions. It is a social duty from the point of view of national interest and general well-being' (Bryder, 1988, p.147).

Although these sound very much like the tenets of modernist designers and architects, blaming parents for the death of a child is unhelpful to say the least, particularly when some of these ingredients were not available in your neighbourhood or house. Linda Bryder argues that self-responsibility was the emphasis of NAPT propaganda. Gardiner in her historical survey of the 1930s finds that although the interventions of state, private companies and local authorities had some philanthropic influence on improving facilities for hygiene purposes, the emphasis was on the individual to be responsible for their own health. She argues that 'it called for discipline and resolve, rather than better housing, increase wages or welfare initiatives (Gardiner, 2010, p.517). Like today, personalised responsibility for health in the demise of the NHS calls upon the individual to be proactive in self-care rather than relying on the state.

Tuberculosis was not just the preserve of the poor (Bryder, 1988) but spread more easily in crowded, damp and dirty environments (Bynum, 2012, p.112). Bovine TB also existed in milk and it was not until 1936 that tuberculin tested milk (pasteurised) existed

(Bryder,1988). There were several contributory factors to becoming infected with it. Hence it did cross class boundaries.

Many literary figures succumbed to tuberculosis in both the 19th and 20th centuries including both Ann and Emily Bronte, Franz Kafka (who also got the Spanish flu but survived it), Katherine Mansfield, John Keats, George Orwell, and others. The disease figures almost as a character in Thomas Mann's 'Magic Mountain'; in 'La Boheme' Mimi's death is often portrayed on stage in poor, downtrodden environments, but nevertheless a romantic association. Susan Sontag in her book 'Illness as Metaphor' compares the literary metaphors of both TB and cancer and claims that the disease is thought to produce spells of euphoria, increased appetite and exacerbated sexual desire. She argues that the symptoms are more 'attractive' than cancer; 'liveliness that comes from enervation, rosy cheeks that look like a sign of health and come from fever and an upsurge of vitality' (Sontag, 1991, p.13). The romantic view of tuberculosis that Sontag critiques detracts from the reality of the disease. Recent books such as 'The Electric Michelangelo' by Sarah Hall (2005) shows the horror of a young boy clearing out the bloody, morning sputum evacuated by TB patients in his mother's boarding house at the seaside. John Braine's autobiographical book 'The Vodi' (1959) describes the stigma of the disease and the difficulty of finding a job after leaving a sanatorium. It is a powerful rendition of the social isolation and stigmatisation of a person who, having recovered from the illness, has his ambitions thwarted by tuberculosis.

The invention of the X-ray in 1895 (Babic et al, 2016) made a significant contribution to the diagnosis and treatment of TB. The ability to see inside the body, and in pulmonary TB, the lungs, as the technology progressed in the 20th Century enhanced the medical gaze to the point of tyranny for those in recovering in the Sanatorium. Both Brain and Mann give detailed descriptions of visiting the doctor following the results of their X-ray to hear the progress or decline of their disease. (Braine 1959) and Mann (1928). Hans Castorp, the protagonist in the Magic Mountain 'would be able to see for himself later, in the diapositive which they would give him for his very own (Mann, 1928, p.219). The sick have ownership of their X-rays and are able to see inside their own bodies.

The transparency of the X-ray (spooky perhaps, as Castrop's doctor says), corresponds to the architecture of modernism, the glass brick, steel and glass constructions allowed the inner functions of buildings to become more visible (Worpole, 2000). Similarly, the X-ray enables the interior of the body to be known and examined. Other materials such as celluloid and cellophane all offer mysterious, indeed magical qualities, as part of the modernist trope. Judith Brown cites transparency and blankness as two important aspects of modernism that digress from the detail and ornament of the Victorian period. Transparency, she states in relation to consumerism and desire becomes 'the clean, see-

through material that appeared to consumers in the early thirties offered both an unimpeded view of the product and an additional sheen that improved its appearance' (Brown, 2009, p.160). Here it is analogous with the new expanses of sheet glass windows that technology enabled in the interwar period. The interior exposed to the transparent gaze needs to be clean-lined and uncluttered. Blankness and blank surfaces with their expressive absence of the surfaces and things of the past, also allude to the ongoing presence of technological advancement (Brown, 2009). Transparency dissolves boundaries, large expanses of glass windows collapse the interior/exterior binary.

Freya Hartzel tells us that Walter Benjamin writing in 'Experience and Poverty' contends that 'Things made of glass have no 'aura'. Glass is generally the enemy of secrets' (Benjamin, 2014, p.217 in Hartzel, 202o, p.165). Although undoubtedly Benjamin is talking about what he views as the negative aspects of glass, it is precisely its capacity for openness and exposure that appeals to modern architects. Pierre Chareau designed the Maison de Verre in 1931 for the gynaecologist Jean Dalsace creating translucency throughout (Worpole, 2000). This semi-transparent interior must have reflected that which Hartzel argues as icy or frozen light captured in the glass brick diffused, but magical.

Berthold Lubetkin's Finsbury Health Centre shown in Fig. 4.18 used glass bricks for 'greater light and transparency' (Worpole, 2000, p.64). It was intended to 'fight against disease' (ibid).

Fig. 4.18. Finsbury Health Centre Interior with Glass Brick walls (1938). Twentieth Century Society.

The interior of the clinic with its glass wall, reflective surfaces, chrome, columns and pillars presents itself as having no hidden secrets. Lubetkin states the intention of the glass façade

as not only being from the ‘point of view of hygiene but also as a medium of propaganda of light and air in the homes of the patients, and as a powerfully stimulating psychological factor. Here the glass brick is educative for the general public; it has moral probity. It is helping patients not only to fight disease through the clinic but to take those principles back into their own homes.

The modernist sanatorium with its white walls and sweeping balconies, high on the hills of Northern Europe contains much of the iconography of modernism. The principles of fresh, clean mountain air, as with the hydropathic institutions that came before were built high up, away from cities and modern forms of pollution. Shown in Fig. 4.19 the Paimio tuberculosis sanatorium completed in 1933 had terraces built high above the forest so that sunlight could penetrate them (Overy, 2007). Patients could access the terraces via a corridor to catch the sun and fresh air. Instead of individual balconies off rooms these long terraces gave a more sociable atmosphere and possibly a feeling of being afloat rather like being on an ocean liner.

The curvilinear forms of the building were a speciality of Aalto’s, both in his architecture and in his furniture design. The smooth, white surfaces testify to its cleanliness and purity, reflecting the hygienic qualities of its interior with wipe clean surfaces able to take disinfectants and other cleaning products.

Fig. 4.19. Balconies of Paimio Sanatorium, 1933, Alvar Aalto.

The modernity of the sanatoria and their functional bent-wood and tubular steel furniture and the white walled rooms were, as Overy states, ‘designed not only to be easy to clean

but also *to appear to be spotlessly clean* (sic.) – potent symbols of hygiene and health' (Overy, 2007, p.29).

It is important to note that this style of architecture, the whiteness, the smooth concrete surfaces and tubular chrome fittings were popular for the building of lidos and other types of seaside architecture in Britain.

Lubetkin suggested that sunshine, light and cleanliness could be transposed to the home from the clinic and gradually some of these modernist ideas worked their way into domestic living spaces.

Both Forty (1986) and Overy (2007) have shown how the Victorian/Edwardian house was full of dust traps: carpets, curtains, upholstery, ornaments and carved wood provided breeding grounds for germs and bacilli. Barnaby (2013) testifies to the amount of cleaning and maintenance required to maintain the surface and patina of the 19th and early 20th century interior. Many of these interiors required a raft of servants to sustain the appearance of these surfaces of brass, wood, mirror plate and marble. The modernists and hygienists gradually introduced some of their ideas about hygiene into homes via the kitchen and the bathroom (baths and/or bathrooms had been introduced into working class homes by 1930) but as Overy argues 'only a fashionable and sophisticated – or professionally committed-minority wanted their living rooms to resemble hospitals or sanatoriums' (2007, p.83). He points out that many early patrons of modernism were health care professionals. White walls and large glass windows and cubic structures were not widespread in Britain but did exist, they were more ubiquitous in Europe, however, both as interior design and architecture.

Victoria Kelley points out that where you lived could also mitigate against your ability to keep a home and its contents clean. Living amongst the soot and dirt of Wapping Docks, she had been 'able to buy her fine white bonnets trimmed in swansdown' (Foakes 1975, p.36, in Kelley, 2009, p223), but she found them impossible to keep clean in 'the smoky atmosphere of her home'. (ibid). Dirty atmospheres and polluted environments could not host the clean, white surfaces of modernism either, so where those properties started to be built were out of industrial centres and on the edges of cities and towns.

In time, modernism suffered from difficulty with maintenance. Those wipe clean bent woods and chromium chairs rusted and deteriorated in such a way that they lost popularity post-Second World War and did not become fashionable again until the 1960s. The blank white surfaces of concrete walls did not age in the same way as stone and other building materials. Weathering stained them and as Mostafavi and Leatherbarrow claim 'how can modern architects have thought of inevitable stains on their buildings as anything other than defilement?' (1993, p.86). Inevitably all surfaces both interior and exterior require and need maintenance for both cleanliness and longevity. The hygienists and modernists

however did gradually influence the design of household appliances in the 1930s including washing machines and vacuum cleaners that reduced some of the work for the housewife and lessened the need for servants in the middleclass home (Forty 1986).

Sunlight and Sunray Treatment.

In May 1928 the Times Newspaper printed a forty-page supplement entitled 'Sunlight and Health', an image from which can be seen in Fig.4.20 below. The supplement contained images of men, women and children exercising in the open air, either naked or semi-naked, opening up their bodies to fresh air and sunlight.

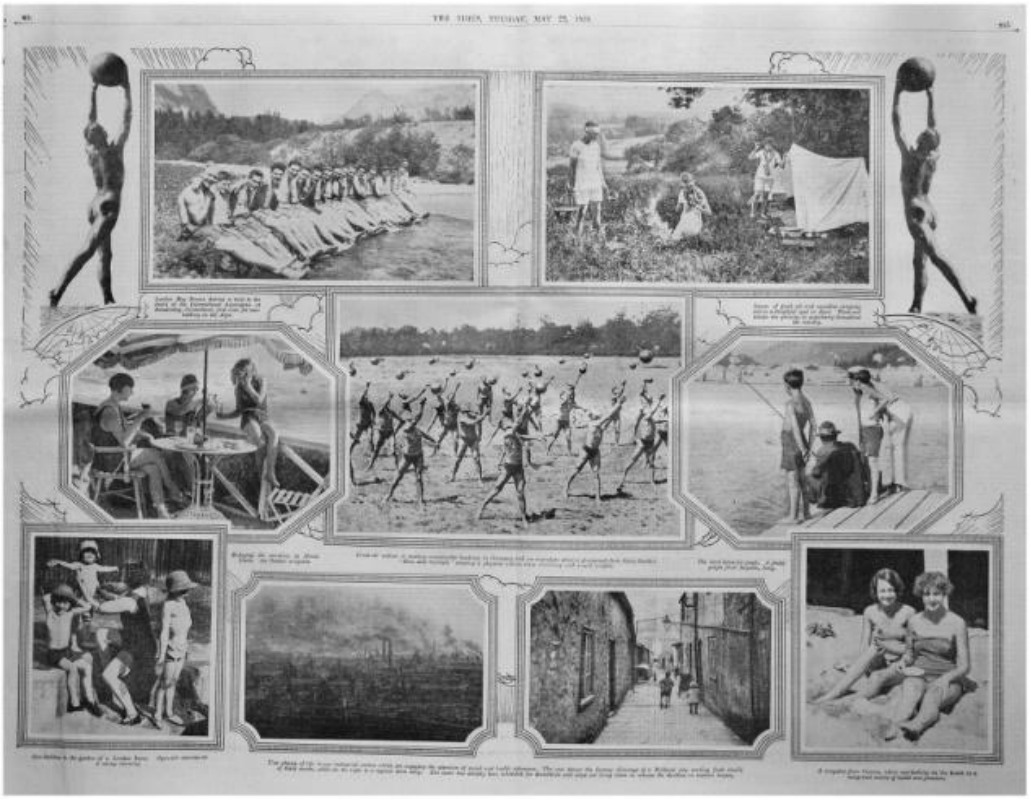


Fig. 4.20. 'Seeking Health in the Sun', Times Supplement, 22nd May 1928, p.xx-xxi.

The image promotes sunbathing in swimsuits, outdoor gymnastics, children's play and fishing. The naked men posing with medicine balls that flank the top two images are almost certainly taken from Hans Suren's book 'Man and Sunlight' published in Britain in 1927 by the Sollux publishing company who were manufacturers of sun-ray lamps. Suren was the Chief of the German Army School for physical discipline. The book has a forward by Caleb Saleeby, founder of the Sunlight League (1924) in Britain. The book is militaristic in style and language and advocates exercise in the nude except where it is absolutely necessary to cover up the genitals, he contends:

> ‘at the same time, I would strongly urge all sun-lovers, when bathing, to discard the very unhygienic bathing costume and to expose the entire body to the sun’s rays (Suren, 1927, p.35).

A belief that the tuberculosis germ will live for ‘two years out of the direct rays of the sun and not more than ten minutes in the sunlight’ was promoted by the ideas of a Danish physician Niels Finsen based on the bactericidal properties of sunlight. (Worpole 2000, p.49). Not only TB but also deforming bone diseases such as rickets, caused by a lack of vitamin D, were thought to benefit from exposure to the sun. Carter (2007) points out that living conditions for some people precluded access to the sun’s rays; they could be obscured by the weather and ‘smoke pollution there was a seasonal variation in the power of sunlight; houses and dwellings, especially in poor areas, did not admit sunshine easily’ (p.72). He notes that the population were also not inclined to remove their clothing. However, for those in poverty, this must have been difficult, alternative clothing for sunny and warm days was probably not economically viable and the idea of nudity outside of their comprehension.

The Sunlight League established in 1924 by Caleb Saleeby sought to encourage the general populace to take advantage of the health benefits of sunlight or ‘heliotherapy’ as it was clinically known. He had read the work of Auguste Rollier who had effectively used sunlight treatment at his clinic in Switzerland. His book ‘La Cure de Soleil’ was published in French in 1914 and it was translated into English in 1923 with a forward by Saleeby. The Sunlight League campaigned directly via their journal for mixed bathing and open-air sunlight schools throughout the 1920s (Carter, 2007, p.75).

Artificial sunlight also gained in popularity at this stage and lamps were available in places such as schools, hospitals and doctor’s surgeries. Carter states that they were ‘taken seriously by those with a responsibility for public health’ (2007, p.43). Ultra-violet radiation was thought to give the same health-giving properties for diseases such as TB and Rickets as natural sunlight and continued as a therapy until well into the 1950s when portable sunray lamps became more available for home use. Images in Fig. 4. 21. show that semi-nakedness was permissible in the clinical or home environment.

THE TIMES, TUESDAY, MAY 22, 1928. xxxix.

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AGENTS:

Fig. 4.21. Advertisement for sunlight apparatus, Ajax Ltd (London), in the Times supplement, 22nd May 1928.

Nudism was much more widespread in Germany and the Scandinavian countries, in Britain and France the general public were more inclined to take ‘sun’ and ‘air’ baths wearing swimming costumes or even fully clothed. One of the spin-offs of sun-exposure for glamour and fashion was, of course, the sun-tan, as Horwood states;

> ‘Before the 1920s, exposure of the skin to the sun’s rays had been a sign of working-class roughness, especially in women. Now tanned skin became a sign of affluence, suggesting sunbathing in the Riviera rather than potato picking in Essex’ (Horwood, 2000, p.658).

Promoted by Chanel and others in the Riviera resorts the sun-tan was associated with leisure and wealth; it ‘symbolised holidays, swimming and sailing, all of which were fashionable pursuits’ (Arnold, 2009, p.50). Bronzed skin was seen as an attribute of beauty as well as health and towards the end of the 1920s, mixed bathing was increasingly permitted in outdoor swimming pools and lidos. Not only did the suntan enhance the

appearance of the swimmer in their swimsuit but it lent an elegance to the limbs and skin when swimming.

Swimming and Swimwear.

The growth of the lido or open-air swimming pool became part of the bid for the nation's fitness. Government intervention in the health and hygiene of the nation devolved the task to municipal authorities to enable these facilities to be built in their locale. The lido and other swimming places are further discussed in the thesis but the thinking behind the growth of the outdoor swimming pool fits into healthy lifestyles. Gardiner comments that they represented a new era:

> 'A combination of health and hygiene regulations introduced in 1934 closed down some of the older pools, while paid holidays, marginally shorter working hours and a celebration of the outdoors and the efficacy of the sun provided additional impetus. So did the fact that the government was prepared to give grants to local authorities for public works, provided that they benefitted the community and used unemployed labour and British materials' (Gardiner, 2010. P.518).

The combination of all these socio- economic and political factors did result in a boom in the construction of open-air pools and lidos (Smith 2005). 180 were built between 1930 and 1939 (Smith, 2005, p.22). The lidos were often modernist in architectural style building on those ideas of health and hygiene promoted by architects of the previous decade. Fig 4.22 shows Morecambe Super Swimming stadium completed in 1936 as an example of this.

Fig. 4.22. Morecambe's Super Swimming Stadium, 1930s, LCM.

The architecture with its indoor and outdoor walkways, its spectator seating, fountains, and high diving boards show smooth concrete surfaces and curvilinear lines.

It has been previously mentioned that claims for democracy in swimming did not extend to the swimsuit itself. One of the solutions for those who could not afford to purchase a swimsuit was to hire one from the local swimming pool, an example of which can be seen below in Fig 4.23:

Fig. 4.23. Hire swimming costume labelled ‘Margate Corporation’ 1920s in the collection of the Beecroft Art Gallery, S2013.209.

The hire swimsuit was knitted jersey made either of cotton or cotton/wool mix. Wool would have been difficult to launder in the turn-around required for the pool. The garment is high-necked, it is a man’s swimming costume and does not have a modesty skirt relying on shorts for coverage of the upper thighs. Swimwear and towels could be hired for a small fee in most municipal pools and lidos. This alleviated the investment in a manufactured costume and the embarrassment of the saggy home-knitted variety.

The design of the swimsuit gradually adapted itself over the 1930s to accommodate the desire for bronzed healthy bodies. Women’s swimsuits gradually became briefer until finally two pieces emerged in the 1930s exposing the midriff. Men rolled down the tops of their

swimwear to expose their chests to the sun. Fig. 4.24 shows an example of this in a photograph from the period.

Fig. 4.24. Men sunbathing with swimsuit tops rolled down, Private collection: Margaret Oakes.

As Horwood comments:

‘Similarly, the authorities reacted strongly in 1934 to the new fashion among men for rolling down their costumes to the waist, ostensibly to sunbathe as part of the lido libido’ (Horwood 2000, p. 664).

Eventually later in the decade swimming trunks came to the forefront and the swimsuit allowed maximum exposure to the sun in both genders without the need for nudity. By the mid-1930s swimming was firmly embedded in the nation’s consciousness as a part of healthy living and physical culture.

Healthy Body Culture.

The perfected body, slim, athletic, and healthy was the ultimate emblem of many social, political, and cultural factions of the interwar period. The shift from the idea of classical bodily form to the modernist androgyne occurred in the early 1920s. In the 1900s, many doctors and physical culturalists viewed the maternal hips and breasts of the Venus de Milo as an ideal form (Zweiniger-Bargielowska, 2011). In 1918, swimmer Annette Kellerman dismissed this embodiment of female beauty as being ‘rather fat’ (Zweiniger-Bargielowska, 2011, p.307). In the early part of the 1920’s women were encouraged to dispense with their external corsets and develop a strong ‘internal’ muscular corset with diet and exercise.

Wearing the new androgynous swimsuit required slimness and a perfected body. There was little room for curvaceous form in the tubular, wool jersey swimsuit.

There was much focus on young women by the physical culture movement who, of course, for the purposes of fashion needed to cultivate the internal corset to achieve the androgyne/gamin look. The medical profession however was more circumspect and excessive slimness was viewed with concern not only for nutrition but also for prospective motherhood.

European wide physical culture movements developed, many in Germany and Scandinavian countries with the participants preferring to exercise in the nude to benefit from sunshine too (Ross, 2005). Men were also encouraged to participate in group and individual exercise not just for health and strength but to maintain a youthful appearance (Wilk, 2006). Sport and physical activity became a far-reaching movement intended to improve the health of nations. Beauty, although secondary to the goal of militaristic fitness was never-the-less important to each nation's ambitions and goals for its citizens.

The magazine 'Health and Strength' published a special women's issue in 1919, where the editor declared that:

> 'health and beauty was a 'duty' for every woman because this was the only sure path to her own happiness as a wife and mother, and imperative in view of the 'most valuable of all our national possessions – our future race' (Health and Strength, 1919 in Zweiniger-Bargielowska, 2011, p.304).

The future 'race' also became important in eugenic thinking and this is addressed in the next section of the chapter. Health and Strength magazine also promoted birth control as a sign of 'advancing civilization' from 1918 onwards (ibid). The magazine encouraged the establishment of physical culture clubs attached to the league too and had mixed activities including rambling and gymnastic displays. Fig.4.25 shows a front cover featuring Windsor Woollies swimsuit model Alyson Milner (later Alyson Lancaster) on the weekly magazine.

Fig. 4.25. Alyson Milner (Lancaster) modelling a swimsuit on the cover of Health and Strength magazine. (Archive for Art and Design).

In the image she is wearing a knitted wool jersey swimsuit in a studio setting. the handwritten script on the photograph states that she is a competition finalist and has won £100. She is framed by images of classical Greek athletes who engender authority and status to the magazine. Her swimsuit has a modesty skirt and her slender form corresponds to the perfected body of the time. She was a swimsuit model for Windsor Water Woollies who are discussed in the context of poolside fashion parades, as part of the thesis. She was a key model; she so clearly represented the fit and healthy ideal of the time as the company used her on much of their publicity and marketing materials. The swimsuit, of all the fashion garments would most successfully show off the bodily form.

Modernists (architects and designers) also embraced healthy body culture. The Bauhaus school, for example was highly influential in art, architecture and design education and it could be argued, continues to be so today. Their machine age aesthetic championed industrial processes and evolved from their own craft aesthetic and unlike many of the 'craft' workshops of the 19th century including those of the Arts and Crafts movement; it did not reject mass production. (Droste, 1990). The Bauhaus philosophy was utopian in ethos and did engage with the healthy body culture prevalent in Germany at the time. (Otto 2019). Elizabeth Otto states in 'Embodying the Bauhaus' that ideas about body culture were

recognised as having 'transformative possibilities of embracing changes in diet, movement, clothing, and art production as paths to a better life. (2019, p.xxix). Otto also addresses the complex gendered body within an institution led by male teachers who struggled with traditional masculinist ideas about the 'Modern new woman' amongst the students whilst wanting to champion freedom of sexuality and identity for all. Gymnastics and dance using Loheland (Lheland School for Physical Development, Land Cultivation and Craft, founded 1919) techniques took physical awareness further than many previous dance techniques such as those advocated by Rudolph Laban. They treated the body as a spiritual entity and were approved by Director Walter Gropius at the Weimar site of the school (Otto and Rossler, 2019). The holistic approach to the body was intrinsic to the student's education and the performative aspects of the body were fully explored by Bauhaus teacher Oskar Schlemmer in the 1920s. (Wilk, 2006).

Women's League of Health and Beauty.

In Britain, exercise classes, principally for women were started by Mary (Mollie) Bagot Stack in 1930 at the London branch of the YMCA under the auspices of the Women's League of Health and Beauty. By 1934 there were over 47,000 members and 50 students in training to be League teachers (Ashburner, 2005). The Daily Mirror asked Mary Bagot Stack to write a series of articles on slimming. The League had established themselves as a significant force in training the modern perfected female body. The exercise was mainly confined to gymnastics, dance and yoga. With a nod to the spiritual dimension of exercise learned from her time as a colonial wife in India, Patricia Vertinsky states that Bagot Stack:

'aligned her goals with the substantive shift in attitudes towards physical culture and its transformative potential to develop a self-supporting commercial enterprise for women based upon "racial health", "peace" and "harmonious balance in the innermost tissues of mind and body" ', (Stack, 1934, in Vertinsky, 2012, p.527).

The Women's League of Health and Beauty benefitted from the desire that young women had to improve their health and appearance through leisure and that 'physical culture activities were celebrated as emblems of modernity which could make a difference to their lives' (ibid). Bagot Stack prided herself on a 'cross-class appeal' and ran classes in businesses and factories as well in regional centres. However, there was an annual subscription and each class cost 6d (Ashburner 2005, Zweiniger-Bargielowska, 2011), so it could be argued that it required a certain level of income to participate. Indeed, as Zweiniger-Bargielowska argues 'during the interwar years representations of working-class women's bodies served as a counterpoint to middle class notions of modern femininity' (2011, p.312). She cites Margery Rice Springer's findings of extensive ill-health among

working class women due to poverty, number of pregnancies and poor housing. It was not until much later in the 1930s that the opportunity to exercise through local authority classes was made possible (Zweiniger-Bargielowska, 2011).

The perfected female body with its athletic lines was not available to all and again laudable ideas about democracy fail in the detail of motivation and access to fitness and health.

The Women's League of Health and Beauty through the directorship of Mary Bagot Smith worked in conjunction with eugenic ideas of the time, her reference previously stated to 'racial health' corresponded to much eugenic thinking. When her daughter Prunella Stack took over the organisation she visited Mussolini's Italy and the 'new Germany' to look for models of physical training (Vertinsky, 2012). She became interested in the mass demonstrations of physical fitness, with their militaristic dimension and incorporated them into the Women's League marches and annual displays of gymnastics. She was asked to serve on the National Fitness council formed by the government in 1937 with the 'object of improving the health of the nation'. (Stack, 1973, p.69). Vertinsky alludes to the 'uneasy line between government suggestion and direction and whether the National Fitness movement was 'Nazifying' with its slogans 'get fit, keep fit' and 'fitness wins- in work or play' (Vertinsky, 2012, p.533). The sylphlike perfected body became a contested site in the late 1930s when the correlation between the British fitness movement for gymnastics, sport and swimming and those of the newly formed fascist states of Europe increased. Eugenic ideologies, although not discredited until much later, began to overlap with the complex relationship of health, beauty and exercise.

The Body and Eugenics.

The swimsuit and its wearing body is underpinned in this thesis with ideologies of modernism and their counterparts. One of the most disruptive ideologies concerning the body is that of eugenics in particular, those aspects of the body concerning desire and reproduction. The final section of this chapter examines how the body is represented, rationalised and hypothesised in eugenic thinking.

It seems important to give some background and context to a general reading of eugenics before exploring the relevant aspects to my thesis. Francis Galton, cousin of Charles Darwin published two articles on the inheritance of ability; one focused on how to breed more gifted individuals and in the other he coined the term Eugenics (Redvaldsen, 2017) to mean systematic racial improvements. In Galton's Britain increasing urbanisation caused social problems such as pauperism, disease, mental illness, alcoholism and prostitution. There was concern that the underclass apparently associated with these social problems was increasing in size in comparison to the middle classes. As Greta Jones points out

‘British resources of fit and healthy manpower were on the decline. Moreover, industry also paid a heavy price for the diseased and debilitated among the working class.’ (Jones, 1986, p.25). Whereas left wing commentators attributed Britain’s health problems to poverty and extensive malnutrition, Galton believed eugenics would be a biological tool to control the population through the increase in breeding of ‘fit’ individuals (Bashford and Levine, 2010). Unlike the Nazis however there was no suggestion that the ‘unfit’ would be eliminated, but sterilisation was certainly recommended for some of those thought to be ‘unfit’. Sweden, for example practiced this under state legislation until as late as 1976 (Bates, Guardian, 1999). Eugenics as an ideology was taken up by most Western continents including Europe, America and Australia.

Racial hygiene in most writing about eugenics is normally assigned to the Nazis and their elimination of entire populations of Jews, gypsies and others. However, the impact of eugenics on the racial segregation in North America and South Africa must have been alarming. White supremacists and the Nazis feared miscegenation or the interbreeding of races was endemic in eugenic thinking. Mary Ann Doane has argued that the individual of mixed ancestry ‘whose looks and ontology do not coincide, poses a threat to the very idea of racial categorisation’ (Mary Anne Doane, 1991, in Smith, 2008, p.78p). W.E.B Du Bois, an African- American activist did catalogue African-American types in a photographic exercise to show the range and type of African-American people in order to challenge the idea of black and white segregation (Smith, 2008). Similarly colonial and imperialist regimes used segregation as a means of controlling sex and procreation.

The Eugenics society was established in 1907 as the Eugenics Education Society and renamed in 1926. It involved itself in both theoretical aspects of Eugenics but also the means by which these could be achieved. According to the Wellcome foundation their records contain material on the treatment of the mentally and physically defective, the development of birth control methods, the legalisation of sterilisation, the use of artificial insemination, etc. (Wellcome Foundation, online). Several highly reputable people were members including Beatrice and Sidney Webb, Bertrand Russell, Maynard Keynes, Winston Churchill and Marie Stopes. Writers such as F. Scott Fitzgerald and Virginia Woolf reference aspects of eugenic ideas in their work (Kruse, 2015, Childs, 2001). Fitzgerald in his friendship with eugenicist Mary Harriman Rumsey brought some of those ideas into his novel, ‘The Great Gatsby’ (1925), (Kruse, 2015 p.147). Childs (2001) claims that Woolf’s book ‘The Three Guineas’ (1938) has elements of both positive and negative eugenics.

I would argue that eugenics in the first half of the 20th Century was deeply embedded into the power structures of politics, economics and society of the western world.

Neo-Lamarckian Eugenics.

George Leroux, prized by the French Government for his ability to produce art that acted as a panacea to the depopulation and degeneration crisis in their country, painted the Banks of the Tiber in 1909, shown below in Fig. 4.26:

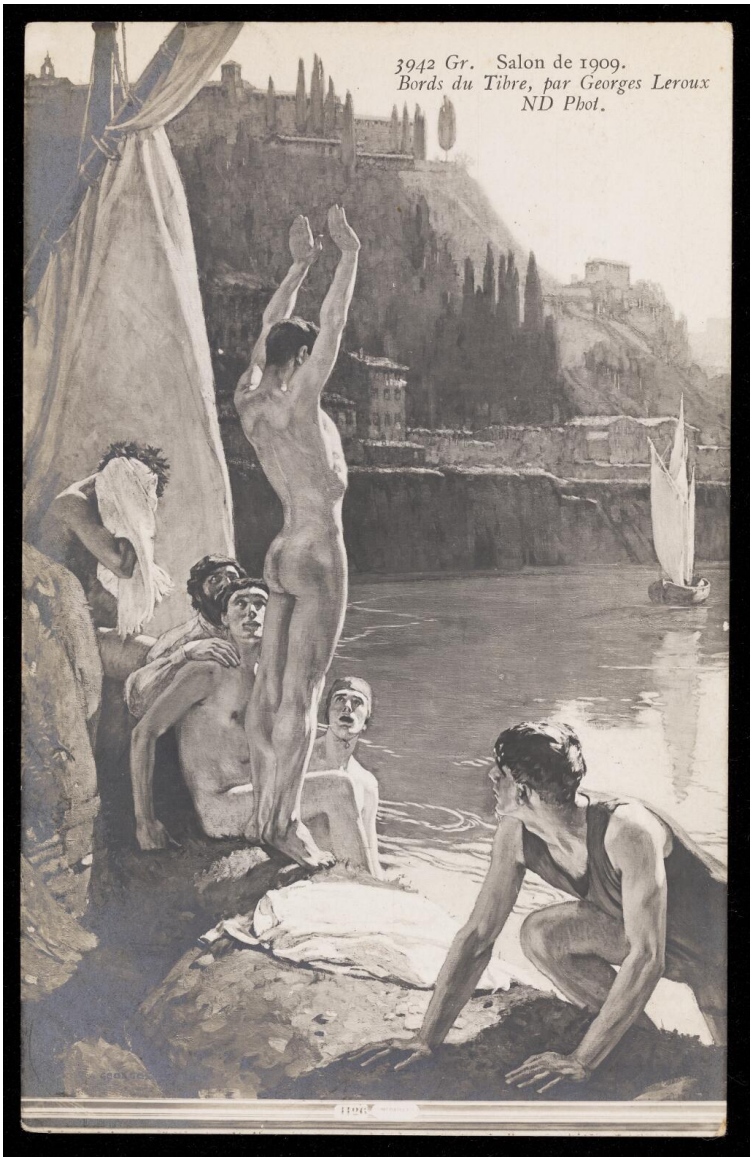


Fig. 4.26. Banks of the Tiber 1909, Georges Leroux.

Commenting on this painting in her writing about Neo-Lamarckian eugenics Faye Brauar says:

> ‘Aligning the decline of France with the fall of Rome in his Darwinist lectures on art history and aesthetics at the Ecole des Beaux-Arts, Taine located its cause to the loss of ‘fitness’, particularly the kind of physical fitness acquired from the practice of sport and physical culture. To set the scene both historically and classically for this

display of musculature, Roman temples are interspersed with poplars amidst the fertile Roman campagna surrounding the Tiber' (Brauer 2008, p.123).

She goes on to suggest that although this would have been categorised as a 'history painting' its historical verisimilitude is then disrupted by swimming apparel that could only have been acquired in the early 20th century, the bathing suit and the bathing cap give the painting its 'vigorous reality' (ibid). Brauer contends that Leroux is saying that through the pursuit of sport and physical training, 'fitness' is as evident in modern Rome and France as it was in the Roman Empire.

Diving as a sport had just been added to the Olympics in 1904; swimming had been included since the inception of the Modern Olympics in 1896 (Sprawson, 1992).

The parallel of the classical world and eugenics presents itself in several visual forms later in the 1930s also, as this thesis notes both in this chapter and later in connection to fashion. In this instance Brauer argues it illustrates how the painting rivalled, if not surpassed antique canons of Beauty and that the regenerated body promised a solution to the depopulation crisis plaguing France and the threat of racial extinction (Brauer, 2008).

France was suffering from a low birth rate and there was a bid for rational repopulation and the growth of the French race. France's depopulation crisis was deemed to be one of the worst in Europe leading to a French eugenic society being formed. Its approach was based on a fusion of Jean Baptiste Lamarck's zoological philosophy (1809) which had been somewhat discredited because of his claims that the giraffe inherited its long neck from its ancestors reaching for leaves in high places, and Darwin's evolutionary theory. The new eugenics was termed Neo-Lamarckian (Brauer, 2008) and it proposed the improvement of race through cultural intervention and environmental action. Regenerating the body through modern sport and physical culture was part of this thinking. Brauer argues that the dissemination of these images through painting or physical culture magazines would engender the mechanisms of 'biopower' (from Foucault) as she states 'subtle, insidious, and efficacious instruments of sexual coercion and regulation. The key point is that the sexual desire that this might arouse would be for a body that was disciplined rather than the body represented in pornography – seen by eugenicists as degenerate (2008). The naked body with its classical overtones, shown in its beauty of form (without swimming apparel) is in the painting, celebrating not only physical perfection achieved through exercise but is promoting desire.

Sigfried Kracauer comments on this contested issue of nakedness in the 1925 German film 'Ways to Strength and Beauty, which shows naked people exercising, intercut with presentations on health matters. He states:

> ‘Against the dedication in which the naked figures exercise out in the open, any kind of desire not relevant to what they are doing is a disgrace, the image remains an image and maintains the right degree of attachment, so that nothing is expressed except the joy of play, grace and rhythm. It is therefore totally justified, and even recommended, that young people should also be allowed to see this film’ (Kracauer,1925 in Prinzler, 2013, p.152).

Clearly, Kracauer is lending his support for the film to be shown to young people but his quotation above seems to contradict the intentions of French Eugenicists that the body toned and healthy from physical regeneration should be an object of desire. However, this film directed by Wilhelm Prager in 1925 reiterates the idea of the body being beautiful but disciplined and healthy. The central core of German nudism was the de-eroticizing of the body so that sex and sexuality were separate and the body was then attuned to nature (Ross, 2005, p.138).

One of the actresses in the film is Leni Riefenstahl who later went on to direct ‘Triumph of the Will’ and ‘Olympia’ (Prinzler, 2013). Hitler had a difficult relationship with ‘Nadtkultur’ although not with the wider ideology of fitness, health and hygiene which was firmly embedded in the Hitler Youth Movement and his ideas of racial superiority. However, he allowed Riefenstahl to use the bodies of naked athletes as they morphed from the poses of classical statues into discus throwers and torch bearers in her film ‘Olympia’.

Nudity and nudism in Britain were not as widespread in as in Germany and the Scandinavian countries and tended to be confined to isolated camps and beaches, (Barcan, 2004, Pollen, 2021). The air bath and the sunbath for the majority of the general public therefore required swimsuits and gradually over the interwar period these became much briefer to allow more bodily exposure to the sun.

Measurement of the body in Eugenics and the link to ergonomics in Modernist Design.

Modernism and its relationship to the body, and the perfected body is central to the thesis it therefore seemed important to make the link between modernist thinking and eugenics. This has been well established by writer Christina Cogdell and is worthy of inclusion in this section. The ideal body form and dimensions were typically ‘Nordic’ and thereby equated with the characteristics of the ‘Aryan’ race, used by the Nazis primarily to exclude and eliminate those who did not ‘fit’ the type. Bodily ideals permeated the work of medical, scientific, military establishments along with the softer institutions of physical culture and fashion. The perfected body of modernist design and architecture would have necessarily been influenced by eugenic thinking as Cogdell shows.

Anthropometry and craniometry were used as systems of measurement and classification of the body on adults, children and indigenous people as a method of scientific eugenic practice. This was the method preferred by Galtonian eugenicists and differed from the practice of Neo-Lamarckian eugenicists. As Christina Cogdell has argued 'Galton based his understanding of heredity not on the precocious knowledge of genetics but rather on the statistical analysis of countless bodily measurements attained through physical anthropometry' (2008, p.245). She states that he did this with race and class biases. He also did this to establish norms and to measure how far an individual deviated from those norms in their racial type. A widespread practice, it continued in institutions such as schools and hospitals in this country and others long after eugenics had been discredited.

