Wax works: Hairlessness, infrastructure, and the air that we breathe

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Abstract

Working across urban sociology and critical beauty studies, this thesis examines the materials, spaces, infrastructures, and embodied forms of labour which effect the production of 'feminine' bodies in London's beauty salons. Interrelatedly, it explores the toxic harms imbricated in this beauty work. Given the increasing ubiquity of extended hairlessness for a 'feminine' appearance, the thesis focuses on the journey of depilatory wax to and through the beauty salon and on how wax works. In particular, the role of oil is underscored: as a key raw material which affords the product and its packaging certain ways of performing; as powering the wax's diesel-fuelled journey to the salon; and as enabling its easy disposability and replacement. The thesis also considers the spaces upon which this work is predicated: salons but also ports, wholesalers' warehouses and stores, light industrial estates, and waste facilities, and the road networks and waterways which connect these. Following wax and other beauty products across London, the materials and places necessary for beauty work to actually happen are put into relief. As are the forms of potential toxicity which are co-extensive with beauty practices, for the products' application in the salons, the journeys they make through the city, and what is released as they are incinerated are replete with petroleum-originated emissions. Taking materials, places, and bodies to be in de/generative interchanges, the toxic harms are epitomised in the air that 'we' breathe where vulnerability to these is patterned by intersecting structural disadvantages. Petro-permeated air circulates through spaces and into lungs and is inhaled and metabolised on starkly different terms. Drawing these together, the thesis argues that the production of 'feminine' bodies in the beauty salon is materially and spatially effected, heavily permeated by oil, and inseparably entangled with unevenly-distributed toxic harms.

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Chapter 1 Introduction

> Feminist theory on beauty needs to be grounded; that is, it must take the ambiguous, contradictory, everyday social practices of women as its starting point (Davis, K. 1991: 33).

1.1   Introductory remarks

This thesis explores how materials, spaces, infrastructures, and forms of embodied labour actively participate in effecting the particular version of 'femininity'[1] produced in London's beauty salons. I start the study in some of London's 7,266[2] salons where 52,382[3] people[4] work (British Association of Beauty Therapy and Cosmetology 2019: 26, 35) before broadening my focus to the beauty products themselves, their packaging, and the urban infrastructures which facilitate their movement to and through the salon. In particular, the role of petroleum products is centralised: as key ingredients in beauty products and their plastic containers, as fuelling their movement through the city, and as a key factor enabling their 'easy'[5] disposability and replacement. Interrelatedly, the thesis explores the (potentially)[6] toxic harms imbricated

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[1] The terms 'femininity' and 'feminine' appear in inverted commas throughout to recognise that this is but one version of 'femininity' and that it is socially, culturally, materially, and spatially constructed. Additionally, the version of 'femininity' which I examine is specifically the version worked upon in the beauty salon and so is heavily tied in with outward appearance. It is crucial to recognise that 'femininity' and 'feminine' bodies are not the only expression of gender worked upon in the salon and produced through hair removal and other beauty practices. For example, particular versions of 'masculinity' (Terry and Braun 2016) are also made there, as are gendered expressions which are outside of the normative feminine-masculine binary (Corp 2021; Ridley 2022; see section 1.5).

[2] Figure for 2017. This is the adjusted figure; the un-adjusted figure is 6,100. With regards the number of hair and beauty businesses, the British Association of Beauty Therapy and Cosmetology report explains: '[t]he ONS [Office for National Statistics] estimates that in 2017 there were 34,305 hair and beauty salons in England [of which 6,100 are in London] … [T]he ONS data is likely to significantly underestimate the number of businesses as a result of excluding those not registered for VAT and PAYE – a significant number of Hair and Beauty businesses. This data has therefore been adjusted by combining it with additional robust data … to provide a more accurate estimate of the number of businesses' (2019: 26; see pp.20-21 for more on the methodology).

[3] Figure for 2017. This is the adjusted figure; the unadjusted figure is 29,223 (British Association of Beauty Therapy and Cosmetology 2019: 35; see footnote 2).

[4] It is predominantly women who work in the hair and beauty industry. The National Hair and Beauty Federations' industry statistics show that in the UK, '83% of people working in hairdressing and barbering and 94% of people working in beauty are female' (National Hair and Beauty Federations 2019).

[5] Although products may be easily disposed of and replaced, this of course is far from straightforward nor infinite as these processes heavily rely upon the provision of oil and so are ultimately unsustainable. Moreover, this ability to dispose of and replace consumer goods are deeply entwined with 'geographies of petro-violence' (Savitzky and Urry 2015: 185) from the locat*ing* (note: the emphasis on locat*ing* as an active process, see footnote 37 and section 6.7) of drilling platforms and pipelines (see Marriott and Minio-Paluello 2013a) and oil refineries (see Davies, T. 2019; Jephcote and Mah 2019; Mah 2015) to other forms of 'escalating petro-inequality' (Appel 2012: 442) as different communities are differentially impacted by oil and its extraction (see Gbadegesin 2001). Far from 'easy'.

[6] It is important here to emphasise the *potential* toxicity of these products as, firstly, although nobody and nowhere is free from toxins (Alaimo 2008: 260), the ways in which these impact vary enormously. And secondly, often little research has been carried out into their effects, or that which has been done is inconclusive which speaks to the

in beauty work as the products leave traces in the places – from the port to the manufacturers to the wholesalers to the salon and, once thrown 'away'[7], onwards to the municipal waste facility where they are incinerated, a plume of smoke emanating from the incinerator chimney – through which they 'journey' (Knowles 2014). The thesis also considers how, in a reciprocal relationship with these various spaces (Grosz 1999), the products and their journeys come to permeate the bodies with which they come into contact in different ways. In other words, it thinks through how the people who work with beauty goods or simply live alongside the routes the products take are corporeally affected by this movement to and through the salon. To examine these harms, the thesis pays specific attention to the air that 'we'[8] breathe as it circulates through places and into bodies, in the salons, through the city, and beyond; making life but on deeply unequal terms where vulnerability to toxicity is patterned by intersecting structural disadvantages. Understanding beauty work as materially and spatially 'animated' (Watson 2015: 877), I contend that these harms are deeply entangled with how the products work and how they move through the city and beyond and so co-emerge with the particular version of 'femininity' produced in the salon. Drawing these together, I argue that the making of 'feminine' bodies in the beauty salon is materially and spatially effected, heavily permeated by oil, and constitutively entangled with unevenly distributed and (potentially) toxic harms.

Given the increasing ubiquity of hairlessness (and for ever-novel parts of the body [Widdows 2018]) for a 'feminine' appearance (Fahs 2011, 2014, 2017; Herzig 2009, 2015; Smelik 2015; Tiggemann and Kenyon 1998; Toerien and Wilkinson 2003; Toerien et al. 2005) and the requirement to repeat this process as body hair grows back and so needs removing again and again and again, in particular, this thesis focuses on depilatory wax[9] and its journey to and through the beauty salon. I examine what wax is – what it consists of – and so what it does. Specifically, I consider how wax's petroleum-derived ingredients enable it to perform in particular ways, ultimately removing 'unfeminine' and so unwanted hair. I also explore how it journeys through London, from the port to the wax-blending factory to the wholesalers and

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power relations tied into experiences of toxicity: whose experience matters enough to be studied (Davies, T. 2019; Nixon 2011)?

[7] 'Away' appears in inverted commas throughout as I will go on to problematise that there is an 'away' to where our rubbish is thrown as this waste, of course, has to go somewhere (see Chapter 6).

[8] 'We' appears in inverted commas throughout as it is crucial to recognise the differences in the air in different places and the different terms on which differently-situated people are able (or not) to breathe: '"we" are not all the same, nor are we all "in this" in the same way' (Neimanis 2017: 15).

[9] It is important to note that, although this thesis focuses predominantly on depilatory wax, this is only one of the many products enrolled in producing 'feminine' bodies in the salon, with which beauty therapists work, which journeys through the city, and which is discarded and incinerated once used (see section 1.5). As such, at times I specifically address wax but at others I refer to beauty products more broadly. This is made clear in the discussion.

onwards to the salon to consider various spaces, infrastructures, and people enrolled in its journey. Additionally, I examine what happens when the wax and other used beauty products are thrown 'away', tracing their journey to the incinerator and beyond, their emissions carried from the city by London's prevailing westerly winds.

In this thesis I contribute to critical beauty studies by extending the socio-cultural focus of feminist work which has examined the reasons why women[10] engage with beauty work by additionally centralising how wax and other beauty products, the spaces through which they move, and the related infrastructures and embodied labour practices animate the making of 'feminine' bodies. Furthermore, working across critical beauty studies and urban sociology, my focus on the mutually constitutive relationship between spaces and bodies (Grosz 1999) and the associated 'power geometries' (Massey 1993) allows me to contribute to the latter by examining how forms of urban infrastructure are implicated in the intimate consumption practices in the salon. In particular, I consider how these infrastructures *effect* the production of 'feminine' bodies, a deeply corporeal topic which has often been overlooked in urban studies (Watson 2015). Putting the areas of study into conversation, the thesis explores the material, spatial, and bodily 'animators' of beauty work. It emphasises the petro-infused harms entwined with these practices, putting into relief how these are felt at once spatially and corporeally and are threaded through with intersecting forms of structural, infrastructural (Boehmer and Davies, D. 2018; Rodgers and O'Neill 2012), and slow violence (Nixon 2011), most notably epitomised in the air that 'we' breathe.

1.2   Structure of the chapter

In the rest of this introductory chapter, I begin by offering a reflection on how my research developed, establishing the 'ground' (Davis, K. 1991) for my examination of the materially- and spatially-animated production of 'feminine' bodies in London's salons and the associated forms of (potential) toxicity imbued in beauty work (1.3). In the next section, I discuss in more detail my contributions to both critical beauty studies and urban sociology (1.4). I then outline the key concepts which underpin the thesis. Given my focus on depilatory wax, I start by considering the apparent ubiquity of hairlessness for a 'feminine' appearance (1.5). I then address the seemingly never-endingness of the ever-expanding beauty work as more and more is expected of women; practices which must be repeated again and again and again in order to maintain a suitably 'feminine' appearance (1.6). In the following section, I turn to the role of materials and spaces in the production of this particular version of 'femininity' emphasising the dynamic

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[10] I use the terms 'women' and 'woman' throughout the thesis to indicate people who self-identify as women.

de/generative relationships between spaces, materials, and bodies and the power relations threaded through these (1.7). I then underline the centrality of petroleum-derived products for the thesis because, as a key ingredient in wax and other beauty products, powering the transportation of the goods to and through the salon, and an enabler of their unthinkingly easy disposability and replacement (Hawkins 2009, 2013a, 2013b; Liboiron 2021; Mah 2022), oil comes to infuse and indeed *enable* the production of 'feminine' bodies in a multitude of ways (1.8). In the next section, I discuss how I build on Doreen Massey's (1993) concept of 'geometries of power' to consider the 'geometries of toxicity'[11] co-extensive with beauty work as a means of exploring the unevenness of the related material, spatial, and bodily harms (1.9). Finally, I argue that a productive way of considering the materials, spaces, bodies, and geometries of toxicity entangled in the making of 'feminine' bodies is to attend to the air that 'we' breathe as it circulates through places, inhaled into bodies, permeated by the petroleum which renders beauty work possible (1.10).

1.3   Establishing the ground

Towards the end of my field visit to one of the UK's manufacturers of depilatory wax, Mark – the Managing Director and my tour guide for the day – is showing me around the factory warehouse. Moving out of the way of the forklift, we navigate the tightly-packed aisles stacked floor to ceiling with goods on pallets. Pointing out various cardboard boxes and plastic sacks, Mark provides an inventory of what is stored there: resins from Portugal, hydrocarbon resins from the Netherlands, paraffin waxes from China, France, and Taiwan, and palm oil from Malaysia. These ingredients will be transported the short distance to the factory for blending in different quantities to produce depilatory wax. In the other half of the warehouse, the finished and packaged waxes await collection and onwards transit to UK wholesalers or to seaports from where they will continue their journey to Korea, Romania, France, America, Italy …

(Fieldnotes, October 2019).