Similarly, as Cogdell states ergonomic designs became extensions or appendages of statistical 'norms' established by anthropologists studying average racial types in the 1950s. Joe and Josephine were anthropometric partners for Dreyfus Associates but were based on a number of statistical proportions not just one. Fig 4.27 shows how Dreyfus developed his calculations from anthropometrics in the same way as the eugenicists did based on a cross section of the average (white and of Nordic type) American man and woman:

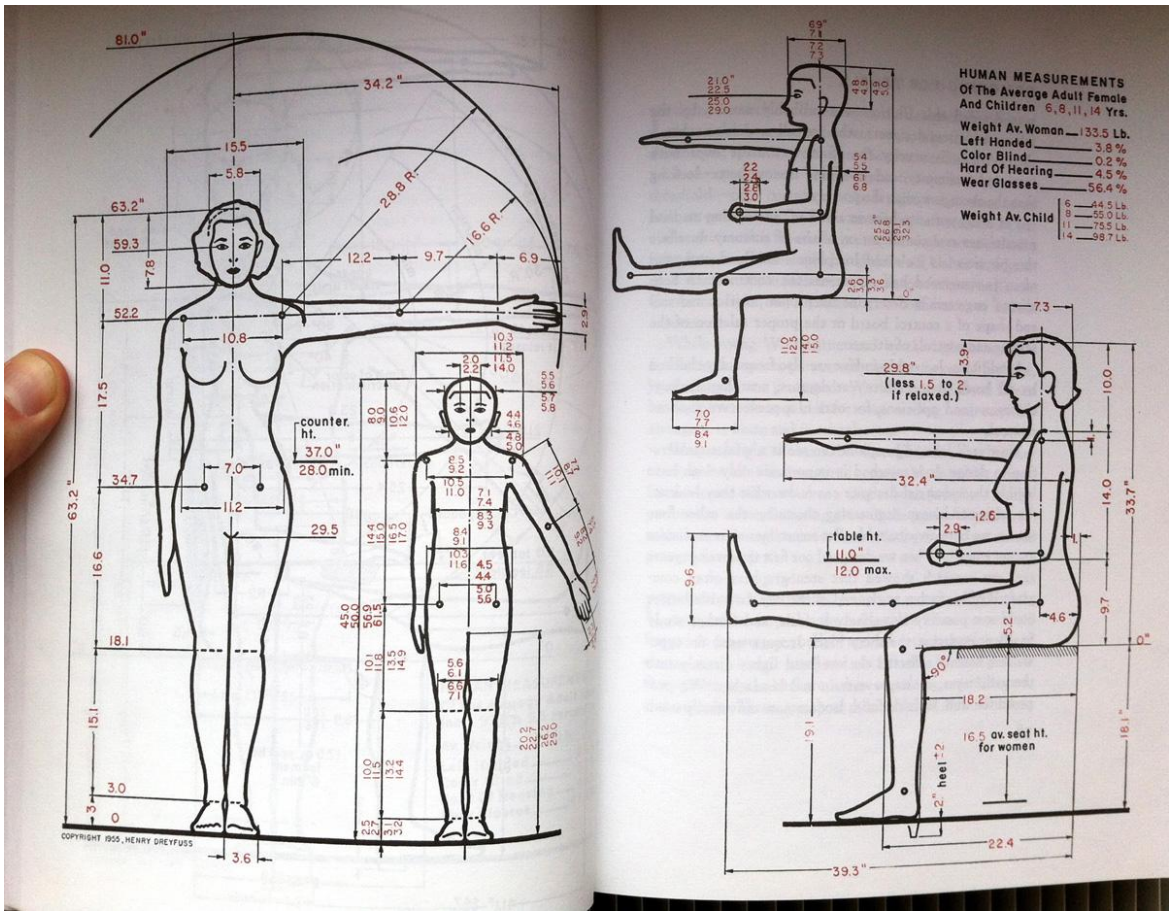


Fig. 4.27. Henry Dreyfus, Designing for People.

As Cogdell argues: 'Throughout the 1930s numerous designers including Dreyfus did, in fact profess to be striving for the creation of pure forms and ideal product types suitable to the 'world of tomorrow', sculpting plastic and metal much as eugenicists were sculpting flesh and bone' (Cogdell, 2008, p.255). The 'world of tomorrow' – became a battle cry of the eugenicists and contained all the tenets of modernism including progress, breaking with the past and utopian futures.

Various industrial designers were asked to design a dress for the 'woman of the future' for American Vogue 1st Feb 1939. The designers predicted what clothes and accessories might look like but also, as Cogdell states 'how her body and mind would be perfected through the implementation of eugenics' (2003, p.36). Teague's vision was that most women would have beautiful bodies and the 'present trend towards nudity would continue at an accelerated pace' (Cogdell, 2003, p.37). Transparent clothing was the order of the day. However, Loewy did not feel that this type of clothing was suited to all contemporary individuals but said that in the future 'eugenic selection may bring generations so aesthetically correct that such clothes will be in order' (ibid). The 'woman of tomorrow' according to the conjecture of the industrial designers writing in *Vogue*, was genetically or eugenically predisposed to perfection, as specified by the ideals of the period.

The perfect female (and male) forms were preoccupations of both eugenicists and modernist designers. The overlap between the two has been brilliantly outlined in Christina Cogdell's work. This thinking is aspirational and the reality of the body in its different shapes, sizes, skin colour, physical capabilities and age is side-lined or worse, or much worse, within this ideology. The maintenance of the perfected body for sport and fashion, particularly for wearing the swimsuit in public spaces, is onerous and although in our times diversity it much more accepted, the challenges of the 'ideal' still continue to pursue us as human beings.

Conclusion.

The main purpose of this chapter was to foreground the interwar swimsuit in many of the ideologies about health and hygiene of the period. The swimsuit sits in a satellite of overlapping ideologies and theories that developed from the 18th and 19th centuries into the 20th century where they were consolidated. It seemed important to give an historical perspective of some of these trajectories as they feed directly into the concerns of modernists and hygienists.

The shift from the classical body, formed as if by nature itself, to the modern, trained, athletic form, with, of course reference, to the antique gymnasts in the literature and advertising of the physical culturists is indicative of the changes in the body of the swimmer.

The element of water as a health-giving power through cleanliness, hygiene and therapy is traced from its significance in antiquity, to hydrotherapy, sea-bathing, public baths, and washhouses to the lido of the 20th century. Sunlight is shown as being therapeutic but also for leisure and pleasure in both the sunbath and air bath, clothed or naked. Technology played an important part in the development of healthy environments in the 20th century both in architecture and in the treatment of illness through the X-ray for diagnosis and glass for light and openness (Overy, 2007).

The key aspects of the chapter, however, lay in the complex interaction of ideas about healthy body culture, government concerns, both national and international in first world countries, about civilian and militaristic health and eugenic theory in relation to the ideal and perfected body. Some of these ideas and ideologies impacted on the decision in Britain, to build, at government and local authority expense, a whole raft of outdoor pools for the purpose of health in the population (Smith, 2005). The notion of 'democracy' on which this is based will be examined throughout the rest of the thesis as a significant part of understanding how the swimsuit is differentiated as a garment, not just within the boundaries of what constitutes the perfected body of the modern woman but also her class and economic status.

In fashion, the perfected body also takes a central role; the silhouette is slender, sylphlike, and achieved through 'training' in the form of diet and exercise. The 'internal' corset, although not as restrictive as the worn corset from previous decades was just as challenging to the modern woman. Clothing, in particular the interwar swimsuit, was unforgiving to those, who, as in eugenic theory, did not 'fit' the archetype promoted through ubiquity of media imagery. This too forms part of the discourse in the thesis.

The following chapter examines the different sites of swimming and sunbathing available during the interwar period. These are addressed through the lens of Foucault's heterotopia or 'other places' seen as spaces outside of everyday life and the daily rhythm, invested with their own rituals and behaviours.

Chapter 5: The Bathing Costume, the body, and its environs

Introduction

Having already established the connections of the swimsuit to principles of health in Chapter 4, this chapter examines the bathing costume in relation to the body and its environment. It does this in relation to various aspects of modernity, its character and aesthetics: new formations of the body, approaches to public space and architecture, and especially, the qualities of surface which were idealised in all kinds of cultural expressions. Starting with the concept of the heterotopia, this chapter considers the pool, beach, lido and cruise ship, and the kinds of leisure and sporting activity in which the bathing suit and ideal form is entangled. It ends by exploring how photography of the period constitutes these garments in relation to the overall context.

Baudelaire, who is viewed by some as the originator of the concept of 'modernité', defined it as transitory, fugitive, and contingent (Fisher, 2013, p.2). His modernity sought out the 'new' in the streets of Paris, its modern society and its cultural manifestations. These observations are reflected in the 'Painter of Modern Life' (1863) in which he discusses the experience of modernity. This chapter explores modernism as part of modernity and reflects on ideas about the 'modern surface' as something which is both solid in terms of design and architecture but also fugitive and transitory in its nature. The 'modern surface' is examined not only in relation to concrete, chrome, grid-like structures which are solid but also to sheen, light on skin, created by cinematic and photographic technologies new to the early 20th century. The relationship between body and building, skin, swimsuit, and building are foregrounded in the chapter as aesthetic surfaces.

Brown (2015) draws on the significance of light as a modern metaphor in her investigation of light and glamour, 'Berman sees light as a driver for aspiration, referring to the description of the collision of rich and poor in Baudelaire's tale 'The Eyes of the Poor' (1964a [1869]) where a poor family unable to enter the glittering café stand outside, noses pressed against the glass in wonder and desire' (p.65). Berman notes they too wanted a place in the light but the son's eyes seem to say 'How beautiful it is! But it is a house where only people who are not like us can go' (Berman, 2010, p.149). The interwar period made available some of these places 'in the light' to the working classes such as the cinema, the department store and the lido. However, there remained obstacles to pushing at class boundaries. Aspirations to achieve a glamourous swimsuit clad body were dashed when the swimmer came out of the water and class boundaries emerged along with sag, discomfort and embarrassment.

The previous chapter examined theories of health and hygiene in the interwar period. Emerging from this was the number and range of places available for swimming and sunbathing. Some of these such as the beach and the lido could be seen to be democratic in their availability for everyone but other places were not. This chapter focusses on places of swimming and their relationship to swimwear in the context of the modern surface discussed in depth later in the chapter. The relationship of new technological surfaces including metals and concrete to the streamlined body with its impermeable aesthetic are investigated as part of the understanding of the modern surface. The connection between these two facets of modernism adumbrated by theorists such as Wigley and Colomina (2016) who describe architecture as a 'machine for enhancing the body' (p.167), runs throughout the thesis as part of health and hygiene, and as part of the idealised form of modernity. The reality of how this ideal was translated for everyday practice as swimming, and the places of swimming became increasingly promoted by government agency (Smith, 2005) as exercise for all, as Sir Josiah Stamp declared: 'Bathing reduces rich and poor, high and low to a common standard of enjoyment and health. When we get down to swimming, we get down to democracy.' (p.128). His idea that swimming pools and lidos could be a great leveller demonstrates the government desire to democratise exercise. The lido had all the accoutrements of modernism but the wearing body of a saggy swimsuit may not have felt itself enhanced.

The marketing of swim fashion in the interwar period of the 20th Century led to the emergence of new environments in which the bathing costume was transformed from a functional athletic garment into sensual apparel that displayed more of the body for sunbathing and had a physically gratifying relationship to water and surface.

The first part of this chapter will explore the beach, the lido, the liner, and the holiday camp as sites of what Foucault and Lefebvre describe as heterotopia, as temporal disruptions to urban existence. Those whose bodies did not conform to the youthful and athletic silhouette did inhabit these spaces for leisure and pleasure but may have felt conspicuous and challenged by this, it is discussed further in Chapter 6 in respect of women who are older and mothers with small children.

These sites of swimming and sunbathing are analysed through the concept of heterotopia as outlined by Michel Foucault in his essay 'Of other spaces: Utopias and Heterotopias' originally published in 1967, in relation to the place and locale where swimming and sunbathing took place during the interwar period of the 1920s and 1930s.

The chapter will also focus on the Ocean Liner as it functions, as Foucault suggests, in opposition to daily social practice within the binary discourse of leisure and work, private space and public space.

The next section then examines the interrelationship of body to building through the concept of cladding. The skin of the building is its outer sheath and in the interwar period in modernist design was often concrete. The outer sheath of the body is normally skin but clothing is required for modesty, warmth and as a protective sheath against the environment (Flugel, 1971). This will be looked at through the work of Didier Anziou's 'skin envelope' from his book *The Skin Ego* (2016) and Anna Anlin Cheng's 'Second Skin: Josephine Baker and the Modern Surface' (2011). Cheng is fascinated by modern surface in relation to the play of light on Baker's skin. This chapter then considers how photography represents the modern surface highlighting its smoothness, its gleam, its matt qualities and its shimmer The chapter examines the modern surface in relation to body, building, new technologies, new materials and the swimsuit by first looking at the concept of skin as a protective surface in relation to building and body.

The final part of the chapter revisits sites of swimming and sunbathing in relation to Lefebvre's concept of heterotopia which chimes with Foucault's fourth principle of temporality where he refers to fairgrounds and festivals. Lefebvre's heterotopias, as outlined in 'Urban Revolution', where he discusses the history and journey of urbanisation dialectically, are spaces of difference and ambiguity, both excluded from but part of the fabric of society such as 'caravansaries, fairgrounds on the margins of cities' (Lefebvre, 2003, p.9). As Harvey states in the preface to his 2012 book *Rebel Cities*, Lefebvre's concept of heterotopia is radically different from that of Foucault and delineates liminal social spaces of possibility where 'something different is not only possible but fundamental for the defining of revolutionary trajectories' (xvii). The sites outside or on the margins of the city, as Lefebvre argues, can be places of discord and revolutionary fervour. However, as Rob Shields using Bakhtin's interpretation of the 'carnivalesque', explores how some of these sites can be liberating and in opposition to official order and culture. The challenging aesthetic of the swimsuit and architectural features of modernist lidos for example, which in themselves were and continue to be heterotopic spaces, are countered by Donald McGill and other's seaside postcards of the 'grotesque' and humorous body on the beach. The buxom, the fat, the ridiculous were illustrated along with depictions of the many other transgressions of the desired aesthetic of the young, slim, and streamlined body. Lefebvre sees that holidays; sites of leisure and pleasure, disrupt the order of the urban, the normative experience of the city but unlike Foucault he also see this as a disruption of and in contrast to, ideas of Utopia. This final part of the chapter presents an opposition to the perfect forms of modernism and looks at the reality of working-class people on the beach during the interwar period and how they presented an alternative representation to those of fashion magazines and railway posters.

Sites of swimming and sunbathing as heterotopic spaces

Foucault outlined his idea of heterotopia in his preface to the Order of Things (1966) as Peter Johnson states in his article 'Unravelling Foucault's different Spaces' that he discussed it 'within a radio broadcast as part of a series on the theme of utopia and literature and finally in a lecture presented to a group of architects in 1967' (2006, p.75) The former as Johnson argues is concerned with textual material but the latter (radio broadcast) is an analysis of types of social space. In the essay written in 1967 Foucault outlines several counter spaces that are in diverse ways outside of the ordinary including cemeteries, brothels, prisons, asylums, and holiday villages. He refers to the rest home for example as a place for doing nothing, for the non-productive, perpetuating idleness that he describes as a 'deviation' from the norms of society (Foucault, 1967, p. 5). Johnson argues that:

> 'There are complex and subtle relational differences in English and French between space (espace) and place (lieu). Augé provides a subtle and helpful distinction. 'Space' is much more abstract than 'place'. The former term can refer to an area, a distance and significantly in relation to Foucault's concept of heterotopia, a temporal period (the space of two days)' (2006 p.76).

Johnson after discussing how Foucault uses 'lieu' or 'place' in relation to intimacy or subjectivity, then notes that Foucault will often use both expressions in the same sentence such as 'these different spaces, these other places' (2006, p.77). Johnson believes Foucault's term 'emplacement' which lost much of Foucault's meaning when translated to English as 'site' is critical to the understanding of a sense of 'placing in a certain location' (2006, p.77). This is a useful point of departure for the chapter as it places the swimmer/sunbather (body) in different locations (natural or constructed) and explores the concept of the temporal period. Time spent in the swimming or sunbathing location be it the beach, the lido or the pool is outside of the everyday and therefore is determinate; there must be a beginning and end.

This word heterotopia derived from Greek heteros 'another' and topos 'place' as Johnson contends (2006, p.77) is used to distinguish the spatial quality of different spaces both mythical and real 'an emplacement' from Utopia which Foucault sees as 'not real' and dystopias, also imagined, but where everything is unpleasant or bad. Johnson also notes, however, in his discussion of Foucault's heterotopias in relation to other writers about space and the places of heterotopia, that the term 'heterotopia' originates in medical discourse to refer to a particular tissue that develops at a place other than would be expected. He notes that 'the tissue is not diseased or particularly dangerous but is merely placed elsewhere, a dislocation' (2006, p.77). Heterotopia, as suggested here is a dislocation framed in relation to what is usual or normative but connected either spatially or temporally to it. The body is

a host to the unexpected development of the tissue in the way that society could be host to a heterotopic site that is different to, but intrinsically connected to it.

Although Foucault does not mention any locale such as the lido – he does discuss the beach as a site of relaxation (1967, p.3), the holiday village and the garden as sites of heterotopia. Foucault does describe the boat as an extreme type of heterotopia 'a floating piece of space, a space without a place that exists by itself, that is closed in on itself and at the same time is given over to the infinity of the sea….' (1967, p. 9). In the introduction to 'Globalization of Space: Foucault and Heterotopia' a selection of essays edited by Palladino and Miller, they state that:

> 'But while utopias are 'fundamentally 'unreal spaces' that present society in a 'perfected form' which is to say they reveal a 'direct or inverted analogy with the real space of Society', heterotopias are 'real spaces' and 'counter-sites' that remain absolutely different from all the sites that they reflect and speak about. Heterotopias should not, however, be understood in *opposition* to the space from which they are differentiated. They remain intimately involved with the rest of the world, even as they suspend its regulations and affects' (2006, p.3)

Heterotopias are not imagined, perfected, spaces, they are a real space in both location and time but operate either as a deviation from or as counter to the normal functioning of society. The suspension of the regulations and effects of everyday life as suggested by this quotation can in term lead to the establishment of new ones and these can be examined by behaviours in the heterotopic spaces. From that basis it seems possible to argue that the beach and the lido operate as heterotopic spaces as they fulfil some of the six principles that Foucault outlines to describe heterotopias.

The first principle is the heterotopia of crisis/deviation and Foucault suggests that this includes institutions such rest homes, prisons, psychiatric hospitals. The second principle is the heterotopia of the cemetery - the city of the dead adjacent to the city of the living. In the third principle, Foucault cites the theatre and the cinema as heterotopic spaces; he advocates the garden, as in the Persian garden as being a site of pleasure from antiquity. The fourth principle Foucault states is linked to slices in time that open out into what might be termed 'Heterochronies.' Foucault suggests that museums and libraries are linked to an accumulation of time but that transient time such as festivals and fairgrounds that appear on the edge of the city for brief periods would also constitute a heterochrony of a temporal nature. Foucault's fifth principle refers to the opening and closing of the heterotopia – one that both isolates them and enables them to become penetrable. Those entering a heterotopia sometimes have to subject themselves to rites and purification (Foucault, 1984). In contrast to the regulation of daily life, Foucault proposes extreme heterotopias such as the brothel and the colony as his sixth principle of heterotopia. However, within the

sixth principle, Foucault expounds the boat or the ship as a 'floating piece of space, a place without a place that exists by itself' (1984, p.9).

The Beach

The beach is a liminal space both metaphorically and literally, as Lencek and Bosker (1999) state 'The beach is not so much a distinct place as it is a set of relations among four elements: earth, water, wind, and sun. Partnered in an endless dance these elements produce a staggering range of beaches, each subject to constant change, sometimes rhythmical and cyclical, sometimes linear and catastrophic' (p.5). The beach is also an assemblage of social practices, customary social norms, which, as a space constitute behaviours and patterns of interactions outside of everyday social mores, dress, and activity. The boundaries of sea, sky, water and sand constitute the physical fluidity of the beach where social boundaries, pleasure and leisure also shift and in that it conforms to Foucault's first principle of heterotopia where he replaces the idea of heterotopia of crisis with that of deviation – where behaviour deviates from the required norm and wherein the case of the institution, sometimes those whose behaviour deviates from the norm are placed. Walton states in his book 'The British Seaside: Holidays and Resorts in the Twentieth Century':

> 'This pattern of provision marked out the seaside resort's status as a liminal environment, neither land or sea, a 'place on the margin' where the usual constraints on respectability and decorum in public behaviour might be pushed aside in the interests of holiday hedonism' (2000, p.96).

Walton and Shields both see this as a space where authority can be challenged in relation to bodily exposure and expected moderation in both demeanour and pleasure. Deviation from daily life and social mores exist on the beach as a heterotopic space. Shield analyses the 20th Century beach as being peopled by individuals with a specific set of social practices and routines that are natural and appropriate for this environment that although counter to the accepted authority, have a connectedness with it through determinants of social acceptability. Those determinants were in conflict much of the time however between personal freedoms and moral respectability (Shields, 1991).

As a space described by Lencek and Bosker as paradisiacal in the title of their book 'The Beach: The History of Paradise on Earth' (1999) it conforms to the third principle where Foucault discusses the Persian Garden as 'the smallest parcel of the world and then it is the totality of the world. The garden has been a sort of happy, universalising heterotopia since the beginnings of antiquity…' (Foucault, 1967, p.6). The beach also has these

qualities, the idea of a universalising experience and a happy experience both within and outside of normative existence.

The beach from the late 19th century had developed from the experience of the isolated bather in a 'bathing hut or machine' taking the water for the purpose of health to becoming a pleasurable communal experience for families and groups of young people to inhabit despite the restrictions on mixed bathing in force during the first part of the interwar decades. Walton describes this as such:

> 'Developments after the First World War changed the balance of that picture in important ways. Most obviously the atmosphere of the beach changed, with the pre-war trend to relaxation and informality in bathing and bodily display becoming sharply accentuated, boosted by the vogue for sunbathing and more generally for sport and healthy outdoor activity' (2000, p.97).

Matters of bodily health and hygiene that had been prevalent before the war, although these continued to underpin ideas of swimming of exercise and health, were superseded by a sensual

Fig. 5.1. Swimwear by Patou, Molyneux and Yrande, 1930.

approach to the beach as can be seen in Fig. 5.1. The androgynous modernist body aesthetic that is evident in this photograph by Hoyningen-Huene suggests a beach on the

Riviera, a place framed by class and leisure occasioned by wealth. It was popularised as an idyll not only by the ballet, literature and Hollywood but also Coco Chanel's appropriation of the suntan as a fashion statement. Sunbathing was seen as a health-giving treatment as advocated by Calum Saleeby in the first annual general meeting of the People's League of Health in 1922 (Carter, 2007, p.67) and earlier the Riviera had been cited as a strip of paradise that had been scientifically proven to cure all manner of illness in a 1911 regional guide (Carter, 2007). However, as the 1930 photograph shown in Fig. 5.1. demonstrates that the pleasures are sensual – the swimwear is fashionable designed by Molyneux, Patou and Yrande, but the males in the photograph have removed the upper part of the garment to expose their chests and backs to the sun. As Fashion historian Rebecca Arnold states:

> 'Tanning has lost its proletarian connotations of outdoor work. Suntans were connected to elite leisure and wealth, since they symbolised holidays, sailing and swimming, all of which were highly fashionable pursuits that entailed exposing the body to the sun in new, brief swim and sunbathing costumes' (Arnold, 2009, p.50).

This look was the aspiration of many who sought the beach and who looked for more sensual pleasures to be found beyond the discipline of swimming for health and fitness. Here in Fig. 5.1. with its geometric juxtaposition of the streamlined bodies, tanned and toned to a modernist concept of perfectibility – the tabula rasa of the new machine age – the woollen bathing costume becomes a second skin, a sheath to the body – to be discarded or worn as applicable.

Lencek and Bosker state that:

> 'The swimsuit on the beach tells us the square inch by square inch history of how skin went public in modern times. In the swimsuit, flesh and fabric combined to serve sport, sex and culture and continually shifting zones of eroticism. In a very real sense, the beach became the geological setting for the pas de deux between flesh and fabric choreographed by the forces of concealment and disclosure and played against the shifting sands of civilisation and its discontents' (1999, p.191).

This quotation exemplifies the ways in which the liminal boundaries of the beach push the boundaries of the individual's response to the authority of respectability, morality and occasionally class distinction through the body and its beach apparel. The bathing costume has agency in the deviation from social mores and practices implied by Foucault's first principle of heterotopia.

Construction of the Pleasure Beach.

Fuggle and Gledhill in their book 'La Ligne D' Ėcume' caution against assumptions about the beach stating that 'The beach is a canvas and a frame. It is also a battlefield, and it constitutes almost a threat as much as a promise' (2016, p.3) The beach and the coast

have a dangerous and subversive other nature and although demarcated beaches fit with what Foucault describes as sites of relaxation (1967, p3), they can also present the opposite in particular sets of circumstances. Other sites of swimming have boundaries, seawater fed lidos with their walls protect the swimmer from the dangers of the ocean and are subject to regulation so can be closed if circumstances are dangerous. The beach is sometimes demarcated for zones of danger but if unsuspecting swimmers go out further than they should, they can get into serious trouble.

Fig. 5.2. Morecambe Bay near Arnside 2010.

In Figure 5.2 this image of Morecambe Bay illustrates the concept of liminality very well. There are the hills in the background that admittedly define the boundary between sea and sky but the distinction between sandbanks and water inlets makes the surface very tenuous and difficult to negotiate. These surfaces contribute to the impression of boundaries dissolving. Here there is a Queen's guide to cross the bay, it is too risky for the average tourist to do this on their own and it was here that 23 Chinese cockle pickers died in 2004 (Guardian online, 2004). This area is dangerous and as Jenny Landreth states in her water biography entitled 'Swell': 'The sea holds secrets. It has a boundless horizon with all the fear that holds. The sea never ends' (2017, p. 154). Landreth makes this observation as a reason she prefers to swim in lidos with their constructed boundaries that give the impression of open water swimming but have an edge. Without wishing to dwell on the sea and the beach as a potentially dangerous space, the fact of this shows how the pleasure/leisure beach, was of necessity, a construction. Áine Larkin in her essay entitled 'Proust and the Beach as Écran explores the relationship of Proust in 'À la recherché du temps perdu' to the Balbec seafront and the girl Albertine whom he kisses there and wishes he could also (embrasser) kiss the whole of the seashore. She cites the beach as the screen and the frame by which he explores love and desire. Larkin explores the beach both in terms of liminality and social interaction:

> ‘The jetty or sea wall is a modern manmade structure which was a key structural element for re-zoning the space of the beach, acting as a screen between the reduced marginalised working environment of the Ancient Mariner and the leisure society’s pleasure beach’ (Larkin, 2016, p.68).

This zoning of the beach not only distinguished the working practices of fishermen from the spaces where the pursuit of leisure occurred and, in that sense, it relates to the binary oppositions referred to by Foucault in the introduction to ‘Of Other Spaces’. The leisure beach becomes the heterotopia rather than the working beach.

In 1926 Gerard Murphy also created a pleasure beach in front of his villa in Antibes that was primarily used by fishermen with their boats. He laboriously cleared seaweed and stones to create a space of play for family and famous artistic and literary friends in 1926 creating a space separate from the working activities of the local population (Vaill, 1998, p.2).

John Urry in his book ‘The Tourist Gaze: Leisure and Travel in Contemporary Societies contends that Brighton was the first resort in which the beach was constructed for pleasure and as he argues for ‘social mixing, for status reversals, for carnivals and it is one reason why in the first few decades of the twentieth century Brighton came to have a reputation for sexual excess and particularly for the ‘dirty weekend’ (Urry,1990 p.31). Urry’s observations about Brighton beach confirm how established social and sexual practices were stretched and expanded in the beach/seaside environment. Not all resorts would choose to have that reputation and facilities such as public houses, amusement arcades and fairgrounds were restricted to create a more ‘genteel’ ambiance in places such as Frinton on Sea the next resort along the coast to Clacton on Sea in Essex which embraced all those amenities.

The Ritual of the Beach

Foucault in his fifth principle of heterotopic states (Foucault 1967, p.7) says that they presuppose a system of opening and closing that both isolates them and makes them penetrable and in which the individual has to submit to rites or purifications. There is also a ritual to entry and exit from the beach in terms of being both in an appropriate frame of mind and being properly attired. There was however a great distinction between the glamourous images and advertising of the beach through the railway companies and swimwear manufacturers and the reality for many of cold or rainy British beaches.

Despite claims for the democracy of the beach and swimming, boundaries of class, age and form did exist. The cost of manufactured woollen swimming costumes was prohibitive, so people often used knitting patterns to make their own as is shown in Chapter 6.

Fig. 5.3. Home-made swimsuit, Mark and Cleo Butterfield collection.

The costume shown in Fig. 5.3. is a hand knitted swimsuit from the interwar period and exhibited in 'From Chanel to Westwood' at Barnsley Civic Hall in 2015. Horwood comments below on some of the problems with the hand-knit swimsuit.

Fig. 5.4. LMS holiday brochure 1937.

The young woman shown in Figure 5.4. sitting on a rock above the beach drying herself with a towel, personifies the aspirations of the majority of individuals who wanted to dress for the beach. Although the bathing costume is obscured by the towel it is evidently sleek and streamlined. Horwood states in relation to the expense of a manufactured bathing costume and the unreliability (as illustrated in Figure 5.4. above) of the home knitted version:

> 'It may have been for these very reasons that there was a consistent group of women of all classes, especially older women and those with children who did not bother to change into a costume on the beach. With little choice now available other than body-clinging costumes, many men and women were content to enjoy the sun without paying for the inconvenience of changing in and out of wet costumes. Some women preferred to sit on the beach in their summer dresses which could be tucked into their knickers when they went for a paddle. Nothing could have been a greater contrast to the glamour images promoted by the railway companies to promote seaside travel, or indeed the image of bodily perfection being promoted in swimwear advertisements toward the end of the 1930s' (Horwood, 2000, p.666).

This 'reality' as opposed to the idealised state that advertising and promotional material exemplified will be discussed further in this chapter and in Chapter 6. The rite or ritual in relation to the heterotopic qualities of the beach possibly only existed as a differentiated experience for those who used it. However, those who undressed had to dress up before leaving that space, even if only to pull down a dress or roll-down some trousers. Moving between the beach and the town or resort generally involves covering up appropriately.

The beach and indeed the lido with their unregulated and informal practices as compared to the discipline of the Olympic style municipal pool demonstrated many of the qualities of heterotopic space and its otherness – both in opposition to usual daily practices, having elements of the carnivalesque as Lefebvre posits. They are temporal and time-bound in relation to the individual's engagement with them. They function too as potential sites of social revolutionary practice pushing at the margins of accepted behaviour, acceptable apparel and shifting relationships between genders.

The Lido

Between 1930 and 1939 at least 180 open air pools and lidos were built in Britain as part of a public office of works programme designed to improve the health and fitness of the nation and to provide employment (Smith, 2005). However, the lido as Fenner states:

> 'In opening itself to the skies the lido paid homage to 'unbounded nature': it also offered the feeling of fresh air on unclothed skin. It was not serious, like the indoor pool, which was built to be swum in, and in which one was totally indifferent to the

elements outside, and which was essentially part of the urban environment, a halfway house between a London suburb and the Côte D'Azur' (Fenner cited in Worpole, 2000, p.114).

Like the developed beach resort, the lido often had facilities such as a café, areas for sunbathing and for other activities including gymnastics and dancing. The lido allowed public informality and hedonism in juxtaposition to the city or everyday life. The lido with its advertised 'mixed bathing' (Worpole, p.2000), helped to break down gender barriers and to facilitate a close relationship between men and women as can be shown in the 1933 Railway poster in Fig. 5.5.

Fig. 5.5. Railway Poster 1933.

The poster depicts a relaxed environment where the male and female bathers mix freely in the background of the image, in and on the edge of the pool, around its modernist architectural structures and in the enclosed indoor space that the viewer first encounters. Clearly the ritual of entering and exiting this space according to Foucault's fifth principle is more clearly defined than at the beach. Bathing costumes, towels and robes are much in evidence. Many lidos offered spectator facilities but these were clearly demarcated so that those using the café and viewing terraces without first having changed into a bathing costume were not involved in the depth of pleasurable experience afforded by the

swimmers and sunbathers. The streamlined modernist bathing costume was in its element in these aesthetically delightful heterotopic spaces as can be seen in Fig. 5.6.

Fig. 5.6. Jubilee Pool 1935, Penzance, Cornwall. Sunbather against the lido wall.

This photograph depicts a white curving concrete wall of the Jubilee pool at Penzance built in 1935 by Captain F. Latham, the borough engineer (Worpole, 2000, p.124). The shape of the wall creates an abstract form that embraces the sunbather in the image. The wall also delineates the boundary with the sea that Landreth celebrated previously, fed by seawater the pool can be choppy in the wind but safely isolates the swimmer from the sea. The modern surface of the lido with its impenetrable gleaming concrete and chromium plated railings and pool ladders enhances the streamlined figure sunbathing against its sea wall. The androgynous figure with gleaming sun-tanned limbs, sleek costume and sleek hair testifies to the machine aesthetic of modernism. Colomina and Wigley (2016), both theorists who examine the relationship between fashion and building, conclude that 'Modern architecture presented itself as lean and fit, all the excess weight of neoclassical tradition stripped off to reveal a muscular and agile body in a white sports outfit' (p.167). The image shows a black (male) swimsuit rather than a white sports outfit but the meaning of the relationship between the modern surface of architecture and the modern surface of the swimmer is clear.

Bodily pleasures and hedonism which the lido enabled were often further enhanced by evening opening and lit pools for nighttime swimming that can be seen in Fig. 5.7 of the 1936 Morecambe Super Swimming Stadium.

Fig. 5.7. Morecambe Super Swimming Stadium (1937).

The night as Smith contends was when ‘many a lido switched on its fairy lights and turned up the music and transformed itself into a magical oasis’ (Smith, 2005, p.40). In Fig. 5.7. the night-time lighting enhances the reflective surfaces of white concrete, water, and skin. Although in the image the bather is in shadow, he is poised to dive into the water breaking the smooth surface and creating further sheen and glitter through the combination of skin and water.

The assemblage of social practices was transformed in these spaces that were both sexy and modern as Smith argues and were unlike any form of pleasure park the British public had ever known. (ibid). New behaviours were permissible, and the conjunction of bare skin, sunlight and water encouraged individual and group pleasure.

Susie Scott‘s paper ‘Reclothing the Emperor: The swimming pool as negotiated order’ (2009) uses Goffman’s (1966) theories on behaviour in public spaces (also discussed in more depth in Chapter 7) to examine relationships in a swimming pool. It has been previously mentioned in this chapter that in heterotopias a new set of regulations can be established, that may or may not conform to those of the world outside the pool. She discusses a complex series of interactions that include rules around not interfering with another’s regime of swimming or corporeal self-improvement.

However, she does note that there is conflict between this serious pursuit and the fact that the participants are nearly naked, but no-one refers to this. Eye contact and physical touch are guarded, she argues (Scott, 2009), along with rituals of the changing rooms around undressing the swimmer’s body. These rituals and behaviours conform to Foucault’s fifth principle where the swimmers undress and then dress to assume their usual social roles.

Scott refers to the municipal swimming pool in this paper and some of these behaviours would be applied in a more relaxed way in the lido. Her contention that 'Flirting, "chatting up" and predatory gazing are deviant practices in that they acknowledge the body's presence as a personal and sexual object' (Scott, 2009 p.138) conflicts with what is known about the lido. In a subtle way it is a sexualised space that does acknowledge the near nudity or approximate modesty of the swimsuit and celebrates the body in its sensuousness without objectification. It has additional leisure zones outside of the areas for serious swimming where flirtation or even ordinary chatting about everyday things can take place. As a heterotopic environment it is much more glamourized and fluid in its social environments than the municipal pool.

Some lidos mimicked the ocean liner in their aluminium railings and geometric forms, and this added to the glamour or Hollywood feel of the environment. The lido as a heterotopic space 'par excellence' is a space enclosed in itself – it is not bounded by the ocean but often by a city or holiday resort. It floats outside of its immediate location offering time out of ordinary everyday existence. A ninety-six-year-old woman recently interviewed on Radio Sussex recollected swimming in Saltdean Lido (pictured in Fig. 5.8) in her youth and although wearing a hired swimming costume from the lido described her experience as like being in Hollywood (Sussex Breakfast, 2018). Saltdean lido as seen in Fig. 5.8. with its smooth surfaces, grid-like windows and sculptural formations must have presented itself as the height of glamour in the interwar period.

Fig. 5.8. Saltdean Lido 1937.

Diving and Athleticism

The lido with its modernist architecture that was intended to complement the streamlined figures of its bathers enabled another display of perfection for those able to achieve it through their multi-tiered extremely high and complex diving boards, an example of which is shown in the lido at Weston Super Mare (Fig. 5.9). This structure was originally listed for its outstanding architectural features but then was demolished due to safety reasons (Worpole, 2000).

Fig. 5.9. The Diving Board, Weston-Super-Mare 1937.

The springboard allowed for amazing achievements of athleticism and the popular dive during the interwar period was the 'swallow dive' celebrated on the logo of the company Jantzen's swimwear and shown in Fig. 5.9. Lencek and Bosker state that 'Depicted in profile executing and impeccable swan dive, she became the consummate embodiment of intangible American ideals: youth, grace, sex appeal and athletic prowess' (1999, p.186). This image became a cultural icon and still retains its charisma in an age dominated by health and safety legislation where diving is no longer allowed in swimming pools.

Fig. 5.10. Jantzen Swallow Diver motif.

Charles Sprawson's book, 'Haunts of the Black Masseur' (1992), surveys swimming in literature and he contends that the Swedes originally introduced the art of diving to England at the turn of the 20th Century. He particularly cites the swallow dive as one of their most spectacular achievements, he says 'At the height of its flight the body appeared to pause in the air. It seemed to spectators an 'idealistic' manner of reaching the water, for it was just like the action of a swallow when flying.'

The elegance and artistry of this dive was particularly risky and Lencek and Bosker describe it as 'a subtle and daring trick, not learned in a day, and not finessed without an occasional bump to the bottom or a close shave with a fractured skull'. (1999, p.173). The athletic divers who perfected this must have attained extraordinary status in the lido.

The experiences that the lido allowed were so far removed from the everyday life of those who used them and the society that sustained them that they could be argued as heterotopic. Worpole meditates on this new architectural form and wonders about the deep political and cultural foundations that underpinned the lido. Born out of a high-quality public concern for the relationship between the body, public health, and the city it seems a very philanthropic international gesture that would hardly be repeated today (2000, p.125). However, where those lidos have been restored and are still in use they are really celebrated; as journalist Julie Burchill puts it 'They seem to me to be the greatest expression of a very public hedonism, attractive and accessible to all, regardless of age, sex or social status.' (Burchill cited in Landreth, 2017, p.155).

Johnson argues that Foucault's account of heterotopia 'remains briefly sketched, provisional and at times confusing' (2006 p.81). Interpretations of heterotopias are usually based on those he mentions in 'Of other spaces'. The lido links in this context to the beach and the liner in both the temporal and physical nature of a heterotopic space, the ritual involved in entering and leaving the space aligns with the system of opening and closing as described in Foucault's fifth principle of heterotopia. The lido however demonstrates

through its very existence accorded by planners and government that in its set of relations it is not so separate from dominant structures and ideologies (Johnson, 2006) but offers flight and escape from daily existence. In the practices and positive social relations that occurred in the lido during the interwar period and do so now, it is a site counter to urban existence, a place of pleasure, fun and sanctuary.

The Ocean Liner

In his sixth principle of heterotopia Foucault specifically cites the boat or ship as a heterotopic space 'par excellence' (1984, p.9); it, he says 'exists by itself, that is closed in on itself and at the same time is given over to the infinity of the sea' (ibid). In a civilisation without boats 'dreams dry up' (ibid).

The ocean liner in the interwar period became a place of dreams, the only means of getting between Europe and America many of these boats became spaces of glamour, fashion and were often completely fitted out in a modernist style. Le Corbusier celebrates the Ocean Liner in the first of three essays that appeared in 'Towards a New Architecture' (2014) entitled 'Eyes which do not See' in this he discusses the liner in relation to its engineering: 'If we forget for a moment that a steamship is a machine for transport and look at it with a fresh eye, we shall feel that we are facing an important manifestation of temerity, of discipline, of harmony, of a beauty that is calm, vital and strong'. (p.97) He advises architects to look towards the ship to find the freedom from age old traditions of architecture and to 'embrace the world organised according to a new spirit' (ibid). Le Corbusier himself found the equivalent of a heterotopic space on board an ocean liner. Le Corbusier on a lecture trip to Buenos Aires met the dancer Josephine Baker on the ocean liner 'Giulio Casare' and travelled back with her on the Lutetia to Europe. It was rumoured that they had an affair. This was particularly significant to Anna Anlin Chen in her book Second Skin: Josephine Baker and the Modern Surface as it determines this relationship as significant in the expression of modernism through surface and skin. This is discussed later in the chapter. The new sense of freedom in his body he describes in the notes that finally became his collection of lectures known as 'Precisions'

> 'For fifteen days between Bordeaux and Buenos Aires, I am cut off from the rest of the world. I opened my trunks, I settle in my house, I'm in the skin of a gentleman who has rented a small house.' (Le Corbusier cited in Cheng, 2011, p.90).

Le Corbusier's feeling of being cut off from the rest of the world is not insignificant in relation to the liner. French novelist Émile Henriot (1889-1961) described his experience in American *Vogue* in 1926. He also presented his voyage as an alternative reality 'primarily

because the sense of time disappears – there are no telephones, no telegrams, no letters – one can truly escape real life back at home.' (Henriot cited in Finamore, 2018, p.212).

Fashion writer Michelle Tolini Finamore suggests in her essay 'Floating in Dreamland: Fashion and Spectacle on Board' in the catalogue for the Ocean Liners exhibition at the V&A in 2018 that ocean liner experiences were a medium between dreams and reality. (ibid).

Fig. 5.11. Cover of American *Vogue*, 1927.

Finamore contends that the gangplank focussed attention on those who arrived and disembarked. It may have become a more vertical version of a catwalk too. As Finamore tells us society pages of magazines and newspapers would list the transatlantic passengers and Hollywood also publicized any of its stars making the crossing (ibid). In Fig. 5.11. the towering funnels, white railings and lifebelt ring with 'Paris' inscribed on its surface are rendered in flat body colour. The young woman waving her handkerchief with a flourish is dressed in black pearls, a cloche hat and a deco style costume is the epitome of glamour. Both the liner and the young woman become surface and shape fitting the modernist body into the curves and forms of the accompanying engineering.

One can imagine the woman in Fig. 5.11, being rather like the *Vogue* writer CP who, although she travelled third class on SS Normandie, regretted not being able to see herself

sail away from the harbour at Le Havre (Finamore, 2018). This writer could not decide when searching for a dining room to eat in 'whether my type of beauty would be better off by a background of black glass or natural wood in broad daylight' (Finamore 2018:215). This comment is significant in that the writer clearly looks to the architecture and fittings of the liner to enhance her fashionable clothing and looks.

A passenger could 'travel with little more than a bathing suit, pyjamas and a dinner jacket' a contemporary observer commented (Kitchen, 1927, cited in Finamore, 2018, p.186). However, fashion was part of the heterotopic experience of the liner. Designs crossed the Atlantic from New York to Paris and back again. There were shops and shopping malls on the ocean liners (Finamore, 2018) and a whole host of easily accessible luxury, dream-like environments in which to display one's fashionable body.

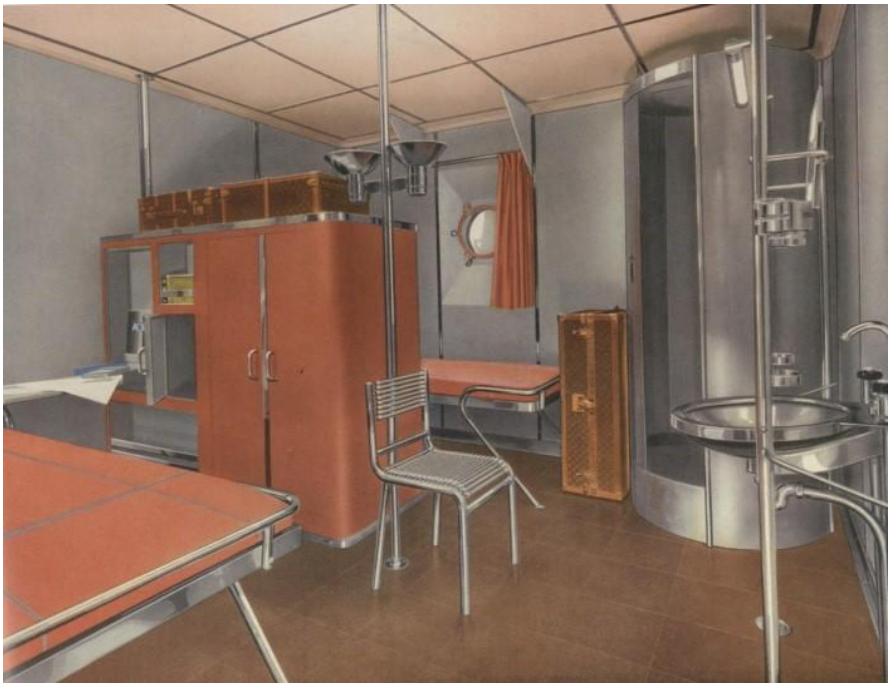


Fig. 5.12. 3rd class cabin on 'Normandie' Liner. V&A Exhibition Catalogue 2018.

Even the third-class cabin on the Normandie liner has functional Bauhaus style furniture as shown in image 5.12. and is associated with the style and aesthetic of the age. The ocean liner was a distinct, contained heterotopic experience outside of time, space and land. The occasion to ostentatiously display oneself in an environment that enhanced the self through style and glamour must have been one of the major attractions of the liner. The link proposed by the *Vogue* writer CP between fashionable beauty and her environment that made her consider which room would flatter her most, is a key theme of the chapter. The next section looks at the relationship between the body and its environment/building in some depth in relation to the 'modern surface'. It also examines the idea of skin, both in building, and the gleam and glisten of Josephine Baker's skin captured in the light of the camera. It is worth noting her connection to Adolf Loos, the 'plumber' of hygiene and

modernity in the swimming pool he designed for her but never built with viewing windows so that possible spectators could watch her swim.

Garment/Skin and Building/Surface

Adolf Loos introduced the metaphor of skin and surface in his 1898 essay 'The Principles of Cladding' where he alludes to the concept of cladding as a form of protection and describes it as being 'older than structure' (Loos, 1982, p.67). Loos states that cladding is used for numerous reasons including protection against bad weather or for the purposes of hygiene (enamelled tiles that have wipe clean surfaces etc.). He makes a link between the cladding of buildings and the broader relationship of people to nature, stating that 'The principal of cladding, which was first articulated by Semper, extends to nature as well. Man is covered with skin, the tree with bark' (Loos, 1982, p.67). Adolf Loos was an architect whose concern with hygiene convinced him that plumbing was an essential part of an architect's accoutrements and interests. In what would become the principles of modernist architecture his innovative ideas included the clean surface of the modern building and complex interpenetrating spaces including split level flooring.

According to Cheng (2011) the German historian and architect Gottfried Semper made the initial connection between skin and textile in architectural theory according to Cheng (2011) based on the idea that textile was starting point for figuration in art and architecture and Semper considered bodily adornment (tattoos) to be the first art form. Loos would reject this, however, because of the relationship between figuration and ornament which he strongly condemned in his thesis 'Ornament and Crime' (1908). In this essay Loos dismisses ornamentation of any form in architectural practice and he lays the foundation for the belief in the stripped down 'denuded' modern surface (Cheng 2011).

Fashion historian Elizabeth Wilson cites Gerald Heard as making an analogy between architecture and clothing in his 1924 book 'Narcissus: An Anatomy of Clothes' in which he asks:

'Will not architecture become what clothing has been? The main fabric will be given a skeletal structure sustaining a circulatory system that already begins to imitate the elaboration of the body's…. If like a snail possessed, we learn to carry a rushing home everywhere with us, it will be our costume and habit' (Heard cited in Wilson, 2003, p.221).

Wilson comments that along with other Fabian thinkers of the early 20th century including HG Wells, Heard believed that social advancement would be brought about by 'miracles of science' rather than the efforts of politicians. Heard believed that 'clothing is somehow a projected form of the evolution of the body, which has reached the end of its capacity to develop, so that clothing now has to take any further evolution forward' (Wilson, 2003, p221). The growing equation between the body and the machine, the fascination with new

technological advancement and how this could be projected onto the body and the environment clearly made the relationship between modern building and the body, thereafter, clothing and or the skin a philosophical possibility.

Ann Anlin Cheng, in her book 'Second Skin: Josephine Baker and the Modern Surface', (2011) uses psychoanalytic theory, in particular the work of French analysist Didier Anzieu to explore skin, especially that of the performer Josephine Baker in relation to the modern surface. The book examines a project to build a house for Baker that Adolf Loos designed in 1928 which included a swimming pool situated so that spectators could view Baker swimming in a partially glazed tank surrounded by a viewing corridor. The house was never built. The project was previously investigated in Beatriz Colomina's essay entitled 'The Split Wall: Domestic Voyeurism' (1992) where she contends that:

> 'The fetishization of the surface is repeated in the "interior". In the passages, the visitors consume Baker's body as a surface adhering to the windows. Like the body, the house is all surface; it does not simply have an interior' (Colomina,1992, p.98).

Colomina argues that the stark black and white Baker house cannot be read as a mask to conceal the interior whose purpose is the voyeurism implicit in the swimming pool, but that it is a 'tattooed surface' that neither reveals nor conceals the interior.

Cheng (2011), whilst picking up some of the themes of Colomina's essay, locates this work firmly in the connection between building surface and skin in the modernist period. Le Corbusier as well as Loos is fascinated with Josephine Baker. Baudelaire's light as a 'modern metaphor' is exemplified in Baker's black skin when lit with photographic lighting, it glows like metal, bronze, gold lamé or shellac and this erotic, glamourized modern surface she wears with or without clothing creates the hard sheen of advancing technology. Baker's image transcends those of the usual identification of naked black bodies with 'nature' and 'with' nature as defined by Raymond Williams (1976) as the countryside or the rural.

Wallace-Sanders (2002) states that:

'Images of Black Women that are in fact national, racial and historical hallucinations have been engrained in the collective consciousness of the United States since slavery generally in an ethnographic context, or as labourers, usually domestic, their social status playing a cultural role in the development of visual identity' (p.182).

These powerful connotations associated with the naked black body as enslaved, or as an ethnographic classification and being both sexualised as entities and without power must have impacted on the first spectators of Josephine Baker's performance. Josephine Baker also signals 'primitive' qualities that she determinedly plays with in some of her performances including wearing a banana skirt as shown in Figure 5.13. – making a link with the imagined 'native' of the African jungle but also the Caribbean populations of the

plantations, where bananas grow. However black skin, and in particular her black skin, becomes changed with early 20th Century photography and celluloid. Cheng discusses how photographs of Baker, either nude or semi-nude reflect the polish and sheen of her skin and the gloss of her hair. As she contends:

‘The masculinist/impassive/technological modern surfaces (bronze, metal, shellac, film) flow casually into the feminized/animalized/fluid surfaces (skin, cloth, hair) in these images. What is so sexy about these images is not so much Baker’s naked body as its surfaceness and that quality’s ability to express and facilitate fluidity’ (2011, p.110).

Fig. 5.13. Josephine Baker in her banana skirt.

In the 20th century the advent of film brought about a relationship between touch and gaze – the cinematic or photographic image had its own interior illumination. When the skin glows, touched by light it suggests a caressable quality that invites a connection between gaze and the desire to touch. Is it the interplay between the ‘scopic and the haptic: are we touching or are we feeling?’ (Cheng, 2011, p. 116). The photograph through significant lighting can create the quality of an idealised human skin. Josephine Baker thereby transcends her place in presumed racial and historical locale by her affiliation with glamour, as Dyhouse comments

‘Light plays across skin, satin, the surface of fur and hair, and it is in large part this quality, along with careful posing and retouching, that gives the well-known stills of screen goddesses their extraordinary seductiveness’ (2011, p.36).

It was during the interwar period that the word ‘glamour’ as an idea and expression was fully devised and shifted from an adjective applied to higher levels of society to those who could claim for themselves the accoutrement of what we now describe as ‘celebrity’. Gundle gives us a useful definition of glamour here:

‘When Whigham used ‘glamour’ to evoke the whirlwind events of her debut year, she did so as though it were more synonymous with upper-class living. In fact, in 1930 the term was more widely understood as a quality of excitement and magnetism that was associated with some famous men and women regardless of their background. Not by chance, the word ‘glamour’ entered common usage at this time’ (Gundle, 2008, p.146). Glamour as a concept is further developed and investigated in the next chapter,

Baker’s skin has a relationship to modernity. She is transformed not only by the patronage of celebrated architects such as Le Corbusier and Adolf Loos but through an emerging world of celluloid, surface and lighting, that as Cheng states, is qualitatively different: ‘its tonality and texture harder, more synthetic, more properly a *finish*’ (2011, p.112). The glamour is modern and impenetrable and consequently although desirable becomes objectified in the photographs of Baker as that of a sculpture, albeit one that moves and creates sculptural form in her movement.

Cheng explores race and eroticism in this work through Baker’s body and skin although the link between architecture and skin in creating ‘modern surface’ is a contested idea. Helmut Lethan (2011) refutes the idea that the skin can be ‘a border surface’ (p.303), he also argues that architects of the modern movement were interested in ‘permeable structures’ such as transparent glass walls (p.303). This questions the particular relationship of a woollen knitted swimsuit to the surfaces of modern buildings, however I would argue that the swimsuit creates a ‘shell’ both physically and metaphorically and with its outline of the body and smooth surface it connects to and complements the architecture of the modernist building. Hoyningen-Huene’s photographs depict this relationship as shown in Fig. 5.14. Photography becomes central to demonstrating the interrelationships of the modern surface with its lighting and ability to capture the subtleties of sheen and radiance.

Photography and the Modern Surface

The denuded modern surface becomes the basis for the idea of the clean, smooth lines of modernist building as exemplified by architects such as Le Corbusier who used ‘Ripolin’ paint to enhance the opaque quality of his concrete surfaces both internally and externally. Cheng states that this releases architectural purity from ‘feminine’ or ‘primitive’

connotations and equates this purity to ‘man’ becoming civilised. As she contends ‘The discourse of the ‘pure’ modern surface thus produces a nexus of metonymic meanings – purity, cleanliness, simplicity anonymity, masculinity, civilisation, technology, intellectual abstractism - that are set off against notions of excessive adornment, inarticulate sensuality, femininity, backwardness.’ (Cheng, 2011). The photograph, as this section will show, with its own modern surface in the sheen of the paper, was well placed to capture all the nuance of the reflective surface and abstract imagery of the new mechanical age.

Citing a song of Cole Porter’s written in 1936 entitled ‘Down in the Depths on the Ninetieth floor’, Cheng takes the isolation of a woman in her ‘pet palliated gown’ on the ninetieth floor of one of the newly built skyscrapers as a testament to technological advancement and modern living. The impenetrable surface of the skyscraper protects but also isolates the frail human body in ‘one of the most striking emblems of Western, masculinist, industrial power, she is also machinelike. Even her gown simulates the skyscraper itself: a cover that protects and imprisons the body it sheaths’ (Cheng, 2011, p 85).

Cheng’s use of the words ‘impenetrable’ and ‘sheath’ are especially useful in exploring the concept of ‘second skin’. The hardness of the modern surface – the idea of skin as ‘laminated’ as in ‘glamour’s lamination’ (Cheng, 2011, p.111) in relation to images of Josephine Baker seem to belie the fabric of the swimsuit which was primarily made from wool. However, it was constructed to be streamlined and fit to the skin in ways that rendered it sharp edged in relation to the architecture that it was juxtaposed with. This is especially noticeable in images of swimwear depicted in transport posters or in the case of Hoyningen-Huene, in his photography. If the swimwear is made of wool then the geometry of the stripes and hard edges of the costumes belie this and can be read as a successful connection to the architectural forms that frame them.

Fig. 5.14. Photograph by Hoyningen-Huene showing the swimsuit against pool architecture

In Fig. 5.14. an image of a swimsuit can be seen, photographed by Hoyningen-Huene in 1928, the surface of concrete and limb is smooth and has the appearance of being lightly polished; the stairs and the stripes of the swimwear express the geometrical silhouettes of modernism. This photograph and the more meditative pose shown in Figure 5.15. also photographed by Hoyningen-Heune in 1930, exemplify this observation from Lencek and Bosker that 'Sleek, snappy and streamlined, the tubular swimming suit had that irresistible aura of utopian dreams bred by the great machines of mechanical reproduction. (1999, p.187).

The American product designer Raymond Loewy demonstrated the way that 'streamlining' which refined the shape and form of products from refrigerators to automobiles in the 1930s by making their 'skins or contours tauter, more compact, and more axial'. (Gorman, 2006, p. 858). His 'evolution' charts as shown in Fig. 5.17. details how he saw the bathing suit evolving from a voluminous garment on a larger figure 'bulbous and without character' (ibid) and subsequently related to poor design, to the sleek snappy and streamlined suit adumbrated by Lencek and Bosker (1999) that he envisaged for 1935. This does indeed represent the swimwear that did evolve following the introduction of elastomer thread that fitted more closely to the equally streamlined body, discussed in the next chapter. Loewy did conclude that good car design should have the same aesthetics of slenderness and

economy of means as the ideal human form perfected in Modernism. However, Loewy, as many product designers who worked for the motor industry was refining his ideas on a regular basis. The chart indicates this refinement of his designs rather than being an example of ‘purist’ modernism.

Fig. 5.15. Hoyningen-Huene photograph of bathers.

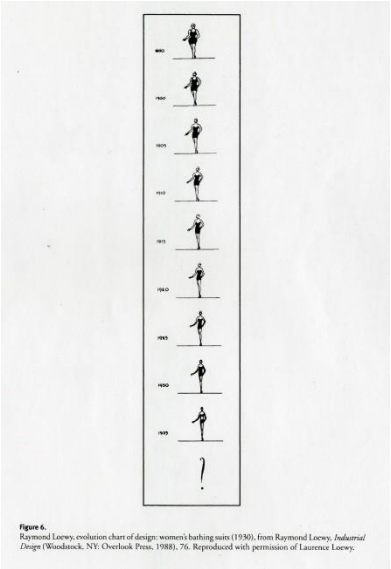


Fig. 5.16. Raymond Loewy’s table of swimwear.

Architecture and the Body

Cheng contends that the ‘the combination of surface and volume affords the human subject the experience of a container or envelope’ (Cheng, 2011) She aligns the ‘womb like’ interiors of Loos’s interiors – with their ‘split level floors and interpenetrating spaces’ (Cheng, 2011) with psychoanalyst Didier Anzieu‘s ‘skin ego’ where he states that ‘the ego is the projection on the psyche of the surface of the body’ and the skin ego is ‘a mental image of which the ego of a child makes use – as an ego containing psychical contents’ (Anzieu 2016, p. 40). As Cheng states, these are architectural metaphors and she suggests that ‘The ego thus does not consist of pre-existing psychical content but comes into being only via the making of a psychical container, a process that is built on the infant’s experience of the ‘surface of the body’ (Anzieu, p. 40). In short, the house of the ego determines its content.

For Loos, architectural design proceeds from a similar logic: ‘volume produces surface that in turn enables the potentiality of human presence and occupation’ (Cheng, 2011). The usefulness of this idea to the relationship of modern surface in the lido or beach architecture to the swimmer and their body, skin and swimwear has some potential and it can be argued is demonstrated in the Fig. 5.14. and Fig. 5.15.

In Hoyningen-Huene's first image (Fig. 5.14.) the volume of the building and its surface correspond effectively to the surface and cladding of the human presence that occupies the space and in the second image (Fig. 5.15.) the photographer creates the 'modernist' frame that contains the surface of skin and form. As Anzieu states: 'Before it becomes a setting that contains objects, space is not differentiated from the objects that occupy it' (2016 cited in Cheng, 2011, p.55). In the construction of this image (Fig. 5.15.) Hoyningen-Huene creates an undifferentiated relationship of space form and surface.

Swimsuits form part of that relationship, and the next section explores the idea of the garment as a second skin.

Wearing Swimwear as a Second Skin

If we follow Cheng's reasoning and acknowledge that skin can be construed as a modern surface then it is a small step to apply the same reasoning to a textile surface that covers the skin.

The tubular swimsuit was a form of cladding and intervened between the wearer and the environment whilst also replicating the form of the body itself. Like close fitting underwear-the swimsuit became a second skin.

Gabriele Mentges (2000) writes in her paper 'Cold, Coldness, Coolness: Remarks on the Relationship of Dress, Body and Technology' about the concept of 'cool' or 'coolness' in relation to style. She cites leather as in the black leather jacket or leather as worn in an aviator's clothing not only as 'cool' and 'stylish' in a timeless mode but also protective and having skin-like properties. As Mentges argues: 'Considered in their pure and material structure, textiles were understood not only as external, but as an element to the body that ensured physical and psychological mediation between the body and its surrounding environment.' (Mentges, 2000).

Ideas about impermeability advanced by both Mentges (2000) in relation to the shell-like garments of the aviator and Cheng (2011) in respect of the modern surface, both see the modern surface as ideologically hard and impenetrable, but these are ideas that are contested as the chapter has shown.

However, it may be the hardness, the polish and the reflective surface are metaphorical rather than actual. Wool and concrete are materials that are porous but through imagery, media and the metonymic meanings of Cheng's (2011) description make connections between the clean, unblemished surface of the modernist lido and the streamlined form of the interwar knitted swimsuit that covers the natural blemishes of the body. The sheath-like swimsuit has connotations with the denuded surface promoted by Le Corbusier in his modernist buildings, the style of which was used in some lidos. These concepts are, according to Baudelaire as transitory and fugitive as modernity itself. However, the principal

link is that of the aesthetic, of the aspiration of the imagery or representation. The final section of the chapter interrogates this aesthetic and questions its reality for the working classes, the fat, the misshapen, the old and those who find it too chilly to disrobe on a British beach.

The Carnivalesque and Donald McGill

The dissonance between the ideal, the aspirational body shape, and the reality of the seaside is usefully explored by Rob Shields in his article 'The System of Pleasure: Liminality and the Carnivalesque at Brighton' (1990). He states that:' Victorian essayists so hotly condemned working class behaviour on the beach, where lewd 'fun' became a threat not only to the social order but also the moral order' (p.29). Lefebvre (2003) posits what he describes as 'caravansaries' as being temporal or time-bound in relation to the individual's engagement with them. These marginal sites which have a similarity to the interwar beach, like the fairground, challenge the accepted norm. They function too as potential sites of revolutionary practice pushing at the margins of accepted behaviour, acceptable apparel and shifting relationships between genders. The crowded beach as Shields contends 'permitted no privacy, and the masses of bodies swept over social divisions and distinctions like so many sandcastles before the tide' (p.55). In breaking down some of these class distinctions the beach could indeed be thought 'revolutionary' as Lefebvre suggests.

Both Bakhtin (1984, in Shields, 1990) and Stallybrass and White (1986) highlight the 'grotesque' body from the medieval carnival as being in opposition to the 'controlled disciplined body of propriety and authority' (Shields, 1990, p.53). Shields develops this line further by stating that this body, the grotesque body, is expressed in the stereotypes of fat bathers, undernourished men and the buxom middle-aged woman. These stereotypes are the ones celebrated in the cartoons of graphic artist and illustrator Donald McGill and described by essayist George Orwell as being 'an illustration to a joke, invariably a low joke, and it stands or falls on its ability to raise a laugh' (Orwell 1941). The 'grotesque' body' with its metaphorical suggestion of being 'shamefully uncovered and open to the world' (Shields, 1990, p.55) is evident in the postcard shown in Fig. 5.18.

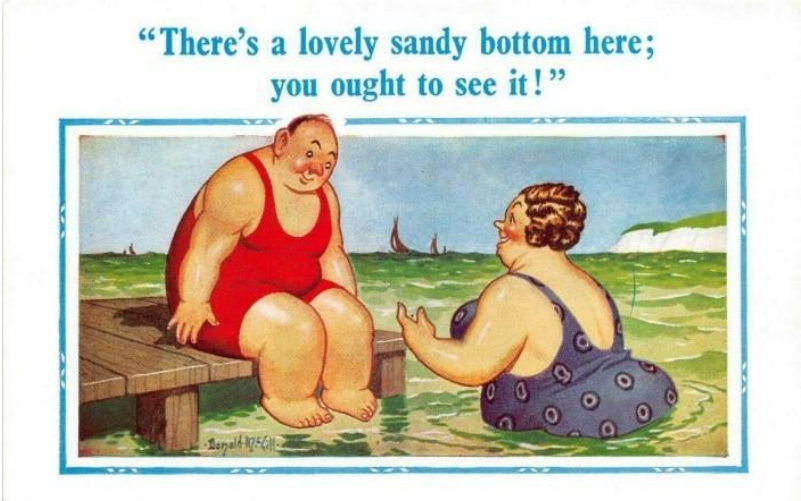


Fig. 5.17. Donald McGill postcard (date unknown).

Both the male and female characters depicted in the postcard could be seen as obese and subsequently represent the idea of the 'grotesque' body, not so much in the amount of flesh that they are revealing but in the fact of its being 'unconstrained', in effect bursting out of their swimwear. They are carnivalesque and completely transgress the modernist ideal of the slim perfected body. Orwell argues that a recurrent motif in comic postcards is the woman with the stuck-out behind. The caption on the postcard reinforces the joke about her bottom which although Orwell states has nothing to do with sex, he points out that the pictures 'lift the lid on a very widespread repression' (1941, p.3). That repression he claims has to do with the slimness of young women who diet and exercise so not to look like that in a swimsuit. The figures in the image are working-class and represent a joke on the transgressions of the working-class on holiday. Shields states that the cards:

> 'portray the moment when those freed to enjoy the beach catch themselves with a jerk, like a dozing train passenger. They return abashed to their proper comportment, having transgressed codes of etiquette, carriage or social position' (Shields, 1990, p.59).

They remind the working classes on holiday of their carnivalesque practices which are contrary to figures of authority who might be scandalised by their breaking of taboos and the norms of society. Certainly, as the two characters in Fig. 5.17 may not be doing any of that but they collectively transgress the required contained and restrained body of the era. They are a considerable distance from the perfected body of the aesthetics of health and modernism.

Conclusion

This chapter examines the different sites of swimming available in the interwar period through the lens of Foucault's principles of Heterotopia. I have applied his theory to sites

of swimming and sunbathing although these are not ones that he included in his 'other spaces'. Some of these sites such as the beach and the lido gradually opened up, with fewer social and behavioural divisions in the interwar period.

The beach is a complex site which sits alongside the sea and, as both Lencek and Bosker (1999) and Shields (1990) state, is liminal in terms of its geography bringing with it potential dangers but is also a paradisical environment. The liminality of the beach is also experienced as a place where behaviour can be stretched outside of the societal norms, as in Foucault's fifth principle. The swimsuit is central to this as it reveals the body, sometimes in its desirability and sometimes in its grotesqueness. This allows for a range of behaviours that might not, for example be allowed in a municipal pool. Sunbathing, for example, caused people to uncover as much flesh as possible and this may well have transgressed social boundaries for some people.

The lido has been shown as a glamorous and hedonistic space where a variety of activities take place including spectatorship, the spectacle of swimming and diving, sunbathing at the poolside and even illuminated night-time swimming. A variety of interactions take place here, in cafes, at the poolside and in the water. It is a space with freedom where flirtatiousness might be permitted. This is the space where diving and athleticism take place The swallow dive, in particular is shown to have been demonstrated at great height in Weston-Super-Mare and at the original opening of the lido at the Matlock Bath Hotel, discussed in Chapter 7 and used in the re-enactment of a swim for the thesis.

The ocean liner equates to the ship, which is one of Foucault's heterotopic spaces included in his 1967 paper. This place for the voyager is inhabited for a longer period of time, for example on an Atlantic crossing (Finamore, 2018) could offer ostentatious and glamorous living with everything needed on board. *Vogue* writer CP makes a relationship between her beauty, style, and the environment that she inhabits, she wonders which room would flatter her the most (Finamore, 2018).

Consequently, this chapter has explored the relationship of body to building and the meaning of the swimsuit, as a modern surface itself, juxtaposed with the environment of the modern surface of buildings, particularly the lido. The interrelationship of body to building is demonstrable through Loos's (1898) ideas of both being cladding or Heard's (cited in Wilson, 2003) of the body and building as metaphors of the container.

Ideas about impermeability advanced by both Mentges (2000) in relation to the shell-like garments of the aviator and Cheng (2011) in respect of the modern surface, both see the modern surface as ideologically hard and impenetrable, but these are ideas that are contested as the chapter has shown. Skin in the case of cladding, camera, and cinematic light pose another form of modernity that glimmer and gleam as much as silver and chromium.

However, it may be the hardness, the polish and the reflective surface are metaphorical rather than actual. Wool and concrete are materials that are porous but through imagery, media, and the metonymic meanings of Cheng's (2011) description make connections between the clean, unblemished surface of the modernist lido and the streamlined form of the interwar knitted swimsuit that covers the natural blemishes of the body.

The chapter builds on the themes of the thesis including modernism, health, the perfected body, and glamour. Josephine Baker's skin reflected sources of light such as camera and stage lighting, creating a glistening sheen on its surface and reflecting glamour and touch ability in her skin surface.

It is important to acknowledge that the modern surface was very expensive and costly to maintain. Cleaning the chromium, upgrading concrete surfaces, polishing large areas of glass were all challenges of the modernist building and consequently to the modern surface. Similarly maintaining the svelte profile required to carry off the interwar woollen knitted swimsuit through diet and exercise must have limited the number of people who could wear it to a minimum. The modern surface was aspirational and an ideal, the reality of the modern surface in both the body and building is subject to the processes of time and finally to decay and deterioration.

Finally, the chapter examines the carnivalesque through Lebvre's (2003) concept of heterotopia as being marginal and often on the outside of cities in relation to Shield's interpretation of Bakhtin's (1984) concept of the 'grotesque' body. Donald McGill's fat swimsuit clad ladies (and sometimes men) contradict the idea of the sleek, snappy swimsuit (Lencek and Bosker, 1999) worn on the perfected body. Class plays into this scenario, the lido and the beach were 'democratic' as suggested in the introduction to the chapter, however what was worn on the beach and one's aesthetic presence in those bathing environments relied on woollen garments that did not sag and a toned body to inhabit them. It should be noted that McGill's depictions are of working-class people who were so far removed from the interwar ideal body that they completely encapsulate class distinction on the beach. The family of the poor, as in Baudelaire's commentary in the introduction to this chapter sought the 'light', and glamour offered by these new environments but failed to 'fit' because of their unruly bodies and unrestrained sexuality.

The next chapter investigates how swimwear that embodied modern ideals was popularised and marketed during the interwar period through high-end and working-class women's magazines; knitting patterns, company advertising and mannequin parades. It also investigates how both high-end and working-class women's magazines promoted diet and exercise to achieve the ideal female form of the interwar period, a body positioned as needing to be suited to, but potentially created through, the wearing of such costumes.

Chapter 6: Aspiration and Reality

Introduction

It seemed an important part of this investigation to examine the swimsuit in the way it was represented in magazines, in advertising, in posters and in knitting patterns. The chapter surveys what was being represented and why.

Promotional marketing and the depiction of swimwear during the interwar period by swimwear and yarn manufacturers used a number of mechanisms including magazines, both high- and low-end knitting patterns for retail and mannequin parades. The chapter will explore high quality 'mediatization' (Rocomora, 2017), this terminology employed by Agnes Rocomora refers to aspects of the contemporary production of fashion including the design of collections and the staging of catwalk shows being moulded for the media. She explores the relationship of the two cultures of fashion and media. Fashion practices, she argues, have both adapted to and being transformed by the media. This interrelationship between fashion and media is demonstrable in 1930s advertising. This chapter also examines the growing sophistication of high-end advertising used not only by magazines such as *Vogue* and *Harper's Bazaar* but also by high-end companies such as John Smedley Ltd, Windsor Water Woollies and Symington's of Leicester. Women's weekly magazines which did not provide high quality advertising because of the nature of their media and consumption, nevertheless included swimsuit patterns that promoted an aspirational lifestyle. The modern surface, in relation to these fabrics and in particular considering these varied materials can be seen as a second skin. Fundamentally this chapter fleshes out the theme where certain kinds of surfaces that demarcate class lines and empty promise. Building on the work of writers such as Kelley (2009) and Cheng (2011) the chapter explores the theme of 'modern' surface as applied to fabrics and textiles through the swimsuit.

Consumers of swimwear and other fashion items in the late 1920s and 1930s were assailed by images in both women's high-quality monthly and weekly magazines of romantic images which were, as Colin Campbell states 'remote from everyday experience' (2005, p1). These images were almost always idealised suggesting exotic locations for beaches and outdoor swimming. Competition amongst swimwear manufacturers as shown elsewhere in this thesis was combative and their marketing reflected this. The growth of the home-knitting of swimwear was reflected in the advertising of knitting patterns and associated beauty products in women's weekly magazines. The first section of this chapter analyses this promotional material.

In order to consider the agency of the swimsuit it is important to reflect on how much of a luxury item the manufactured swimming costume was (Horwood, 2011). Costing an average of 15 – 30 shillings as shown in an advert for Marshall and Snelgrove's women's swimwear in *Harper's Bazaar* (1932, p4); when there were 20 shillings in the pound, the manufactured swimsuit was a significant investment. Historian Juliet Gardiner gives some examples of young women's wages in her book on the 1930s (Gardiner, 2011, p.557) she states that a Lyons Teashop waitress could earn £1,16s 4d per week. A Woolworth shop assistant could earn between £1.10s and £2 per week. (Woolworth museums, online). Comparatively, this sort of income did not allow for the purchase of expensive items and it may be surmised that this was a factor in the choice to knit one's own bathing suit. None of this is immutable however, Pearl Jephcott's account of 'Girls Growing Up' in the 1930s (see Buckley and Fawcett 2002, p.95) includes an account of how the young woman's weekly wage might be broken down based on the idea that wages would be handed over to their mothers and money allocated as pocket money to spend on clothes, dancing, the cinema, cigarettes, cakes and bus rides. She does state that one girl was able to buy 'a bathing suit with her own money' (Buckley and Fawcett, 2002, p.95)[1].

George Simmel contended that 'the lower classes look and strive towards the upper and they encounter the least resistance in those fields which are subject to the whims of fashion; for it is here that mere external imitation is most readily applied' (Simmel, 1957, p.545 [1904]). In this case he suggests that not only does the consumer imitate those higher in social class but perhaps, also, the yarn manufacturers whose images on the covers of knitting patterns sought to provide that which fashion historian Elisabeth Wilson describes as 'the mirage of a way of being' (Wilson 2003, p.157). Imitation is a form of identification and although the aspiration to identify with that which Wilson defines as being 'the look' (2003, p157) is apparent in the promotional and styling techniques of the companies at the lower end of the publication spectrum, the concept of lifestyle aspiration applies to the high-end magazine also. The way that aspiration in advertising was delivered relied on the visual literacy of the perceived consumer. In the 1930s Wilkinson argues that there was a debate in advertising journals between attractiveness and effectiveness. She states that 'Clear typography, bold imagery, and a minimum of text were modernist inventions which

[1]Conversely retired textile manufacturer Barry Whittaker (Interview, Whittaker, 2015) recollects wearing swimming trunks knitted by his grandmother in the immediate post-war period despite the fact that the family was in an income bracket that could afford to purchase manufactured swimwear. This lends some credence to knitwear historian Jo Turney's assertion that knitting has 'moral associations arising as a response to the Protestant work ethic in which 'the Devil finds work for idle hands' (Turney, 2009, p.156), She uses this in the context of solace and usefulness for example for disabled ex-service men but the moral associations with the occupation of the hands and countering idleness may well have cut across class boundaries particularly in the North of England where methodism was ubiquitous in textile manufacturing towns (Dews, 2006).

eventually came into the mainstream; however, in their extreme form, they were thought to alienate certain audiences' (1997, p.23). Perhaps in the cutting-edge imagery of *Harper's Bazaar* that may be the case, particularly as they relied aristocratic photographers such as Baron de Meyer (*Harper's Bazaar*, Nov., 1929. p 33-37) for their perceived upper-class clientele. However, the upper classes as the epitome for fashion and advertising is complicated by the introduction in the interwar period of shiny new role models in the form of Hollywood glamour.