Standing in the warehouse, I am somewhat bemused. At the outset of my PhD in 2014, I had expected my research into women's engagement with beauty work and the associated production of 'femininity' to take place in salons not in draughty factory depots next to motorway junctions. Yet, whilst accompanying women to salon appointments, interviewing them about their beauty practices, and observing hairdressers and beauty therapists at work, my attention was increasingly drawn to the different material, spatial, and bodily practices which are involved in beauty work.

Building on an initial focus on women's engagement with beauty practices and spending time with them during their hair and beauty appointments, I began to turn to the depilatory wax, other beauty products, and their packaging and their roles in beauty work, examining how these behave as they are deployed to

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[11] Thank you to Nirmal Puwar for suggesting this evocative and apposite concept.

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produce 'feminine' bodies in the salon (Chapter 4). In particular, I started to consider how what the wax is – what it consists of – is deeply entwined with what it does (and what it can do): how it performs to remove the 'unfeminine' and thus unwanted hair as well as how it 'prompts' (Hawkins 2009: 193) the 'enskilment' (Ingold 2000)[12] of the beauty therapists as the knowledge of what it is like to work with in practice becomes ingrained into their bodies (O'Connor 2007; Sennett 2009). I also started to question where the products come from and how they make their way to the salon paying particularly close attention to the different spaces through which these products journey and to the logistical infrastructures which facilitate this movement (Chapter 5). Finally, I started to consider where the products go once used and thrown 'away' for inseparable from the arrival of goods in the salon – in ever-increasing quantities, at greater speed, and lower cost – are the bin bags full of un-reusable waste which must leave daily (Wang, M. 2011: 346) (Chapter 6). As such, my methodological approach evolved and I started to follow the wax and other goods across the London. This involved field visits to the different sites – leaving the salons and finding myself in factory depots, warehouses, trading estates, port approach roads, peri-urban A Roads, and incineration facilities – conducting *in situ* interviews, and being taken on guided tours. From speaking to women about their beauty practices to interviewing participants about their work life in the salon, from 'observing'[13] as salon workers interacted with beauty products to asking questions prompted by what was happening in the different spaces I visited, and trying to record minute details in fieldnotes and by taking photos, I cultivated a materio-centric (Hurdley 2010) and mobile methodology. This approach enabled me to carefully focus on things and what they do, how they interact with different places and bodies as these co-produce, and the traces which they leave behind. Above all, whilst moving alongside the wax through the fieldsites and walking and cycling between locations, I became increasingly attuned to the air that 'we' breathe and the different forms of pollution which circulate in different places, inhaled into different bodies.

Following the wax through London and taking materials, places, and bodies to be in dynamic, de/generative interchanges (Gatens 1996: 110 cited in Alaimo 2008: 255) also put into relief the (potential) toxicity which I view as co-extensive with the making of 'feminine' bodies. Indeed if, as Heather Widdows (2017: 13-16) argues, the harms of beauty work extend beyond the psycho-social harms for

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[12] Ingold explains how 'enskilment' is a process 'in which learning is inseparable from doing, and in which both are embedded in the context of a practical engagement in the world' (2000: 416). This is an apposite term given my emphasis on the gradual acquisition of skill which is effected by the materials and the practicalities of working with them.

[13] It is important to note Back's argument on 'how quickly we want to say "observation" when describing social research' when, in fact, all our embodied and sensory faculties are at play (2012a: 29).

'engaging individuals' (i.e. customers) to include 'direct harms' – for example, emissions from the products themselves and the illnesses they may cause – to providers of the services, then my approach enables me to additionally attend to the 'direct harms' to those people working and living alongside the factories, road networks, trading estates, and waste facilities also implicated in the production of 'femininity' in the salon. Furthermore, as with many forms of harm, these are unevenly felt in the salon (idem.) and beyond. Some places and bodies are more adversely impacted than others in (potentially) toxic experiences where susceptibility to exposure and to long-lasting health concerns is patterned by intersecting social dynamics. Given the omnipresence of oil in every step of the hair removal process which I have examined, it is perhaps unsurprising that many of the (potential) harms are saturated with petroleum. At the same time as the beauty therapists work to remove hair and logistical and waste landscapes enable this practice, spaces and bodies are shaped by the oil-permeated actions and circulation of the goods. The products' journeys through London and its salons leave noxious traces and, reflecting a common structural pattern of pollution, it is already-disadvantaged and marginalised communities who are most vulnerable to these effects, in the salon, in the city, and beyond. The toxic harms are epitomised in the air that 'we' breathe where the oil-permeated air circulating through spaces and into lungs is inhaled and metabolised on starkly different terms (Górska 2016: 107).

In the epigraph with which I opened the chapter, Kathy Davis calls for the *grounding* of feminist work on beauty arguing that we must take seriously women's own explanations for engaging in beauty work and understand them as agents negotiating broader structural constraints. In this thesis, standing in the factory depot, I take this more literally by examining the actual *ground* – the places and materials – upon which the making of 'feminine' bodies is predicated. Or, rather, the places and materials which serve to *effect* the production of 'femininity' in the beauty salon in various ways. Moreover, I aim to also explore how the making of 'feminine' bodies actively impinges on a wider set of spatial and bodily dynamics where different places and people are differently impacted. That is to say, I consider how the beauty practices involved in the making of 'feminine' bodies dynamically enrol places and bodies, both in the salons themselves and beyond, with significant and, given the ubiquity of petroleum products, (potentially) toxic implications for these.

1.4   Contributions

Working across critical beauty studies and urban sociology, this thesis makes contributions to both through examining the 'ground' of beauty work. Bringing together the two distinct fields, my approach enables me to contribute to feminist work on beauty by expanding its purview to also consider the

material and spatial dynamics of the production of 'femininity' in the beauty salon. It simultaneously allows me to contribute to urban sociology by exploring how city spaces and infrastructure are actively implicated in and impacted by the making of 'feminine' bodies, a topic largely overlooked in urban scholarship.

Highlighted by the extant work in critical beauty studies, there are complex and overlapping socio-cultural reasons why (predominantly) women engage with beauty work. For example, these studies have drawn attention to intersecting gendered, classed, heteronormative, and racialised standards of beauty (Barnard 2000; Craig 2002; Holliday and Sanchez Taylor 2006; Kwan and Trautner 2009), social expectations of a particular and 'appropriate' 'feminine' appearance (Black 2004; Widdows 2018), a 'requirement' to remain youthful(-looking) (Hurd Clarke and Korotchenko 2010), a capitalist logic which creates 'problems' to which it sells 'solutions' (Elias et al. 2017), neoliberal imperatives to work on the self (idem.), marketing, media, celebrity culture, and social media (idem; Jones, M. 2016, Peiss 1998), and perhaps even a liberatory sense of pleasure and fun (Craig 2006; Felski 2006; Jafari and Maclaran 2014). In addition to these and largely overlooked by this research into beauty, this thesis argues that there are important material and spatial enablers: the beauty products themselves, their plastic packaging, the skills of the beauty therapists, factories, warehouses, road networks, waterways, incinerators, recycling centres, petroleum. Furthermore, building on research which has examined the various psycho-social and material harms involved in beauty practices for both customers (Wolf 2002; Malkan 2007; Widdows 2018) and workers (Kang 2010a, 2010b; Widdows 2017), I examine how these harms extend beyond the salon and thus how the making of 'feminine' bodies in the beauty salon is co-extensive with a wide range of unevenly distributed (potentially) toxic impacts. I centre this 'ground' and the associated forms of (potential) toxicity in order to contribute to the conversations around expectations of a 'feminine' appearance, structure and agency, and the undergirding power relations which have been parsed in feminist research on beauty practices. In this, I expand the material and spatial perspectives of the field and its concerns with the harms associated with beauty practices.

Bringing together urban sociology with critical beauty studies offers a productive avenue for my examination of the 'ground' of beauty practices and the widespread forms of toxicity with which this 'feminising' work is associated. Yet, as Sophie Watson argues in her work on laundry and its role in 'animat[ing] an assemblage of multiple spatial forms and socialities in the city', such 'mundane objects' – dirty washing, beauty products, depilatory wax – have often been relegated in the macho field of urban studies: too trivial, too bodily, and too 'feminine' to merit serious attention (2015: 877-878). Indeed,

research which has examined the role of 'different objects and materials … in making up, separating, allowing, and limiting different publics' has tended to concentrate on the 'the hard stuff of the city, the "serious" stuff', implicitly the 'masculine' stuff (idem.): 'roads, pipes, cables, broadband, code and classification' (Amin 2014: 139), the phallic stuff. In my contribution to this field, then, I argue that the production of 'femininity' in London's beauty salons is 'animated' by materials (Watson 2015: 877) as well as, crucially, by urban spaces and infrastructures as it is simultaneously implicated in co-constitutive spatial and bodily formations. In particular, my focus on the role of urban infrastructure in the production of 'feminine' bodies in the beauty salon – an inescapably bodily domain – intervenes in the overriding a-corporeality and 'masculinity' of the extant studies of infrastructure.

1.5   'Hairlessness norm'[14]

Other authors have noted that beauty salons are places where in the main[15] women 'invest in femininity' (Sharma and Black 2001: 114); where, through their engagement with different forms of beauty work, 'women are made women' (Widdows 2018: 11). Accompanying white, predominantly middle-class, female[16] customers to their salon appointments and interviewing them about their beauty practices (and as a white, middle-class, female salon customer myself), hair removal was more often than not mentioned as a key part of this 'feminising' work. From treatments which are almost enjoyable[17] to those which are a tedious and/or painful 'necessity'[18], every woman with whom I spent time had engaged in some form of body hair removal. Underlining the ubiquity of depilation, visible body hair is described by research participants as 'horrible', 'gross', and 'disgusting'; removing it means that they feel able to wear a 'feminine frock' or even just to show their legs in the summer[19]. These reactions are perhaps unsurprising given that since the 1990s, researchers have noted the increasingly entrenched connection between hairlessness and 'femininity' where '[e]ven a small amount of hair growth may be understood as a threat to femininity' (Toerien and Wilkinson 2004: 88). This has resulted in what Marika Tiggemann and Sarah J.

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[14] Tiggemann and Kenyon (1998).

[15] As I detail in sections 1.5, 1.6, and 2.3, research in the UK and the US has demonstrated that it is predominantly those who identify as women who engage in beauty practices (see Berkowitz 2017; Elsesser 2019). Additionally this research has shown that most women modify their bodies in some way through beauty work (see Herzig 2015; Mintel 2017).

[16] How the research participants self-identified.

[17] For example, one participant Holly tells me about her 'brow plan' – a long-term plan of shaping her eyebrows through threading, tinting, and applying castor oil with the aim of making them appear thicker and fuller – which she approaches with great enthusiasm, WhatsApping me photos and keeping me updated on her brows' progress long after our interview (fieldnotes and interview with Holly, March 2017).

[18] Removing hair from the legs and arms was largely framed as a chore by participants. Bikini line waxing and upper lip hair removal was discussed as painful – sometimes eye-wateringly so – but still necessary.

[19] Interviews with Marie, Pippa, and Jayne, February – April 2017; myself included.

Kenyon (1998) term the 'hairlessness norm' for women where visible body hair has become largely anathema to a 'feminine' appearance or, even, as Anneke Smelik (2015) describes, 'taboo'.