This chapter will explore some of the deficiencies in the 'trickle-down theory' proposed by Simmel and economist Thorstein Veblen in relation to style, aesthetic and consumption. Often applied to fashion in the context of haute couture being diluted for the department store, or now the high street, its application to the swimsuit is pertinent, as this chapter demonstrates, the intervention of aesthetic role models other than the upper classes in the form of cinematic glamour already disrupts this theory. Many of the theorists employed in this chapter had their own experiences of modernity Simmel, Kracauer and Benjamin locate it in the consequences of urban life, as did Baudelaire, whose 'family of eyes' discussed in the previous chapter contributed to Kracauer's fascination with light, sheen, glimmer, glitter and all the reflective surfaces of modernity. This chapter looks at the role of celluloid in the cinema and its impact on modern life. The woman's magazine, the cinema and the high-street hold the key to the aspirations of the working-classes.

In the case of the swimsuit, the 'handmade' or more distinctively, the 'home-made' becomes secondary in the hierarchy of perceptions of the quality of the product. It reverses the earlier formulations (Veblen, 2007) that the leisure classes preferred the handcrafted to the machine made. The technical advances in the manufacture of knitted products meant that the swimsuit would become a 'figure fit' from the jersey and rib knits of the 1920s to the incorporation of elastomer thread in the 1930s, to achieve as one manufacturer stated 'a second skin' (LMS, Symington Archive, SKM1817746117). Those who have worn hand-knitted swimwear testify to its propensity to sag and stretch (Horwood, 2000, p.665) and,as noted elsewhere in the thesis, reknitting and replica samples demonstrate that whatever the look that was achieved when the garment was dry, it changed significantly when in water, often threatening to challenge not only aesthetics but also modesty and function.

Technological developments in advertising, also had an impact on swimwear and will be investigated in the chapter. There was an increase in the use of photography not only in the high-end magazines but also in those targeted at the working classes. Photography along with illustration was used in the 1930s to create the image and lifestyle sold to the consumer through women's magazines. In the case of John Smedley Ltd and Windsor Water Woollies the tradition of the mannequin parade continued along with magazine advertisements. Windsor Woollies took the parade out of the shop/salon however and into

the local swimming pools and lidos to promote their swimwear. Fashion historian Caroline Evans has made a link between modernity and the mannequin parade (Evans, 2015). She argues that the fashion show is a film strip of modernist sensibilities and is 'inherently cinematic' (p.247) as it shows the body in motion striking often linear and graphic poses. The mannequin, however, presents nonchalance and 'cool' in the interwar period; she is machine-like and has no mobility in her facial expression in Evan's reading. The models in the Windsor Woollies mannequin parade, smile. It is my intention in the chapter to question this digression from the expected 'form' of the mechanized mannequin. The mannequin parade as she claims is a 'new technology' and has links to the cinema and modernist time. Movement, motion and time will be explored in relation to both the mannequin parade and photography.

Fashion writer Helen Grund, a contemporary of Walter Benjamin is a proponent of the importance of movement in fashion. Benjamin's interactions with Grund are examined using the theorist Philipp Ekardt's work on Benjamin and fashion in this chapter. Various theorists on the concepts of glamour and Colin Campbell's work on modern consumerism will be applied to archival research into women's magazines and fashion model Alyson Lancaster's scrap-books held in the V and A.

Finally, the chapter will examine a particular collection of late 1930s swimwear that is described through contemporary marketing as 'skin' in the guise of a 'mermaid's skin'. Symington's Peter Pan Brand included a telescopic swimsuit that was patented in the late 1930s as a distinctive piece of textile technology. The competition between companies to produce the best figure fit garment impacted on John Smedley Ltd who developed a range of swimwear that was 'nude' in appearance, but with the perfection of a statue or the smoothness of marble, or indeed concrete, the chosen material of modernist architects for the lido. The 'nude' look, of course, applied only to Caucasian skin. This look however suggested a close relationship between the swimwear and the body beneath.

Consumerism and High-End Magazines

The concept of what was feminine in the early part of the interwar period, following the swift changes in women's dress and style after the First World War, was fluid and ambiguous. Shorter skirts, shorter hair and an 'internal corset' achieved by diet and exercise combined to give an impression of the 'gamine' or the boyish, androgynous figure. The descriptions of glamour as envisaged by Cheng in her contention that a certain style of femininity such as the tenderness and vulnerability achieved by soft lighting and apparent in images of Lilian Gish and later Marilyn Monroe, were at odds with the impenetrable modern surface and lines that light created in Josephine Baker's form and image (Cheng 2011). The latter

in many ways reflects the new found independence of women, many of whom had to undertake paid work and found less refuge in marriage due to a lack of available men following the First World War. (Dyhouse, 2011 p.35). The fashionable androgynous look may have suggested a frail and vulnerable femininity, however the change in economic and societal circumstance that engendered the sexiness, insouciance and the anti-heroine persona became the feminine stance of the 1920s. Androgyny was then associated with a rebellious spirit and initially was against the societal norms of the time. Young women shortened their hair and their skirts, they smoked, drank and with a modicum of independent income, they consumed.

Magazines reflected the nature of consumerism during the interwar period and growth in new technologies including photography offered seemingly endless possibilities for imagery and aesthetics. The female body with its comparatively new articulation a slim silhouette, smooth and clean with androgynous dimensions, was central to this ideal. Buckley and Fawcett contend that the magazine 'mapped out the social and cultural boundaries of the female body in the public and private spheres during a period of social upheaval' (2002, p.52). The change in swimwear was radical and as the interwar period progressed the garments revealed more of the body than would have been thought possible in previous decades, hence mirroring those shifting boundaries, particularly in the public sphere.

Swimwear manufacturers such as John Smedley Ltd and Windsor Water Woollies were keen to promote their luxurious swimwear through upmarket channels. Although they used many methods of promoting their swimsuits, John Smedley Ltd in particular used high-end magazines such as *Vogue, Harper's Bazaar* and *The Tatler* to advertise their new lines. In Fig. 6.1. below, the 1930's advert claiming that 'There's style in every stitch' clearly sells the product (swimsuit) in relation to lifestyle and glamour.

Fig. 6.1. John Smedley advert in *The Tatler*, 1st June 1938.

The two models in the image show the lace bather, similar to the one that was reconstructed from the John Smedley Archive Charitable Trust, worn in an environment suggesting, sunshine, pleasure and escapism. The figure fit is emphasised in the stretch across the hip and waist of the left-hand model and in the way the swimsuit fits the bust and midriff of the seated model on the right of the image. The advert refers to their London office where the majority of promotion and sales took place. The overall effect of the advert is that of glamour and allure. The perfection of the image, the smooth, stretched surfaces of skin and bathing suit, the use of sunglasses to suggest heat and sun and the luxury fabrics used in the background connate warmer climes - the French or Italian Rivieras. Both were popular destinations for the wealthy, the aristocracy and cutting-edge cultural icons such as Chanel, Picasso, Hemingway and Fitzgerald (De Courcy, 2019).

Both Agnes Rocamora and Nigel Thrift point to how lifestyle is promoted along with the object of desire, in this case the swimsuit. Thrift shows how goods are part of the imaginary territories explored as part of aesthetics as he states:

> 'From early on, goods have provided a sensual means of inhabitation which are also a *means of captivation*. As elements of the aesthetic experience, they do not just provide evocations of times past or moral reckonings but affective senses of space, literally territories of feeling' (Thrift, 2008, p11.)

The captivation of the consumer and the engagement of the consumer's imagination is paramount to the advertising of the swimsuit in the John Smedley Ltd advertisement in Fig. 6.1. The consumer is not just tantalised by the inherent qualities of the swimsuit itself, the figure fit, colour, lace pattern and shape but also by the imaginary realm that it proposes, the day dream of sunny beaches or swimming pools, the suggestion of relaxed codes of behaviour along with warmth and pleasure. The association of prior experience or the dream of a new experience enhances the magical properties of the advertisement for the consumer.

In her examination of mediatization Rocamora points to the production of fashion including catwalk shows and the design of collections 'reaching out to a variety of spheres including everyday life pointing to the significance of this process in practices of the self, a mediatized self.' (Rocamora, 2017, p.506). The term 'mediatization' that she uses in this context is the process by which the media present and transmit information. In the article she is of course referring to the field of fashion and its relationship to the use of digital and social media. In the interwar years the consumer did not have access to the means of creating an identity through social media pages and the use of the 'selfie'. However, through magazines such as *Harper's Bazaar* and *Vogue* a perceived lifestyle and identity could be captured and captivated by the presentation of advertising and photo shoots. These were the forms of

mediatization employed by the advertisers at the time. The interwar period had new means of technology that had as Thrift states, new means of connections to the consumer, the magazine's readership which 'generated the potential to produce a new range of means of sensing objects. Not least by producing new forms of allure.' (Thrift, 2008, p. 12).

Fig. 6.2. Advert for Matita swimwear *Vogue* June 11th 1930.

In Fig. 6.2 the modernist horizontals and verticals of graphics framing the images on the page indicate cutting-edge design and locate the beachwear advertised firmly in the contemporary era. The use of black and white photography injects the image into the graphic and the language of the text such as 'exclusive' and 'hallmark' suggest the iconography of a high-end magazine. The allure for the consumer is not just the garment but a process of identification with sharp, new design for sport, for pleasure, and as the illustration, indicates a suggestion of freedom. The consumer is completely the new modern woman. This is one imaginary realm that can be purchased by the consumer. Another suggested by the front cover illustration of *Harper's Bazaar* is that of hedonism.

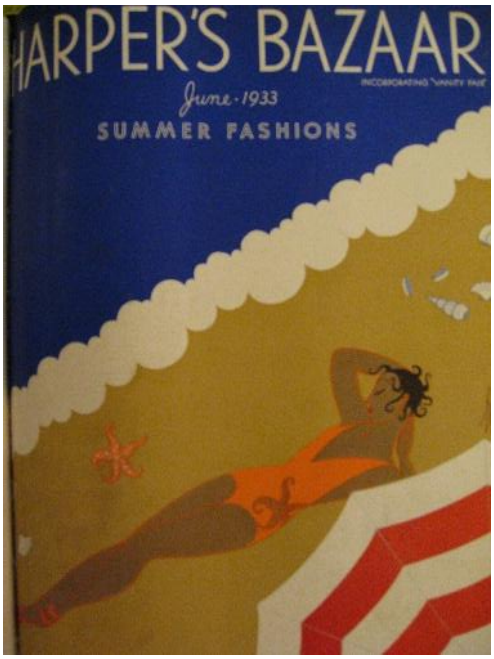


Fig. 6.3. Front Cover of *Harper's Bazaar*, June 1933

In Fig.6.3. there is no advertisement for a specific garment but the illustration conveys a warm sensuous experience of sunbathing on a beach. Three diagonals intersect the illustration, the bottom one being a red and white striped umbrella, at that time suggesting continental holidays; it could be argued that the stripes were synonymous with overseas culture and used in beach umbrella's less frequently in the UK. Certainly, the middle section depicts a female figure with a suntan that is very difficult to achieve without continuous daily exposure to the sun. The pale orange swimsuit contrasts with her figure that lies in on the beach in such a way as to imply languor and enjoyment. The bright blue of the sea and the line of foam also suggest an overseas holiday not normally accessible during the interwar period except to those with funds. Air travel was very expensive (Pirie, 2009) in the 1930s as were intercontinental rail fares, so European destinations were only affordable to the wealthy. In Fig 6.3. *Harper's Bazaar* is 'mediatizing' for its readers – drawing them in with a hedonistic daydream and selling swimsuits on the pages inside the magazine in articles such as the 'Modern Aphrodite' (p.58/59) and 'Down to the Sea in Stripes' (p.93).

Colin Campbell suggests that desire and aspiration are key factors of modern consumerism. This is pertinent when we examine these high-end magazines and, to a certain extent when working class women's magazines are discussed later in the chapter. He argues that:

'The essential activity of consumption is thus not the actual selection, purchase or use of products, but the imaginative pleasure seeking to which the product image lends itself, 'real' consumption being largely a resultant of this mentalistic hedonism' (Campbell, 2005, p 89).

It is this ‘imaginative pleasure’ that forms part of the ‘mediatized’ experience of the consumer and what is being offered on the front cover of *Harper’s Bazaar*. Consumption he argues is fuelled by daydreams and the longing that is generated through the ‘daydream’ needs constant replenishment with new objects of desire.

Fig. 6.4. *Harper’s Bazaar*, June 1932.

Rocamora (2017) draws upon Michel Foucault to argue that computer screens, like traditional glass mirrors, are “technologies of the self”. During the interwar period I suspect in a rather more indirect way that for the high-end consumer, magazines such as *Harper’s Bazaar*, *Vogue* and *Tatler* reflected back through their images, the lifestyle and persona that the consumer wanted to purchase, the ‘self’ that they wanted to construct. As Buckley and Fawcett contend the female body became a cultural artefact during the 1920s and 1930s and ‘its promotion, articulation, and visibility represented to a significant extent, women and their increasingly complex identities’ (2002, p.106). High-end magazines were able to portray a number of these possible identities. Fig. 6.4. shows swimsuits and beachwear available from a premium shop of the interwar period and the body postures as well as the garments suggest both pleasure and leisure time. The previous chapter on the ideology of health and hygiene discusses the significance of these during the period. The prices reflect the luxury of these manufactured garments given the average salaries of the time mentioned in the introduction to this chapter.

The high-end consumer had the material with which to daydream and to a certain extent, window-shop through these magazines before making a purchase, but as Campbell contends, reality cannot provide the perfected pleasures encountered in the illusions of

daydreams so each purchase leads to disillusionment. (Campbell, 2005). He argues that it is the promise of the purchase that is loaded with fantasy rather than the 'object' itself and as a consequence, as consumers then, as now, we seek the experience of 'the promise' in new purchases. Although it may appear that the working-class consumer was not a part of this daydreaming and fantasy in relation to the purchase of garments, this in fact was not the case, and Veblen's idea of 'emulation' (Veblen, 2007 [1899]) was complicated by shiny new glamorous celebrities who brought their own style and imagery to the table. These iconographic modern men and women crossed class boundaries and the glamour that they created appealed to all types of consumers.

The swimsuit as can be seen in the prices in Fig 6.4. was a significant purchase and except perhaps amongst the wealthy fashionistas, was not frequently repeated. Its association with holidays, leisure, swimming, sand and sun however gives so much space for the day-dream, the illusion and the fantasy. Advertising therefore exploited the potential of these aspirations and daydreams by using the newest technologies to create the most captivating 'image' for the consumer and to keep up with the consumer's developing visual literacy (Wilkinson, 1997).

Advanced and New Technologies and their impact on Advertising.

Advanced technologies such as photography and its reproduction in print developed significantly during the interwar period. Evans (2013) even claims, as shown later in the section that a mannequin parade was a new technology.

Photographs published in Vogue and *Harper's Bazaar* before the interwar period were as Carole Squiers argued, 'a sorry lot, mere realistic renditions of clothing worn by actresses, dressmakers' mannequins and photographer's models in various histrionic poses.' (Squiers, 1980, p46). The new fashion photographers included Baron de Meyer, Hoyningen-Huene, Man Ray and Martin Munkacsi, they brought with them a love of movement, an understanding of lighting and elements of edginess adopted from surrealism, in particular the work of the photographer Man Ray.

Hoyningen-Huene began taking fashion photographs in 1925 and was influenced by the 1925 Exhibition of Decorative Arts held in Paris where he was based. His photography, as Squiers observes:

'incorporated an overall sharp focus, astringently designed architectural settings and geometrical backdrops into his pictures, his women easily assume postures of architectonic elegance which echo modernist design' (Squiers, 1980p, p. 47).

In 1930 he produced a centre spread for *Vogue* magazine which can be seen in the image below.

Fig. 6.5. *Vogue*, June 1930, Hoyningen-Huene 'The Hand-knit suit.

The images in Fig. 6.5. have strong elements of modernist design in especially apparent in the black and white contrasts of the image on the top right-hand side of the centre spread, where the three figures arched over the ball suggest androgyny in their figure fit swimsuits. The composition is surprising and somewhat theatrical, despite its suggestion of abstract forms. Hoyningen-Heune had worked as a movie extra and lighting technician in France (Squiers, 1980) and this clearly contributed to his work. Squiers also argues that his attachment to the Imperial Russian court and his flight from the Russian revolution caused him to believe that elegance was dead. She states that conversely 'his women assume a patrician, self-possessed stance unlike any other' (Squiers, 1980, p. 47). In this centre spread few of the women's faces are shown looking directly at the camera, the evident nonchalance that this conveys became the byword for elegance in the images of the period.

The influence of surrealism on photography in the 1930s is evident in some of Hoyningen-Huene's work, particularly in the image of the swimsuit clad figure in Fig. 6.6 below.

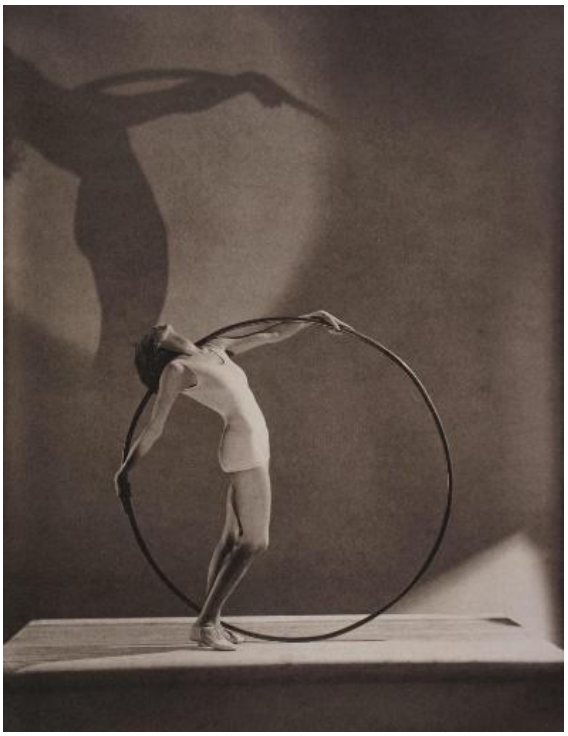


Fig. 6.6. Hoyningen-Huené 1930.

As Buckley and Fawcett argue: ‘Drawing on Freudian ideas, some surrealist artists had used the female figure as a metaphor for sexual transgression, deviance and disorder in their work’ (Buckley and Fawcett, 2002, p.12.). Surrealism in fashion focussed on the inanimate form, suggesting statuary, strong lighting and shadows to give a sense of disquiet. Fig. 6.6. depicts a model wearing either a swimsuit or exercise garment that fits closely to her form. The hula hoop used as a prop suggests the modernist forms and geometry used in images of the period. Windsor Woollies, a swimwear manufacturer, discussed later in the chapter uses the same device on one of their advertising brochures, see Fig. 6.14., but with different intentions. The shadow projected behind the model on the wall behind creates the disquiet in the image. Visually it detracts from what otherwise might have been a portrayal of health and fitness; it implies darkness rather than daylight and this lends the image a strange quality.

Carmel Snow became editor of *Harper’s Bazaar* in 1933 (Gallagher, 2007) and appointed Martin Munkacsi as one of her fashion photographers. He had been a photojournalist during the 1920s and was ‘schooled in the split-second spontaneity of German photojournalism’ (Squiers, 1980, p.48). He embraced movement and at Carmel Snow’s request advised his model to run. (Radner, 2000, p.131) This was a radical move away from the static photographs that had been prevalent in the 1930s decade to date. Fig. 6.7. shows one of a series of photographs published in *Harper’s Bazaar* in 1933.

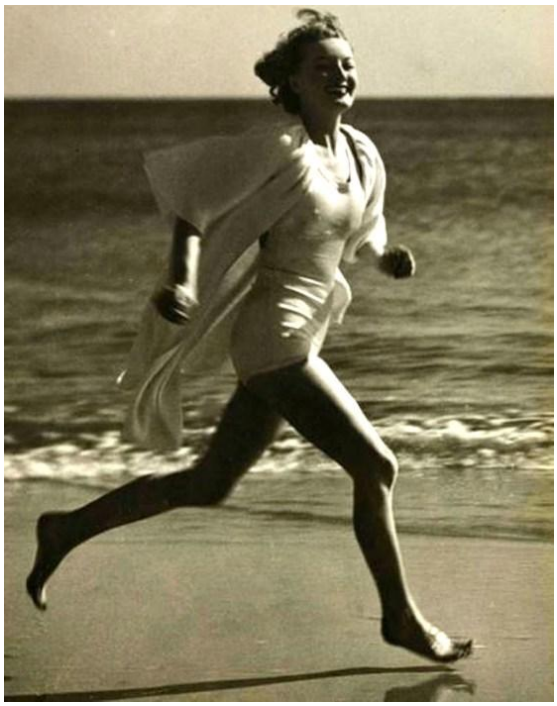


Fig. 6.7. Munkacsi,1933.

The model depicted looks happy, rather than nonchalant, engaging with the photographer and the audience. Her gleaming swimwear and limbs suggest energy and freedom. She is selling this idea along with the beachwear items. She is running next to the sea, out of doors rather than in a studio setting. The photograph frames her closely so that we can see the expression on her face and the movement of her body. As Radner states: 'She represents something other than her 'self', even as she offers a model of this 'self' to the woman reader' (1980, p.131). This, then, is one potential 'self' or identity with which a consumer of women's magazines can have reflected back to her and would almost certainly had appeal for those with an active or athletic lifestyle. The foot poised above the wet sand suggests escape, perhaps from one state to another. The contradiction between the commodification of fashion in the image and the naturalistic environment in which the garments are photographed is marked.

Walter Benjamin, Marxist thinker and philosopher, was evidently interested in fashion as a form of scholarship. Writing about Benjamin, theorist Buck-Morss states that 'Benjamin opened up to philosophical understanding the phenomenon of fashion that is specific to capitalist modernity' (1991, P.97). She also states that 'In fashion the phantasmagoria of commodities presses closely to the skin' (1991, p.97). Buck-Morss situates Benjamin's interest in fashion within the Marxist framework of commodities and capitalism. Philipp Ekardt argues that Benjamin's interest in fashion was concerned with temporality, as he contends, using the model of fashion 'the linear and unidirectional motion of progressing time is interspersed with turns and deviations manifest in fashion's recursions.' (Ekardt,

2020, p.39). Fashions repetitions and cycles were of great interest to him and foregrounded his term ‘the tiger’s leap’ for the regeneration of past fashions and looks to this process. Ekardt uses the expression ‘retro’ to explain Benjamin’s perspective on fashion, that past styles are constantly recycled. (Ekardt, 2020, p.40).

Benjamin collaborated with fashion writer Helen Grund during the 1930s, his interest in fashion often in conflict with other writers from the Frankfurt school, particularly Adorno who saw it only as commodification. (Adorno, 1991). Benjamin does adhere to the idea of fashion trickling down from the upper to the lower classes and often from the city to the provinces, but sees the shifts in fashion as more revolutionary i.e., his idea of the ‘tiger’s leap’ (Ekardt, 2020). Benjamin also refers to Veblen and Simmel on occasions in the Arcades Project indicating that he has engaged with their theories. Benjamin’s writing, Ekardt argues, ’revolves around a program of what could be called an “obdurate” fashion form’ which he suggests might be ‘hard edge chic’ such as in the design work of Elsa Schiaparelli and Madeleine Vionnet (Ekardt, 2020, p.105). This analysis it could be argued points to one of the fashion aesthetics of the time and is perhaps personified in the photography of Hoyningen-Huene. Grund diverges from Benjamin with regard to this, putting ‘elegance’ in a central position in her own fashion system. She argues that: ‘The lure of the dress does not result from its objectness (i.e. from its qualities as an object), but from the effect of its elegance. ‘A dress ’in itself’ even the most beautiful and the most modern lacks essence until it is animated through attitude and lively movement.’ (Ekardt, 2020, p.109).

The introduction of ‘Lastex’ to the knitted woollen swimsuit in the second half of the 1930s would have helped with the concept of ‘movement’ – essentially, the garment on the body would still hold a figure fit when in motion. Fig. 6.8. below shows both the knitwear structure and the amount of stretch and twist when worn on models.

Fig. 6.8. Roberts of London Swimwear, *Harper's Bazaar* January 1933.

The strongly lit photograph in Fig. 6.8. is effective in supporting the text in the advertisement, where the highlighted words are 'finest', 'softest' and 'perfect fit'. All of these adjectives, as shown elsewhere in the thesis, are requirements for the ideal swimsuit. For the high-end magazine reader the aesthetic allure of the garment along with the assurance of comfort and fit would have been undeniable. The image links to Grund's previous assertion about elegance relying on movement (Ekhart, 2020) and would certainly create a space for desire and daydream.

Stephen Gundle argues that photography with its easy:

> 'reproducibility and capacity for making the false seem true, photography was the most becoming to glamour. It allowed for the secret weaving of myths and enticements that caught spectators unaware, enchanting them under the guise of a true representation' (2008, p.158)

Photography was also to have another allure for those marketing knitted swimsuits as manufacturers of knitting yarn began to realise that good quality advertising created more revenue. Eleanor Reed has shown how there was an increase in the popularity of handknitting during the interwar period and an increasing awareness of women generally as consumers (Reed, 2021). This is discussed in more depth later in the chapter.

Photography was a medium of mass production and although the avant-garde images of Hoyningen-Huene, Baron de Meyer and Beaton were not reflected in the popular images of knitting patterns, some of the poses and environments are, as can be seen here in the knitting patterns covers shown in Fig. 6.9. and 6.10.

Fig. 6.9. Robert Glew and Co, Ltd. 1930s.

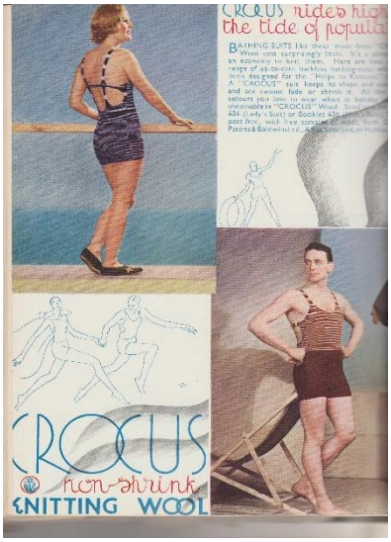


Fig. 6.10. Crocus wool knitting pattern. June 1933.

The image in Fig. 6.9. shows a woman posing against a diving board wearing the swimsuit part of a beachwear ensemble. The caption ‘For Laine de Paris’ suggests speciality wool with the fashion connection of Paris, still the centre of the fashion world in the interwar period. The photograph depicts the model against a blurred abstract backdrop and the line of the posture takes centre place in the image, with an inset photograph showing the full knitwear set. The photographer is clearly emulating some of the stock poses and devices used by the high-end photographers but employing a more straightforward visual rhetoric. (Wilkinson, 1997). ‘Crocus’ yarns were popular for swimwear along with ‘Diana wool’, this is evident from the collection at the Knitting and Stitching Guild.

The advertisement from Stitch Craft (Fig. 6.10.) promotes the non-shrink capabilities of the wool using a juxtaposition of photographs and illustration. The photographs although posed with the accoutrements of a beach setting seem rather wooden in comparison to the illustrations. These show elongated figures full of movement and very idealised in form. Fig 6.11 demonstrates just how appealing these illustrations were and how they referred to the idealised form of the body wearing a swimsuit.

Fig. 6.11. Crocus wool, June 1933.

The disadvantage of using illustration alone for the yarn manufacturers is that it does not show the detailed information about what the garment would look like knitted up, as in Fig. 6.10. The combination of both, however, does give the appearance of the actual garment along with the glamour and fun of the illustration. Photographs also helped the knitter with the garment and enabled them to ‘clarify the finer points of their construction’ (Reed, 2021, p. 98).

The photograph became essential to the marketeers of fashion and gradually over the interwar period became the staple in advertising. Caroline Evans argues that the fashion show or mannequin parade was also a new technology in the sense that the body in motion gave another new framework within the modernist canon (Evans, 2013).

The Mannequin Parade

The mannequin parade was another vehicle in which garments could be seen in motion and Evans locates this within the framework of modernism. Making a link between the speed and acceleration and the dynamic of modern life celebrated in the work of the Italian Futurists she comments:

‘These new iterations of modernity constructed a counter-narrative of the body, in which the mannequin is paradigmatically modern not merely modernist.’ (Evans, 2013, p.3.). Although the thesis has concerned itself with ‘modernism’ as part of modernity, Evans emphasises the significance of the ‘modern’ body, the shift from 19th Century ideas and ideals about female form, to that of the 20th Century.

She points to the idea of the mannequin demonstrating an articulation of the body that was happening before the First World War. The counter-narrative to which she refers is perhaps to the classical body vis a vis the emancipated modern body that articulates itself freely. In the mannequin parade the body became even more articulated when some of the cinematic tropes were employed in the staging of the fashion parade.

The tradition of the exclusive shop (or Salon, in Parisian terms) which offered a highly exclusive retail experience for those who could access them via class and wealth was replicated for the middle classes through the department store and each town had a ‘madam’ shop that offered a personalised service. (Horwood, 2011). Many of these continued to exist into the postwar decades. Mannequins modelled a garment for the individual customer and alterations could be made to suit their figure.

The fashion show featured the ideal form of the 1930s, the streamlined, modernist bodies of the 1920s were superseded by the curvaceous forms of the new decade. Increasingly, in the Fashion Houses of Lelong and Patou, fashion shows began to be the spectacle that they are today. Then, as now, commerce and culture were projected onto the form of the mannequin and her chilly, lean, nonchalant appearance. However, the ‘cult of expressionlessness’ it could be argues is how the mannequin brings to life the garment. (Evans 2013).

Swimming costume manufacturers including John Smedley Ltd based in Derbyshire and Windsor Woollies based in Lancashire used the mannequin parade to market their swimwear, some to the retail sector and in the case of Windsor Water Woollies, to the general public. Fig. 6.12. shows a collection of models with customers in the swimwear department of Jaeger in the mid-1930s.

Fig. 6.12. Swimwear Department Jaeger, 1930s

Although this shows the models with customers rather than retailers, these may have been among the type of interactions that occurred with retailers and fashion journalists at John Smedley Ltd., Brook Street Offices in London. The Brook Street offices opened on the 12th September 1932 (John Smedley Archive Charitable trust, 2014, 11459). A Miss Stockley was appointed to be in charge of sales at the annual salary of £650 per year (roughly £12.10s a week to compare with previous salaries mentioned). Her remit was 'ladies outerwear/lounge wear and bather's wear'. According to the archive minute books parades of 34 swimwear items were common and on the 10th October 1933 invitations to the show were sent to Harrods, Marshall and Snelgrove, Debenhams and Lillywhite's among others and also included journals and newspapers such as *the Lady*, *Daily Express* and *Daily Mirror*. On other occasions *Vogue*, *Harper's Bazaar* and the *Draper's Record* were invited. (John Smedley Archive Charitable Trust, 2014 11459). Extensive searches in both Vogue and *Harper's Bazaar* have not produced any write ups of these shows so I imagined they served to introduce the collections and enabled company advertising to be placed in these high-end magazines.

Fig. 6.13. John Smedley Ltd, Advert from *the Tatler*, May 18th 1938.

Fig. 6.13. is an advert from the *Tatler*, showing Smedley swimwear for sale at high-end shop Marshall and Snelgrove. The prices are expensive and commensurate with both the retail outlet and the magazine in which the swimwear is advertised. This does indicate some of the economic differential in the purchase of swimwear which has been emphasised throughout the thesis but particularly in this chapter. £19 shillings and 6 pence for the least expensive garment would take more than a week's wages for the average working girl.

A manufacturer that held the Royal Warrant was Windsor Woollies, a company based in Poulton le Fylde, Lancashire. The swimwear collection was referred to as 'Windsor Water Woollies' and the company used a variety of means of advertising including the publication of brochures. Their most innovative form of advertising however involved mannequin parades that took place in lidos and municipal swimming baths throughout the North West of England and as far south as Wales (V&A archive, ARC54999). The V & A, Archive of Art and Design holds the collection of papers for Alyson Lancaster who was the principal model and 'trademark' figure for the company. These mostly comprise of scrapbooks of her modelling photographs and newspaper articles but also include many of the photographs that were translated into illustration for the Mannequin Parade brochures.

Fig 6.14 and 6.15 show a photograph of the model and then the trade mark image as it was finally constructed.

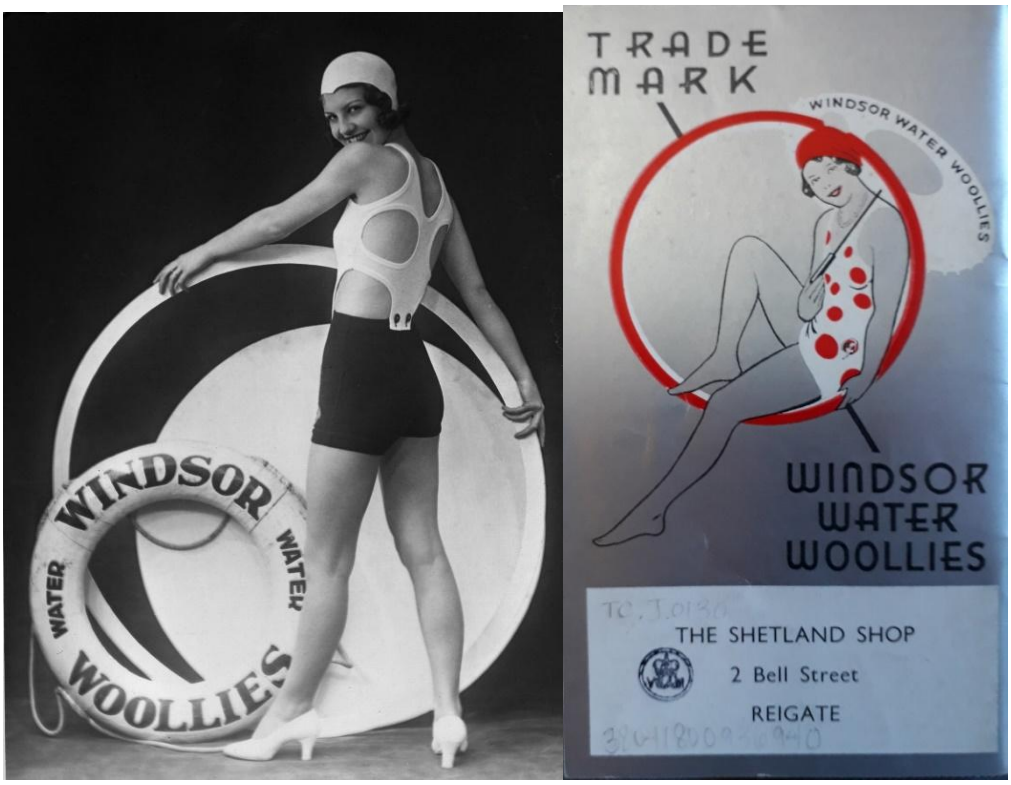


Fig. 6.14. left: Alyson Lancaster 1930-1932, Archive for Art and Design, AAD/2011/10/2.

Fig. 6.15 right: Windsor Water Woollies Trade Book, National Art and Design Library, TC J 0130. Special Collections.

The Trade Book assures the customer that:

‘Made especially soft and lustrous, Windsor Water Woollies afford protection from the danger of chills and cold when wet and yet give comfort and freedom from irritability even to the most tender skin on the hottest of days.’ (Windsor Water Woollies Trade Book, National Art and Design Library, TC J 0130.).

The emphasis here is on softness and comfort, and the fact that the garment is protective and ‘kind’ to skin. However, the image on the right is using some of the visual references to modernism, the hoop, as previously mentioned, becomes stylised, a circular form in the modernist graphic of the trade mark. Windsor Water Woollies is asserting the contemporary feel of their garments through abstract form and shape. Lancaster has none of the typical alienated pose of the mannequin, she smiles and gestures towards the audience but with a gesture that never quite realises itself. The ways that silent film may be close to modelling have been suggested by film-maker Jean Epstein who states that without a boundary or stage between the spectacle and spectator there is an ethic of ‘suggestion’. (Epstein in Evans, 2013, p.248). Evans contends that the ‘suggestive face’ reaches its apotheosis in modelling. Lancaster’s face is ‘suggestive’ rather than nonchalant, appearing to engage with the audience, she smiles but there is also a remoteness there. She is presenting

herself to the audience both in photographs and presumably as a ‘live performer’ as an image rather than a person. This is perhaps one interpretation for the enigma of the ‘smile’

Windsor Water Woollies held mannequin parages in lido’s and local swimming pools as can be seen in Fig 6.16. The swimsuit pattern designs are interesting, suggesting a ‘fair isle’ pattern (popular on the pullovers of golfers during the interwar period) but on close examination reveal the geometry of modernism. As such they make references to tradition but are radical in style.

Fig. 6.16. Model Alyson Lancaster leading a Windsor Water Woollies Mannequin Parade, Photograph, Archive for Art and Design, AAD/2011/10/2.

The mannequin parades were part of a programme of other activities including Diving Displays, a Parade of costumes that mother and grandmother wore, Beauty contests for the most attractive young lady in a bathing costume – open to visitors and residents both! These events appeared to be organised by Windsor Woollies and often included the local shops at which the swimwear could be purchased. Figs. 6.17. and 6.18. show pages from a Windsor Water Woollies programme of the 1930s.

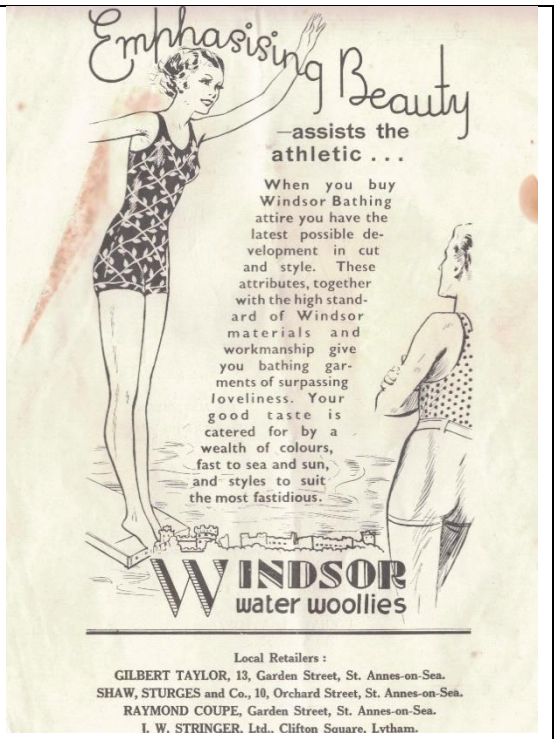


Fig. 6.17. left: Windsor Water Woollies Programme 1930s [Own Copy].

Fig. 6.18. right: Windsor Water Woollies Programme 1930s [Own Copy].

These mannequin parades certainly appeared more democratic than many others but the cost of these swimming costumes would put off many of the spectators of these shows. Economics would have been at the forefront of the enterprise and one can only assume that they were profitable and attracted potential customers of the swimwear. The centrality of the mannequin to this event does as Evans indicates: 'create significance in anti-linear narratives and images across the fields of popular culture and technology that establishes her performance as part of the modernist flow of images' (Evans, 2013, p.247). In this context, her body is in motion in a regulated and rationalised way echoing some of the early cinematic spectacles such as Busby Berkley's musicals. The audience would have been familiar with this panoply of images from multiple sources - advertising, cinema and so forth. (Holtby 1934, Kracauer, 1995 [1963]). The spectacle of the parade is performative, theatrical and included as a main feature of entertainment. Therefore the 'suggestive expression' or smile becomes important; this is not a fashion house with an audience whose expectations of a certain format are contained.

The question of Alyson Lancaster's smile in the Windsor Water Woollies lido parades is intriguing. 'The suggestive expression' is one response but there are others. The photography of Munkacsi, Louise Dahl Wolfe and Toni Frissell shows athletic and sensuous women moving in swimwear through natural surroundings. Their reactions to the environment as can be seen in Fig. 6.16. usually involve smiles or expressions of pleasure.

This, as Arnold states, in relation to a cover photograph published in *Vogue* by Frissell in 1937, showed how daydreams of holidays and escape might be suggested with minimal accoutrements. (Arnold, 2018). The smile on the mannequin's face in this context could represent the advertiser's desire to suggest pleasure and encourage this type of daydreaming.

The smile, I would argue, is still a mask and like the swimsuit itself creates a boundary between the mannequin's nakedness and the audience. This was certainly perpetuated in the style of modelling used in later professional bathing beauty contests such as Miss Great Britain. Many of these also included bathing costume parades in lidos such as The Super Swimming Stadium in Morecambe (Smith, 2005). The Windsor Water Woollies mannequin parade disrupts some of Evan's contentions about the severe and inaccessible presence of the modernist mannequin (Evans, 2013).

The ideal form of the mannequin modelling a swimsuit still had to exist (no carnivalesque seaside postcard forms here) but the edge of seriousness normally associated with a fashion show is removed by the juxtaposition of the high-divers and the spurious 'beauty parade', to become a feature of seaside entertainment.

Glamour and its intervention in Class Differentials in Fashion

Glamour with its etymological origins in the fascination or spells associated with witchcraft had originally been located within the aristocracy (Brown, 2009). The connotations of glitter, cool, allure and elegance were more obviously associated with this class. Novelist Rosamund Lehman describes her upper-class character Clare's glamour as:

> 'the reflections, the shallow lights and shade in the polished surfaces of alabaster, jade and cornelian, and such ornamental stones (cool, hard yet in a way rich and yielding) whose texture her appearance suggested?' (Lehman, 1930, p.79).

It is these very mineral qualities and their impermeable attributes that are evident in the aloof image of the Baroness de Winterfield shown in Fig 6.19.

Fig. 6.19. Judith Brown, Glamour in Six Dimensions, front cover.

The image of Baroness de Winterfield in Fig. 6.19. centres on her face, neck and shoulders to focus attention on the paleness of her skin, the gleam of her jelly-fish like helmet and her pearls. The helmet looks polished; it gleams incandescently and as a surface reflects everything away from itself with its ethereal sheen. It is impermeable though, encasing the hair and moulding to the skull. It is this cap and the pearls that give the image its mineral qualities flattering the smooth skin of the Baroness. I would suggest that these helmets were very difficult to wear and really only suited those with sculpted cheekbones and well-defined jawlines, the exclusive apparel of the young and beautiful. Her aloofness is suggested by her gaze turned away from the spectator and her concentration on the cigarette. There is no direct evidence of smoke but the background suggests some of its ethereal qualities. Judith Brown argues that the cigarette and smoking are the height of glamour (2009). They are a pause in the material world of things and commodity and allow the smoker to experience a moment of nothingness. This experience of nothingness Brown argues, although nihilistic, is a feature of modernist glamour.

The nonchalant, detached glamourous persona of the Baroness is consistent with Veblen's assertions that those qualities belong to the leisure classes, that: 'In the nature of things,

luxuries and the comforts of life belong to the leisure class' (2009, p.50 [1899]). He argues that unproductive consumption including articles of adornment are tabu for the labouring class of women, in particular the servant class. Veblen associates the leisure class with the upper classes and those who have wealth. He also contends that they are responsible for upholding honour or honourable behaviour in society, hence the use of the word 'tabu' in his argument, that unproductive consumption on the part of lower-class women would not only be inappropriate but dishonourable (2009, p.50). He argues that 'each class envies and emulates the class next above it on the social scale' (ibid).

The application to fashion is evident in Simmel's arguments in his essay entitled 'Fashion' where he takes the concept of emulation further by suggesting that once upper-class fashion is 'imitated' by the lower classes, the style is copied and crosses:

> 'The line of demarcation that the upper-classes have drawn and destroying the uniformity of their coherence, the upper-classes turn away from this style and adopt a new one, which in turn differentiates them from the masses; and thus, the game goes merrily on.' (Simmel 1957, p.545 [1904]).

Simmel suggests that style, innovation and chic belongs to the upper-classes and that any imitation or copy is a diminished version. This may well be applicable to the swimsuit; a hand-knitted version only aspires to the style and quality of the manufactured one but the focus of the advertiser be it for high-class or working-class women's magazines is aspiration. Campbell argues that those who came to be regarded as taste-makers were the designers and fashion correspondents whose definitions, particularly those adopted by the newly wealthy (nouveaux riches), rejected the standards of the more traditional upper-class. (Campbell, 2005). The complexity of the class system, I would argue, was greater than was suggested in either Veblen or Simmel's discussions at the time of their writing in 1899 and 1904 respectively. Arguments about the movement of fashion, style and aesthetic from the top to the bottom are undermined by the introduction of glamour as portrayed by Hollywood and the introduction of celebrity lifestyle.

Gundle (2008), points to the word 'glamour' becoming part of common usage in the 1930s. Both Gundle and Dyhouse who write about glamour define it as sexiness, allure, charm and sparkle. (Dyhouse, 2010, Gundle, 2008). As Carol Dyhouse states that the Oxford English dictionary records an early use of the term 'Glamour girl' in a magazine published in 1940 at the end of the period that this thesis surveys.

Gundle also states that glamour was originally located in the upper-classes but high society became very fluid during the interwar years. Air travel and many leisure activities including frequenting fashionable beaches and lidos were shared by both Hollywood stars and the British upper-classes. He debunks both Veblen and Simmel's ideas by contending that: 'Haute Couture was often parodied and demystified, its elitism and eccentricity became an

object of mirth. In this way elite forms were appropriated and rendered accessible.' (2008, p.189). Emulation still existed but there was a move to a distinctive feminine image preferred by younger and working-class women that denied any association with the aristocracy and upper-classes. One example of this can be seen in Fig. 6. 20.

Bebé Daniels of "Rio Rita" fame has exquisite skin

"To fascinate, a star *must* have flower-like skin" ***say all great film directors***

HOLLYWOOD: Great film directors say that a flawless skin, exquisitely soft, is the most important asset any girl can have. They state that, in films, there can be no outstanding success without it.

Stars have learned that their careers depend on keeping their skin satin-smooth. 9 out of 10 guard their skin with Lux Toilet Soap, and they have made it the official soap in the dressing-rooms of all big studios.

Bébé Daniels (Radio Pictures) says—"Many girls lacking great beauty but possessing lovely skin, have passed on the road to fame the girl with perfect features. Lux Toilet Soap is a great help in keeping the skin smooth and lovely."

Today, millions of women are following the film stars' example and using this delicately perfumed soap which is so quick to lather — Lux Toilet Soap — to keep their complexions radiant and lovely.

Lux Toilet Soap can be bought at all grocers and stores in boxes of a dozen, or single tablets for the moderate price of 4d.

TL.145-302 65

Fig. 6.20. Bebe Daniels from *Woman's Weekly* July 5th 1930.

The image of Bebe Daniels shown in Fig 6.20 above demonstrates a particular form of glamour and fascination, advertised by *Woman's Weekly*. The advertisement for Lux Toilet Soap quotes Daniels as saying 'Many girls lacking great beauty but possessing lovely skin, have passed on the road to fame the girl with perfect features. Lux toilet soap is a great help in keeping the skin smooth and lovely.' (*Woman's Weekly*, 1930). The advertisement goes on to say that millions of women are following the film stars example. The aspirational quality of the advertisement is evident in the text although Bebe Daniels with her Sombrero and large earrings presents a very exotic image to the British magazine buying public. Dyhouse states that 'the glamour of cinema had an enormous impact on popular fashion. Stars became style leaders, their hair-styles, make-up and clothes emulated by thousands' (2010, p.94). The bobbed hair, the sheath like dresses, short skirt and wearing of make-up was in part due to the advent of cinema. (Holtby, 1934). For young working-class women,

class and femininity began to diverge and along with fashion as Buckley and Fawcett contend there was a refusal to conform to society's ideals of feminine and 'lady-like behaviour. They state: 'For young working-class women, such glamourous images, make-up and smoking were important symbols of rebellion against family expectations and middle-class aspirations.' (2002, p.97).

Thrift contends that: 'The glamorous celebrity is neither a person nor thing but something in between, an unobtainable reality, and imaginary friend and an accessory.' (Thrift, 2008, p.19). Judith Brown goes further than this in relation to the idea of celebrity stating that those attributes 'remove from the prosaic routine of everyday life that together produced an intoxicating distance across which the ordinary mortal could not reach' (Brown, 2009, p.100). The Hollywood celebrity was a role model for many young women but for working class girls presented an image that was both dreamlike and escapist, whilst connecting to some of their everyday dreams and aspirations. In Britain, class had been one of the chief determinants of how idealised femininity was characterised, this changed with the advent of cinema as Gundle states:

> 'The development of cinema allowed male producers and artists new possibilities for moulding women and creating figures of fantasy, even to the point of reconstructing ideals of femininity. The practical aspects of stardom, with its attention to beauty, artifice, display, fashion, luxury were considered by many to be exquisitely female.' (2008, p182).

The ideals of what constituted femininity shifted significantly in the 1920s and these were in part encouraged through the prevalence of cinema as Buszek observes, 'Hollywood was key to the creation of modern womanhood' (Buszek 2006, cited in Wright, 2015, p.4), by the end of the 1920s women comprised of 75 – 83 percent of cinema audiences (ibid). The swimsuit as a garment played an important role in how the 'New Woman' was portrayed on the screen as Wright suggests:

> 'The swimsuit clad woman who appeared within the popular media with increasing frequency from the beginning of the twentieth century presented a representational shift from the delicate, passive and firmly domestic Victorian female ideal towards a much bolder, more assertive and 'modern' public femininity (Wright, 2008, p.4).

The utility and functionality of the swimsuit as Wright contends also enabled the garment to push the limits of the production codes relating to nudity and exposure, as she states:

'In many situations the swimsuit's use by the entertainment industry was predicated precisely on the notoriety and the libertine, modern or risqué connotations of the garment. It offered suggestions of sex while never quite revealing, allowing the viewer's imagination and desire to look beyond the swimsuit's limitations.' (Wright, 2008, p.8)

The swimsuit was a means by which as Wright states that sex could be smuggled into the cinema (2008, p.5). However, it could be argued that it was also an instrument by which sexuality could be smuggled back into concepts of femininity and aligned with the somewhat de-sexualised sheen, gloss and steam-lined glamour of the modern woman.

Cinema architecture enhanced the aspirations of glamour – even the smallest, most out of the way town could boast a picture palace of modern/deco style. Siegfried Kracauer, like Benjamin, a theorist of the Frankfurt school examines, the assault to the senses found in such environments:

'Spotlights shower their beams into the auditorium, sprinkling across festive drapes or rippling through colourful, organic looking glass fixtures' (Kracauer, 1995 [1963], p.324).

The auditorium mirrored some of the sets of the films in its glamorous presentation and as such lifted the experience of cinema going out of the ordinary. The focus of the image on the white screen shown in darkness would have encouraged intense, dream-like concentration further removing the spectator from their everyday concerns. Baudelaire's modernity, the palace of light mentioned in the previous chapter, has been made available to the working class. They no longer press their faces to the glass of the glittering café feeling excluded; they can participate in the cinema, just as they can in the lido and join the 'cult of distraction' to use Krakauer's phrase, as he states that 'the aspiration to higher strata is not for its content but its glamour' (Frisby, 2013, p.169). He cautions that this experience of modernity, the lit department stores, the light of the cinema screen and the sunlit lido and says: 'The glamour that has been dispensed should indeed chain the white-collar masses to society, but only just so far as they remain all the more securely caught in the position that has been ascribed to them' (ibid). This echoes my point in the previous chapter that these glamorous spaces were made available to the working classes during the interwar period but came with a metaphorical price tag attached.

The celebrity film star becomes part of the practice of aspiration, glimpsed occasionally at the cinema, in magazines and in advertising. The link between material goods that helped to emulate the celebrity such as make-up, clothing and behaviour corresponds, as Gary Cross states: 'to immaterial longings, blending social, psychological and physical needs indivisibly' (Cross, 2000, p.28). Thrift's imaginary friend walks alongside the working-class girl fuelling her consumerism and enabling her to escape the reality of her world.

Increasingly working-class young women sought styles, fashion ideas and the beauty tips of the Hollywood stars through popular magazines such as *Woman's Weekly*, *Woman's Own* and *Home Chat*. Swimwear was, of course, a very important part of this and the glamour of a day by the water, be it in the local lido, beach or on the Riviera, apparently became a more democratic exercise. Veblen and Simmel's contention that emulation and imitation of the upper-classes by those in lower-classes, is challenged by a new elite,

namely the celebrity or Hollywood star. Class boundaries, particularly in Britain, did not disappear but the introduction of the word 'glamour' into the fashion lexicon during the interwar period disrupted the ideas of where style and elegance were located.

Examining Working Class women's magazines through representations in *Woman's Weekly*.

Women's magazines in the interwar period reflected the need for advertising to correspond to the growth in consumerism. Working class women's magazines, in particular, recognised that their consumers would not spend on significant items (Buckley and Fawcett, 2002), but they would spend on beauty products, knitting yarns, fashion patterns, chocolates and so forth. Wives and mothers were also primarily responsible for decisions that were made about purchases for the home (Hackney, 2010) *Woman's weekly*, the magazine that this chapter will focus on, included articles and advertisement for homecare, childcare, healthcare, beauty tips, along with short stories, knitting and sewing patterns and agony aunt pages. It offered multiple constructions of femininity for both the working girl and the wife and mother.

High-end magazines relied on couture, although in the case of *Vogue*, with a view to a wider market, as Buckley and Fawcett have shown, they state: 'there was a 'dissonance' between women's lived experiences and the representations of femininity in fashion'. (Buckley and Fawcett, 2002, p.76.) The reality of lower middle-class and working-class women's lives demanded practical and economical solutions to both fashion and lifestyle. However, it was young women who were at the vanguard of emancipation in their attitudes and values. Their consumption was watched closely by advertisers (Buckley and Fawcett, 2002).

Woman's Weekly was part of Amalgamated Press along with *Home Chat* and *Woman's World*. The publisher encouraged advertisers to take advantage of the access to 'a large female audience' (Greenfield and Reid, 1998).

The swimsuit played a significant part in these magazines – particularly during the spring and summer months where knitting patterns for swimsuits were available, along with advice on the type of yarns that would be best for swimwear.

The swimsuit with its glamorous associations with daydreams of holidays and days out was often used for advertising products some of which might be associated with one's appearance in relation to the wearing of the swimsuit but, as can be shown in Fig 6.21, often used for other products too.

Fig. 6.21. left: Cigarette advert, August 5th 1930 *Woman's Weekly*.

Fig. 6.22. right: Advert for Hair Removing cream July 12th 1930.

The tobacco advert in Fig. 6.21. demonstrates the relationship between glamour, leisure and smoking. These associations have been discussed elsewhere in the chapter as, of course, the unhealthy qualities of smoking were either not known, or as Brown suggests, ignored (Brown 2009). The parasol, slightly off centre in the image nevertheless draws the eye to the faces of the two swimsuit clad women, one of whom is lighting a cigarette for the other. The caption 'After a dip in the 'Briny'.' connects to the saltiness of the sea and perhaps the saltiness of the sailor whose gaze converges with the young women. The sailor is the advertising 'motif' for the brand appearing on the cigarette packet. The advert suggests a location and time for lighting cigarettes, but the dry looking swimming costumes and hands do not convey the reality of smoking after a dip in the sea.

The advertisement for the hair removal cream in Fig. 6.22. is part of a battery of beauty products offered in women's magazines to perfect the body for swimwear. Emmy Sale, in her article about how magazines promote the making and wearing of swimwear, suggests that these examples 'infer or directly tell the reader that their body must look a certain way in order to be acceptable for the beach.' (2018, p.54). The advertisement in Fig. 6.22 shows a diving woman and how her legs and underarms may be exposed in the sport. Diving, though less acceptable in current swimming places, was an important part of the swimming experience during the interwar period as Chapter 5 on Sites and Spaces of Swimming

investigates. It would leave the person vulnerable to not only unwanted hair but also to an ill-fitting swimsuit – causing anxiety about modesty and looks. Given that the trip to beach or the lido was an opportunity to pursue romance and fun, these hindrances to attractiveness were prime targets for the advertisers.

The handknitted swimsuit was promoted through magazines such as *Woman's Weekly* with many knitting patterns and yarn advice available for the reader. I have shown previously in the chapter that the cost of a manufactured swimsuit was prohibitive for many young working-class girls and Sale (2018) concurs with this but also adds that the factor of crafting or adapting a design to one's own requirements might have been a factor in this too, she states that 'Hand-knitted bathing suits were one-off productions with designs unique to each suit'. (p.50). This resonates with some of the qualities of the handmade that Veblen (2009, [1899]) refers to earlier in the chapter and why it was preferred by the upper-classes. The uniqueness of the garment and the pride in making it, if it had been knitted by oneself, as Jo Turney (2004) has suggested, was a great motivational factor in producing a hand-knitted swimsuit.

Eleanor Reed in her article on hand-knitting in Women's Domestic Magazines 1910-1939 also suggests that the development of these craft skills was long-lasting, rather than the beauty care or housework focused parts of publications. They also gave value for money and she points out that balls of wool could be bought from a knitting yarn shop when required. There was no need for a significant initial outlay of money (2021). Advertising also began to take note of the revenue that could be generated by knitting patterns and therefore gave more copy space to them as the interwar period progressed (Reed 2021).

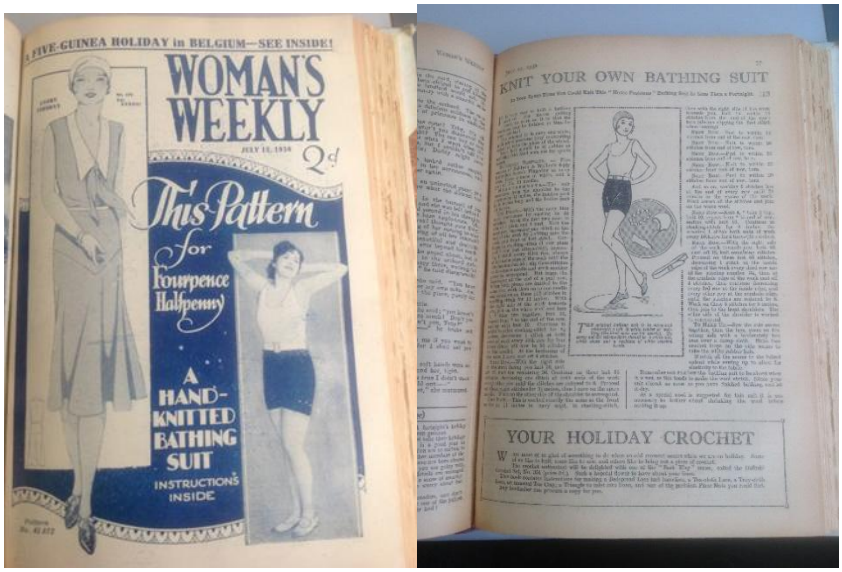


Fig. 6.23. left: Knitted Swimsuit Pattern *Woman's Weekly* 12th July 1930, front cover

Fig. 6.24. right: 'Knit your Own Bathing Suit, *Woman's Weekly* 12th July 1930, p.57.

Fig. 6.24. shows an illustration of the knitted bathing suit along with other items that may be needed to pull off the look successfully, including the belt, bathing hat and beach shoes. Its form in the illustration of the knitting pattern looks rather more idealised than the photograph on the front cover of the magazine which shows a made-up version of the garment. The instructions on the knitting pattern are clear and suggest the colourway of the original, navy and white and also the type of yarn that should be purchased for the garment and the quantities required. There are also instructions for the purchase of a belt, where rubber of the type of a man's sportswear belt is suggested. Reed has indicated that earlier in the century a great deal of reliance on the expertise of the knitter was applied to the writing of these patterns but by the 1930s these were more comprehensive. (Reed 2021). Betty Barnden, who knitted the sample tested in a Lido for this thesis, stated that her expertise as a professional pattern designer would be very useful in interpreting 1930s patterns as they were hard to follow. (Interview, Barnden 2019).

In Fig. 6.25, the swimsuit shown no longer has a belt but is a rib knit that helps with the figure fit. By 1935 manufacturers had started to use Lastex in their garments (Kennedy, 2007) to enhance the elasticity of the suit. Lastex could not be used in hand-knitting so the rib knit was the equivalent. Photography rather than illustration is now used in a studio setting with the deckchair as a prop to show the finished garment. The made-up costume seems to fit neatly to the contours of the body and flatters the figure of the model.

Fig. 6.25. Swimming costume Knitting Pattern, *Woman's Weekly*, April 13th 1935 p.668 and 669.

In the accompanying text the instructions for making are again clear and suggest 'Crocus' yarn that was mentioned earlier in the chapter. This time a lay plan is included to show how it might be stitched together. The advice of the magazine, however, is that the reader/maker produces two of these costumes – one to be worn for swimming and one to be worn on the beach afterwards! This does point to the crux of the issue about the hand-knitted costume, that the reality of wearing a hand-knitted swimming costume is very different from the aspirational qualities of the advertising. *Woman's Weekly* was resourceful and came up with a solution to the problem of the wet hand-knitted costume. Many such knitting patterns came up with tips for a better fitting hand-knitted swimsuit and as Sale concludes that, despite this, 'the reality of the making was not the same as the magazine images.' (2018, p.61).

The test swim discussed in Chapter 7 (Reknitting an archival garment) indicated very strongly through photographic evidence and testimony that even given Betty Barnden's expertise in interpreting and making a swimsuit from an historic pattern, the result was insecure and sagged away from the body. Advertising in this case definitely demonstrated aspiration rather than reality.

At this point it would be valuable to give some background to another company, Symington's of Leicester, who patented a distinctive piece of textile technology in its Peter Pan brand which created a 'bubble' effect at the edges of the body. Its advertising shows how accommodating this look was to the bodies of women and children. Mothers of young children, as Horwood (2011) has stated suffered with certain types of swimwear on the beach because of the need to be so active. Conversely, John Smedley Ltd developed a range of swimwear that created a smooth fitting 'nude' appearance that acted like a second skin. Both companies used elastomer thread to achieve the figure fit.

Wearing Swimwear as a Second Skin

If we follow Cheng's (2011) reasoning and acknowledge that skin can be construed as a modern surface then it is a small step to apply the same reasoning to a textile surface that covers the skin.

The tubular swimsuit was a form of cladding and intervening between the wearer and the environment whilst also replicating the form of the body itself. Like close fitting underwear- the swimsuit became a second skin.

Gabriele Mentges (2000) writes in her paper 'Cold, Coldness, Coolness: Remarks on the Relationship of Dress, Body and Technology' about the concept of 'cool' or 'coolness' in

relation to style. She cites leather, as in the black leather jacket or leather as worn in an aviator's clothing, not only as 'cool' and 'stylish' in a timeless mode but also protective and having skin-like properties. As Mentges argues: 'Considered in their pure and material structure, textiles were understood not only as external, but as an element to the body that ensured physical and psychological mediation between the body and its surrounding environment.' (Mentges, 2000).

The swimsuit developed during the interwar period through the use of Lastex and other branded elastomer threading to create a form that was as close to the body as possible. However, swimwear created with these new technologies conversely protected those who felt less confident about their figures – by forming not so much an internal corset but an intervention between the wearer and her environment. As the brochure claimed (Fig. 6.26). 'If you have unruly curves a 'Peter Pan' will control them for they're the *Original Corset Tailored Swimsuits*' (Symington Archives, LMS). In the mid 1930s Symington Ltd of Leicester produced a knitted interlock swimwear collection known as 'Peter Pan', they were a medium price range so potentially affordable for a number of the population.

Fig. 6.26. left: Back View, Symington's Telescopic bather in the Peter Pan range.

Fig. 6.27. right: Front view LS20, LMS.

In 1937 Symington designer Martin White 'patented the ruched swimsuit which was called the Telescopic swimsuit (Patent No 476546). The method used was simple but revolutionary. Lactron thread (cotton covered rubber) was stitched on to the fabric with a special stitch and with the lactron thread held at a pre-determined tension during the whole of the stitching process. The result was a ruched garment which only needed to be made

in one size to ensure perfect fit for any figure from 30” to 42” bust. (Symington Archive, Leicester Museums Service). The one piece ‘shagreen’ suit shown in In Fig. 6.26. and 6.27. is a technical advancement on this. The two-tone fabric was half wool and half cotton with interwoven multi fitting. The fabric was supplied in a tubular length and was cut and lactroned under the bust to give shaping and uplift. The fabric construction can be seen in Fig. 6.28.

Fig. 6.28. Telescopic swimsuit knit.

This technique later became known as ‘ruching’ and continued to be used until the late 1950s.

In the 1930s Symington also introduced rayon into their knitwear collection and this would take print as shown in the leopard skin two piece on the left-hand side of Fig. 6.31.

The relationship of the human and the machine, referred to by Mentges however is evident in the construction of this swimwear. Advanced industrial technology has been applied to the textile used for the swimwear in this instance to the extent that the fabric construction was patented. However, the marketing of the swimsuit locates the innovation firmly in the domestic and leisure sphere – any relation to machinery and the detail of the technology used is not included. In fact, it is resisted. This production technique was used to ameliorate the concern that women who couldn’t conform to the ideal outline had about exposing their body when swimming, by keeping it constrained. Polished surface – relationship between surfaces its fluidity draws attention. Relationship illustion – is a smooth as you want it to be. We were not expecting to find this – important part of my original discovery, important to other people. This is one of the main things – subheading perhaps. Contradictions – use

it as a hook. Even the fabrics that did not conform did had a role to play in creating the idea of the perfect skin.

Marketing the ‘skin like’ swimsuit.

The brochure shown in Figures 6.29. and 6.30 claims ‘What an array of Swim Suits. In lovely colours, *figure fitted* and fashioned in exclusive materials. At the sea or the pool, on the beach or in your own garden – you can really ‘let yourself go’ – if you are wearing a Peter Pan Suit, for they are so trim, so gay, so absolutely right that you can almost live in them. You’ll find they never sag when wet nor lose their shape and size when dried.’ (Symington Archive LMS).

Fig. 6.29. left: Marketing Brochure for Peter Pan Range (1939).

Fig. 6.30. right: Fold out of brochure, (1939).

The marketing brochure in Figure 6.29 is artfully cut along a curve of a wave to separate the mermaid’s tail from the illustration of the swim suit. The analogy is there, that this piece of textile engineering that makes the ‘slim figure trim, and trims the fuller type. It is a miracle garment – for one size fits perfectly almost anyone’. (Symington Archive, LMS). The body is both sheathed and protected as in cladding, It is advertised to function successfully for women in all environments.

Fig. 6.31. Peter Pan range with description and prices. (1939).

In Figure 6.31 the unfolded brochure reveals a full range of garments produced for 1939. It is apparent from the images in the brochure that the body has become fuller and the profile of the swimwear softer. The edges of a ruched swimsuit would be much more forgiving than the sleek woollen swimsuits of the 1920s and early 1930s and although the introduction of a two piece would present some challenges for the wearer and her body, the stretch qualities of the new design of swimwear would indeed ‘trim’ the fuller figure like a ‘sheath’.

The ‘nude’ swimsuit.

The John Smedley Ltd swimsuit that incorporated Lastex functioned to protect and to sheath the body but had rather more of an unforgiving profile. Although a wide range of colour and pattern were used as in the Symington collection, one of the swimsuits they promoted had a nude appearance on Caucasian skin as can be seen in Fig. 6.32. and 6.34. There were several versions of the swimsuit including a two-piece shown in Fig. 6.33. and a lace bather shown in an advert (Fig. 6.35.) as worn by ‘Irene’ a former employee of John Smedley Ltd.

Fig. 6.32. left: Front view of Smedley swimsuit. 2011 4600, JSACT.

Fig. 6.33. middle: Loop Lastex two-piece swimsuit. 2011 4624 (top) 2011 46242 (briefs).

Fig. 6.34. right: Rear of John Smedley swimsuit.

The art historian Kenneth Clark in his book 'The Nude' (1923 [1956]) makes a distinction between nudity and nakedness that has been dismantled by feminist theorists in the decades since he wrote it. In discussing the nude Capitoline Venus in relation to the containment of the body he contends that:

'At no point is there a plane or an outline where the eye may wander undirected. The arms surround the body like a sheath, and by their movement help to emphasis its basic rhythm. The head, left arm and weight-bearing leg form a line as firm as the shaft of a temple' (Clark, cited in Nead, 1992, p.5). Clark's likening of the marble statue and the smooth surface of the marble, with arms surrounding the body 'like a sheath' has a resonance with the hard 'skin' of modernism.

Interestingly feminist theorists saw the body as porous with orifices that emitted matter – believed to be viewed by the male art historian as polluted and therefore needing to be contained or 'framed' and read in a particular way. Prior to the 20th century skin was seen as a porous substance and Ann C. Colley in her book *Wild Animal Skins* in Victorian Britain' (2014) contends below:

> 'The whole concept of skin as a porous boundary through which the world and the body encountered one another was understood in a practical sense, but not necessarily explored metaphysically except in Victorian fiction.' (Colley, 2014, p.13)

In the 20th Century a fascination with the impermeable and impenetrable as shown by Cheng (2011) and others cited became much more prominent. Feminist theorists and artists however in the 1980s and 1990s revisited the idea of the body and skin as porous

and challenged the particular mores of male art historians who sought to contain it as shown in the next paragraph.

The swimwear both shows an impermeable protective surface and a similarity to skin. In Figures 6.32 and 6.33 and Fig.6.35 below there is an element of the smooth surface of concrete in the apparent nudity but also the marble of classical statuary. The naked body (both men's and women's) as Baudrillard argues in advertising and fashion refuses 'the status of flesh, of sex and the finality of desire' (Baudrillard 1998). Nakedness does not work when the form of the body is objectified, the form of nudity as explored by Clark – the sheath or impenetrable surface suggested by classical sculpture or the impermeable modern surface as shown in the images of Smedley's 'nude swimwear' that replicates skin but contains it without any of its creases, blemishes and imperfections. Something about the hardness of this surface, its impenetrability in fact, is not inviting. It is alien, deflecting any touch or engagement with it as an object. Sometimes two contradictory things can co-exist, the desire to touch and being repelled by something that appears cold and alien.

Fig. 6.35. John Smedley model Irene wearing a one-piece skirted swimsuit. JSAT.

Why would John Smedley produce a swimsuit that suggested nudity? Being naked had been promoted throughout the 1920s and 1930s as the best way to absorb sunlight, with its healing properties and tanning capacity as discussed in Chapter 4. In Germany and Scandinavian countries people swam and exercised naked and enjoyed being true 'helio

humans' (Carter, 2007). However, legal and local authority restrictions did not allow the British to participate in naked bathing or other exercise. In promoting unclothed sunbathing in their book 'Sunrays and Health: everyday use of Natural and Artificial Light 1929' Ronald Millar and Dr EE Free, advise that:

> 'Not many people are in the fortunate position of being able to take all-over sun baths in the open air. In the present state of public modesty, they require a wilderness or protected private grounds, or a roof high enough to over tower its neighbours. But a bathing suit as scanty as law will allow or local custom condone, is the next best thing to no clothes at all.' (Millar and Free, 1929, p88)

They also advocate wearing bathing costumes whilst sitting in the garden or playing tennis to increase exposure to the benefits of sunshine to the body in the open air.

The nude swimming costume certainly functions as a second skin, not only in appearance but by suggesting the skin beneath in surface and form. The swimsuit would, of course, work successfully as a contrast to a suntan – enhancing the glow and vibrancy of even a light tan. Given the cost of Smedley swimwear, it is possible that the client group would wear these abroad, perhaps at the Riviera where the tan was celebrated and partial nakedness allowed. These images exemplify the swimsuit in its modernism suggesting hard surfaces and smooth qualities. The sheath of the swimsuit against the body and the skin suggests not only glamour but the appearance of nudity without either its vulnerability or its inappropriateness. This swimsuit merges into the skin but is defined enough to create a demarcation between the two surfaces. The form of the swimsuit would sit perfectly against the modernist architecture of a lido or seaside resort architecture. Cheng would state that in the early 20th century there was a reimagining of the relationship between essence and covering and interiority and exteriority. (Cheng, 2011) The modernist swimsuit as a second skin, flattered by an environment of clean, smooth surfaces and modern materials personifies that relationship.

Fashion historian Jennifer Craik (1994, p.136) suggests that swimwear is marginal clothing very much like underwear and in Fig. 6.36, which shows a John Smedley lace bather, the similarity is evident. The swimsuit takes on the form, shape and texture of some of the one -piece underwear of the period. The delicate lacy knit structure was used on similar underwear pieces that the company produced during the late 1920s and 30s, although the form of the gusset and the opaque panel in the back of the garment (shown in Fig. 6.37.) determine it as swimwear.

Fig. 6.36. left: Front view of lacy bather. 2011 4609. JSACT

Fig. 6.37. right: Rear view of same.

Craik states that: ‘In order to distinguish swimwear from underwear designs emphasised tailoring and accessories such as belt, buttons and buckles to reinforce the public respectability of swimming and remove it from the private, erotic associations of lingerie’ (1994, p.146). It is evident from the swimwear shown in Fig. 6.38. that the addition of a braided strap and the pom-pom fastening serve not to detract from the appearance of nudity but to reinforce it. The visual image of the swimsuit suggests the surface of statue – clean, with a hard surface and as in the ancient Greek convention of sculpture the garment covers pubic hair along with any other blemish on the torso. It therefore gives the body an idealised form. It does, however, invite touch, not only to the fabric of the swimwear but also potentially to the flesh underneath.

Fig. 6.38. Skirted Cream bather with pom-pom attachment. 2011 4616. JSCT.

To novelist Angela Carter clothes masquerading as flesh, were more highly erotic even when they covered most of a woman's real flesh – leather, suede and velvet, for example, are "profoundly tactile fabrics that mimic nakedness and invite the touch" (Carter 1982 cited in Barcan, 2004, p.16). Wool is soft but may not have the exact qualities of leather or velvet but it is apparent that the Smedley swimwear seeks to masquerade as flesh. The juxtaposition of flesh and flesh-like garments have always held an allure. As Barcan contends:

'There are clothes whose function is paradoxical rather than marginal, their primary function being to make the body look naked. Others like "nude" makeup or "nude" stockings belong to the everyday world. A number of elite fashion designers have played with making clothing that simulates nakedness, and have made "nude" outfits, flesh-coloured shoes, dresses, jackets, handbags stockings and makeup' (2004, p.16).

The naked or apparently nude dress is something that existed in the modernist period, actresses such as Jean Harlow and Marlene Dietrich wore clothing that simulated naked flesh. However, the most iconic example of this is the dress that Marilyn Monroe wore in a later decade for the birthday party of John Kennedy shown in Fig. 6.39 Although she had promised to dress discreetly the dress designed by Jean Louis was made of transparent nude fabric, with rhinestones sewn in strategic places such as over her breasts and genitals (Banner, 2012, p.392). The dress, however, was deceptive – it appeared to cover her body in normal lighting but under stage lights the fabric seemed to disappear leaving only the

rhinestones showing. This of course, historically, made the dress notorious and it has been copied by performers since.