It is important to note that, although this thesis focuses on the making of 'feminine' bodies in the beauty salon and within this a version of 'femininity' – in particular, as hairless – as understood and embodied by cis-gendered women, this is not the only expression of gender worked upon there. For example, in their research on male body hair removal practices, Gareth Terry and Virginia Braun describe how '[t]he ways that men in the West are responding to hair on their bodies appears to have undergone some significant changes in the last two decades' with slowly increasing numbers of those who identify as men choosing to remove body hair and choosing which body parts to remove it from (2016: 14, 15). Not as widespread and socially demanded as women's body hair removal where a 'feminine' appearance is almost ubiquitously a hairless one and *choice* is severely restricted, the authors argue that there are some versions of 'masculinity' where hairlessness has become accepted and expected, even the 'ideal' (ibid: 23). Equally beyond the scope of this thesis to address, there are gendered expressions outside of the feminine-masculine binary which engage with body hair removal and other forms of beauty work in order to produce a particular appearance. Body hair and its removal (or not) are 'integral', as Isabel Corp (2021) discusses, to the gender expression of queer people. They are also hugely significant for the gender expression of people who identify as non-binary or gender fluid. For example, Jonti Ridley (2022) describes their 'complex relationship' with visible body hair and Corp (2021) explains how body hair or lack of and decisions about removing it can 'trigger dysphoria' for trans people. Although recognising the different expressions of gender (as well as different expressions of 'femininity') worked upon in the salon, with its focus on the hair removal and other beauty practices of cis-gendered women and their notions of a 'feminine' appearance[20], this thesis cannot do justice to the complexity of gendered relationships to body hair and its removal.

It is also crucial to acknowledge that hairlessness is only one facet of the particular version of 'femininity' invested in and worked upon in the salon. For instance, writing in a UK context, Tiggemann and Kenyon describe how '[c]urrent ideals of beauty emphasise the looks of "youth": a slim body, high taut breasts, and smooth, unwrinkled, and hairless skin' (1998: 873). A whole gamut of services and products is enlisted

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[20] And as a cis-gendered woman myself.

to fulfil these ideals: various methods of depilation including waxing[21] as well as hair dyes, hair relaxers, Botox, fillers, brow tints, facial products, lash extensions, spray tans, nail polishes.

Whilst recognising the full range of materials involved in the making of a 'feminine' appearance, with which the hairdressers and beauty therapists work, which must journey to and through the salon, and whose emissions are muddled into a (potentially) toxic cocktail (Zota and Shamasunder 2017), I focus predominantly on depilatory wax. I selected to concentrate on this product and what it does due to the primacy of hair removal amongst the woman I interviewed about their engagement with beauty work. In their accounts, notions of a 'feminine' appearance were heavily tied in with hairlessness. Additionally, hair removal (usually waxing) featured prominently in the salons I visited where it is one of the, if not *the*, most popular services.

1.6   'Quite an ongoing process'

After spending time with Marie, a white middle-class woman in her fifties whilst she has her bi-monthly cut and blow dry, we turn to talking about her beauty practices more generally. A long-time if infrequent and very reluctant salon customer, she nonetheless extols the virtues of depilatory waxing:

> Marie: Have you ever had your arms waxed?
>
> Me: No
>
> Marie: Oh see, I've got very hairy arms from here to here [indicates wrist to elbow] and for ages I thought I can't wear dresses that show my arms and [my daughter] said 'why on earth don't you have your arms waxed?' and I said 'why? Is that ok, my arm hair is part of me' and she said 'it's no more a part of you than your leg [hair], loads of women have their arms waxed' and I needed someone to say to me loads of women have it done and then I went and had my arms waxed and it was the best thing ever! It was fantastic! … When we went on holiday to Goa, I thought I wanted to wear nice t-shirts without having my arms covered so of course I had them waxed and it was brilliant because sometimes *if you're wearing a really feminine frock and then you have arms that look like a gorilla, it's horrible*. So I haven't looked back from that ...

She elaborates:

> Marie: It's not like I'm doing it out of vanity, it's all I have done, I don't have massages, I don't have nails, I just don't like having outer body hair. I don't have anything really personal done like the full Brazilians[22] and all that, but I think its gross if you've got a swimming costume and you've got furry bits sticking out so I like to be clear of body hair. *It's quite an ongoing process* [laughs] because it grows back.

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[21] There are different techniques for removing hair both at home and in the salon: waxing, threading, sugaring, laser treatments, plucking, depilatory creams, electrolysis, and shaving. In the white British context of my research, waxing was the most popular of these in the salons I visited.

[22] An intimate form of waxing where all the pubic and anal hair is removed except for a thin strip on the mons pubis.

(Fieldnotes and interview with Marie, March 2017, emphases added).

In addition to the seemingly intractable connection between hairlessness and a 'feminine' appearance which is reinforced by Marie's account (where hair removal is posited as necessity, counterposed against other treatments which are 'vain'), also of note is the never-ending-ness of body hair removal, 'an ongoing process'. This too has been examined in critical beauty studies where research has underscored both the repetitiveness of this 'maintenance' work (Black 2004) and how the amount of work 'needed' is increasing whilst the pressures to engage with it are intensifying (Widdows 2018).

In my contribution to feminist work on beauty, I argue that beauty practices are not only driven by social expectations for women to appear a particular way in order to be considered 'feminine' but, additionally, there are significant material and spatial factors which equally enable and prompt beauty work and, especially, enable it to be performed again and again and again. And on ever-increasing body parts: lower and upper legs, bikini line, mons pubis, labia, anus, bum cheeks, toes, feet, nipples, arms, underarms, upper lips, chins, cheeks, ears, neck, nose, eyebrows, navel line, stomach, chest, back, shoulders …[23] For, as Widdows states, 'the increase in what *can* be done adds to the pressure of what *should* be done (2018: 68, original emphases). A *can* and a *should* which I view as predicated on or, rather, *animated by* particular material and spatial dynamics. In this thesis, I aim to build on the socio-cultural focus of the extant literature on beauty to also examine the products, places, and infrastructures upon which this 'ongoing' 'feminising' hair removal is contingent and the (potentially) toxic harms imbricated in these practices.

1.7   Bodies-spaces[24]

Underpinning my investigation into the widespread and (potentially) harmful impacts of beauty work are the assertions that 'space and place emerg[e] through active material practices' (Massey 2005: 118) and that 'people are engaged in dialogical relationships with the spaces in which their lives are set [where] people make the spaces through which their lives are made and given substance' (Knowles 2003: 97). What is more, in these processes, spaces and bodies are in a mutually constitutive relationship where each shapes the other (Grosz 1999). This reciprocal relationship is an open-ended, dynamic, and

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[23] This list of body parts is taken from my own experience and the body parts mentioned by participants combined with the treatment list of the waxing-specialist salon where Holly one of the participants goes when she is having a full-leg and Brazilian wax (interview with Holly, March 2017).

[24] This concept of 'bodies-spaces' is taken from Grosz's essay 'Bodies-cities' in which she argues that bodies and city spaces are in a mutually constitutive relationship: 'the city in its particular geographical, architectural, and municipal arrangements is one particular ingredient in the social constitution of the body … the form, structure and norms of the city seep into and affect all the other elements that go into the constitution of corporeality' and, simultaneously, 'the body must be considered active in the production and transformation of the city' (1999: 108).

processual entanglement in which things play an active role and where negotiations 'must take place within and between both human and nonhuman' (Massey 2005: 140; see also Massey 1994). That is to say, I understand bodies as 'in constant interchange with [their] environment … radically open to [their] surroundings' (Gatens 1996: 110 cited in Alaimo 2008: 255) where, in generative (or degenerative) spatial-bodily exchanges, 'we co-emerge with the materials that we mine, manufacture, and mobilise' (Litvintseva 2019: 154). In these relationships, materials are taken as lively (or deadly[25]), as 'vibrant matter' (Bennett 2010). Things, here, 'ha[ve] efficacy, can *do* things, ha[ve] sufficient coherence to make a difference, produce effects, alter the course of events' (ibid: viii, original emphasis); have the 'capacity to prompt certain actions' (Hawkins 2009: 193). Wax and other beauty products are viewed as actively participating in social life, with a role in the co-productive and de/generative relationship between places and bodies; as are their constituent ingredients, and the (potential) toxins released as they make their journey through London.

I am also guided by Doreen Massey's conceptualisation of places and in particular cities as 'peculiarly large, intense, and heterogeneous constellations of trajectories': trajectories of international migration, of capital, 'of physical trade, a million service industries, … a considerable manufacturing base, and a tattered public sector infrastructure' alongside the quotidian trajectories of its inhabitants, making their daily excursions, and those of the goods that they consume (2005: 155, 118). Following Massey, I take these trajectories – international and local, spectacular and mundane, active, material, and embodied – as not only coming together in but as actively producing spaces. Where Massey (2005) highlights the large-scale trajectories which constitute spaces, Caroline Knowles (2014) focuses on a single object and uses the notion of 'journeys' to emphasise the more intimate ways in which things and the movements they make play a role in these processes. Following flip-flops (and the oil from which they are manufactured) from Kuwaiti oil fields through Chinese factories to a rubbish dump in Addis Ababa to examine how globalisation is experienced on intimate scales, Knowles (idem.) problematises the term 'flow' which is more conventionally used in the literature on globalisation. Preferring 'journey', she explains 'flow conveys an unreal ease with which people and things move from place to place … [r]ather than flow, people and objects bump awkwardly along the pathways they create as they go. They grate against each other, dodge, stop and go, negotiate obstacles, backtrack and move off in new directions …' (ibid: 7-8). **'**Rather than *flow*', the notion of 'journey' puts into relief how things and their trajectories are actively involved in making the spaces as well as the lives through which they move on fine-grained scale.

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[25] With thanks to Alex Rhys-Taylor for curbing my tendency to only talk of the 'liveliness' of materials.

Their very movement engenders particular actions and formations whilst leaving traces in spaces and bodies, for some benign, for others pernicious as these journeys are bumpy, full of friction. As such, I attend to not only how the wax and other beauty products behave in the salon but also their trajectories to and through the city and its salons and, following Knowles, what they do as they *journey*.

Underscoring the asymmetries of these de/generative spatial, bodily, and material interchanges, it is important to recognise that these processes are threaded through with what Massey terms 'power geometries' where 'different social groups and different individuals are placed in very distinct ways in relation to [the] flows[26] and interconnections [which make space]': 'Gender and ethnicity clearly influence that experience [of space]'; as do 'colonialism, ex-colonialism, racism, changing gender relations, and relative wealth' (1993: 61, 60). Underlining the inequalities imbued in space, Massey further describes how the trajectories of people and things 'clash', how they come into '*collision*' (2005: 155-159, emphasis added). As the different facets of urban life 'collide', there are casualties; some come off better than others. Within these power-full spatialised processes, how the effectuations and effects of the products and their journeys are experienced is dependent on one's spatial and social location where some places and people more vulnerable to beauty work's (potential) toxicity. Given that spaces and bodies co-produce, evoked by the term 'collision', many of these unequally distributed injuries are borne corporeally. Particularly pertinent when considering the (potential) toxicity threaded through spatial-bodily interchanges and the deep-seated structural inequalities embedded in these, Jennifer Gabrys argues that 'health' should not be individualised but instead understood as a 'political and democratic set of encounters with the lived environments that are generating and exacerbating polluting conditions' (2020: 9). That is to say, a 'healthy' or 'unhealthy' body is made thus in interaction with the environment in which it lives and, moreover, within broader political economic and social structures which mean that the possibilities for 'health' are not equally accessible to all. As such, both in the beauty salon and beyond, differently-situated people are differently impacted by the 'ground' of beauty work as the trajectories of goods and people 'collide', disparities of experience which are patterned by intersecting social dynamics and deeply political.

Finally, a focus on the journeys of the wax and other beauty products and the uneven ways in which these are experienced enables me to address another of Massey's contentions on the uneven making of places, how:

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[26] Although see the above discussion on the use of 'journey' rather than 'flow'.

World cities, as indeed all places, also have lines which run out from them: trade routes, investments, political and cultural influences, the outward connections of internal multiplicity itself; power relations of all sorts that run around the globe and connect the fate of other places to what is done in London (2007: 7).

Tracing, for example, routes of the container ships which carry beauty goods across the globe or the plume of smoke emitted by the incinerator as spent products are thrown 'away' makes these connecting 'lines' and their (potentially) damaging impacts almost tangible. Following wax and the other goods thus shows that not only spaces within the city but other places are enrolled into and impacted by what happens in London (including the 'feminising' work in its salons), as 'here' and 'there' are co-constitutively connected through the power-full lines which run between them.

1.8   Oil engenders

If oil '[has] come to infiltrate ever more realms of human and planetary life', showing up in everything (Savitzky and Urry 2015: 181; Watts, M. 2012: 349 cited in idem.), this unsurprisingly includes in beauty products, their journeys, and so in the making of 'feminine' bodies in the beauty salon. The connections between oil, gender, and particular forms of 'femininity' and 'masculinity' have been critically examined. For example, Sheena Wilson describes how 'petroleum-related innovations … came to define gender dynamics and gender roles in Western petroculture(s)' where '[w]omen have long been identified as major consumers of petroleum products' (2014: 248, 249). In particular, she lists 'feminised/ing' products: fashion, beauty, housewifery, and motherhood; products with are constitutive of a (specific Euro-centric, middle-class, heteronormative) 'feminine' identity (idem.). Cara Daggett also focuses on oil's gendered and gendering dynamics putting forward the concept of petro-masculinity as she addresses 'the relationship – both technically and affectively, ideationally and materially – between fossil fuels and white patriarchal orders' (2018: 28). For Daggett, in the US in the twentieth century, 'the achievement of hegemonic masculinity required intensive fossil fuel consumption and, for the working or middle-class, jobs within or reliant upon fossil fuel systems' (ibid: 32): a particular (again white, relatively wealthy, and heteronormative) 'masculinity' forged by oil[27]. Drawing on these assertions to consider how petroleum is constitutive of gendered identities, through attending to salon practices, I argue that oil is gendered and gendering as it makes a particular version of 'femininity' in a more literal sense too; working to literally produce 'feminine' bodies in the beauty salon. The wax and other beauty products' 'performance

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[27] One being (re-)venerated by twenty-first century white, hetero-patriarchal, right-wing groups (Daggett 2018).

characteristics'[28] which enable them to act and so to work in particular ways (Chapter 4), the journey they make to and through the salon (Chapter 5), and the ability to simply dispose of and replace them once used (Chapter 6) – all crucial for the 'ongoing process' beauty work – are heavily reliant on petroleum. And it is petroleum products, what they do, and what they afford which I centre in the thesis as oil's seemingly infinite uses and apparently[29] inexhaustible supply are important factors in the never-ending production of 'feminine' bodies, making hair removal and other beauty practices and their (daily, weekly, or monthly) repetition possible.

Moreover, thoroughly interconnected with beauty practices, oil leaves its traces in other ways. For example, I argue that it actively features in beauty therapists' incorporation of materially-informed skills as well as in the (potentially) toxic occupational health issues they may experience (Chapter 4). Oil also infuses the transit networks, industrial estates, and warehouses designed to accommodate and enable the petroleum-fuelled 'flow'[30] of consumer goods in ever-increasing quantities (Chua et al. 2018; Danyluk 2018); the diesel fumes of the ships and HGVs which carry these becoming concentrated in some areas more than others (Chapter 5). It is further implicated in the ease with which used products are disposed of and replaced meaning that some people are able to maintain a (privileged) social, material, and spatial separation from the waste produced by consumption practices (Hawkins 2001). Relatedly, petro-compounds are present in the widespread, unevenly distributed, and again (potentially) toxic impacts as the salon's rubbish is transported across the city, incinerated, and 'Azeri lithosphere [floats] off into London air, carrying its carbon load into the atmosphere' (Marriott and Minio-Paluello 2013b: 180) (Chapter 6). I contend that these oil-saturated effectuations and effects are constitutively entwined with the making of 'feminine' bodies for this version of 'femininity' is 'prompted' (Hawkins 2009, 2013a) by the beauty products' actions and journeys and the ongoing-ness these enable, all predicated on petroleum products.

1.9   Geometries of toxicity

Given the omnipresence of oil and its by-products in the realisation of beauty work along with my focus on the interchange between bodies and environments and the unevenly experienced impacts of 'collisions' (Massey 2005), I build on Massey's (1993) concept of 'geometries of power' to consider

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[28] Email correspondence with Quality Assurance Manager from Eastern Waxes, November 2019.
[29] Of course, this supply is finite; yet, given the rate at which oil is supplied and consumed, it may appear as if it is endless.
[30] Of course, far from a 'flow' (see section 1.7). I will further problematise the notion the consumer goods 'flow' across the city to the market in Chapter 5 when I discuss the landscapes of logistics.

'geometries of toxicity'. Where Massey's notion underlines that location – at once spatial and social – matters in terms of privilege, disadvantage, marginalisation, or violence, 'geometries of toxicity' further emphasises how these spatialised and bodied power relations are actually manifested taking (potentially) toxic forms. That is to say, thinking through 'geometries of toxicity' highlights how both the causes (for example, product emissions or diesel pollution) and the impacts (for example, environmental degradation, health issues, or death) of (potential) toxicity are at once material, spatial, and bodily. The concept also puts into relief that toxicity is distributed differently amongst those occupying differential spatial and social situations, where some places and people are more susceptible than others. These vulnerabilities follow and reproduce deep-seated structural inequalities. Following Gabrys (2020) on health and air pollution, these environmental-bodily encounters are politically charged and far from incidental where the (potential) harms may be understood ahead of time but where particular spaces and lives are subsumed to the imperative of ongoing consumption.

1.10 The air that 'we' breathe

Carrying the (potential) toxicity imbued in the making of 'feminine' bodies in the beauty salon, linking the spaces, bodies, and products entangled in this process, and useful for examining the vectors of power along which these interact is the air that 'we' breathe. The air that 'we' breathe acts as a connective fibre throughout the thesis as it circulates through the different spaces which animate beauty work. This air is inhaled by people consuming in, working in, and living alongside salons, factories, warehouses, ports, road networks, incinerators. And it is infused by the materials (and in particular the petroleum products) which contribute to the making of 'femininity' in the beauty salon. As air is inhaled into the lungs, the oxygen it contains is transferred into the blood. Through our vascular system, this oxygen is carried to every part of the body and transformed into the energy we need to live. Bodies and lives are literally constituted in constant interchange – in gaseous exchange – with their environment as air crosses permeable spatial-bodily boundaries. Yet, others have shown that the ability to breathe clean(er)[31] air (or even to breathe at all) is not evenly distributed. Breathing has a 'political forcefulness' where 'every breath one takes is a process of the intra-metabolizations of power relations' (Górska 2016: 23, 107). For example, racialised, economically-disadvantaged, and marginalised communities are subject to higher levels of air pollution or to having the air literally choked out of them in cases of police and state violence and murder in the UK and the USA (British Lung Foundation 2016; El-Enany 2019; Gabrys 2020; Marquardt 2022; Sharpe

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[31] Acknowledging that no air is completely clean; rather, there are different degrees of cleanliness which is unevenly distributed across spaces and social groups.

2016)[32]. Even in the most intimate and seemingly innocuous of consumption practices taking place in the beauty salon, it is productive to pay attention to the air 'we' breathe for this is revealing of the power relations threaded throughout the oil-saturated interactions between places, bodies, and materials. Indeed, as Timothy Choy (2016) describes, '[i]t is hard to breathe in many places—in some places more than others, for some bodies more than others'. Air marks and *makes* divisions: 'breathing together rarely means breathing the same' (idem.).

Reflecting on the air that 'we' breathe, I began my fieldwork by accompanying women mostly living in and around Park Village, a largely white, middle-class, and affluent neighbourhood in London (Nomis n.d.a)[33], to their salon appointments. As has been argued elsewhere, identifying as white and middle-class, these women occupy a privileged position with regards standards of beauty and societal norms of 'femininity' in the UK (Collins 2004; Kwan and Trautner 2009; Moreno Figueroa and Rivers Moore 2013; Skeggs 1997). They are also relatively privileged in other aspects. For example, in a common pattern across London and elsewhere in the UK, they live in a well-resourced part of the city with low housing density, a good number of green spaces, and away from large roads. Recalling the notion of 'geometries of toxicity', this has material and bodily impacts and, indeed environmental health studies have shown that the air *they*[34] breathe is likely to be less polluted than people living in less affluent neighbourhoods or those with higher numbers of Black, Asian, or minority-ethnic-in-the-UK residents (Barnes et al. 2019; Dorling 2010; Fecht et al. 2015; Mitchell and Dorling 2003; see sections 5.6, 6.6, and 6.7).

As I will demonstrate in the rest of the thesis, the air inhaled by these privileged customers is different from that breathed in by those working in hair and beauty salons who spend their working day surrounded by (potentially) toxic products (Chapter 4). It is also distinct from the air breathed in by those living alongside the transit networks which transport the goods from the factory to the salon and the industrial estates where these are warehoused (Chapter 5); or by those whose homes, schools, playgrounds, places of worship, or workplaces neighbour the municipal waste facilities where the salons' ever-replenishing rubbish is incinerated (Chapter 6); or by those living thirty miles eastwards (and very likely beyond) to where the incinerator's plume is carried on London's prevailing winds (Chapter 6). The air that circulates

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[32] See also climate activist and co-founder of Choked Up, Destiny Boka Batesa on the *Climate Curious* (TedX London 2022) podcast 'How inequality affects the air we breathe'.

[33] According to 2011 census data, nearly 80% of residents living in the Park Village local area identified as white and over 60% are classified in the top 2 NS-Sec categories (higher managerial, administrative, and professional occupations [27.1%] and lower managerial, administrative, and professional occupations [33%]) (Nomis n.d.a).

[34] Myself included.

in and out of these places and in and out of the bodies who live there is both the same and different, where breathing is certainly political.

1.11   Concluding remarks

Coming to see the products with which beauty work is carried out, their journeys to and through the salon, and the different places which enable these journeys as key to the production of a 'feminine' appearance as understood and embodied by cis-gendered women, this chapter has introduced the thesis' focus on the materials and spaces implicated in the making of 'feminine' bodies in the beauty salon and on the forms of (potential) toxicity which are co-extensive with this process. Concentrating on the 'ground' of beauty practices, this thesis contributes to critical beauty studies by expanding the material and spatial purview of the field and examining the harms associated with beauty work in locations beyond the salon. Bringing together feminist work on beauty with urban sociology and studies of urban infrastructure also enables me to make a contribution to scholarship on cities by centring bodies and, in particular, examining how 'feminine' bodies are made in a reciprocal relationship with urban spaces.

The thesis is undergirded by a number of key ideas which have been introduced in this chapter. I have considered the increasingly intractable connection between hairlessness and 'femininity' explaining why I chose to focus primarily on depilatory wax in my research. I have also looked at the 'ongoing process' of hair removal and other forms of beauty work as ever-more is expected to be done in this seemingly never-ending work to maintain a 'feminine' appearance; work that I argue is precisely both enabled and effected by wax and other beauty products, their packaging, and their journeys. The products, how they act, and their movements play an active role in the dynamic and reciprocal relationship between spaces and bodies where each shapes the other and where places – 'there' – are constitutively connected through what happens 'here'. These are processes threaded through with power dynamics meaning that places and people (and non-human bodies) experience these interchanges very differently depending on socio-geographic location. Given the pervasiveness of petroleum in the beauty products themselves (allowing them to perform in particular ways) and their journeys (the diesel-powered ships and trucks which transport them) as well as enabling their unthinkingly easy disposal and replacement (of course necessary for the 'ongoing process'), I argue that this particular version of 'femininity' is literally constituted by oil and its by-products.