Fig. 6.39. Marilyn Monroe singing 'Happy Birthday' Mr President.

As the cultural historian Barcan states:

'Most studies of nudity even politicised studies, focus on representation – whether from the perspective of an implicitly masculinist visual arts tradition (the nude in photography, sculpture or painting) or from feminist cultural criticism (e.g. debates about pornography or the male gaze)' (2004, p.5)

She even proposes some binary oppositions that are applicable to the reading of the clothed/unclothed body, these would be:

Nakedness	Clothing
Natural	Cultural
Visible	Invisible

The debate about the nudity and nakedness is an important discourse when applied to garments, the interplay between the fabric and flesh is seen as erotic whereas full nakedness is not. Nudists for example would claim that their bodies are not erotic and the

intention of nakedness in the open air or on the beach is for the purpose of health and very possibly the pleasure of sunlight on naked skin. Nakedness is viewed as a natural state – either in the context of goodness and innocence (Williams 1976, p.223) or in its more virulent state of 'survival of the fittest' – nature as a powerful personification. Nudity has continued to be a cultural debate, as Barcan has indicated that has taken place through both masculinist and feminist cultural critiques. Flesh and skin are seen as porous in feminist readings where the inside of the body (particularly a woman's body) is vulnerable and penetrable, not just sexually but also surgically. Skin is not impermeable. This chapter seeks to investigate the aims of modernism to create the impression of impermeable surfaces and a relationship between body and building through discourses of fashion and swimwear. A cultural critique that lends itself to this approach is that from Kenneth Clark's book on the Nude where he suggests that the model that an art student might draw may be 'shapeless and pitiful' (Clark, 2023, p.3) whereas the classical nude on the other hand is perfect, unblemished, it abolishes the wrinkles, pouches and other small imperfections of the body. Clark suggests that the unruly body is perfected in art by the processes of purification, discipline and subordination and this like the impenetrable surface suggested by classical sculpture, resonates with the operations and surfaces of modernism.

Conclusion

This chapter has used archival research into women's magazines from the interwar period to demonstrate how the increase in consumerism coincided with the shift in women's working lives and the expansion of their feminine identities. Beauty in the guise of 'allure' was seen as a 'tangible' asset, as Dyhouse (2011) has shown, in uncertain and fluctuating economic times. It is important to stress that 'allure' and 'glamour' are different from implicit beauty of face and form. Both 'allure' and 'glamour' were constructs and subsequently they were achievable across the class spectrum. An individual could make themselves 'alluring' or 'glamorous' with appropriate role models, discipline and effort. This was more achievable with disposable incomes but not exclusively so. Magazine advertising played on this and used multiple forms of aspiration to induce readers to buy.

The swimsuit, was well placed to be a pivot of advertiser's attentions because of its connections to the day-dream of the holiday, the pleasure of the beach or lido and its capital of being outside of the ordinary and every day. Consequently, it is a perfect fashion garment for the 'imaginary realm', the place where the consumer can go to imagine what that garment will do to transform their bodies, enhance their lifestyle or merely escape. Aspiration therefore played a very strong part in advertising at both the high-end and the low-end of their market. The 'eyes' of the working-classes in this instance, rather than Baudelaire's 'poor' are drawn to the glamour of the swimsuit, the sunlight, and sensuousness of spaces such as the beach. Even if their beach is in Blackpool or Southend

and the lido in Morecambe, it is possible to create their own 'imaginary realm' through aspiration. The chapter has shown through cost differentiation between the high-end and the home-made, the somewhat soggy and saggy reality of the working-class woman's swimsuit.

The swimsuit appears in the cinema as a glamorous item of clothing enhancing the sexiness and allure of the Hollywood stars. This chapter has shown that the process of identification with these new role models enabled a shift away from Veblen and Simmel's theories that the upper-classes and haute couture were the zenith of the fashion system.

Advertisers adopted advanced technologies such as photography to enrich and apparently 'make real' the aspirational qualities of their products. In the case of the swimsuit this was not always successful as the chapter has shown and that in some cases illustration was more elegant and appealing to the consumer. Gradually though, through the use of movement and natural settings, photography of the swimsuit became more successful and its use, particularly in high-end magazines, more ubiquitous. This added more to the aspirational drive of the marketing of swimwear as a sports item.

The aloofness of the mannequin and the cool impenetrable gaze of some of the icons of glamour was gradually replaced by a more open, sometimes smiling visage in the 1930s. The chapter explored the rationale behind what may have been, as Evans has contended, 'A mechanical smile' (2013). However, glamour, as the decade developed through cinema and other media, had multiple faces many of which were accessible to the spectator and possibly used in advertising to encourage identification. Glamour was made more affordable to the young working-class woman but continued with its illusory qualities.

Class differential, however, continued to play its part in swimwear. Despite the efforts of knitwear pattern designers for working-class women's magazines to employ yarns, techniques, and all types of tips to help the knitter keep the swimsuit fitted to the body, sadly the reality was that it did not. The reality was that as a swimmer or a sunbather you were much more secure in a manufactured garment in the main than a hand-knitted one.

The next chapter builds on some of the assertions and findings of this chapter by presenting and analysing the results of the re-creation of both a high-end and home-knitted swimsuit and the re-enactment of a swim using these garments. The re-enactment examines how the re-creation of an archival manufactured swimsuit performed alongside one of the hand-made versions knitted from an historic interwar knitting pattern.

Chapter 7: Re-creation and re-enactment: exploring the material and performative qualities of the interwar swimsuit

Introduction

This chapter explores the reality of wearing both the manufactured and home-knitted swimsuits through the examination of women's magazines both high-end and working class, along with the aspirational elements of advertising and promotion.

The discussion so far has raised some questions about the lived experience of class difference, the ideologies of health and hygiene and the interactions between aesthetic and material properties. To gain greater understanding of these I investigated the materiality and serviceability of interwar swimwear. Sophie Woodward (2020) defines materiality in a basic sense as referring to 'what the properties and capacities of things are, and how these can lead to objects having 'particular effects' (p.17); in the case of the interwar swimsuit, these effects were comfort and function. It was important as part of the research process to find out how it was constructed, what it felt like to wear and what it was like to swim in.

The chapter discusses the various stages leading to the re-creation and manufacture at Nottingham Trent University of an archival swimming costume originally manufactured in the interwar period by John Smedley Ltd from a selection in their archive. In addition to the production of the recreated swimsuit we also made two hand-knitted garments including a swimsuit and swimming trunks from original knitting patterns of the 1930s. These were then tested and evaluated by swimmers in a lido.

My archival research demonstrated that swimwear manufacturing companies were advertising new knitwear techniques including telescopic methods and the introduction of elastomer core thread to produce a perfect figure fit of the garment. Horwood (2000) and Warner (2006) had cited examples of where hand-knitted swimsuits had sagged when wet and I wanted to test both manufactured and hand-knit garments on swimmers in water to ascertain how the garments performed by triangulating the swimmer's testimonies with the physical performance of the different costumes. This enabled me to establish a difference in the materiality of the costumes and confirm my proposition about class.

Material Cultural Analysis.

The thesis as a whole engages with both visual and material culture as a multidisciplinary process and this chapter initially tracks some of the historical developments of object study through the section on Material Cultural Analysis. It examines the development of the discourse of material culture and how this is applicable to the project. The chapter principally draws on material cultural analysis as it has evolved in its contemporary discourse. This extends to, and includes some of the discussions of archaeology, museum and archive studies that support the reconstruction of historical garments and re-enactment as a tool to interrogate the meaning and context of an object. The findings from the processes of remaking and re-enactment extend the range of knowledge available to many academic disciplines including fashion and textile histories by building on rather than replacing established approaches to the reading of a garment. (Davidson, 2019, Küchler and Miller, 2005).

Social historical analysis also contributes to the 'particular effect' (Woodward, 2020, p.17) of wearing a garment that compromises one's modesty and comfort in a public place. The making of the swimsuits and the information garnered from the swimmer's experiences of wearing them allowed for an enhanced understanding of the material properties of the interwar woollen swimsuit.

Authenticity.

This chapter then engages with the concept of authenticity in the 're-creation' of heritage objects for study. Although no heritage artefact can be genuinely 'authentic', striving for validity and cogent interpretation of an original object is paramount to most archaeological and museological re-creations. The chapter examines some of the debates about authenticity in relation to the remaking of the swimsuits using experiential archaeology as a point of reference.

Evidence Gathering Day at John Smedley Ltd.

This chapter further explores the findings from an evidence gathering day at John Smedley Ltd. Participants were asked to bring along photographs and stories of swimming in some of the local pools including the pool at the New Bath Hotel, Matlock used for the swim. They were also asked to bring in any swimming costumes (including those made by John Smedley Ltd) from the interwar period to share. Findings were interesting and varied using a mixture of directed questions and qualitative analysis. Some of the findings useful to the project included photographic evidence of behaviours in swimsuits, including men taking their swimsuit tops down to sunbathe before swimming trunks were available and historical information about the New Bath Hotel Lido and one of John Smedley's models for a swimsuit.

Re-creation and Re-enactment.

This chapter then discusses the rationale for the re-creation of the swimsuits. It will explore this through the concepts of Bruno Latour's (2007) actor networks and Ian Hodder's (2012) conception of 'entanglement' in the connections between people, objects and their relationships. A number of people were engaged in the re-creation of the swimsuits and in the re-enactment of the swim; their relationship to the concept of networks and entanglements are discussed later in the chapter. The exploration of material cultural evidence is provided by the process of re-knitting historical swimwear as a reconstruction within the confines of present-day technologies of machinery and yarn. One of the key challenges was selecting a swimsuit from the archive that could be remade as close to the original as possible and this excluded many of the archival costumes that used elastomer in their construction. A lace bather was finally chosen for the re-created swimsuit; this is discussed in this part of the chapter along with the interactions of the various members of the team involved in the process of remaking as in a network or entanglement. Similar compromises had to be made with the hand-knitted swimsuits as detailed also.

The latter parts of the chapter examine two re-enactments of swimming in these garments that took place to explore the material qualities of the garments and bodily experience of the swimmers who wore them. The swimwear was tested in the lido at the New Bath Hotel, Matlock which was opened in 1934 with support from a government grant. This venue was appropriate because of its historic time frame and proximity to John Smedley Ltd. The Triathlon club who uses the pool were keen to try out the swimsuits, as serious swimmers this added to the rigour of the test. It accorded an added dimension to the swim whereby competitive swimmers could give their findings along with others who swam for leisure purposes. This chapter explores the findings from this test and the 'embodiment' (Davidson, 2019) experienced by the swimmer's being clothed in historic garments in the lido. The idea of embodiment presented by Hilary Davidson, suggests that the 'embodied turn' in dress history encompasses not only the production of an object through re-creation but also 'the social and physical bodies inherent in dress objects and practices and how subjective bodily experience can contribute to history studies' (Davidson, 2019, p.330). Swimming in the recreated garments explored the physical body in the process of making the recreated swimsuits, through the adjustment of knitting patterns to fit contemporary measurements. That which Davidson describes as 'subjective bodily experience' (2019, p.330) was useful in ascertaining what the garments were like to wear. This was particularly pertinent to any effects of sag or bag produced by wet swimsuits which impacted on their comfort and function.

There were many organisation challenges in relation to the re-enactment and Hodder's theories of 'entanglements' (2012); his contention that 'entanglements are open, complex

and uncertain' (p.167) underpinned much of the activity during the day. The presence of a film crew caused additional management problems and the threat of a thunderstorm, which would have meant closure of the pool and a complete reschedule of the event, were amongst the uncertainties and complexities that were dealt with. The chapter discusses whether the reconstruction of archival garments is a useful tool for the interpretation of historical clothing. It also examines the implications for the swimmer of the class differential implicit in the different types of garments. Understanding the materiality of the swimsuit through re-creation and re-enactment proved to be an effective tool in eliciting evidence that went beyond what was available in secondary sources and visual analysis.

The chapter uses many forms of data including interviews, photographic and film evidence, archival research, garment manufacture including the sourcing of materials and observation.

This chapter finding's show that the manufactured swimsuit holds up better in water than the home knitted version after the triangulation of different parts of the research process including interviews and observation. Given the cost of the manufactured swimsuit in the interwar period as opposed to a home-knitted version, as detailed in a previous chapter, it points to class differential and differing material properties. Woodward's (2020) effects of construction, comfort and function were undermined in the case of the hand-knitted version. The chapter finally considers the 'stigma' (Goffman, 1966) associated with garments that may cause problems with modesty and confidence in public places.

The construction of the re-enacted garments and their comfort (or discomfort) factors have emerged from the significant object study undertaken in the research process. The next section examines some of the historical and contemporary underpinnings of this.

Material Cultural Analysis

Material cultural analysis study has evolved over a number of decades. The epistemology of object study has an origin in Heidegger's essay 'Poetry, Language, Thought' (1971) in which there is a chapter entitled 'The thing' where he considers the jug. Hodder notes that since Heidegger contends that the jug stands up against us 'it can be described as an object' (Hodder 2012 p8) and Hodder then theorises that 'When a scientist explores a jug to see what it is made of and what it was used for, it becomes an object of study, something distanced and particular' (ibid). The 'thing' becomes an object that exists in its own right as an entity; however, it has water or wine poured into it and in turn poured out of it thereby connecting humans who do the pouring to other natural or cultural elements. As Hodder (2012) suggests the jug also has material properties, made from different types of clays to make it water-tight and the handle needs to have the strength to be lifted when the jug is full of water. So, the manufacture of the jug is significant but not, as Hodder notes,

necessarily explored in all approaches to object study. The swimsuit does not, as Heidegger states 'stand up against us' unless it is actually being worn by a person. (Hodder, 2012, p.8). However, it is similarly connected to natural and cultural elements by being worn for swimming (in water) and is a means of displaying the fashionable body on the beach. The swimsuit's manufacturing process like Hodder's (2012) reading of the jug is central to my approach to evaluating it as an object as the manufacture creates a distinctly different structure between machine and home-made swimsuits.

Appadurai's study 'Social Life of Things' (1986) takes the idea of the 'object of study' further by examining the social dimension of objects and their meaning in society. Woodward and Fisher point out the 'cultural turn' in the 1980s and 1990s (2014), particularly in archaeology and anthropology was concerned with material culture as they state: 'These disciplines examined the relationship between cultural subjects and objects' (p.3). This is important in establishing the link between culture, society and objects as an academic study. Later the work of theorists such as Bruno Latour (2005) (Actor Network theory), Ian Hodder (2012) (Entanglement) have deployed theoretical frameworks that look at the complex nature of human/object interactions that inform my analysis of re-knitting and re-enactment where materials, human and technologies encounter one another. There are also theorists who examine clothing and textiles as artefacts of study, in particular Klepp and Hebrok (2014) whose study of the properties of wool, the experiences of wearing wool and its associations has a useful parallel with this study.

Latour's Actor Network theory relies on an interrelationship of human and non-human actants (multiple individual actors) which have agency within a network or an assemblage that challenges social science to consider the 'object' or non-human actant to have equal status in 'collective representations' (De Vries, 2018). In this case the 'actants' would be the body (swimmers), water, wool, construction of knitwear and so forth. The 'collective representation' or assemblage would examine the interactions of the actants both human and non-human. Entwistle (2016) contends that fashion itself is an assemblage or 'collective representation' involving human and non-human actors. Latour (2005) discusses how social differences projected onto a fabric may assume that, for example, silk is a high-brow fabric and nylon a low-brow fabric; whatever these assumptions are based on they do not consider the composition and construction of the cloth and that without these 'mediators' as he contends 'this social difference may not exist at all' (p.40).

Mediators, as Latour argues may 'transform, translate, distort and modify the meaning or the elements that they are supposed to carry' (2005, p.39). Latour suggests that if the manufacturing processes and construction of the fabric, in this case the knitting, were seen as mediators then the use of machinery to produce a swimsuit with a tighter firmer construction than the hand-knitted variety might be another way to establish class

differential in the performance of the swimsuit. Other mediators may have included the message that the swimsuit was also svelte, figure-hugging and modern. Latour (2005) contends that '*without* the many indefinite material nuances between the feel, the touch, the colour, the sparkling of silk and nylon, the social difference may not exist at all' (p.40). Therefore, what he suggests is that the technical and material qualities of a fabric and the methods of production are as important in determining the meaning of a material object in terms of class/social difference as assumptions made on preconceived knowledge about status and quality. This is particularly relevant to the reconstruction and experimental embodiment of historical swimwear to establish not only social difference but to challenge preconceived ideas such as those referred to in Chapter 5 that swimming as an exercise represented democracy (Smith, 2005). Swimming in itself may have been democratic but the swimsuit was not as the findings of this chapter illustrate.

Other theorists show how their approaches to the materiality of cloth go beyond Actor Network theory with specificity and ideas of sensuality – they engage with the feel and look of the fabric. Klepp and Hebrok, (2014), for example, explore wool as a material for clothing, its properties and assumptions based on the idea of wool as an 'itchy' and uncomfortable fabric when worn next to the skin. Their methodology explores how the wool count and length of fibre may have affected customers preconceptions of wool however their findings suggested that associations and experiences of wearing wool may have added a social and cultural dimension to their responses also. As Küchler and Miller contend: 'The sensual and the aesthetic – what cloth feels and looks like - is the source of its capacity to objectify myth, cosmology and also morality, power and values.' (2005, p.1). This quotation sounds rather ambitious in terms of contextualising a garment but this thesis does engage with many of these factors. Practices in archaeology as shown next can inform ideas about materiality in dress history despite the subject area differences.

Hilary Davidson is a dress historian who has previously worked on the reconstruction of garments, sometimes in an historical context but otherwise in conjunction with archaeology where reconstruction is accepted to be an information gathering process. Davidson (2019) contends that: 'There has been a wide-spread reluctance within the historical discipline to accept the experimental and interpretative processes involved in the re-enactment of material processes as valid methods for investigating the past' (p.331). Davidson argues a case that the re-creation of historical clothing is something that fashion and textile scholars would benefit from as a means of 'filling the gaps, conjecturing, or reading absence in incomplete presents' (2019, p.332). The idea of experimenting with the embodiment of re-created garments through making and wearing presented itself as an important method for the analysis and interpretation of the swimsuit.

The swimsuit is stored in the archive as a flat object. To understand its function and wearability, as previously stated in this chapter, I undertook the re-creation of an archival garment from a high-end manufacturer and trialled this against a costume knitted from an original 1930s pattern. The concept of the 'flat' swimsuit is that due its construction – often cut and sewn, rather than fully fashioned during the interwar period, it only takes form when placed on the body of the wearer. Therefore, as a flat unworn object it lacks what material culture researcher Sophie Woodward describes as 'facets such as identity, sexuality and social role' (2005, p.21). These become discursive points when the swimsuit is worn and subsequently wet.

The class differential implied in the costs of purchasing a swimsuit from a manufacturer (Horwood 2000 p.666) and either hiring a swimsuit from the swimming pool (SMS, Box 5, S2013-18) or hand-knitting the garment from a range of patterns available in women's magazines (as shown in Chapter 6) needed to be investigated and evaluated. Chapter 6 discusses the aspirations of style and comfort to be found in working class women's magazine knitting patterns as opposed to the actual reality of wearing them. Piloting the swimsuits in a pool in 2019, worn by swimmers allowed for dialogue about their material properties along with the swimmer's experience of its comfort and/or reliability. Would it hold up in the water? A drawing by artist Janet Samson (Fig.7.1) from 2015 in response to my question about her experience as a child provides anecdotal evidence of the sagging effect of hand-knitted woollen swimming costumes. The image clearly depicts a wet drooping costume that she said acted like a 'balloon in water' (Samson, Interview, 2015). Fig.7.2 shows Alf Bower and his father wearing knitted woollen swimming trunks in the 1950s, which the caption suggests had to be held up in water to stop them falling down (Bower, communication, 15.11.2015). This photograph prompted me to include men's bathing trunks in the experiment.

Fig. 7.1. Drawing by Janet Samson, 2015.

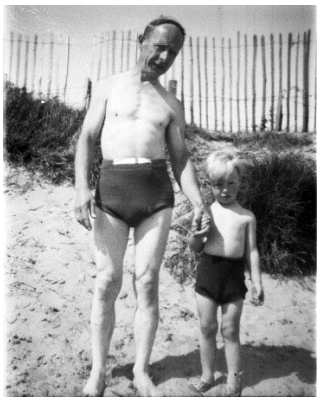


Fig. 7.2. Photograph of Alf Bower with his father. He recalls having to 'hold these up when they were sodden'. (Bower 15.11.2015)

Secondary sources also suggest that hand-knitted garments were inclined to stretch and sag (Horwood, 2000, Warner 2006). This in itself could support the proposition that people had different experiences of swimming depending on their class background and financial circumstances. However, trialling the re-created garments on swimmers provided a wider range of information including the sensory experience of wearing the swimsuits and how much the wearing of these swimsuits affected the swimmer's performance and so forth. Building on the type of research carried out by Klepp and Hebrok (2014) and Davidson (2019) it was critical to produce the re-creations and use these as part of a material cultural analysis and as a methodology to establish the materiality of both the manufactured and hand-knitted swimsuit.

Rationale for the reknitting and remaking of the swimming costumes.

Jules Prown observed the study of material culture that assumes that 'the existence of a man-made object is concrete evidence of a human intelligence operating at the time of fabrication.' (2001, p. 70). This chapter describes a process that takes this assumption as a starting point using Prown's progressive readings from 'Mind in Matter' (Prown, 2001) whereby stages of description, deduction and speculation are followed when interacting with objects in archives and museums.

I have engaged with these principles as a methodology when working in archives. Although material cultural studies have advanced and developed since his time of writing his staged analysis is still relevant. For example, his detailed descriptive stage is helpful in acquiring all the necessary information from an archive. I was certainly mindful of this during any archival work. The deductive stage is the already accumulated knowledge that is brought into the engagement with the archive and the speculation is the testing of the findings and free association with emerging ideas and concepts that form the beginning of a research project. The testing and reconstruction of swimwear has been very much a part of my

intentions for gathering evidence from the beginning of my PhD and this builds on and contributes to Prown's speculative stage as discussed in the next paragraph.

Curators Kim and Mida have also published 'The Dress Detective' (2015) which has detailed comprehensive methods for object-based fashion and dress history. However, it leans more to the description and deductive aspect of Prown's theory rather than to the speculative which asks what questions the object presents and draws up a programme of external validation for the research. Researching historic garments in archives was an important part of the research for this thesis and I gathered a great deal of knowledge from this activity – following the principles of description and deduction to present speculative questions. Some of the acquired knowledge, particularly from the descriptive stage included knowledge about sizing of the historic garments. This needed to be factored in when designing a re-creation; it needed to fit a contemporary body so very early on we needed a model for the manufactured costume and one for the hand-knitted garment.

Research in the collection of swimwear in the Beecroft Art Gallery revealed a collection of cotton swimwear with motifs on the front, indicating which corporation had 'hired' out the swimwear to their local lidos and municipal baths. The hiring of swimsuits is discussed in Chapter 4 as a means by which the authorities encouraged swimming as an exercise and, for me, this was an important insight, acknowledging that for some people during the interwar period the acquisition of a swimsuit was a difficult matter.

Another key insight that emerged from the archival work was the rivalry and competition amongst swimwear manufacturers to produce a figure fit swimsuit as discussed in Chapter 6. Symington's of Leicester patented a telescopic knit technique (Symington Archive, Leicester Museums Service). The knowledge of the use of elastomer thread in the knit structure to enhance the figure-fit aesthetic of the swimsuit also came from archival research including Symington's collection, Meridian collections and John Smedley Ltd.'s archive. Sophie Woodward determines the types of knowledge that can be obtained from similar approaches such as cataloguing and documenting the uses of objects. These she states as: spatial, material, relational and temporal (Woodward, 2020, p.85). Material knowledge 'types of things (and how you categorise them), material histories including patterns of use' (ibid), was applicable to sizing and figure fit knit structures and the discovery of a collection of hire swimming costumes was 'relational.' Woodward (2020) argues that all these types of knowledge co-exist and this did seem apparent it what I learned from archival research.

Although the archive work provided knowledge of construction, size and fit and so forth there were gaps in the engagement with materiality. Many of the archives permitted me to handle the material using gloves and Leicester Museums were quite happy for me to touch and stretch the garments without gloves to gain tactile information from their collection.

Some archives would only allow handling by the curator, which is understandable to preserve the garment, but this made it rather difficult to ascertain some of the features that I was looking for including stretch and softness. Direct engagement with the historic garments was therefore variable depending on archival policy.

In these situations where direct engagement was not possible the information that was available remained illustrative or textual (relying on curatorial notes for example) rather than haptic. The garments were also flat and at one stage this was limiting in that it was difficult to see what the swimsuit would look like on a person. With some persuasion, the archivist Jane Middleton Smith allowed me to photograph the John Smedley Ltd collection on mannequins (archivists are not keen on excessive handling of their collections, which this involved) using the size 6[2] mannequins that were the smallest in the range that John Smedley have. They subsequently became 'embodied' (Davidson, 2019, Pink 2015) when the garment was put on, albeit, a mannequin, it brought it to life and made it possible to read the garment as a three-dimensional form and to assess the swimsuit's relationship to the streamlined body of the 1930s. Leicester Museum Services were also able to give me photographs of some of their collection on models along with promotional material that demonstrated how their collection would have looked when worn.

One of the aims of my research was to know how these swimming costumes performed in water when swimming and what they were like to sunbathe in before and after swimming – this would supply some evidence of where and how they were worn in the sites of swimming or sunbathing as shown in Chapter 4. It would also provide greater experiential knowledge of the materiality of the swimsuit. I had one interwar knitted woollen swimsuit of my own that could be swum in but an artefact in an archive or museum cannot possibly be subject to that kind of wear. A solution presented itself when Jane Middleton Smith, the archivist at John Smedley Ltd responded favourably to the suggestion that we remake one of the archival garments.

The remaking and replication of garments has some precedents in fashion and textile history and theory, although for different purposes than those which motivated this research. Davidson and Hodson (2007) published a paper about the replication of a black work jacket on loan to the gallery of costume at Platt Hall, Manchester City Art Galleries outlining the importance of this type of object research. They state that

> 'Replicas can present new types of material research. The function of recreated items of dress which are used increasingly by museums, can be as part of a

[2] The John Smedley bathers were sized from 34 – 40 inches indicating either a bust or hip measurement. The samples that I photographed were usually 36 inches. That would have indicated a size 12 in the 1960s/1970s (from personal experience). The use of the size 6 mannequin shows how much a shift in sizing in recent years has occurred.

handling collection, to complete an outfit or provide correct underpinnings' (Davidson, 2007, p. 204).

In my own research the replica was used for swimming, something that would have been prohibitive with an archival garment. The material research conclusions confirmed some of the insights I had deduced from other aspects of the research process such as literature, archives and visual analysis. This type of research using a simulacrum of the past is still controversial; archaeology, for example distinguishes between the experimental which has a scientific rigour and holds academic credibility and relies on controllable imitative experiments to generate and test hypotheses for interpretation (Graves-Brown, 2015) and the experiential which focuses on action and practice and is more explicitly sensory. The newer methodology of experiential archaeology uses re-enactment or re-creation to give information that is otherwise unavailable. (Graves-Brown, 2015). Re-enactment and re-creation are more versatile in relation to the study because it provided both a resemblance to the original archival garment and knitting pattern along with the swimmer's experience of the reconstructed costumes. Re-creation and re-enactment are becoming more accepted and suited the project in terms of the findings, outcomes and available resources. Sarah Pink states that 'embodied ethnographic experiences have 'been recognised in much existing methodological literature across the ethnographic disciplines' (Pink, 2015, p.27). Dress historians such as Hilary Davidson have already established a precedent for this type of experiential research. Given these precedents, constraints on resources and conservation requirements it was appropriate to use this approach.

Authenticity in Heritage Reconstructions.

David Lowenthal writing in the 1980s in a post-Thatcherite environment where history became 'heritage' and a means of generating income through the advent of Visitor Centres, interactive museums and re-creations of mining and other villages warns that: 'The past is a foreign country' (1985). This statement particularly when read in the original quotation from which Lowenthal took the title of his book 'The past is a foreign country they do things differently there' (Hartley 2000) from the book 'The Go Between' originally published in 1953). The phrase is a caution for historians particularly when they embark on reconstructing objects of the past either through re-creation or re-enactment.

Kevin Walsh in his chapter 'Simulating the Past' in his 1992 book 'Representing the past: Museums and heritage in the post-modern world' also examines major visitor attractions such as Beamish, Disney World and Jorvik in relation to simulation and heritage representations. His critical appraisal of depictions of the past through spectacle and image rather than historical information and critique (Walsh, 1992), is important in terms of acknowledgement that critical engagement with the past is essential in any form of re-creation and re-enactment that is intended to be used as a methodology for the purpose of

interpretation of past objects or events. The question of the relationship between critical engagement with the past and the authenticity of a re-creation or reconstruction is an important one here. The past is often sanitised in reconstruction, particularly the reconstruction of villages such as Beamish where smells and dirt have been eradicated from what Latour would describe as the 'assemblage'. Critical engagement with, in this case, the swimsuit and its role in the interwar period became an important aspect of the project. Detailed information in (Appendix 1) and the section in this chapter on 'the re-knitting and recreation of manufactured and handmade garments' demonstrates some of the thought processes that went into the making of the swim wear, critical decisions were made about the type of yarn used to provide a close equivalent to the original in both the hand-knitted and manufactured garments.

The most significant decision was concerned with the choice of a lace 'bather' from the John Smedley Archive Charitable Trust rather than the 'Lastex' bather that we had originally looked at. Lastex was introduced into British manufacture in the early part of the 1930s decade (Lastex Yarn, Journal of the Textile Institute Proceedings, 1935) and is a Lacton thread or rubber filament that can be used as a core for wool or cotton in the knitting industry. It gives stretch and support to a knitted garment and was particularly useful for garments such as hosiery, underwear and swimming costumes that need to fit snugly to the body. There was no longer an equivalent to Lastex yarn and contemporary knitting machines could not take this, so the lace bather with a knitted structure that fitted to the body was re-created instead. Re-creations cannot be truly authentic as it is generally difficult to replicate the past in the same way as an original would have been created, however an approach which seeks to be as true to the original as possible is a good way forward.

Henry Cleere in his paper on 'Authenticity in Archaeological Conservation and Preservation' explores the historical background to the concept of authenticity in heritage and conservation. He refers to the 1994 ICOMOS (International Committee on Monuments and Sites that hosted a conference of experts in Nara, Japan (Cleere 2014) Their findings in relation to authenticity were that it is 'the essential qualifying factor concerning values, understanding of which plays a fundamental role in all scientific studies of the cultural heritage' (Cleere 2014, p.4) Much emphasis is placed on the idea of truthfulness, authoritativeness (from the Greek 'authentes' meaning master or perpetrator); and being made or done in the same way as the original. (Clere 2014). The Nara document makes several points to be considered in archaeological sites, one of which I have quoted above, but the main point that ties into my project and re-creation and re-enactment is this:

> 'Depending on the nature of the heritage, its cultural context, and its evolution through time, authenticity judgements may be linked to the worth of a great variety

> of information sources. Aspects of the sources may include form and design, materials and substance, use and function, traditions and techniques, location and setting, and spirit and feeling, along with other internal and external factors. The use of these sources permits elaboration of the specific artistic, historic, social, and scientific dimensions of the cultural heritage being examined (Cleere, 2014).

This research included a range of different data and source material such as the form and design of the swimsuit, materials and fabric construction, knitting traditions and technique which were adjusted according to modern day standards. The location and setting of the swim were researched thoroughly in terms of historical veritas (being of the period – hence a 1930s lido) and being an affordable resource to hire for the swim. Resource considerations were paramount for this project, finding swimmers, locating a lido that we could hire and putting the two elements together within the same time frame was logistically problematic. The use of the New Bath Hotel lido had elements of historic and social dimensions to the striving for truthfulness and authority through its links to John Smedley Ltd and the fact of it being newly restored; an independent heritage project in its own right. Stylistically, a lido such as Saltdean near Brighton as shown in Chapter 4 with its modernist smooth surfaces and chromium fitments, the glamour, explored in Chapters 5 and 7, of the swimsuit and the lido would have suited the project better overall but that was not a practical option. The lido used at the New Bath Hotel which had links to John Smedley Ltd, was of the right period and had been recently restored.

Lowenthal (in Larson 1995) argues that: 'authenticity is in practice never absolute, always relative'. Some of my findings from the project did concur with what Lowenthal states here absolutism and lack of conjecture cannot be applied in every part of the process of reconstruction as I have discussed in this section. Maria Piazzoni (2018): 'concedes that 'we must embrace the ambiguity of authenticity to reveal its power' (p.2) She defines aspects of contemporary authenticity in scholarly conversations about the term to be 'Moral' authenticity is a condition of being – or aspiring to be – true to oneself (Heidegger, 1927); material authenticity refers to the veracity of an artifact and is central to theories and practices of preservation (Jokilehto, 1995); finally symbolic authenticity is what consumers seek through the experience of images and place (Knudsen and Waade, 2010 in Piazzoni 2018, p. 2).The latter and most contemporary interpretation of the term authentic where it becomes a powerful branding tool is not part of the purpose of this study but Piazzoni's other interpretations of the term authentic are applicable. These being the questions of moral authenticity – being true to oneself in terms of purposefulness and rigour of inquiry were very important to all the team involved in the project – in a sense making the 'entanglement' as in Hodder (2012). The team may have questioned and challenged each other on small points but each wanted their part to be as truthful and lacking in compromise as was possible. For example, one of the team wanted to make the garment with a thinner

yarn count so that garment would be lighter and less thick. However, this was overruled by another participant who wanted to keep the yarn count as close as possible to the original This is discussed further in this chapter and in Appendix 1. Material authenticity in making decisions about what technologies and fibres to use were important for the replica swimsuit. Symbolic authenticity existed in the place of the swim. The setting and the ambiance of the swim was not important for 'consumers' as suggested previously by Knudsen and Waade (2010 in Piazzoni, 2018),. but it was very important for the participants. Symbolic authenticity was occasioned by the pool having being completed in the interwar period and being a heritage project in itself.

The re-creation of a past garment for the purposes of this study therefore needed to be approached with a critical understanding of what it might present in terms of interpretation and what its limitations would be. The striving for authenticity in the reconstruction of the garment could only be attempted through the adoption of a methodology that followed a systematic approach working with the original garment. One of the questions that this presents is 'How can a replica be authentic?'. A re-creation is in itself an interpretation – the finished object is determined by the processes of making. (Davidson, 2019). A replica is a facsimile and an approximation of the original garment and in the case of knitting up a garment from an original knitwear pattern compromises were made with the techniques and yarn employed in the process. Davidson argues that 'The fibres, processing, machinery, methods of reproduction and retailing in our particular moment in history cannot essentially replicate the conditions of other points in history.' (2019, p. 345). This being so the process of examining the archival garment through photography and drawing, replicating the stitch pattern and wale deflection on the computer were important processes of learning about the original construction of the swimsuit as will be demonstrated further in this chapter.

The re-enactment of swimming in the garments in a restored lido of the same period of the costume connected the experience in terms of replica's temporal dimension (Hodder 2012) The information gathered from the volunteers' experience of swimming in it still accords information that would be otherwise unavailable to me. It was for that reason that the remaking and reknitting of these garments became a core basis for testing the potential of a method of material cultural analysis.

Gathering Evidence at John Smedley Ltd.

Much of the research for this study has been undertaken in a variety of archives; as a researcher the findings from archival research have both presented questions and given me a fuller understanding of the interwar swimsuit.

One of the most important archives that I worked with was at John Smedley Ltd who have a collection of knitted woollen swimwear from the interwar period. The archivist Jane Middleton Smith at John Smedley Archive Charitable Trust responded with enormous generosity and enthusiasm to my project and has been constantly supportive, informative and collaborative in her approach to my research.

John Smedley Ltd was established in Lea Bridge, Derbyshire around 1818 (Oakes, 2009). One of the most significant developments from John Smedley's paternalistic and philanthropic approach to his work-force was his building of a free hydropathic hospital for his workers at Lea Mills. (Oakes, 1993). This is discussed in Chapter 2 where the role that he played in hydropathy for health is outlined.

The collection of swimwear, known as 'bathers' in John Smedley archive starts at the beginning of the 1930s. On 12th September 1932 a London office for the company was opened in Brook Street (JSCT, 1933, p.321) and a Miss Stockley was appointed to the sales of Ladies outerwear, loungewear and bathing wear. The Director's minutes book records that she was paid £650 a year. Press and companies invited to the 1934 swimwear and beachwear parade held at the Brook Street Office on the 10th October 1933 included *the Lady*, *The Daily Mirror*, *Daily Express* and *the Star* whilst representatives from companies included those from Harrods, Marshall and Snelgrove Ltd, Jones and Higgins, D H Evans, Spirella and Lillywhite. (JSCT, Visitor Book, 1934). Magazines such as *Vogue*, *Harper's Bazaar* and *Drapers Record* were also represented at the autumn range of knitwear on 12th June 1933 confirming that John Smedley swimsuits were the epitome of high-end glamour, at prices ranging from 29 shillings and 6 pence to 35 shillings and 9 pence (JSCT, *The Tatler*, May 18th, 1938). This is discussed fully in Chapter 5 where the purchase price of manufactured swimwear is discussed in relation to cost of living and average wages.

My research in the archive progressed well and after finding a mannequin small enough to model the archival collection the three-dimensional appearance of the archival garments was a revelation. Helen Grund, a collaborator with Walter Benjamin on reading fashion, states that she sees 'elegance' as a guiding aesthetic value and regards the essence of successful fashion garments as those which have 'the potential and propensity to be "animated" through a certain attitude, bodily posture, and lively movement' (Ekardt, 2020, p.110). This struck a chord with me when I began to put the bathers on a mannequin and realised that to see the swimwear being worn and potentially swum in started to become an attractive proposition. Jane and I therefore began to discuss the possibility of re-creating one of the archival garments and testing it in water.