The (potential) toxic harms associated with the petro-products which serve to 'prompt' (Hawkins 2009: 193) beauty work in different ways are equally entangled with the production of a 'feminine' appearance. These are examined through the prism of 'geometries of toxicity' where differently-positioned groups are

differently impacted, materially, spatially, and bodily. Impacts which are far from incidental and thoroughly political. These (potential) harms, I contend, are epitomised in the air that 'we' breathe. Shared by everybody/every body and connecting places and bodies but on very different terms, the air that 'we' breathe circulates throughout the thesis to highlight the uneven toxic burdens which co-emerge with the making of 'feminine' bodies in the beauty salon. From the port to the factory to the trading estate to the salon to the incinerator and onwards and in between, the beauty products themselves, their packaging, their journeys, the places through which they move, all serve to enable and 'animate' (Watson 2015: 877) the production of the particular version of 'femininity' made in the salon. Permeated with petroleum and imbued with associated forms of (potential) toxicity, this thesis makes a central argument that the making of 'feminine' bodies in the salon is materially and spatially effected, saturated with oil, and co-extensive with wide-reaching and asymmetrical harms.

Chapter 2 Beauty matters[35]: The production of 'femininity' in the city

Shift[ing] focus … away from concerns with shifting standards of beauty (what beauty *is*), and toward a mapping of beauty as an affective force (what beauty *does*) (Reddy 2013: 32, original emphases).

2.1   Introductory remarks

The aim of this thesis is to broaden the remit of critical beauty studies by exploring the material, spatial, and bodily dynamics as well as the (potentially) toxic harms of London's beauty work. At the same time, I aim to contribute to urban sociology by bringing to the fore how city spaces and urban infrastructure participate in the material production of 'femininity' in the beauty salon as well as how, concomitantly, the related harms are experienced at once spatially and bodily. Reviewing the literature across both fields of study, this chapter draws feminist work on beauty and the power relations imbued within into conversation with scholarship which has recognised the active role of things in the dynamic, power-laden, and co-constitutive relationship between urban spaces and bodies. Bringing these together, I identify the gap in critical beauty studies which has tended to neglect the materiality and spatiality of beauty work, especially the role of oil in this, and the associated spatial and bodily harms both within and beyond the salon. Additionally I contend that sociological accounts of the city and the ways in which urban space is dynamically and power-fully produced have largely omitted the topic of beauty, relegating it to a concern only of women, 'domestic', and so of no wider relevance (Watson 2015). As such, the ways in which city spaces and, in particular, urban infrastructure and its violence (Rodgers and O'Neill 2012) – ordinarily a masculinised sphere of study (Watson 2015) – are imbricated in the production of 'feminine' bodies have been overlooked. I argue that an attention to what is necessary for the actual realisation of beauty work – the 'ground' (Davis, K. 1991) of beauty – offers a productive means of addressing these interconnected gaps by examining how materials, bodies, and urban spaces and infrastructures (all permeated by petroleum products) and the associated forms of (potential) toxicity are actively entangled in the production of 'femininity' in the beauty salon.

Twenty years ago in her ethnographic research on the UK's beauty industry, Paula Black contended that the salon offers a 'microcosm within which to investigate wider sociological themes' (2002: 3). In particular, Black noted this as 'a space where a number of competing discourses and practices of the body

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[35] I am not the first to point out that 'beauty matters'. In her introduction to the edited collection *Beauty Matters*, Zeglin Brand states that '[f]or women, beauty has always mattered – in a personal way and as an inevitable and underlying sociopolitical framework for how they operate in the world' (2000: 5-6).

intersect … shed[ding] light upon gendered employment practice …, leisure and consumption patterns, and issues of health and well being' (idem.). This is in addition to the salon as 'a site *par excellence* for investigating the construction and maintenance of gender and sexuality' (idem.). I too contend that the beauty salon and what takes place therein offers an excellent opportunity to address a number of key sociological concerns.

To build on this research, I follow Rebecca Herzig who calls for a 'consideration of the "upstream" production and "downstream" effects' of hair removal and other forms of body modification (2015: 189). For example, in her 'history of hair removal' Herzig points to the diverse range of phenomena imbricated in depilation practices:

> From the scores of sheep and pigs slaughtered to produce a single dram of gland extract to the thousands of electronics factory workers recruited to assemble home laser devices, from waterways filled with the effluvia of chemical depilatories to air polluted with the belching smoke of petroleum refineries … (ibid: 189-190).

Herzig precisely instructs us to take into account not only the psycho-social impacts on consumers of beauty work but to move beyond 'the site of consumption' and investigate how '[t]he uneven effects of "personal" enhancement are distributed broadly, temporally, and geographically' (idem.). Responding to this, I move my investigation out of the salon. I focus on the materials, spaces, bodies, and infrastructures which *effect* beauty work and so animate the production of 'feminine' bodies in the salon and which, reciprocally, are (potentially) toxically affected by this 'feminising' work. This enables me to extend the socio-cultural emphasis on the construction of 'femininity', questions of identity, and debates around 'choice' or 'obligation' centralised in Black's (2002, 2004, 2006) and many other studies of beauty[36]. In particular, I concentrate on the depilatory wax and other products which move to and through the salon, the corporeal labour involved in their journeys, the infrastructures which enable this circulation, the people whose lives neighbour the routes they take, and the air that 'we' breathe in the salon and beyond. I argue that these are as significant in the production of 'femininity' as the socio-cultural dynamics which have largely been the focus of the extant literature on beauty. This approach allows me, in Black's words, to address a number of 'sociological debates [which] intersect in the world of the beauty salon' (2002: 3)

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[36] For work which has focused on some of the socio-cultural factors which impel women to engage with beauty work see Berkowitz 2017; Bordo 2003; Davis, K. 1991, 1995, 2003; Elias et al. 2017; Gimlin 1996, 2002; Holliday and Sanchez Taylor 2006; Hurd Clarke and Korotchenko 2010; Jones, M. 2008; Kang 2010a; Kwan and Trautner 2009; Liebelt 2016; Sharma and Black 2001; Stevenson 2001; Tiggemann and Kenyon 1998; Toerien and Wilkinson 2003; Toerien et al. 2005; Weitz 2004; Widdows 2018; Wolf 2002; Zdatny 1997 (see section 2.3).

but which also extend out of the salon, into the city and beyond. As such, this thesis highlights that questions of infrastructure and its violence (Rodgers and O'Neill 2012), embodied labour practices and their associated health concerns, the 'deadly life' of global logistics (Cowen 2014), oil dependence, the locat*ing*[37] of waste, and the uneven distribution of air pollution are equally among the 'wider sociological themes' brought together in the beauty salon (Black 2002: 3).

2.2 Structure of the chapter

I begin this chapter by detailing work from critical beauty studies which has problematised definitions of beauty as neutral or objective (2.3). This research has highlighted beauty's gendered, classed, and racialised dynamics and the power relations with which it is imbued. In a second section, I give an overview of another facet of this feminist social science work[38] which has concentrated on the different forms of labour in hair and beauty salons to posit what an attention to the materiality of the industry can offer (2.4). Taking the things as 'fully-fledged participants' in social assemblages (Hawkins 2009: 184), in a fourth section I outline literature which has proposed that things actively interfere in the geographies of social life, in 'socio-material imbroglios' (Whatmore 2002: 4) (2.5). I then turn to studies which have focused on role of these lively or deadly objects in the production of urban space whilst highlighting the dynamic relationship between materials, spaces, and bodies (Grosz 1999; Massey 1994, 2005) (2.6). Placing materially-replete beauty work in the context of the city more broadly offers a productive way of expanding on the socio-cultural dynamics of beauty work by looking at not only the products but also at the spaces and infrastructures upon which beauty work is contingent. This urban literature has generally neglected 'the affair[s] of women' (Watson 2015: 878), an omission that this thesis seeks to counter. As such, in a final section I consider literature which has underlined how urban infrastructure is active in generating social forms (Amin 2014), arguing that, in the case of the beauty salon, it plays a significant role in the production of 'femininity' (2.7). I also examine how, in infrastructure, the social, spatial, and material are inseparably intertwined to create unevenly-experienced or, at times, even violent effects (Boehmer and Davies, D. 2018; Rodgers and O'Neill 2012), effects which are acutely corporeal. Taken together, identifying the gaps in both critical beauty studies and urban sociology, this theoretical framework allows me to examine how the particular version of 'femininity' produced in the beauty salon is not only socio-culturally impelled but also materially, spatially, and bodily contingent, animated by lively

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[37] It is important to consider not only the location of these facilities but to also emphasise the *locating* of them, as an active and knowing process of planning and decision making. I discuss this further with regards the locat*ing* of incinerators in London in Chapter 6.

[38] In Chapter 4, I will also draw upon occupational health research which has been conducted in hair and beauty salons.

(or deadly) things and infrastructures, fully saturated by oil, and co-extensive with petroleum-infused harms.

2.3 The power of beauty

Above all, feminist research on beauty and beauty as an industry has brought to the fore the power dynamics imbued within. As Rita Barnard argues in her work on beauty pageants in South Africa, 'standards of beauty function as a peculiarly dense transfer point for relations of power' (2000: 345). Definitions of beauty and ensuing assessments of who counts as 'beautiful' are embedded in and simultaneously perpetuate gendered, classed, heteronormative, racialised, and racist hierarchies. The socially- and politically-constructed and mobilised (e)valuations of 'beauty' which have been highlighted within this feminist work are also entwined with capitalist logics. Arguably, never has an industry been so astute at creating 'problems' to which it can sell the 'solutions': 'the beauty-industrial complex' (Elias et al. 2017: 11). This commodification of 'beauty' further exacerbates and reproduces the uneven power dynamics. Thus, work in critical beauty studies has shown that these are questions not so much of what beauty *is* but rather *what beauty does* (Colebrook 2006; Coleman and Moreno Figueroa 2010; Reddy 2013).

Oft-described in the literature on feminism and beauty, in 1968, in Atlantic City, (mainly white) feminists protested outside the Miss America Beauty Pageant throwing away (although not burning) bras, false eyelashes, and high heels (Banet-Weiser 1999; Craig 2002; Rani Jha 2016). The protesters linked the accoutrements of beauty and the time and effort that went into achieving it with the patriarchal oppression of women. In Naomi Wolf's famous treatise on 'the beauty myth' published in the early 1990s, she similarly contends that 'images of female beauty' have been used unambiguously 'as a political weapon against women's advancement' (2002: 10). Although Wolf's work has been heavily critiqued for its unnuanced stance on beauty as oppression and its ethnocentrism (Kang 2010a), it is nonetheless true that it is predominantly those who identify as women who engage with beauty work. For example, in 2019, *Forbes* reported that 'women's purchases account for 80-90% of an estimated $500 billion market for beauty products' in the US (Elsesser 2019); and 'in 2014 women accounted for 92 percent of the total number of cosmetic procedures' and 96 percent of the total using Botox (Berkowitz 2017: 45). Evidence from the US and Europe equally suggests that most women engage in some form of body modification. For instance, it has been reported that 'more than 99% of American women voluntarily remove hair' (Herzig 2015: 9). And in their findings into 'Britain's beauty market', Mintel (2017) states that 'as many as 83% of UK women wear make-up'. In her work on hair styling and the 'gendered self', Karen Stevenson

precisely describes hair salons as the place where the 'day-to-day production of femininity' occurs (2001: 149); Ursula Sharma and Black likewise state that beauty salons are places where women 'invest in femininity' (2001: 114).

From the gendered/gendering engagement with beauty consumption, a particular version of 'femininity' is produced; this 'femininity' is heavily tied in with outward appearance and takes on a specific, 'worked-upon' form. For instance, Samantha Kwan and Mary Nell Trautner explain how 'women's appearances are more carefully scripted and scrutinized than are men's' and thus:

> Women are held accountable for numerous appearance norms, including, among others, those related to their hair, makeup, body hair, body size and shape, clothing, and nails … The basic assumption that underlies all of these norms is that women's bodies must be altered in some way – that their natural state is unacceptable (2009: 54-55; references omitted).

And nearly a decade later, Widdows (2018) argues that there are ever-intensifying pressures upon women to make these alterations. However, this is not to suggest that a unilaterally oppressive 'beauty myth' has taken hold for, as others have argued, this production of a 'feminine' appearance is skilfully negotiated with agency (Davis, K. 1991, 1995) and sometimes a sense of pleasure or fun (Black 2004; Felski 2006; Jafari and Maclaran 2014). Nor do I want to imply that there is only one version of 'femininity' produced in beauty salons as 'femininity' is culturally contextual (although existing in and propping up social hierarchies as I discuss below where some versions of 'femininity' are judged more valuable)[39]. Rather it is to recognise that it is predominantly women who are consumers of beauty work and, thus, that beauty work plays an important role in the production of the particular version of 'femininity' to be attained however this is conceived. These 'feminised'/'feminising' orientations of beauty and, in particular, the socio-cultural dynamics which impel them have been the primary foci of feminist work on beauty.

Research in critical beauty studies has further nuanced understanding of the work undertaken to produce 'feminine' bodies by highlighting the intersecting gendered, racialised, and classed social power dynamics at play in this process where standards of 'beauty' have been deployed in particularly insidious ways. For example, 'there is an important racial dimension to beauty and beauty work' where 'depictions of the Eurocentric beauty ideal come alongside negative, stereotypical, and controlling images of black women's bodies' (Kwan and Trautner 2009: 61 and Collins 1991 cited in idem; see also Moreno Figueroa and Rivers

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[39] Again, it is important to note that the version of 'femininity' which I discuss throughout this thesis is oriented around appearance and, more specifically, appearance which is worked upon in the beauty salon (see footnote 1).

Moore 2013). In this racist deployment, 'beauty' is linked to personal attributes: 'bodily beauty and deformity covary with moral beauty and deformity as well as with general cultural and intellectual capacity' (Taylor 2000: 58). These *imagined* connections between beauty, morality, and character both reflect gendered, racist, and classist hierarchies and work to perpetuate systemic and structural inequalities. Indeed, in her work on beauty, racism, and colourism, Meeta Rani Jha underlines 'the role beauty plays in creating structural and individual privilege, as well as contributing to discrimination and inequality' (2016: 3).

One way these dynamics find expression is in national beauty competitions, deliberately and performatively public forums. As research on pageants has shown, these contests 'offer a glimpse at the constantly changing and complicated stories about the nation itself: Who counts as part of the nation?' (Banet-Weiser 1999: 2; see also Barnard 2000; Gilbert 2015). Returning to 1968 Atlantic City where decisions about which woman best embodied the nation's values were being made, Maxine Leeds Craig documents how another contest(ation) was taking place: 'the National Association for the Advancement of Colored People staged the first Miss Black America pageant' (2002: 3). She explains how, across town from the protests outside the Miss America pageant:

> Black women had to contest their wholesale definition as non-beauties. In response to the exclusion of black women from dominant representations of beauty, African American women's beauty became part of the symbolic repertoire with which champions of the race sought to assert racial pride (ibid: 5).

Beauty here was not seen as unilaterally oppressive (as Wolf [2002] might have it) but as having an empowering potential[40] whilst crucially recognising that different women have different access to being considered 'beautiful'. This work further complicates the notion of beauty as an unambiguous tool of patriarchal oppression (whilst also not claiming it as liberation) and, in particular, it underlines that 'beauty' and the associated notion of 'femininity' are not monolithic nor products of false consciousness. But nor are they equally available to all. Instead, this research shows how definitions of beauty and the 'feminine' bodies on which these play out are mobilised in marking and making intersecting gendered, racialised, and classed social hierarchies: what beauty does.

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[40] Although as Craig (2002) also points out these 'champions of the race' were largely men who deployed women's bodies as a way of proclaiming 'Black is beautiful'.

The production of 'feminine' bodies which takes place in the salon occurs within these interlocking social dynamics and is threaded through with power. For example, as Miliann Kang shows in her study of New York nail bars, not only is gender 'embodied in the manicure itself' but 'women's choices of nail styles and services reflect the social construction of beauty, which is not based on natural or biological traits but upon socially conditioned tastes that are deeply entrenched in gender, race, and class differences' (2010a: 150, 98). Crucially, given the location of Kang's ethnography, we must note that these are choices being made *in the salon*; this/these 'femininity/ies' are largely actualised in a commercial environment. As Kang emphatically states, 'beauty [is] a commodity' (ibid: 33). It thus needs to be acknowledged (recalling Sharma and Black [2001: 114]) that the choice of nail style or body hair removal or lash treatment or hair style are (in a very literal sense) an *investment* in femininity. The 'feminising' products and services must be paid for. In the UK, the British Beauty Council 'estimate that UK consumers spent a total of £27.2 billion on beauty products and services in 2018'; of this, '£8.0 billion [was] spent on beauty services' (2019: 17)[41]. The ongoing-ness and never-ending-ness of beauty practices – as hair grows back, manicures chip or grow out, eyebrow tints fade, Botox wears off – align almost perfectly within capitalist logics: to have to keep consuming, replacing, replenishing, and disposing to make room for more consumption. As Black argues, then, 'the desire to achieve a feminised body is *the product of a commodified system*' (2004: 64, emphasis added). This is a consumer industry which is sustained or, rather as I argue, *enabled* by a seemingly never-ending supply of products and services which serve to 'prompt' (Hawkins 2009: 193) the demand for beauty work. This, of course, requires the goods themselves, people with the skill to use them, distribution networks, and the ability to throw 'away' of the products once used up (making space on the shelves for still more goods). Building on the discussions of the gendered, racialised, and classed power dynamics imbued in assessments of 'beauty' and the associated commercialised production of 'femininity' in the salon, this thesis seeks to explore these material, spatial, and bodily animators (Watson 2015: 877) of beauty work.

2.4   The labour of beauty

Another significant part of the social science research in hair and beauty salons focuses on the forms of labour performed by hairdressers and beauty therapists. Addressing another of Wolf's well-known contentions, that beauty work has become women's 'third shift', working to limit their power and undo the gains of feminism (2002: 25), Kang (2010a) instead draws our attention to those who work in the industry. She argues that Wolf's position 'ignore[s] the many women who do not do their own beauty

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[41] From *The Value of Beauty Report*, an Oxford Economics report on the economic impact of the beauty industry, commissioned by the British Beauty Council (2019: 3).

work … [who] pass off sizable portions of the third shift onto the shoulders of less-privileged women' (ibid: 15).   Research into salon labour has highlighted how there are also intersecting gendered, classed, and racialised power relations at play in the performing of beauty work.

Much of the sociological research on salon labour has focused on the inter-personal dynamics of this work. Centring the power relations at work in the salon, studies have focused on (employers' demands upon) beauticians' sexual and aesthetic labour (Chugh and Hancock, P. 2009; Sanders et al. 2013; Sharma and Black 2001; Yeadon-Lee 2012; Yeadon-Lee et al. 2011); on the ways in which male and female hairdressers are differently regarded and valued despite performing the same work and deploying the same skillset (Cohen and Wolkowitz 2018); and on the classed dynamics of the salon expressed in the implicit contestation or even the outright dismissal of the hairdressers' training and expertise by their middle-class clients (Gimlin 1996).   In addition, considerable attention has also been paid to the 'emotional labour' encapsulated in Arlie Hochschild's (1983) concept of 'the managed heart' whereby employers require their workers to put effort into 'evoking or shaping, as well as suppressing, feelings in themselves and others' (Wolkowitz 2006: 77)[42].   Putting into relief the devaluing of the skill of salon work when performed by women, this research has shown how emotional labour is not recognised as labour but is instead thought of as 'simply … intrinsic to womanhood' (Sharma and Black 2001: 928; see also Gimlin 1996; Hill and Bradley 2010; Kang 2003, 2010a; McDowell 2009).   These studies have been crucial in highlighting the erasure of skills and effort which are associated with so-called 'feminine' attributes and calling for them to be valued as skilled practices in their own right (culturally, financially, and in terms of better work conditions [Cutcher 2001; Yeadon-Lee et al. 2011]).   However, the research has predominantly focused on the human interactions which take place in the salon which has resulted in the full extent of the work and its material and bodily implications being overlooked.

Addressing the more palpable aspects of beauty labour, Kang not only underscores who actually performs the 'third shift' but she further draws attention to the corporeality of this work both in terms of the 'physical labour … work enacted by the body as the tool or form of labour' and the associated exposures to the products in addition to the resulting long-term health impacts (2010a: 20, 222-225, emphases omitted, 2010b).   Bringing to the fore differentiated forms of labour in the city and to questions of who does/has to do what in order to make a living and a life, AbdouMaliq Simone proposes the notion of 'people as infrastructure' to highlight 'people's activities in the city' which function as a way of 'providing

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[42] For example, see Toerien and Kitzinger (2007) for a study of 'emotional labour in action' whilst eyebrow threading is performed.

for and reproducing life in the city' (2004: 407). Given the corporeality of beauty work, it is further useful to consider, as Jie Yang (2017) does in her study of the beauty and wellness industry, the workers' '*bodies as infrastructure*'. Yang describes how, in China, '[q]uite a few laid-off women [who lost their jobs in the state-owned sector following privatisation in the 1990s] turned beauticians' and 'have used their own bodies and skills to generate value; their bodies are like an infrastructure for them to rebuild confidence, identities, and new lives in the private sector' (ibid: 121). In addition to a means to accrue personal value and build a life for the beauty therapists, the conceptualisation of 'bodies as infrastructure' in the space of the salon and beyond also underscores how the circulation of beauty ideals, standards, and objects and the resulting production of 'femininity' rely on and are effected by physical labour. It also reminds us that beauty work and the other forms of labour upon which it depends (for example, making the goods, distributing them, taking them 'away' once disposed of) are performed by people whose bodies are gendered, racialised, and classed. Structural dynamics play an important role in how the impacts of shouldering this 'third shift' are experienced (Kang 2010a: 15). As such, considering bodies as a form of infrastructure puts into relief that this is labour which is not only fully corporeal but also literally incorporated, leaving its traces in differentially-situated and thus differentially-impacted bodies.

In their physical labour, the hairdressers and beauty therapists are viscerally engaged with the tools and materials of beauty. Moving away from considering the human interactions in the salon, some social science research has discussed the materiality of this labour (Costache 2012; Eayrs 1993; Holmes 2014a, 2014b; Lawson, H.M. 1999; Rich, C. 2014; Shortt 2013; Soulliere 1997). For example, Michele Earys describes how 'hairdressing is technically complicated' involving handling 'hairs' (sic.) [fragile] physical properties' and the physical management of clientele alongside negotiating (potentially hazardous) tools and products (1993: 31). Similarly, Danielle Soulliere underlines that the use of salon products – of which hairstylists 'lay claim to special knowledge' – is one way in which salon workers create a professional identity (1997: 55-57). However, once again due to the feminisation of the labour coupled with 'the instability of objects and materials produced through service work', as Helen Holmes describes in her research into hairdressing, 'the invisibility of the practices and skills [is perpetuated] … and, as a result, this is one key way in which service work remains undervalued' (2014a: 490; see also Cohen and Wolkowitz 2018). Like the studies into emotional labour in salons, this materially-oriented research has been important in putting into relief the actual skill of performing beauty work and highlighting that this is a form of craft which has often been rendered invisible due to its association with women. I argue this is only part of what attending to things in the salon can offer. The tools and materials of beauty work are objects which, as Craig Rich argues in his study of salon mirrors, do important work in the salon (2014:

17). Objects 'have histories and built-in affordances, they resist and "bite back"' (Engeström and Blacker 2005: 310 cited in idem); they are not just passively picked up and used but 'they act upon the relations they are situated within' (Rich, C. 2014: 17).   And, as suggested by the verb 'bite', they can cause hurt. I therefore build on these studies by putting a 'materio-centric' (Hurdley 2010) attention into conversation with the notion of 'bodies as infrastructure' to consider some of the ways in which salon objects 'bite back'. I examine how the objects impact at once spatially and corporeally, both in the salon and beyond, at times benignly but often harmfully, where some lives are more vulnerable to the hurt.