We then looked at how we might approach implementing a re-creation of one of the archival garments using contemporary knitting techniques and machinery. We invited Cathy

Challender, Lecturer in Knitted Textiles, from Nottingham Trent University to lend her expertise to the project and this is discussed later in the chapter. We also considered where we might hold a re-enactment of the swim, enquiries into hiring lidos proved that they were expensive and initially we applied for funding for the whole project, which was not successful. However, a solution presented itself through the evidence gathering day when Jason Skipper suggesting using a pool at the New Bath Hotel, Matlock that he had recently restored. The re-enactment is discussed later in the chapter.

Despite academic evidence from various sources (Horwood, 2000) that although knitted woollen swimwear was attractive when dry as it became wet it was 'stretchy, saggy, itchy and smelled of wet wool' (Warner, 2006, p.80). I decided that it was important to acquire some actual evidence. I had researched and gathered information from a variety of people who recollected wearing woollen swimwear even as late as the 1950s but it seemed necessary that the collection of evidence should be approached in a systematic rather than an ad hoc way to gather a pool of responses.

Jane Middleton Smith and I had planned an event in conjunction with the New Bath Hotel at Matlock intended to coincide with the reopening of the hotel's 1934 outdoor pool. The intention was to attract members of the general public with their stories of swimming and sunbathing in the region. It was suggested that photographs of family wearing swimming costumes from the interwar period were brought to the event along with an actual garment if any were available. The initial event due to take place in August 2018 was cancelled because of difficulties at the hotel and was rescheduled at John Smedley Ltd on November 7th 2018.

Flyers, press releases and other information were sent out in a timely manner. Jane was interviewed on Radio Derby on the 6th November 2018 to promote the event. Jane had volunteers available to help make tape recordings, notes and take photographs of the event. The flyer for the event is shown below in Fig. 7.3.

Fig. 7.3. Flyer for the Beautiful Bathers Day.

One of my major challenges was how to approach interviewing the attendees of the day, given that I would not be the only interviewer and some of the archive's volunteers would be working with me.

The type of questions under consideration were as follows:

Did you have a knitted swimming costume and what was it like to wear?

Did you swim or sunbathe in the costume or a mixture of both?

Did you own a manufactured swimsuit or was it hand knitted?

and so forth…….

However it did not seem possible to establish a model of analysis from these questions. They were closed questions rather than open ended and had more of a relationship to a questionaire or survey than what was actually required. In qualitative research methods as outlined by Holloway and Jefferson (2000) it seemed possible to elicit a response that had a narrative or a story. The implications of this being that in an interview the interviewer turns the question into a 'storytelling' invitation (p.35). This seemed to suit the purpose of these interviews well – something like 'what can you tell me about this photograph' seemed more appropriate that the closed questions that had been previously proposed.

Eventually I drew up a list of questions to be used by the volunteers which were as follows.

If an interviewee brings in a garment or photograph ask them – What can you tell us about this?

Prompt questions where appropriate might be:

Do you remember having a knitted swimming costume?

What was it like to wear?

Did you, or do you swim locally? If so where?

How long did you leave the swimsuit on? Just in the pool or did you sunbathe in the swimsuit too?

We structured two sessions for myself and the volunteer interviewers. One was in the morning and the other in the afternoon; I gave a short talk on the subject, there was an exhibition and then the interviews were conducted.. I did give the volunteers a copy of my original questions shown above as prompts for the 'storytelling invitation' and also asked them to keep records of names and other background details.

On the day there were 18 respondents in total and very few of them brought in what had been expected. (see table below in Table. 7.1.). Not many respondents could tell me their experience of actually wearing the swimwear or if it sagged or not. Many of them did come with anecdotal evidence but of a different scope than I had anticipated. Some of this was very useful to the thesis overall however as shown in Table 7.2.

Jean Barrett	Relative of Irene – model at John Smedley
Richard Barrett	"
Heather Bosworth	"
Margaret Lake	Worked at John Smedley and was a friend of the Smedley model Irene
Mary Rowse	Brought in photographs in 1950s swimsuits
Maren Watson	"
Janet Hitchenor	Worked with Irene (above) at John Smedley Ltd.
Edwina Edwards	
Craig Thomas	Phd Student – Sport in the 1920s
Louise Thomas	Wife of above – aunt Vera was a model for John Smedley Ltd
Anne Pape	Brought in childhood photograph in swim suit.
Anthony Stimpson	Wife Kathleen worked as a model for John Smedley Ltd.
Mr and Mrs Hitchen	
Jason Skipper	Restored the pool at the New Bath Hotel.
John Legg	Groundsman for New Bath Hotel.
Richard Divine	Manager of New Bath Hotel
Margaret Oakes	Wrote an historical book about John Smedley Ltd and brought in some photographs of her parents and their friends in knitted woollen swimming costumes.
Additionally volunteers from John Smedley Ltd gave some evidence of swimming in local pools.	
Ann Thompson	Contributed photographs for the flyer with some information about the swimsuits.
Maggie Hay	Swam in the New Bath Hotel Pool as a child. Maggie's family had worked for John Smedley Ltd over 3 or 4 generations.
Jackie Mitchel	Swan in the New Bath Hotel Pool as a member of their Swimming Club.

Table 7.1. Attendees at the Evidence Gathering Day.

There were some findings that reflected on the organisation of the day and the way the volunteers were briefed. It seemed that the taped interviews functioned better than hand written notes in terms of transcription and that photographs should all be scanned rather than rephotographed in future – as one that had an interesting story attached unfortunately came out blurred. These outcomes are informative from the point of view of the processes involved in organising open-ended research questions in what was a vibrant busy scenario using a number of people to collect the data – both photographic and in transcript. Many of the volunteers were of retirement age and didn't really want to engage with the technicalities of a tape recorder, so made notes thereby making their own decisions about what was significant about what was being said. It appeared that I would not be able to look at what Holloway and Jefferson (2000) describe as the 'whole' of what was accumulated in relation to all of the particpants in the research until a later stage. This was a consequence of having to collect a range of data on one day and it generated a range of data, some of which was useful to my study.

I have included some of the data that was particulalry significant to my thesis in the table 7.2.

Participant	Comments	Findings for Thesis
John Legg, groundsman at the New Bath Hotel, Matlock.	Confirmed that the New Bath Hotel, had a 50/50% grant from the government in 1934. Theoretically this mean't that the pool had to be opened to the general public rather than just hotel guests.	Confirms that government intervention in the health of the nation through the building of pools and lidos during the interwar period was signficant. These findings are addressed in Chapter 4 and Chapter 5.
Margaret Oakes, author of 'A Window on John Smedley's World (2009)	Brought in a photograph of her father and other young men with the tops of their swimwear rolled down on a family holiday. Margaret described wearing a knitted swimming costume that her aunt made for her as 'very itchy and scratchy' (interview,7th November 2018).	Before swimming trunks were introduced later in the 1930s decade if men wanted to expose their chest for sunbathing they had to roll down the tops of their swimming costumes. See Chapter 4. Where this photograph (Fig. 3.24 in the thesis) is discussed in relation to sunbathing. This was probably due to it being 'carded yarn' (Klepp and Hebrok, 2014, p.76), that was used in hand-knitting. Combed yarn is used in finer fabrics worn next to the skin. John Smedley Ltd would have used combed yarn for their underwear and probably for their 'bathers' too.
Jean Barrett and Heather Bosworth. Daughters of model Irene worked for John Smedley Ltd.	Their mother Irene was a model for John Smedley Ltd., swimwear and her image appears in Chapter 8 (Fig.7.12) in relation to glamour and the 'nude' swimsuit. John Smedley sent Irene to art school in Nottingham where she trained as a dress designer. She worked for Aristoc Children's wear until she retired (Interview, 7th November, 2018)	Irene's photograph is prominently placed in the John Smedley Ltd archive trust and symbolises all the glamour of the brand. Philanthropy seems to be an important aspect of the company and is further evidence of their investment in their workforce.
Jason Skipper, Pool manager New Bath Hotel, Matlock.	Restored 1930s pool using thermal spring water.	Becomes instrumental in enabling us to use the pool for the re-enactment.

Table 7.2. Findings from the Evidence Gathering Day.

The call out for participants was very open – and Jane and I hoped that it would bring in some pertinent information for the thesis and possibly even a John Smedley swimsuit. Sadly, the latter did not transpire. Theorists who work with storytelling (Ramsey et al., 2009) advocate that 'the conception, planning and implementation of effective interviews require extensive consideration and thoughtful, mindful decisions' (loc 125.). In this instance much of that took place but with a potentially random rather than specifically invited audience and different people involved in the transcription of the outcomes. What was generated from the experience was valuable and useful for everyone involved.

What was accumulated was a range of information that fed into different parts of the thesis as shown in Table 7.2 above and was in the main part centred around a locality that included both John Smedley Ltd and the New Bath Hotel Lido. This seemed important in terms of the overlapping narrative of the respondents along with some consistency in the temporal and geographical dimensions of the research. Confirmation about some of the problems of wearing wool was evident in the transcripts but in order to argue for a significant difference in the wearing of manufactured and home-made interwar woollen swimsuits it appeared that the remaking of historic swimsuits both manufactured and home-made and the re-enactment of swimming in those garments would be a way forward. Both the re-creation and the re-enactment were methodological approaches that would build on academic and storytelling

The reknitting of the manufactured and hand-made garments.

I believed that I needed some expert help and support to achieve replicas that were as near authentic as possible. Betty Barnden, a retired knitwear designer for yarn companies and craft magazines, offered to knit the home-made swimming costume and trunks, she pointed out that knitting patterns from the interwar period assumed a lot of knowledge of the knitter and this proved to be the case. A discussion about hand-knitting patterns in the interwar period is given in Chapter 6 where Reed (2021) offers a similar analysis. We used a 1930s pattern from Stitch craft (April 1933) magazine for the swimsuit and the knitting pattern from Practical Family Knitting illustrated (reprint 1947) for the swimming trunks. The yarns were chosen to be a modern-day equivalent to the original and these were West Yorkshire Spinners 'Signature' 4ply sock yarn for the swimsuit (75% wool and 25% nylon) and King Cole Merino blend 4ply (100% wool) for the trunks. Details of the knit and the compromises made in the selection of materials and techniques used are indicated in Table 7.3. and 7.4. below and a full record of this is in Appendix 1. Due to time constraints and practicalities I decided to re-create only one of each garment including a manufactured archival garment and a hand-knit garment. I own two other manufactured interwar swimsuits including a CC41 Utility swimsuit in blue and a skirted black German made knit jersey swimsuit in

black. These added to the range of manufactured swimwear available to test in water and helped with methodological approach in the re-enactment.

The archival swimsuit was made with Cathy Challender, who was one of my supervisory team and an expert knitwear lecturer at Nottingham Trent University along with the knitwear and CAD expertise from technician Martha Glazzard. They produced the manufactured replica of the archival garment using machinery and equipment at Nottingham Trent University. We chose the lace bather for 'figure fit' as Lastex normally used for the John Smedley Ltd Archive Charitable Trust bathers is no longer available and there is no machinery that would take this. Lastex is a material incorporated as a rubber core yarn into manufactured swimsuits in the mid to late 1930s, as has been previously mentioned in this chapter.

Cathy drafted the pattern from the original garment and this was translated by Martha onto the computer and put into the knitting machine. The yarn was donated by John Smedley Ltd and was a worsted merino selected in 2/24s and 2/48s guage. John Mumby, former technical director at John Smedley Ltd and now a volunteer believed that this would be the most appropriate yarn. The original coloour of the Smedley 'bather' that we chose was Aqua but this was not availible in the Smedley store so a bronze colour was used instead as it closely resembled the interwar colour palette.

The enlargement of the number of individuals now involved in the project added to the 'network' of actants from Latour's 'Actor Network Theory' (2007) which has been useful to the study so far. In the case of the reknitting, the people actors were myself, Betty, Cathy and Martha and archival staff from John Smedley Ltd, including archivist Jane Middleton Smith and John Mumby. The actants were of course, yarn, original interwar knitting patterns, drawings, computer generated imaging, the Stoll knitting machine, toile patterns, seam cover and overlocking equipment. However, as the project progressed, I found Ian Hodder's idea of 'entanglement' to be much more useful to some of the scenarios that occurred, which will be shown later in the chapter. Hodder critiques Latour's ideas of 'networks and meshes' and suggests it would be more appropriate to look at the dialectic of dependencies and dependence whereby material objects and humans are 'entwined, involved with each other, dependent on each other, tied together' (2012, p.95). The actants and people together led to a complex network of interactions and sequences in which the challenges of recreation and remaking were embedded. The materiality Woodward (2020) that as a team we engaged with during the process of re-making also emerged as a key player in these entanglements.

As Davidson argues in her paper 'The Embodied Turn: Making and Remaking Dress as an Academic practice' the concept of 'the embodied turn' refers to 'the innate body knowledge created through making objects, the social and physical bodies inherent in dress objects

and practices, and how subjective bodily experience can contribute to history studies.' (2019, p. 330). This seemed particularly relevant to this study in the reason for remaking the garment - that it would offer knowledge that was sensory, haptic and observed through drawing, measurement and the selection of similar or equivalent materials for the making of a replica. It also refers to the re-enactment of swimming in the garment as Robinson (2010, p. 506 cited in Davidson, 2019) suggests is 'the bodily experience of doing history', swimming in an historical garment would explore the role the body played in relationship to the material qualities of the swimsuit in past narratives. Davidson further states that 'the key point about reconstructed clothing is that it can be tried on, the big taboo for historical clothing in public institutions. (Davidson, 2019, p. 345). The knowledge that is gained from the wearing of a garment and in particular being able to swim in it contributes significantly to the understanding of not only how a garment was worn and where it was worn but how it felt to the wearer. This is fully discussed in a later section on the re-enactment where the different testimonies of the swimmers are discussed.

The next sections examine the re-creations of the swimming costumes and engage with some of the salient findings that emerged from the process.

Knitting from an historic pattern.

The re-creation of a hand-knitted suit was an essential part of understanding the materiality of the garment and how the knit structure revealed its performative qualities. Adjustments had to be made to make the garment fit a contemporary swimmer; these were part of the methodological approach, as were carefully researched equivalents for the yarn.

The original knitting pattern was selected for its aesthetic qualities and particularly for the scoop back which was a popular design style for evening dresses in the interwar period. Measurements from the pattern indicated that it was a small garment and one that would potentially be too small for a contemporary swimmer. Additionally on the knitting pattern it notes that 'REMEMBER As woollen fabric expands a little when wet, your swimsuit must fit firmly. Measurements given for these costumes will stretch to fit the average figure' (Stitch craft, April, 1933). This was an interesting comment as it implies the swimsuit will 'give' when wet (sag perhaps) and a tighter fit was recommended. Betty and I decided to use a contemporary model for the swimsuit and chose one of my students who was a swimmer – we therefore used her measurements to adjust the costume to a contemporary size. Fig. 7.3. below shows how the swimming costume was made:

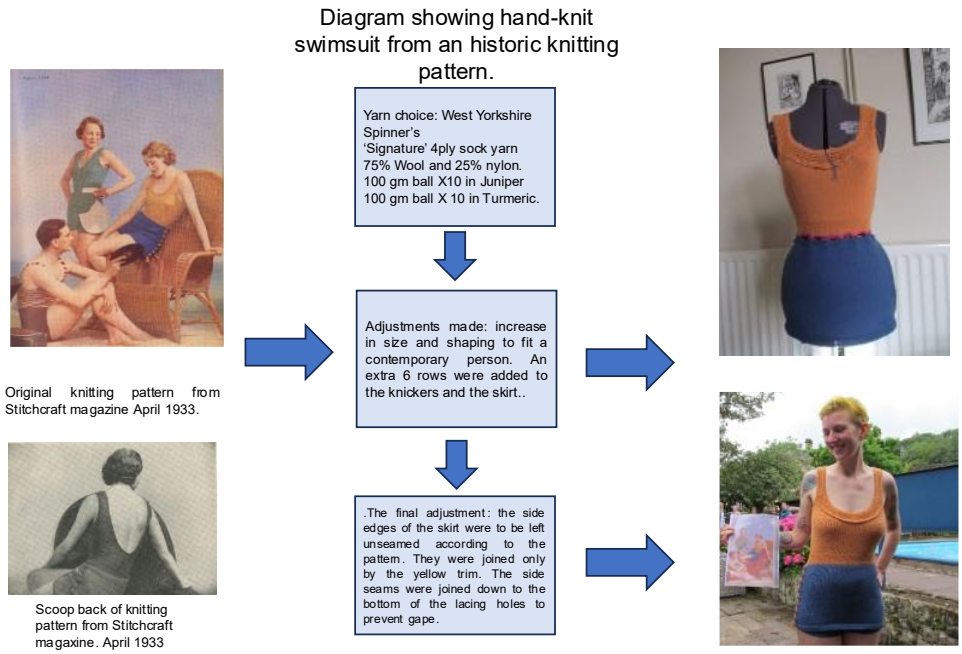


Table 7.3. Diagram showing how the hand-knitted swimming costume was made.

Some of the findings are indicated diagram 7.3 but it is worth reiterating these as compromises were made in the interpretation of the knitting pattern for the modern-day wearer.

I was initially concerned about the yarn holding 25% nylon (to make it more hard-wearing for socks) as it seemed to compromise the strive to re-create in the most authentic way possible. The concept of 'truthfulness' is mentioned earlier in the chapter was something that I was keen to pursue. Davidson (2019) previously pointed out earlier in the chapter that fibres, methods, and techniques cannot easily be replicated. Betty and I had tried to find out about the original 'Crocus' knitting yarn used in the pattern but the Paton and Baldwin's archive were unable to provide the properties of the wool. The yarn was the best equivalent for the tension and needle size given in the pattern.

Adjustments had to be made throughout the process and these are fully detailed in Appendix 1 including the joining of the skirt seams to facilitate the lacing and prevent gaping. The making up of the garment from an original pattern had revealed past methods of knitting in the way that, as Davidson contends:

> 'Reconstruction creates new garments that tell us about the past in unique ways and reiterates how sewing and construction are essential to fashion systems fundamentally enmeshed with material culture' (2019, p.332).

Creating a new garment from an historic pattern also as previously stated revealed that there was no information for 'casting on' regarding which method to use and it is assumed that the knitter will know the difference between stocking stitch and garter stitch and how

to do the lace pattern. There were no explicit instructions for this and it is safe to conclude that this pattern was written for expert knitters. (Communication, Betty Barnden 15.8.2019).

Betty and I also decided to make a pair of men's swimming trunks. Until the mid to late 1930s men had a top part of the swimsuit that held the whole garment up with shoulder straps as shown in Margaret Oakes image in Figure 4.24. in the chapter on Health and Hygiene and discussed earlier in the chapter in Table 7.2. This (Fig. 4.2) photograph shows men sunbathing with their tops down as it became more acceptable to do this in line with the decency regulations for behaviour on the beach (Lencek and Bosker, 1999, p.194). One of the challenges that knitting swimming trunks from an original pattern presented was finding a suitable equivalent of a belt strong enough to hold the trunks up in water. Typically, the belt buckles used during the interwar period for men's swimming trunks were made from metal and the fabric of the belt was woven, ribbed cotton. This is shown in a pair of trunks from the Symington collection of swimwear in Leicester museums in Fig. 7.4. Betty managed to find a suitable buckle from her collection of haberdashery and we sourced extra strong woven tape. A more detailed description of the knit can be accessed in Appendix 1

Fig. 7.4. Swimming Trunks from the Symington collection, Leicester.

The swimming trunks as shown in Table 7.4 below were from a knitting book that was reprinted post war and does testify to the anecdotal evidence – particularly shown in Fig. 7.2 of Alf Bower and his father that woollen swimwear continued to be popular into the 1950s.

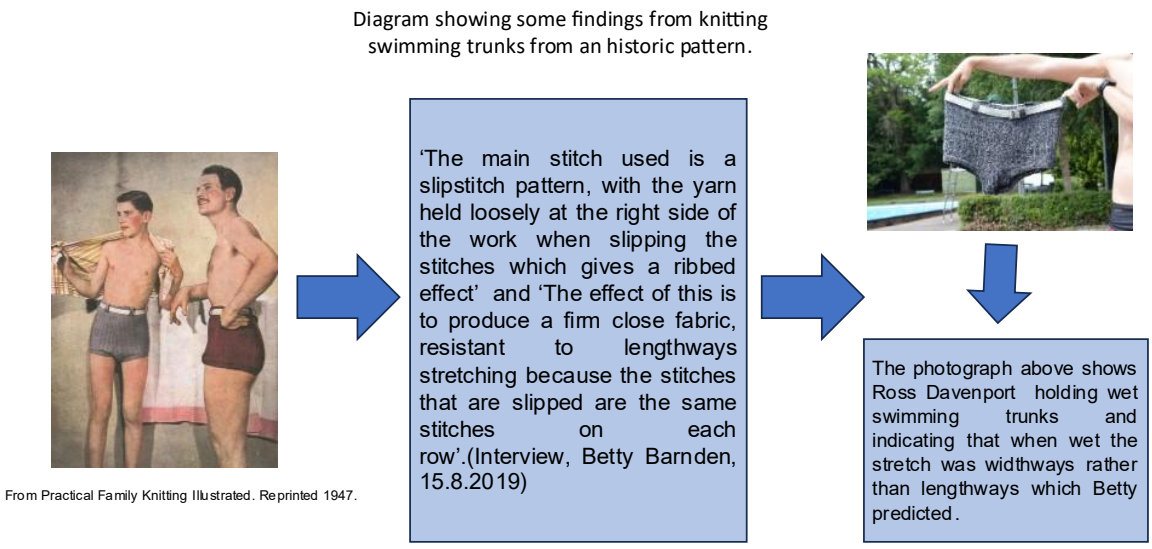


Table 7.4. Diagram showing findings from the re-creation of swimming trunks.

One of the findings that emerged from the recreation of the swimming trunks is shown in diagram 7.4. The rib knit added extra strength and a width-wise stretch. A lengthways stretch could compromise dignity for the wearer even with the addition of a strong belt. Schmidt (2012) states that: 'The rib knit, like that produced on jumper and cardigan cuffs, with noticeable length wise ribs, had more elasticity and durability than plain knits. (p.78). Betty had discovered through the process of knitting what many companies including Jantzen had applied in the manufacturing process.

The agency of the swimming costumes in a network of actants (Latour, 2005) is significant in relation to the other contributors, myself as commissioner/project coordinator, Betty Barnden as interpreter/maker in the decisions made about the yarn and the techniques used to best approximate what would have been the original knitted outcome. It also includes the embodiment of the garment when worn by the bather. These interactions enabled the garments to be experimental interpretations of historic knitting patterns but made in the context of a present-day yarn and stitch technologies. The socio- economic aspect of this network is revealed in the act of swimming when the garment becomes a mediator in the differential between the manufactured machine knit costume and the home knitted one.

The complex interaction of the network involved in the process extends much more in the production of the archival garment in the next section, involving many more actants (Latour 2007) and technological mediators than in the hand-knitting project.

Reknitting the archival garment.

It is in the nature of archival garments that they cannot be worn due to conservation practices. Re-creation is a good solution and an appropriate methodology to investigate the qualities and techniques used in the original garment.

The discussion of remaking an archival garment in the collection of John Smedley Ltd had taken place between the archivist Jane Middleton Smith and myself over a three-year period. I wanted to make a replica garment that could be worn and swum in to test the performative qualities of a contemporaneous manufactured swimsuit. The hand-knitted garments were relatively simple to construct but the reconstruction of an archival garment involved not only time but specialist machinery and equipment.

Cathy Challender, a lecturer at Nottingham Trent University and a member of my supervisory team agreed to reconstruct the archival garment using equipment and facilities at Nottingham Trent University. Cathy, with technical input from Martha Glazzard, who digitised the pattern and Cathy's drawings produced the garment. They were both happy that I followed the processes that they undertook. I had the opportunity to shadow the transcription and making up of an archival garment and this illuminated some of the material and cognitive absences and presences in the archival garment through what it presented in terms of its construction (Davidson, 2019). These are referred to below and fully detailed in a transcription of the making in Appendix 1.

Cathy and I considered the garments in the collection that would be suitable and appropriate for reconstruction. I had made an initial selection but Cathy looked through the collection with me. Initially Cathy examined one of the selections, shown in Fig. 7.5 below – that I thought would approximate the idea of the 'modern surface' – the relationship of the garment to the architecture of the sites of swimming. Cathy started to measure this and we performed some initial investigations of the bather.

Fig. 7.5. Loop wool Lastex Bather, 2011 4619.

This ‘bather’ as the swimsuits are referred to in John Smedley Ltd archival documents presented a problem in that it included ‘Lastex’, Lastex is a material that was patented by the Adamson brothers in July 1931. The yarn consists of a lactron thread – an extruded rubber filament that could be twisted in with whatever support, cotton, art silk or woollen yarn. (Lastex Yarn: p40-41). A moth hole in the garment effectively showed where the lastex was – the moth hadn’t eaten the lastex. This can be seen in Fig. 7.6. This is an example of what can be detected when undertaking detailed study of an historic garment – the construction of the use of lastex in this particular garment was revealed through the moth hole.

Fig. 7.6. moth hole in Loop Lastex.

Lastex was used to create figure hugging swimwear in the mid to late 1930s and Smedley advertised its own version of Lastex construction which was advertised as ‘Jaylax’.

A Smedley 1930s advert claimed:

> ‘You just know it’s Smedley Jay underwear by the beautiful softness of the finish and the perfect fit. So, too with Smedley swimsuits. You recognise them by the novelty stitches, by the original colour contrasts and by the wool itself – pure botany

wool spun by Smedleys at their own mills in Matlock' (JSACT Ladies and Children's Price list, 1938 , Cat.No. 2016 429.).

The advertising claim by John Smedley Ltd suggests that the lastex is a novel fibre construction that is used throughout their products in the 1930s.

Lastex did become one of the stumbling blocks for the reconstruction. On reflection it seemed that it would be very difficult to get hold of an elastomer thread – lycra would not be a suitable substitute and even more difficult to incorporate into the available machine at NTU. Cathy and I then looked at one of the lace bathers to reconstruct instead. This had raised some questions because of the relationship to modern surface that is a central theme of the thesis. The loop lastex bather with its undifferentiated block of aqua colour broken by a diagonal contrast (shown in Fig. 7.5.) in white running through the knit, would have made a clear link between the architecture of the seaside and the swimsuit itself, through its suggestion of impermeability and geometry.

We eventually chose a lace bather (JSACT, Box 3, Cat. No. 2011 4622.) shown in Fig. 7.7. , again in the colour 'aqua' with its relationship to the lido and part of the interwar colour palette. This created a shift in the notion of 'modern surface' – a central theme of the thesis in that the smooth, continuous texture of the loop lastex bather was exchanged for the texture of lace.

Also, the lace bather made a relationship to glamour, which is another theme of the thesis in the subtle way that the body is revealed. The knit is figure hugging without the need for lastex. Novelty knits for swimwear also became more fashionable in the mid to late 1930s including 'lace, sponge, cord, honeycomb' (Schmidt, 2012 p. 81) Cathy pointed out that lace became prevalent in knitwear towards the end of the decade and therefore as a knit structure it was contemporaraneous of the time.

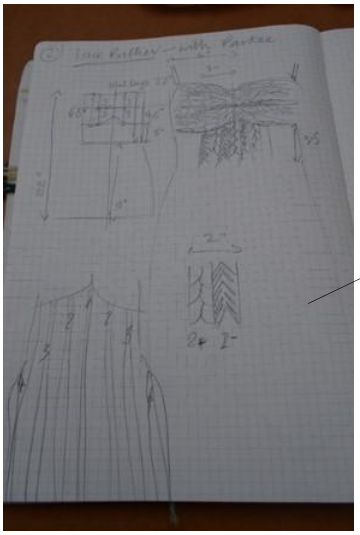
Fig. 7.7. Lace Bather.

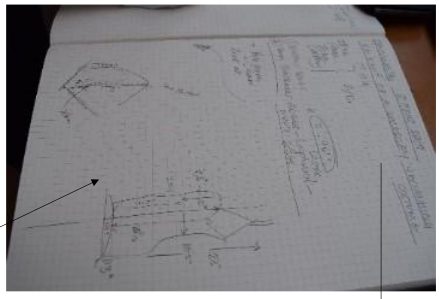
Lace with its areas of transparency and open work is another means of perfecting the body as sheer stockings can smooth out the blemishes in a leg. Lace used on swimwear similarly disguises and reveals a perfected form in the way that underwear can enhance nudity as discussed in Chapter 6 where Baudrilliard (1998) argues that fashion denies nakedness as being the antithesis of desire. The texture of the lace like that of rough cast render used in Mackintosh's Hill House gives the illusion of a modern surface by evening out the traditional stone work underneath (see Fig.7.8).

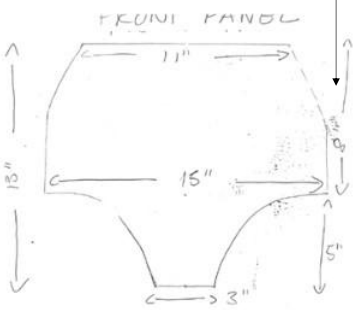
Fig. 7.8. Charles Rennie Mackintosh, entrance to Hill House, detail of the rough-cast surface to the left of the image.

The undifferentiated white surface gives the impression of smoothness and predicts the later concrete clad modernist buildings with their impression of an impermeable facade. Lace, too, signifies this modern surface by smoothing out the body whilst revealing a certain amount of perfected flesh underneath. The swimmers found the reconstructed bather to be the prettiest, the most glamourous to wear (Interviews: Kandy Diamond, Becky Morley, 1.08.19). The lace bather was selected for reconstruction after it was checked for the viability of remaking on the Nottingham Trent University computerised knitting machines.

Careful drafting of the lace bather began to develop the lace pattern for its input into the computer. Cathy's skill in the observation of the knit structure and the wale deflection became very important in transcribing this information for input into the computer. Careful measurement to make the toile of the garment was essential as shown in Table 7.5..







Examples of Cathy's transcriptions and detailed drawings with measurements to accurately adjust what might be needed for a contemporary swimmer.

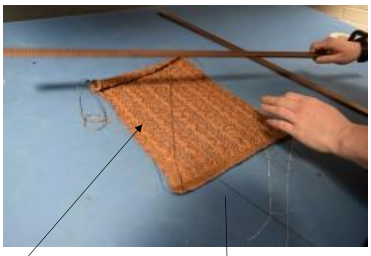
Table 7.5. Cathy's transcriptions and measurements of the lace bathers.

Davidson states that historian Janet Arnold used drawing as well as photography to record a garment's construction saying 'In the process, she provided the foundation for an idea that remaking a garment … offers insight into the process of historic clothing not available through other means' (2019, p.335). The idea of having information 'not available through other means' became a significant part of the findings for this chapter. The accuracy of the transcription was very important in the reconstruction of the garment. Although in the sense of the bather being a 'replica' authenticity was impossible to achieve, both Cathy and myself were committed that any compromises that we should make would be considered and thought through.

One of the discussions that took place between Cathy, John Mumby and myself was around the yarn. John Smedley Ltd via Jane Middleton Smith had agreed to donate an equivalent yarn to support the making up of the bather. Unfortunately the aqua colour was not available so I chose bronze which seemed to be the nearest colour to those specific shades for swimwear of the 1930s (Schmidt, 2012, p.81). Cathy and John were in dialogue about the yarn count, which is the guage of measure of the thickness of the yarn. The worsted merino used was selected as 2/24s and 2/48s, the finer knit being used for the bust lining.

Cathy transcribed through drawing the wale deflection on the lace and all the information was handed to Martha Glazzard for making the toile as shown in Table 7.6.

Photographed enlargement of wale deflection of lace yarn on the computer



Finer knit sample for toile.

Left-hand toile is in finer yarn and right-hand toile is made of the thicker yarn, closer to the original count that Cathy was keen to maintain.

Martha inputting into the Stoll machine.

Toile produced in finer yarn, triggering a discussion between Martha, Cathy and myself about the thickness of the yarn.

Final Toile used for the garment in thicker yarn.

Table 7.6, Process of transcribing the drawings onto the computer and producing toiles.

Following a discussion between Martha and myself, some concerns were raised about the guage of the wool. Martha was concerned that the thicker yarn would prove difficult to manipulate in the seam cover equipment and so produced a knit sample in each. However, the sample showed it to be very transparent in the lace area. Cathy was keen to keep as close to the original as possible despite difficulties that it might present in the finishing processes. We opted for a heavier gauge wool for the final piece.

Hodder suggested that within the ‘entanglement’ there is the possibility of an ‘entrapment’ – he observes that a practical problem such as rotting beams in a roof of an historic house can create many interactions:

‘It is not just the rotting of the beams in the roof that entraps humans in such entanglements. The entrapment is also caused by the way we have come to value old houses in the USA and the interactions between decaying roofs and historic sensitivities. (Hodder, 2012, p.96).

Similarly, Martha’s perception that the knit structure and toile should look a particular way, which would also make it easier to construct through the seam cover and over-locker machines were at odds with Cathy’s perception that the reconstruction should follow the original as closely as possible. The entanglement hence involved not only the yarn gauge but also the different people and perceptions involved in the makeup of the toile. The additional ‘entrapment’ in the entanglement was the responsibility to recreate a garment as close to the original as could possibly be managed. The striving for authenticity was paramount to the project and Cathy had double checked the this of the wool so that we used the thicker gauge wool in the reconstruction.

Cathy reinforced how important the toile is in understanding the make up of the original. Davidson and Hodson state that ‘a toile can inititiate speculative discussion’ (2007) and this in itself becomes a method of researching into the original garment and provides a level of knowledge that is not provided by mere observation.

Cathy stated that she constantly used an accurate system of matching and measuring. Davidson and Hodson write in ‘Joining forces: the intersection of two replica garments’ where the authors create two replica garments of an embroidered black work jacket on loan to Platt Hall’s gallery of costume that the two different makers in putting the garments together ‘raised questions and discussions that only appeared with the interrelationship of the garments. (Davidson and Hodson, 2007, p.208). In the case of the John Smedley replica what was learnt from the conjunction of the two or three garments, the original, the first toile and the second toile and the challenges that these presented revealed some of the questions and discussions about yarn count and making a toile that would not have emerged from secondary sources.

Cathy also noted a ‘tag’ that had attached the skirt of the swimsuit to the pants shown below.

Fig. 7.9. Tag to hold the skirt to the knickers.

She suggested that this was made using buttonhole stitch and would have to be hand done. The significance of this ‘tag’ did not become apparent until the Matlock Bath swim event took place.

Knitwear tutor Kandy Diamond is shown holding the toile against herself in Fig. 7.10.

She was finally persuaded to be the key swimmer for both the manufactured and hand-knit swimsuit.

Fig. 7.10. Kandy Diamond trying on swimsuit.

Davidson and Hodson (2007) discuss the importance of the replica in supporting historic garments and this was very much the findings of the making of the costume but equally significant would be the opportunity to test its performative qualities in relation to the project.

A very complex interplay of data and interactions took place in this re-creation and this was to increase substantially through the re-enactment of the swim.

Matlock Bath Swim Event.

The Swim event – which I will refer to as the Matlock Bath Swim event took place on the 1st August 2019 at the New Bath Hotel lido in Matlock Bath. The pool reopened after extensive restoration work on 21st June 2019. I attended this opening and interviewed two of the swimmers who wore a couple of the swimsuits in the pool, namely Diane Brown and Ross Davenport.

The pool was originally built in 1934 with a support grant from the government of 50%, this governmental intervention is mentioned elsewhere in Chapter 4 on Health and Hygiene as an initiative to promote the building of open air swimming pools and lidos aimed to increase access to exercise in the general population.

The pool fitted into the timeframe perfectly. Hodder (2012) adds another dimension – that of 'temporality' to his entanglements, very much as in archeology, the interrelationship between the past and the present becomes fluid and sometimes 'stuck' in the dynamic of the entanglement. Striving to make both the reconstruction and the re-enactment as authentic as possible was paramount to the project. However the pool was not one of the glamorous, modernist sites as shown in Chapter 5, such as Saltdean Lido with its gleaming concrete and chromium surfaces. As with other aspects of the re-creation and re-enactment, compromises had to be made, but with sensitivity and a desire for equivalence.

The intention of the Swim Event was to see if there was a significant difference between the manufactured garments and the handknitted ones. Given that, as has been previously mentioned, the manufactured garments were considered to be a 'luxury item' as shown in Chapter 6. A working girl's weekly wage on average, equated to the cost of a swimsuit and

gives a context to the expediture. Hand-knitted swimsuits were therefore the affordable alternative.

Jason Skipper contacted me in advance of the Matlock Bath swim event to say the film company Syncopate Media Ltd were producing a film for BBC East Midlands as part of their 'Great Staycation' programmes and wanted to film the swim event. It was eventually broadcast on Monday 11th November 2019.

The principal swimmer and tester was Kandy Diamond and most of the other swimmers were from a Triathlon club who used the pool. Additionally Imogen Clark who was the daughter of the technical director of John Smedley Ltd and a professional swimmer joined the team too. I talked to Smedley's marketing director about the event being filmed by BBC East Midlands and indicated that John Smedley Ltd would probably want a mention in the film. This was agreed and Imogen became one of the swimmers. It was wonderful to have this publicity for the project and my PhD but it did add yet another dimension to the entanglement.

However, I did find the film company intrusive in terms of structuring the event and the negotiation process in terms of what was wanted by both parties on occasion created minor tension. The film company had the swimmers parading up and down the pool to produce a spectacle and this got in the way of me documenting and photographing swimmers in the water. Observation was a key part of the methodology. I wanted to see how the garments behaved in the water in addition to knowing how they felt to wear in the water.

There were three complex human interactions in this scenario as described above, namely the BBC filming of the swim event, the contretemps between John Smedley Ltd and the New Bath Hotel, and the unexpected inclusion of another swimmer. All of this happened before the non-human/human interactions (the swimmers wearing the costumes) began. Hodder describes these types of occurances as 'entanglements' and he gives a number of examples where 'material entanglements involved payments, regulations, bureaucracies, obligations, debts, ownership and the full gamut of human social, economic and ideological relations.' (Hodder, 2012, p.111). This certainly proved to be the case with the Matlock Bath swim event.