Extending research on the beauty work's material dynamics and considering the therapists' corporeal relationships with objects as well as the non-salon spaces enrolled in enabling beauty work to actually happen, I turn to Widdows' (2017) ethical provocation on the 'harms of beauty'. In her essay, Widdows markedly departs from debates on *why* women engage with the beauty industry and the psycho-social harms this can cause to consumers and instead highlights the 'direct harm' of the industry to providers (ibid: 13; see also Herzig 2015: 150; Jankowski 2016). Furthermore, she underlines the power differentials and structural inequalities embedded in susceptibility to these harms as she notes that for beauty practitioners – whose 'skill-base is not regarded as "expert"' and who are 'classed as low-end service-providers' – '[t]he power rests with the consumer … making it hard for providers to control what they do; including the extent to which they work with and administer risky products' (2017: 14, 15; see also Kang 1997, 2010a, 2010b; Zota and Shamasunder 2017). That is to say, it is the relatively disadvantaged salon workforce who largely shoulder the material and bodily burdens of performing this 'third shift' (Kang 2010a: 15). Although providing a useful starting point, whereas Widdows' (2017) concern with 'direct harms' lies with those working in salons, I contend that the (potentially) harmful material impacts stretch much further afield, inflecting bodies and spaces far beyond the salon as these are enrolled in the production of 'feminine' bodies (Herzig 2015: 189-190). I also argue that the harms are co-extensive with these beauty practices for the (potentially) toxic harms are thoroughly entangled with how the materials perform, 'journey' (Knowles 2014), and are disposed of and replaced. These are toxin-laden processes which serve to effect the ongoing-ness of the production of this particular version of 'femininity'.

Building on the extant research into salon labour, I explore what beauty products as they journey to and through the salon. In the first instance this, as Widdows (2017) advocates, brings to the fore the 'direct harms' to health for practitioners. What is more, as I will demonstrate, this also puts into relief the more geographically- and temporally-widespread (Herzig 2015: 190) spatial and corporeal harms and geometries of (potential) toxicity as the materiality of beauty work extends outside the salon. Attending

to things enables an examination of the wider physical mechanisms and impacts of beauty work: what its products do, where, and to whom, and how these are entangled in effecting the production of 'feminine' bodies in the salon.

2.5   Active things

Undergirding my focus on the materiality of salon work is an insistence that beauty products are lively or deadly participants in the social world. I take these goods to be actively involved in generating social and spatial formations and interconnectedly to impact differently on differently-situated bodies as they *journey* making places and lives as they move (Knowles 2014). As my empirical discussion will show, the products, their properties, and their journeys *matter* both to the 'feminising' work taking place in the salon and to life beyond. The salon's walls are permeable. If, as Brad Weiss describes in his work on barbershops in Tanzania, those who work in salons 'and their clients bring the world into the shop' (2002: 107), then I argue that so too do the products with which they work and/or which they consume. Reciprocally, I further contend that what occurs in the salon is felt beyond, exceeding the salon in material ways and playing a role in shaping places and lives outside. Salon objects dynamically effect particular practices, 'prompt' bodily and spatial configurations (see Hawkins 2009, 2013a), and leave their traces in bodies and spaces in uneven and (potentially) toxic ways. Attending to *things and what they do* highlights how the particular version of 'femininity' made in the salon is not only socio-culturally constructed and impelled but also spatially and materially animated, entangled with widespread harms, and permeated by oil.

Unfaithfully drawing on 'new materialist' scholarship (whilst recognising there is little 'new' in this and that it is, moreover, problematic to posit it as novel [see Sundberg 2014; Todd 2016]), I take matter not as 'a blank slate, surface, or site passively awaiting signification' but rather as an 'an active participant in the world's becoming' (Barad 2003: 821, 803). Refuting (Anglo-European) historic philosophical notions of 'matter as passive stuff, as raw, brute, or inert' which have resulted in the 'parsing of the world into dull matter (it, things) and vibrant life (us, beings)', I instead take things as 'vibrant, vital, energetic, lively, quivering, vibratory, evanescent, and effluescent' with 'a positive, productive power of their own' (Bennett 2010: vii, 112, xiii, 1, original emphasis). More-than-human objects thus interfere in social geographies (Whatmore 2002: 4) where a thing 'has efficacy, can *do* things, has sufficient coherence to make a difference, produce effects, alter the course of events' (Bennett 2010: viii, original emphasis), has the 'capacity to prompt certain actions' (Hawkins 2009: 193), and 'generates effects' (Hawkins 2013b: 52). Things, then, are not merely a backdrop nor passively waiting to be interpreted and meaning made from

them by us, but they are lively or deadly participants in the social world in their own right. In this attunement to objects, I want to focus on what they do and, crucially, what they do in collaboration (Kontturi 2018: 110 cited in Coleman 2020: 32) with other human and more-than-human bodies and the spaces in which these lives are lived; on their properties, their affordances, and capacities. In other words, on what they are able to engender and the effects they generate.

Heeding Fran Tonkiss' critique of such thing-oriented studies, it is insufficient to produce endless lists to demonstrate how everything is interconnected in urban assemblages 'without necessarily distinguishing between what is active, what is latent, what is incidental, and what is simply *around*' (2011: 585, original emphasis). Instead I want to ask which things matter? why? how? and at which moment? Furthermore, it is crucial to constantly recognise that these things matter not in a vacuum but *because of* their power-full interactions with places and bodies. For, '[t]here are, of course, many different kinds of things, with many different kinds of powers. And things come together in many different combinations, producing, through their process of everyday quilting, many new powers' (Amin and Thrift 2017: 77). My aim, then, is not to merely list all the things that come together during beauty work but rather to acknowledge that, in particular contexts and in contact with particular spaces and bodies, some of these things serve to (re)produce forms of (dis)advantage. I examine how beauty products provoke certain practices and generate effects and, concomitantly, leave unevenly-experienced (potentially) toxic traces. Moreover, I focus on how their effectuations and effects significantly vary depending upon where they are and with whom they come into contact, processes which are not incidental but highly politically-charged (Gabrys 2020).

It is therefore also not adequate to focus solely on more-than-human things nor to render humans as one lively object, equal amongst others. Indeed, one of the critiques of 'new materialist' work is that humanist issues are disregarded and:

> Some proponents of the new materialism have proved deft at sidestepping, postponing, or caricaturing these ethical or political worries about the decentring of humans from the field of agency (Appadurai 2015: 222).

That is to say, in all the talk of 'lively things', humans seem to have been relegated. Yet, like Ash Amin and Nigel Thrift, my focus on the role of the more-than-human certainly 'does not mean that [I] want to lose the notion of the human entirely' but rather I identify the human 'as twisted into knots of things', things

that surround, cosset, threaten, and become us (2017: 68, 77). Bennett precisely insists upon the vibrancy of more-than-human things because:

> These material powers … can aid or destroy, enrich or disable, ennoble or degrade us … My claims here are motivated by a self-interested or conative concern for *human* survival and happiness ... (2010: ix-x, original emphasis).

She writes that '[e]ach human is a heterogeneous compound of wonderfully vibrant, dangerously vibrant, matter' and so 'in a knotted world of vibrant matter, to harm one section of the web may very well be to harm oneself' (ibid: 12-13). This is not to elide the human in a world in which things also matter. But nor is this a one-way relationship in which humans exercise mastery over the material world (ibid: ix; Haraway 1992). It is to recognise that these lively materials 'strike back' (Latour 2000) and that we are not individual bodies discreetly bounded from the rest of the world. By thinking with lively and deadly objects, 'the notion of corporeal integrity essential to the modernist notion of human being' is refuted (Shildrick 2015: 13; see also Latour 1993); we are certainly 'in constant interchange with [the] environment' in which we live (Gatens 1996: 110 cited in Alaimo 2008: 255), a de/generative exchange. And, as Bennett (2010: vii) cautions, if we ignore the vitality of matter, we risk missing the ways in which some things can have spatial and bodily effects as well as an opportunity to interrogate *which* spaces and reciprocally *which* bodies bear those effects most heavily. Viewed in this way, we can, and indeed must, more fully take into account not only the other humans but also the more-than-humans with which we become (see Haraway 2003).

Although Bennett centres 'Thing-Power' at the expense of 'Flower Power, or Black Power, or Girl Power' (2010: 6), my aim is instead to highlight that the socio-spatial injustices of which these social movements are borne and which they contest cannot be separated out from the actions of things. As emphasised by Myra Hird and Celia Roberts, the recent feminist turn[43] to the more-than-human should mean:

> [N]ot that we give up on concerns about women, power, sexuality, racialisation, etc., but rather that we come to recognise more fully how these come to be constituted and thought in and through particular worlds in which "we humans" are but one nominated set of players (2011: 115).

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[43] Although as Hughes, C. and Lury have noted this is not so much a turn to matter as a *re*-turn (2013: 787 cited in Coleman 2014: 37, original emphasis).

This underscores that 'one's body has its own forces, which are interlinked and continually intra-acting[44] with wider material as well as social, economic, psychological, and cultural forces' (Alaimo 2008: 250). Again, not losing the focus on the human nor on the systems of privilege and oppression within which we live. Rather this attention to matter, as Diana Coole and Samantha Frost contend:

> Foregrounds an appreciation for just what it means to exist as a material individual with biological needs for survival yet inhabiting a world of natural and artificial objects, well-honed micropowers of governmentality, and the more anonymous but no less compelling effects of international economic structures (2010: 27).

Seen in this way, the co-productive and at times harm-full relationships between bodies and places, the concomitant geometries of toxicity, and the production of 'feminine' bodies in which these are implicated are clearly wrapped up with the materiality of human and more-than-human bodies and their dynamic enmeshments. These are inseparable from social, political, and economic structures. As I focus on things and what they do, it is key to note that these things are de/generatively entangled with human lives and the spaces where these lives are lived, and that their effectuations take place within and reproduce long-standing structural inequalities.

2.6   The urban life of things

Writing on how places are made, feminist geographer Massey argues that 'space and place emerg[e] through active material practices', produced through human and more-than-human actions, interactions, and negotiations (2005: 118, 140). In our everyday actions, we 'are helping, although [perhaps] in a fairly minor way, to *alter* space, to participate in its continuing production' (ibid: 118, original emphasis). Spaces are made as we interact with the, with each other, and with things. Reciprocally, our bodies and our lives are shaped by the spaces in which we live (Grosz 1999). As such, it is important to take account of what objects and materials do in the city for in these processes, 'urban social life [is] never reducible to the purely human alone' (Amin 2014: 138). In their conceptualisation of the more-than-human city, Amin and Thrift argue that in urban space – 'a mangle of machines, infrastructures, humans, nonhumans,

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[44] Here Alaimo (2008) is drawing on Barad's (2003, 2007) concept of 'intra-action'. Barad explains: a neologism, 'intra-action' 'signifies the mutual constitution of entangled agencies. That is, in contrast to the usual "interaction", which assumes that there are separate individual agencies that precede their interaction, the notion of intra-action recognises that distinct agencies do not precede, but rather emerge through, their intra-action' (2007: 33, emphasis omitted). Although useful, especially when considering the de/generative relationship between materials, spaces, and bodies, 'intra-action' is not a concept I am explicitly employing in this thesis.

institutions, networks, metabolisms, matter, and nature' – the charged human-more-than-human entanglements are particularly significant (2017: 9). They describe how:

> Cities are spatial radiations that gather worlds of atoms, atmospheres, symbols, bodies, buildings, plants, animals, technologies, infrastructures, and institutions, each with its own mixes, moorings, and motilities, each with its own means of trading, living, and dying (ibid: 2).