The Matlock bath swim event to test the swimming costumes took place on the 1st August 2019. During the swim event the main purpose was to test the replica swimsuit and the handknitted swimsuit and have those worn by the same swimmer. The jantzen shorts and the handknitted shorts would similarly lend themselves to exact information about the differential between manufactured and home made garments.

I arranged to test the following garments:

1. John Smedley Ltd replica swimming costume made at NTU by Cathy Challender

2. Stitchcraft pattern female swimming costume knit by Betty Barnden
3. Hand knitted swimming trunks from an original 1930s knitting pattern made by Betty Barnden
4. A blue Utility swimming costume – stamped CC41 – end of the decade where many knit structure problems had been resolved. Personal collection of Pam Brook.
5. A black German swimming costume with skirt and shorts – possibly late 1920s/early 1930s. Has a water skiing badge and logo. Personal collection of Pam Brook.
6. Jantzen swimming trunks. On loan.

The swimsuits can be seen on the left hand side of Table 7.7., with the identification numbers under the image.

One of the difficulties that emerged as a result of this was that some of the swimmers had to put on a wet swimming costume on the second swim and inevitably this skewed some of the findings but not the principal one of differential. Both swimmers testing the manufactured swimsuits vis a vis the handmade wore dry costumes in both cases.

I arranged to interview the swimmers directly after the swim. The open-ended style of interview that I had used during the open day at John Smedley Ltd seemed inappropriate here – I used a little more structure and prompting to elicit the information that I needed. I adopted a narrative style of interview (Kale and Brinkman, 2009) that meant the transcripts were close to the original testimony.

The swimmers were asked about:

Their experience of swimming.

What the swimsuit was like to wear in the water.

What did they think it would be like to sunbathe in.

Transcripts of all the swimmer's interviews can be found in Appendix 2.

Findings.

The replica swimsuit was worn by two of the swimmers, Kandy Diamond and Becky Morley as shown in Table 7.7 below.

Swimmer	Jason Skipper Pool manager and Triathlete	Ross Davenport Olympic Team and Commonwealth Games – competitive swimmer.	Kandy Diamond Knitwear tutor and lifelong swimmer.	Diane Brown Member of Triathlon club New Bath hotel pool.	Becky Morley Member of Triathlon club New Bath hotel pool.	Imogen Clark Professional swimmer 2nd in European championships
 3	Looser fit Felt less confident in these Less comfortable than the Jantzen's. Had to check he was still wearing them	Comfortable Warm Belt was important for holding up Had to check he had them on in the water.				
 4					Itchy Didn't sag Good body coverage Kept its shape Slightly tight Had elasticity.	Comfortable Move freely in it Tight around the torso Not restrictive Wouldn't use for competitive swimming
 6	Jantzen swimsuits Tight in groin which irritated him when dry Feeling disappeared when wet. Felt confident in them.					
 5				Nicer to wear than lycra or neoprene Warm – getting out of water Water runs off and evaporates Would sunbathe in	Water droplets sat on top of suit Warm including getting out of pool. Looks too hot to sunbathe in.	Comfortable Skirt puffed up like a parachute. Torso tight Liked the shorts Would sunbathe in.
 1			Fits very well – fits perfectly on top across bust. Felt good in water Didn't sag because of the construction Pretty Really nice for sunbathing. Water ran from top and drained through skirt. Held a lot of water.		Pretty – looks beautiful Intricate design Elegant. Felt heavy in water Too wet for sunbathing.	
 2			Warm Fits well Shorts fit perfectly Didn't feel supported in top/bust though Skirt lifted – needed the Smedley tag! Clung to skin – stuck in places. Back sagged in water			

Table 7.7. Swimmer's findings.

Kandy is athletic and a keen swimmer. Her comments on the John Smedley replica swimsuit were that:

‘It fit really well. The whole thing from the bottom and the waist and actually the top fit perfectly, it fit over the bust really well. There were two options on the straps and for swimming and we (Kandy and Cathy Challender) put those on the slightly tighter one. It felt really snug before I went into the water it felt really comfy and lovely. Felt great in the water. When I first went in – you could feel some water going between the top and your skin. When I looked it was fine – there was just a bit of water there, it hadn’t sagged or gone down at all. When I started to swim it felt comfortable in the water, it was holding a lot of water. When I first stood up in the water – the top bit because it was double layered that felt a bit heavy and then it drained down through the swimsuit, then when I got out of the water, the skirt bit felt a little heavy’.

(Interview, Diamond, K, 01/8/19).

Kandy’s response to the fit was anticipated as the costume had been adjusted to fit her once she had agreed to be the principal swimmer. The snug and flattering fit can be seen in Fig.7.11a, Her experience of wearing the swimming costume demonstrated that it was comfortable.

Fig. 7.11a. (left) and 7.11b. (right)

Although the costume is very wet and heavy as can be seen in the images above it did not mean that the costume did not sag away from the body creating problems with modesty. Kandy comments that ‘the first one would be more appealing for sunbathing in because you have not got that change of shape of it, it pretty much stayed exactly the same, the skirt maybe lengthened a little bit but it was really nice and I would love sitting around the pool in that’ (Interview, Diamond, K, 01/8/19). The glamour and construction of this lace bather lent it a special quality – the lace retained the shape and created an appealing texture that enhanced the body. The swimsuit, now saturated after being swum in twice

can be seen worn by Becky Morely in Table 7.7, there was still no significant sag and it did still hold to the body.

The hand knitted swimming costume looked very good on Kandy and fitted well although it had not been specifically made for her as can be seen in Fig. 7.12

Fig. 7.12. Hand-knitted swimsuit.

Kandy commented on its warmth – when she had taken the wet Smedley garment off she said that it was 'lovely and warm to put on' (Diamond, K, 01/8/19). She did also note that 'there wasn't as much structurally as the other swimsuit so it felt that the bust wasn't supported as there was no shaping.' (Interview, Diamond, K, 01/8/19). Kandy also noticed in the water that the skirt on this costume came up in the water as she stated 'When I went into the water the first thing I noticed was that the skirt came up because the other, the Smedley one, the skirt was tacked down the side – Pam explained the tag – the handknit one I could feel some fabric flapping around and I looked down and could see the skirt rising up.' (Diamond, K, 01/8/19). The tag that Kandy referred to is shown in Fig. 7.9 and it is a design feature of the original swimsuit that was reproduced in the replica suit. She also commented that the back sagged and this can be seen in Fig. 7.13.

Fig. 7.13. Sag evident in the hand-knitted swimsuit.

I asked Kandy which of the swimsuits that she felt more secure in and if she felt more confident in the replica garment. Kandy replied that 'Yes definitely, it had more construction to it and it fitted my body much more closely than the hand knitted one both wet and dry. It

just felt safer, less risky' (Diamond, K, 01/8/19). (Although modesty was retained in the test, the photograph clearly shows as part of a visual reading that the swimsuit billowed out in the water). Kandy commented on the construction of the swimsuit in relation to its fit and how securely this felt on her body. This was important information for me to clarify some of the material difference between the hand-knit swimsuit and the manufactured one.

Imogen Clark also commented on the black skirted swimsuit's skirt rising up in the water, she states 'Black swimsuit – Skirt caused drag – puffed up like a parachute. We actually used parachutes in resistance training not idea for swimming in.' (Interview Clark, I, 1/8/19). Imogen is a professional swimmer so her comment on the drag factor was interesting. The analogy to the parachute explains the drag effect caused by the untethered skirt succinctly. Swimming costume skirts that were not caught with some type of device to secure them, clearly caused a problem in the water, particularly for those who swam for sport rather than leisure. Imogen also stated that: 'I liked the shorts. Would wear for sunbathing. Very comfortable – when you get out, they are still warm. Contemporary swimsuits stay cold and you have to run to get your towel. – they are like having a little jumper on'. (Interview Clark, I, 1/8/19). Warmth was an unexpected factor in the findings. This was mentioned by more than one swimmer and clearly made it much pleasanter to emerge from the pool.

Fashion writer Barbara Brownie writes about weighlessness as a final frontier of fashion in her book *Space Wear*.

She contends that

'Without gravity, the fabric of the loose garment does not cling to the wearer. Any part of a garment that is not tight or elasticated, or somehow tethered to the body behaves as if it is free of its wearer' (2019, p.51)

Garments for use in space are tested underwater as it is the only environment that replicates microgravity, as Brownie states 'water provides a valuable impression of the effects of weightlessness.' (Brownie 2019, p.52). The garment in a weightless environment tends to billow outwards rather than downwards. Brownie refers to this 'hydrodynamic drag' and she shows how this is visible in underwater photography whenever 'the subject, or the surrounding water is in motion'. (2019, p.53) This is very similar to both Kandy and Imogen's experiences of swimming in untethered skirts attached to the swimsuit but not secured with the Smedley 'tag' shown in Figure 7.9. Good design is clearly evident in the replica garment and the 'tag' holds the garment more closely to the body, thus lessening discomfort and embarrassment

Jason Skipper shown below in Fig 7.14a and 7.14b had a very similar experience to Kandy in regard to the manufactured and hand-knitted swimming costumes.

Fig. 7.14a. Jantzen swimming trunks (left side) and Fig. 7.14b. hand-knitted swimming trunks (right side).

Jason was a key player in the entanglements of the elements of the event as pool manager. Jason negotiated between my project, the BBC filming and the swimmers from the triathalon club that was running at that time. He did not have time to be interviewed so sent me an email at a later date. It is worth quoting his comments about the Janzen trunks in full:

‘I was suprisingly comfortable in both pairs of trunks. The difference I guess really came down to confidence in wearing them. The Jantzens (shown in Fig. 37) were tight in the groin without modern elastic and irritated me when wearing them on the poolside but that feeling completely vanished in the water. I probably expected more of a scratchy feeling on the skin from these trunks but in that regard, they were very comfortable. But once I got over the general feeling of humiliation parading about in very skinny trunks before a BBC film crew, I felt nicely confident in these. Without being too graphic about it, they seemed to hold ‘everything’ in place and they were great to swim in, not really much different to modern day lycra trunks, briefs or jammers. (Email, Skipper J, 22/8/19)

It is evident that the Jantzen trunks were comfortable in water and felt relatively secure to swim in. This was not the case with the grey woollen trunks shown in Fig 6.14b. Jason Skipper felt that:

‘The grey, handmade trunks in comparison, although incredibly comfortable to the touch, just felt a loose fit and therefore filled me with less confidence in wearing them in the water. In the water, I had to keep checking that I was still wearing something.’ (Email, Skipper J, 22/8/19).

He did feel uncomfortable getting out of the water in the handknit trunks as he testified to the camera crew for the Great Staycation (Broadcast 11/11/19), he indicating how

potentially embarrasing he found this. Jason was the only male swimmer and was evidently very embarrassed by the whole experience, which is perhaps why he did not want to be interviewed directly after this event. This was a very important finding, whereas the sag occurred in the back of Kandy's swimsuit, it just about held up as she got out of the water Jason was afraid to get out of the water in case the swimming trunks fell down I will pick this up later in the section in relation to Goffman's concept of 'stigma'.

The general findings of the swimmers were as follows:

Wool was warm, particulaly in comparison to contemporary swimwear where artificial fibres are used. (Interview, Ross Davenport, 21/06/19), (Interview, Diane Brown 21/06/19), (Interview, Kandy Diamond, 01/08/19). Diane Brown particularly noted the warmth on getting out of the pool, she stated that she didn't become chilled as quickly as in her usual swimwear (Interview, Diane Brown 21/06/19).

The tag on the John Smedley replica prevented the skirted swimsuits from floating away and creating the 'parachute effect' mentioned by Imogen Clark to be used in training sessions for professional swimmers (Interview, Imogen Clark, 01/08/19).

The glamour of the replica swimsuit, the John Smedley Ltd lace bather, was noted by the swimmers who wore it. Kandy Diamond noted that it would be appealing for sunbathing and sitting around the pool in (Interview, Kandy Diamond, 01/08/19). Becky Morley found it had 'an impressive appearance – not what you would get in a traditional swimsuit at all. Was elegant and pretty' (Interview, Becky Morley, 01/08/19). The glamour and construction of the lace bather lent it a special quality – the lace retained the shape and created an appealing texture that enhanced the body. Glamour is a significant theme throughout the thesis both in relation to the marketing of swimsuits and the concept of''modern surface'.

The Jantzen swimming trunks and the CC41 Utility swimming costumes were found to be the most like contemporary swimwear. They were the only ones that felt 'itchy', probably due to a lack of import of Merino wool during the 2nd World War and a reliance on stocks of British wool (Interview, Imogen Clark, 01/08/19), (Email, Jason Skipper, 22/08/19).

The major finding was that there was a significant difference between performative qualities of the manufactured and the hand-knit swimsuit. The bodily confidence of the swimmers was markedly different in the two types of garments also. The materiality of the garments, their quality and feel in water are significant factors in the swimmers feelings of security.

All the major findings of the swimmers given above reflected some of the concerns offered in women's magazines of the interwar period as discussed earlier in thesis. Glamour, is obviously a major concern, the 'prettiness' of the replica was discussed in relation to sunbathing (Interview, Kandy Diamond, 01/08/19 and being at the poolside. The CC41 utility swimsuit (produced during the 2nd World War, in 1941 as suggested by its

classification) was despite the 'itchyness' of the wool fibres felt to be the most contemporary in terms of its figure fit by two of the swimmers, one, Becky Morley had also worn the replica swimsuit (See Table 7.7). The reason the swimmers may have found them most like a contemporary swimsuit may have been that both were manufacted at the end of the interwar period and it is entirely possible that many of the technological issues with the 'second skin' fit that most of the manufacturing companies aspired to had been resolved.

The warmth of the wool, particularly when leaving the water, might be something that current manufacturers might take note of. This was a pleasurable discovery by some of the swimmers.

The key finding however was that the hand-knitted interwar woollen swimsuits, as suggested by academic evidence did indeed float away from the body and made the swimmers feel insecure. The design feature of the replica held the skirted swimsuit in place, those without the tag including the hand-knit and black swimsuit, ballooned out in the water and interferred with swimming. The lack of a tag was annoying but coupled with the insecurity of the hand-knit swimsuit created a real lack of confidence. Given that, as shown elsewhere in the thesis and this chapter it was predominantly those who could not afford the price of a manufactured swimsuit who wore home-knitted versions, the test revealed that those who wore them may have been subject or feelings of shame or embarrassment, either in or getting out of the water.

Erving Goffman discusses some of the potential social restrictions on bodily exposure. He contends:

'The relative undress of a bathing suit is part of the whole loose-ness complex-which includes the way one handles one's voice and eyes as well as one's body -and it is this whole complex that is tolerated and even encouraged on the beach' (1966, p.211)

But what if, even in the beach or lido scenario, the risk of bodily exposure becomes too much? The person wearing a hand-knit swimsuit, that risks bodily exposure through the sag of the garment could be seen to be, as Goffman describes showing 'a lack of attachment to the social setting' (1966, p.213). In a situation where the person is perhaps with a group of friends, on a beach, or in a lido someone could help to reduce any embarrasment by rushing to the swimmer with a towel, a robe or home-made beach pajamas (Horwood, 2011). For someone swimming on their own in an environment such as a municipal pool where propriety was key (see Chapter 5 for required behaviours in local authority swimming pools) or swimming in an environment such as a beach or lido where there were those who generally could afford to wear manufactured swimsuits, they might feel alienated or stigmatised.

Stigma as defined by Goffman ‘refers to an attribute that is deeply discrediting’ (Goffman, 1966), in relation to society and a person’s social identity. The fear of social exclusion in relation to the lack of confidence in a swimsuit, even if strategies for ‘cover up’ had been put in place by the swimmer, must have affected self and social identity. Bodily exposure would have been discrediting on the beach, in the swimming pool or in the lido. If this is also marked by a differential in social class then the feeling of exclusion is compounded. Goffman (1966) suggests that stigmatising an individual on the basis of discrimination can reduce life chances, even if this is done unthinkingly. A person’s inferiority can be rationalised into ‘animosity based on other differences such as those of social class’. (ibid). The interwar period was beset with class differential (Horwood, 2011) and one of the places that it was perhaps most evident was in what Goffman refers to as ‘mixed contacts’(Goffman, 1966), where ‘stigmatised’ and normal mix is on the beach or in the new Lidos. The Lady (1937) advises it readers in an article entitled Outfits for Scotland, Spas and the Seaside ‘not to make the mistake of going to an elegant place in your second-best, or you will feel obscurely out of it, and envious of other women who fit so well into their sophisticated backgound’ (in Horwood, 2011, p.78). Although working class young women would perhaps not be travelling to such an ‘elegant place’ as those anticipated by the feature writer of ‘The Lady’, the quotation indicates how much more than ‘obscurely out of it’ (ibid) and envious a swimmer might feel in a ‘mixed contacts’ situation in a wet hand-knit swimsuit.

The test had its limitations, ideally 5 duplicate archival replicas, 5 swimsuits and 5 swimming trunks would have been tested with 5 swimmers to give a more robust result but the reality of this was not possible because of timescales and availability of personnel and other resources including the Lido itself. The findings were revealing and the materiality of the swimsuits themselves were part of that revelation. The relational interchange between the garment, the makers, the swimmers and the pool highlighted the types of entanglements (Hodder 2012), that were potentially chaotic and occurred during the process of re-enactment. The result indicated a significant difference between the performative qualities of the manufactured and those of the hand-made version. Other revelations such as the warmth of the wet costume and the parachute effect of skirted swimsuits contributed to the understanding gained from this substantial object study.

Conclusion

The main purpose of the chapter was to analyse and investigate the findings of the re-creation of hand-knit and manufactured woollen swimming costumes from archival garments and interwar women’s knitting patterns. The material qualities and capabilities of the re-created garments were tested in a newly restored 1930s lido and the findings from

this established some interesting observations on the performative qualities of these swimsuits, as worn by those who swam in them.

The chapter examined object study in relation to material cultural analysis through the work of Latour (2007) and Hodder (2012) in relation to Actor Network Theory and Hodder's concept of 'entanglement', both of which are concerned with the relational values of people, objects, institutional and material factor. In my case the material factors were water and wool, and dealings with John Smedley Ltd and the New Bath Hotel, Matlock whose pool we used for the re-enactment. Object study in relation to garments drew on the work of Danial Miller and Suzanne Küchler ((Davidson 2019, Miller and Küchler, 2005), and about wool through the work of Klepp and Hebrok (2014).

Authenticity in relation to re-creation and re-enactment indicated that the authentic is not possible in re-creation due to materials and processes being different over an historical time period. However, a goal of 'truthfulness' (Cleere 2014) in the selection of material and processes in re-creating and re-enacting the past was established and an example of where this occurred in the recreation is shown in the chapter in a debate between knitters Cathy Challender and Martha Glazzard.

Hilary Davidson (2019) explores the re-making of garments from Museums and Archives and her idea of the 'embodiment' or wearing of the garment was of particular importance to this object study. The re-creation of both the manufactured and home-knitted garments was complex in relation to the compromises and the adjustments that had to be made so that the garments would be wearable by swimmers and as secure as they could be for the re-enactment.

Finally the re-enactment of the swim in the lido produced some illuminating results. Unexpected findings such as the warmth of the wool and anticipated findings such as the 'prettiness' of the replica swimsuit connected strongly to many of the themes of the thesis including health and hygiene and glamour. Evidence in the literature that hand-knitted swimsuits (Warner 2006, Horwood 2000) did sag was confirmed by photographic evidence and swimmer's testimony. To a certain extent this had also been anticipated, however the employment of an expert knitter to interpret these interwar knitting patterns demonstrated that even with skilled knitting, the hand-knit swimsuit left the swimmer with feelings of insecurity particularly in relation to the swimming trunks.

The chapter strongly makes the point of class differential in the hand-knitted interwar swimming costume, those who could afford the manufactured item, such as the replica lace bather could feel confident, glamorous and self-assured when swimming and sunbathing whilst those who wore the hand-knit version, would have to use a variety of means to cover up. They would at best feel envious in what Goffman (1966) describes as a 'mixed contact' environment or at worst feel second-class and excluded. This object study has engaged

with multiple layers of exploration to produce a volume of evidence and data to establish both the material qualities of the interwar woollen swimsuit and its social dimensions.

Chapter 8: Conclusion

Introduction

The conclusion revisits the research questions outlined in introduction to the thesis and examines how these have been addressed throughout the thesis using a variety of theoretical and methodological approaches. These research questions were:

1. How did the swimsuit come to signify such a large range of meaning from the homespun, to the glamour of Hollywood and the Riviera; and become an emblem of health and fitness in the interwar period?

2. Why did wool become the prevalent fabric for swimwear during the decades of the 1920s and 1930s and how did this fabric, in the form of a swimsuit become a modern surface?

3. There was a significant difference in performance and wearability of swimwear according to how the garment was manufactured – how did swimwear evolve over this period and how did this affect purchase cost?

4. Places of swimming and their locale were important spaces that the swimsuit clad body operated within, what was the aesthetic relationship between the building and body and how did that impact on actions and behaviours of swimmers?

5. Swimming was claimed to be a healthy democratic exercise, it was widely promoted by municipal authorities and government, does this prove to be the case, or were there underlying class divisions with the practice of swimming and sunbathing?

This conclusion will answer each of the research questions in turn, responding to the findings of the thesis and examine the contribution to knowledge that these make. This conclusion will then discuss how my theoretical and methodological approach has made a contribution to knowledge.

How did the swimsuit come to signify such a large range of meaning from the homespun, to the glamour of Hollywood and the Riviera; and become an emblem of health and fitness in the interwar period?

The interwar knitted woollen swimming costume is a key example of Benjamin's (1978) philosophical concept of the 'fragment' in society. As a polyvalent garment it exists within the framework of fashion and textiles but also has cultural, political and social dimensions. Social inequity emerged during the study of this garment, the homespun or handmade has been identified as the way that many working-class women made their clothes. The thesis has examined the figure fit swimsuit in the context of the perfected female form. This was the interwar aspiration, for glamour, for style and elegance in all of a young woman's apparel and particularly in the swimsuit. Th cost of the swimsuit promoted through high-end magazines such as *Vogue*, *The Tatler* and *Harper's Bazaar* was probably more than a week's wages for the average working girl as the thesis has shown. Weekly magazines offered hand-knitted patterns for swimsuits along with strategies for dealing with the problems they caused (for example having one pattern for swimming in and another for sunbathing), the magazine (*Woman's Weekly*, April 13th 1935 p.668 and 669) did not suggest how and where one might change from one to the other. The swimsuit as a fragment signified multiple meaning in the 20s and 30s decades.

The social landscape for women changed enormously during the interwar period when the thesis shows the swimsuit emerged. New glamorous Hollywood role models detracted from the deeply entrenched class system and offered other possible femininities to aspire to than those of the upper classes. The swimsuit appears in Hollywood as a glamorous item of clothing offering sexiness and allure. Young women were able to identify with these role models and move away from Veblen (2007, [1899]) and Simmel's (1957, p.545 [1904]). concept of 'trickle down' from the leisure/upper classes to the lower classes. Working class women's magazines advertised products and offered many tips to achieve the Hollywood look; the young working-class woman was pushing at those defined boundaries of class, that started to become somewhat porous when the British upper-classes mingled with Hollywood stars.

Glamorous swimming locations such as the Riviera were often used high-end women's magazines to promote swimwear using either illustration or photography. Archival research into high-end fashion magazines demonstrated just how closely the swimming costume was associated with new, modern utopias. Mediatization to use an expression by Agnes Rocomora (2019) expanded and grew during the interwar period offering exciting and aspirational new places to enjoy. This thesis has shown that these swimming spaces such as the beach, the lido and the very glamorous ocean liner were associated with idylls and

were utopian in their dimensions. The reality as the thesis has shown was that they were beset with codes of behaviour in the interwar period. Although certain spaces such as the lido were more relaxed and allowed for gender and class intermingling, then, as now those who did not feel body confident would have found those spaces difficult to be in.

The thesis has found that there were governmental concerns about the fitness of the nation after World War One and the outbreak of Spanish influenza. One of the British Office of Works interventions was to promote a healthy body culture through exercise. Swimming and football were made relatively inexpensive as participant sports unlike tennis, golf and gymnastics and of the 180 lidos (Smith, 2005) built, many were designed by modernist architects. Modernism embraced healthy body culture (Wilk, 2006) and it became a new ideology of design. The swimsuit, as a garment was central to this thinking, it symbolised the healthy, glamorous body in the newly created leisure spaces of the lido.

Connections between the main archive at knitwear company John Smedley Ltd who contributed generously to the re-creation of a manufactured swimsuit and the Matlock Bath hotel, where the re-enactment took place are useful as a summary to this question. John Smedley built a hydropath for his workers in Matlock. The triangulation between this high-end garment, place and active concern with healthiness make the swimming costume a marker of the modern body.

Contribution to knowledge

The thesis contributes to established knowledge by using the swimsuit, a textile garment to show how the modern young working woman pushed at some of the boundaries of class and exclusion through emulating the glamour of cinematic role models. It also contributes ideas about the aspirations of working-class people to engage with spaces of leisure and pleasure, to indulge in healthy, bodily exercise like swimming only to encounter obstacles in reality.

Why did wool become the prevalent fabric for swimwear during the decades of the 1920s and 1930s and how did this fabric, in the form of a swimsuit become a modern surface? There was a significant difference in performance and wearability of swimwear according to how the garment was manufactured – how did swimwear evolve over this period and how did this affect purchase cost?

Wool became popular during the interwar period following the development of knitted jersey, showcased by designers such as Coco Chanel. It may have stayed in the popular imagination as connecting with late 19th century views about sanitation and it being a healthy fabric when worn next to the skin (Newton, 1974). Certainly, it had stretch and flexibility in a way that cotton could not replicate. In the 1930s Lastex was introduced in to the manufactured swimsuit enabling it to become much more figure-fit. This allowed it to have the streamlined, snappy quality that Lencek and Bosker (1999) applauded in their writing about the beach. This, in turn, with its figure-fit appearance and, although, soft to touch, it mirrored the stream-lined surfaces of modernist lidos and other seaside architecture.

Companies such as Symington's of Leicester and John Smedley Ltd led the way in perfecting their knit technologies to create the super fitted swimsuit and marketed them (in the case of Symington's) as fitting like 'a mermaid's skin' (LMS Symington Archive). John Smedley Ltd also developed new technologies in competition with some of the other high-end knit wear manufacturer. Many of their bathers incorporated different types of Lastex including 'Jay Lax' (JSACT) which offered alternative directional stretching. Later in the 1930s they developed their 'lace bather' which was the one that was used for the re-creation. Without using Lastex this gave the same figure fit as a Lastex swimsuit. Companies were in competition to find the most figure-hugging garments that would stay in place in the pool. However, the more expensive the materials, the labour and the machinery involved, the more expensive the swimsuit was. The thesis has shown from archival and high-end magazine advertising that the costs were sometimes double an average working girl's wage.

Contribution to knowledge

Throughout the thesis there has been a practical engagement in the materiality of knitwear through the handling of archival objects and the re-creation of a swimsuit. This should build on some of the fashion and textile histories of the swimsuit that primarily deal with anecdotal evidence. The evolution of swimwear has been documented in the past in a number of

historical studies but these have relied on secondary source material rather than direct engagement with the making process.

Places of swimming and their locale were important spaces that the swimsuit clad body operated within, what was the aesthetic relationship between the building and body and how did that impact on actions and behaviours of swimmers?

The research is novel in looking at fashion and fashionable places for swimming and sunbathing in the interwar period in the context of Foucault's principles of Heterotopia (1967). Foucault's paper was presented to a group of architects in 1967 and outlined counter spaces including cemeteries, brothels, prisons, asylums and rest homes as spaces that exist in real time and space but run counter to everyday existence. Sitting between Utopia which is a theme of alternative communities and architects during the interwar period and Dystopia associated with totalitarian regimes, many of which emerged during 1920s and 1930s decades.

The thesis discussed the rituals for entry into the sites of swimming and sunbathing in relation to Foucault's fifth principle of heterotopic states whereby the individual can only penetrate these by submitting to 'rites or purifications' (1967, p.7). There are rituals to the entry and exit of most places of swimming created by the need to undress and change into the swimsuit. The thesis has shown (in the case of the hand-knit swimsuit) that this may have involved robes or beach pyjamas in the lido or on the beach. Changing rooms in lidos, municipal swimming pools serve as the location of entry or exit to this place out of normal time and space. However, the beach is more problematic, anecdotal evidence shows how many women preferred to remain clothed and 'paddled' in their summer dresses rather than changed into a swimsuit (Horwood, 2011). Women with small children were also not likely to run after them in a swimsuit unless it was very secure.

(Wigley, 2016) makes a useful analogy between the body and building showing architecture to be fit and lean in the way that a swimsuit clad body projects health and fitness. The thesis established that there was a strong link between body and building in the interwar period. These connections were made through metonymic meanings (Cheng, 2011) of surfaces showing simplicity, purity and impermeability in concrete, chrome and the newly streamlined swimsuit. The thesis also found that concrete is unsightly unless regularly maintained and the body is subject to aging and can no longer carry off such a challenging or cool look. Knitting itself is unstable and only flatters the svelte and youthful.

Contribution to Knowledge

Discourses on modernism do not generally investigate decay and deterioration, except perhaps where a restoration is in progress. The thesis shows that the maintenance of both body and building take regular and sometimes impossible maintenance.

Swimming was claimed to be a healthy democratic exercise, it was widely promoted by municipal authorities and government, does this prove to be the case, or were there underlying class divisions with the practice of swimming and sunbathing?

The democratisation of life appeared to be prevalent in the interwar period as the thesis has shown through the advent of the cinema as accessible entertainment, the mass production of fashion using cheaper materials to emulate high-end style, and the building of lidos and open-air swimming pools, as previously mentioned; all over the British Isles. The lidos and open-air swimming pools were intended to be classless as Sir Josiah Stamp declared on the opening of Morecambe's Super Swimming Stadium in 1936 (Smith, 2005, p.1280). Swimming as an exercise was purported to be democratic. Those who encountered modern architecture in their lido could have a temporary fix of glamour just as much as they could visiting the cinema.

The working classes apparently no longer needed to stand outside and stare at the glittering, glamorous spaces inhabited by those who were confidently well off as in Baudelaire's poem (Berman, 2010). They did have access to some of the glamorous or 'cool' spaces of modernism, with its shiny, sparkling surfaces but not without the sort of barriers shown in the example of the woman who could afford a swansdown bonnet for her baby but could not clean it properly because of where she lived (Kelley 2009).

Contribution to knowledge

What I have discovered is that class is inscribed at every level throughout the thesis, be it in the architecture, the body itself, the media that promoted it, or the materiality of the swimsuit. Class is set into the very fibre construction of the swimsuit, the manufactured suit versus the hand-knit. The thesis has shown the embarrassment and stigma that arose from a swimsuit that would not hold up in water and how that lack of control over what one is wearing can affect an otherwise confident person. Aspirations to achieve a glamourous swimsuit clad body were dashed when the swimmer came out of the water and class boundaries emerged along with sag, discomfort and embarrassment.

Theoretical contributions to knowledge.

The thesis has engaged with a range of different theories from philosophy, social and cultural theory, archaeology and material cultural theory.

The thesis has built upon theories of surface from the work of Barnaby (2013), Kelley (2009) Hartzel (2020) and Cheng (2011), following the idea of the modern surface the thesis has contributed a relationship between the soft, surface of textiles and the hard, impermeable surface of concrete and chrome. It has shown how skin, textile and reflective light touched surfaces were prevalent in the interwar period.

The thesis used Foucault's idea of 'heterotopias' and aligned it to some of the rituals of entry and exit to sites of swimming. It locates the lido, the beach and other spaces as being outside of everyday life. Changing facilities or robes were used to enable the swimmer to move from one location to another wearing appropriate dress/undress. This approach contributes to the applications of Foucault's theory of heterotopia in a new context.

The findings of this thesis can build upon archaeological theory through the work of Hodder (2012) and others. His concept of entanglement and social theorist Latour's (2005) concept of networking, were used to support a case study involving many actors and actants.

The results of this study can contribute to the expanding field of cultural theory. It draws in from a range of discourses and applies these to the operations of a single artefact or object. It is an historical, social, technological and political reading of a fashion garment.

Methodological contributions to knowledge

This study used a multi-method approach using archives, storytelling. Interviews and photographic recording. It also used the re-creation (of archival swimwear and 1930s knitting patterns) and the re-enactment of a swim to ascertain the material and performative qualities of the swimsuit when it was wet. In terms of fashion and textile research and some object study it goes beyond the findings of anecdotal evidence and tests what this textile garment was like to wear next to the skin, move and swim in. The re-creation and the re-

enactment both set out to establish a class differential based on the cost of a manufactured swimsuit in relation to the relative cheapness of buying wool and knitting one's own.

The study acknowledges its limitations, however the methods used were determined by my theoretical perspective and based on practicality. Re-enactment was used as a means of establishing the performance of wool in different conditions such as wet, dry, in and out of water in preference to the use of wool metrology (scientific instruments) to diagnose the properties of wool fibres.

It could be argued that the test was limited in its scope but it did firmly establish the differential between the two types of swimwear.

Summary

The central contribution to knowledge that the thesis makes is in the uncovering of class distinction in the interwar knitted swimsuit. It has established that class boundaries existed in swimming during the interwar period because of the differing material properties of the interwar swimsuit. The thesis described a body of work that uses contemporary testimony and direct observation of the performative qualities of the swimsuit as its main concern. In doing that it goes beyond most previous research and scholarship to give a directly observed account of how the swimsuit behaved in water and on the wearing body. Wet, saggy, home-knitted swimsuits not only determined your class background but also stigmatised the wearer who was left with compromised modesty.

The conflict between aspiration and the reality of the wearable swimsuit in the environment of the modern surface linking the glamour of both the body and the building is shown as compromised in the thesis by the demise of both over time. The maintenance of both is costly and challenging usually creating an impossible goal.

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Fig. 6.19. Brown, J., 2009. Glamour in six dimensions: Modernism and the radiance of form. London: Cornell University Press. Front Cover.

Fig. 6.20. Bebe Daniels from *Woman's Weekly* July 5th 1930. British Library

Fig. 6.21. left: Cigarette advert, August 5th 1930 *Woman's Weekly*. British Library

Fig. 6.22. right: Advert for Hair Removing cream July 12th 1930. *Woman's weekly*, British Library

Fig. 6.23. left: Knitted Swimsuit Pattern *Woman's Weekly* 12th July 1930. British Library

Fig. 6.24. right: 'Knit your Own Bathing Suit, *Woman's Weekly* 12th July 1930, p.57. British Library.

Fig. 6.25. Swimming costume Knitting Pattern, *Woman's Weekly*, April 13th 1935 p.668 and 669.British Library

Fig. 6.26. left: Back View, Symington's Telescopic bather in the Peter Pan range. Courtesy of Leicester Museums and Galleries.

Fig. 6.27. right: Front view LS20, Courtesy of Leicester Museums and Galleries.

Fig. 6.28. Telescopic swimsuit knit. Own Photograph, Leicester Museums and Galleries.

Fig. 6.29. left: Marketing Brochure for Peter Pan Range (1939) Symington Collection, Leicester Museums and Galleries, as above.

Fig. 6.30. right: Fold out of brochure, (1939). As above.

Fig. 6.31. Peter Pan range with description and prices. (1939). As above

Fig. 6.32. left: Front view of Smedley swimsuit. 2011 4600, John Smedly Charitable Trust Own Photograph.

Fig. 6.33. middle: Rear of John Smedley swimsuit. As above

Fig. 6.34. right: Loop Lastex two-piece swimsuit. 2011 4624 (top) 2011 46242 (briefs). John Smedley Charitable Trust. Own Photograph.

Fig. 6.35. John Smedley model Irene wearing a one-piece skirted swimsuit. Courtesy of John Smedley Charitable Trust.

Fig. 6.36. left: Front view of lacy bather. 2011 4609. John Smedley Charitable Trust. Own Photograph.

Fig. 6.37. right: Rear view of same. As above.

Fig. 6.38. Skirted Cream bather with pom-pom attachment. 2011 4616. John Smedley Archive Trust. Own Photograph.

Fig. 6.39. Marilyn Monroe singing 'Happy Birthday' Mr President. Available at: https://www.thoughtco.com/marilyn-monroe-sings-happy-birthday-jfk-1779363. Accessed 30/04/2020.

Fig. 7.1. Drawing by Janet Samson, 2015.

Fig. 7.2. Photograph of Alf Bower with his father. He recalls having to 'hold these up when they were sodden'. (Bower 15.11.2015)

Fig. 7.3. Flyer for the Beautiful Bathers Day.

Fig. 7.4. Swimming Trunks from the Symington collection, Own Photograph, Leicester Museums and Galleries.

Fig. 7.5. Loop wool Lastex Bather, 2011 4619. Own Photograph

Fig. 7.6. moth hole in Loop Lastex. Own Photograph

Fig. 7.7. Lace Bather. Own Photograph

Fig. 7.8. Charles Renee Mackintosh, entrance to Hill House, detail of the rough-cast surface to the left of the image. Available at:

https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.theguardian.com%2Fuk-news%2F2018%2Ffeb%2F01%2Fcharles-rennie-mackintosh-house-appeal-to-protect-structure&psig. Accessed 23/02/2023.

Fig. 7.9. Tag to hold the skirt to the knickers. Own Photograph

Fig. 7.10. Kandy Diamond trying on swimsuit. Photograph courtesy of Cathy Challendar.

Fig. 7.11a. (left) and 7.11b. (right) Kandy Diamond wearing re-created swimsuit, dry and wet. Own Photograph.

Fig. 7.12. Hand-knitted swimsuit .Kandy Diamond Own Photograph.

Fig. 7.13. Sag evident in the hand-knitted swimsuit. Photograph courtesy of Lucie Griffiths Photographer for John Smedley Ltd 2019.

Fig. 7.14a. Jantzen swimming trunks (left side) and Fig. 7.14b. hand-knitted swimming trunks (right side). Own Photograph.

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