Or, as Adrian Franklin contends 'cities cannot be conceptualised as humanist islands or citadels' for, as shown above, 'non-humans hav[e] powers to affect human life chances' (2017: 215, 206). Laura Lieto proposes that 'giving objects their due expands the scope and strengthens the grasp of urban theory' because 'objects become relevant for addressing issues of spatial injustice' as 'structural injustices, authoritarian regimes, and technologies of environmental destruction are always stabilised around objects' (2017: 576). Following these arguments, instead of looking at only the 'dynamics of inter-personal interaction', I am guided by Amin's:

> [I]nsistence that technology, things, infrastructure, matter in general, should be seen as intrinsic elements of human being, part and parcel of the urban "social", rather than as a domain apart with negligible or extrinsic influence on the modes of being human (2008: 8).

Matter indeed matters for the beauty work performed in London's salons. It matters for how this 'feminising' process is constitutively entangled with wider spatial and bodily dynamics. It matters for urban life more broadly, life in which the salons are set. Interrelatedly, it also matters for the examination of the forms of (potential) toxicity imbued in the making of 'feminine' bodies in London's salons and for interrogating where and who come to 'carry a disproportionate toxic load' (Alaimo and Hekman 2008: 9)[45].

To pay attention to materials, then, allows a fine-grained focus on the production of urban socio-spatial formations as well as in the spatialised and bodily inequalities which are embedded and perpetuated in the city, processes in which things play an active part. Thus I draw on Watson's adoption of a 'socio-material view of publics' to consider how the products needed for beauty work also 'participate in the day-to-day shaping of urban areas' (2015: 877). A day-to-day which is differentially lived by differentially positioned people. The things I examine in my enquiry into beauty work and the production of 'femininity'

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[45] Alaimo and Hekman discuss environmental justice movements who have 'reveal[ed] that lower-class peoples, Indigenous peoples, and people of colour carry a disproportionate toxic load' (2008: 9). I will re-emphasise this point as I follow wax and other beauty products through London and onwards.

in London's salons participate in dynamic environmental-bodily interchanges and they certainly do not impact everyone and everywhere in the same way; they may be lively but can also be deadly. In particular, given the embeddedness of petroleum products in the realisation of beauty work, releasing emissions at every stage, I argue that an attention to the air that 'we' breathe is a useful means of examining these materially-imbued vectors of power where intersections of race, gender, and class are deeply implicated in the ways in which people are differentially affected by these things.

2.7   The infrastructure of beauty

My concerns with de/generative intertwining of the material, the spatial, the social, and the corporeal, and the associated power geometries and questions of toxicity are brought together in an examination of the infrastructures which enable beauty work. These infrastructures – including what engineers call 'the stuff you can kick' ('electrical grids, telecommunication networks, bridges, subways, dams, sewer systems, and so on') (Parks 2015: 355) and 'bodies as infrastructure' (Yang 2017) – support as well as *animate* the production of 'feminine' bodies in the beauty salon.

Explaining what infrastructure does, Brian Larkin describes it as 'matter which enables the movement of other matter' (2013: 329). Yet, as indicated by the above discussions of lively or deadly things and as has been recognised in the growing field that examines infrastructure, urban infrastructure does more than simply facilitate the circulation of goods, electricity, people, water, rubbish etc. through the city. Larkin continues that 'infrastructures mediate exchange over distance, bringing different people, objects and spaces into interaction and forming the base on which to operate modern economic and social systems' (ibid: 330). In his article on 'lively infrastructure', Amin precisely argues that in recent scholarship on infrastructure, 'trunk networks, the built environment, and public utilities and services appear not only as subjects of interest in their own right, but also as matters implicated in the making of urban functionality, sociality, and identity' (2014: 137). For Amin, this research emphasises how infrastructures 'are implicated in the human experience of the city and in shaping social identities' (ibid: 139). Dennis Rodgers and Bruce O'Neill contend that 'infrastructure is a key factor in shaping people's direct relationships both with each other and with their environments in cities' (2012: 402). And Tonkiss describes how 'infrastructure has the capacity to show us how social organisation happens – how an order of things and ecology of social life emerges – from regular and provisional interaction between people and things' (2015: 390). Viewed in this way, infrastructures are 'lively' or 'active' in 'shaping well-being, sociality, and organisation' and in orchestrating communities and institutions: 'the social force of infrastructure is unmistakable' (Amin 2014: 156, 145). Whilst this work has underlined this 'social force', 'femininity' as

one of the formations in which urban infrastructure is implicated has been largely overlooked. This thesis seeks to contribute to this literature by examining the infrastructures which enable beauty work and so prompt the production the particular version of 'femininity' underpinning and underpinned by this work.

In her history of 'beauty culture' in the United States, Kathy Peiss offers a useful starting point by describing the 'nascent infrastructure of the beauty industry':

> The origins of American beauty culture lie … in a spider's web of businesses – beauty parlours, druggists, department stores, patent cosmetic companies, perfumers, mail-order houses, and women's magazines that thrived at the turn of the century … (2011: 61).

She continues that by 1920, new cosmetics companies had adopted practices of 'mass production, distribution, marketing, and advertising' in order 'to create a mass market and sell beauty products to all women' (ibid: 97-98). Today, 'cosmetics … seem quintessential products of a consumer culture dominated by large corporations, national advertising, and widely circulated images of beauty' (ibid: 61). The 'nascent infrastructure' – local, domestic, and predominantly women-led – which drove the beauty industry has been transformed into an international system with a global circulation of ideas, goods, workers, and capital (Herzig 2015: 138; see also Jones, G. 2010). Yet in the same way that urban sociology has neglected the making of 'feminine' bodies in its consideration of infrastructure, the sites and processes of manufacture, distribution, and disposal and their role in the production of this version of 'femininity' have been largely overlooked in critical beauty studies. I aim to counter these intersecting omissions by expanding on the infrastructure examined in academic literature on beauty[46]. For example, imperative for the realisation of beauty work are factories, a global system of logistics, transit networks, wholesalers, and warehouses as well as mechanisms of disposal including municipal waste plants, recycling facilities, and sewerage systems. The beauty industry's infrastructure also includes bodies; the bodies of those working in the industry are considered as form of infrastructure (Yang 2017), both in the salons and beyond as the products are moved to and through the salon. These various forms of infrastructure enable the circulation of beauty products in the most practical of terms. Furthermore, they certainly have a 'social force' (Amin 2014: 145) shaping life in the city and, in the salon, ultimately animating the making of 'feminine' bodies.

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[46] Research into these sites has taken place in investigative journalism; for example, there have been reports on false lash factories (Chamberlain 2013; Diani 2013) and sweatshops (Chamberlain 2013) and on Botox laboratories (Bailly 2018).

Moreover, entwined with its role in shaping different facets of urban life, unsurprisingly infrastructure is threaded through with power geometries:

> [Infrastructure] demarcates both literally and figuratively which points in urban contexts can and should be connected, and which should not, the kinds of people and goods that can and should circulate easily, and which should stay put, and who can and should be integrated within the city, and who should be left outside of it … (Rodgers and O'Neill 2012: 402).

As Susan Leigh Star (drawing on Bruno Latour and Emilie Hermant [1998]) contends '[s]tudy a city and neglect its sewers and power supplies (as many have), and you miss essential aspects of distributional justice and planning power' (1999: 379). Echoing Star (1999), Tonkiss underlines that 'infrastructures produce and reproduce distributional inequalities' and do so 'in material, and deeply spatial, ways' (2015: 384). For Tonkiss, these are questions of both a lack of access and/or an '*excessive* access' to infrastructure (ibid: 387, original emphasis), an excess which is manifest materially, spatially, and (I want to add) bodily.

The ways in which this access (easy and unthought of [Star 1999: 380], taken for granted, lack of, excessive) is distributed is far from incidental. Rodgers and O'Neill continue that 'it could be argued that infrastructure constitutes an often-ignored material channel for what is regularly referred to as "structural violence"' (2012: 404; see also Boehmer and Davies, D. 2018). Forwarding the concept of 'structural violence', Johan Galtung advocates for 'an extended concept of violence': he 'reject[s] the narrow concept of violence – according to which violence is somatic incapacitation, or deprivation of health, alone … at the hands of an actor who intends this to be the consequence' (1969: 168, emphases omitted). Instead, he proposes that we look to 'the violence [which] is built into the structure and shows up as unequal power and consequently as unequal life chances' (ibid: 171). In other words, social dynamics such as gender, race, class, age, able-bodiedness, sexuality, and the ways in which these intersect impact upon how lives are able to be lived, the chance for life. Infrastructure, then, is by no means experienced in the same way by everybody/every body. Interrelatedly, infrastructure can act as a conduit for what Rob Nixon (2011) terms 'slow violence'. That is, 'a violence that occurs gradually and out of sight[47], a violence of delayed destruction that is dispersed across space and time, an attritional violence that is typically not viewed as violence at all' and which Nixon similarly connects with the forms of structural violence

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[47] Although it is important to question, as Davies, T. (2019) does, '"out of sight" for whom?' noting that this form of slow and toxic violence is far from invisible for those experiencing it.

discussed by Galtung (2011: 2, 10-12). At once infrastructural, structural, slow, material, spatialised, and bodily, this violence is manifest in where 'we' live, the work 'we' do, what 'we' come into contact with, and the air that 'we' breathe which circulates through 'our' homes and workplaces, inhaled into 'our' lungs, metabolised in 'our' cells.

Given the (potential) toxicity of beauty products used in the salon, their diesel-powered journey to and through the salon, the spaces enrolled in this circulation, the corporeality of the different forms of labour involved, the constant incineration of the spent ephemeral goods, and the (potential) ensuing emission of NO_x[48] and particulate matter into the air, beauty work offers a productive site to examine these forms of violence and how they are entwined with the making of 'feminine' bodies. With an attention to beauty work's infrastructure, I build upon the discussions of beauty's power dynamics and salon labour with which I opened this chapter. In doing so, I focus on the air 'we' breathe to interrogate where and who are most vulnerable to this 'feminising' work's (potential) toxicity and (potentially) harmful health effects, both in the salon and beyond. Through an infrastructural lens, I examine who experiences Tonkiss' 'excessive access' (2015: 387, emphasis omitted) to the infrastructure which animates beauty work and the particular version of 'femininity' underpinning it.

From the manufacture through the distribution to the application and the eventual disposal (and replenishment) of the beauty products which make 'feminine' bodies in the salon, these are processes which are heavily reliant on oil and its by-products. As these goods circulate to and through the beauty salon, they are thus implicated in the de/generative interchanges between spaces and bodies. These are permeated by petroleum products, threaded through with power asymmetries, and textured by whilst also perpetuating inequalities and violence. This infrastructural violence, I argue, is not merely a consequence of the making of 'femininity' in the beauty salon but is thoroughly entangled in this process for this infrastructure certainly has a 'social force' (Amin 2014: 145), not simply facilitating the movement of goods but also animating this version of 'femininity'.

2.8   Concluding remarks

Beauty work is not only shored up by power-laden assessments of who can occupy the category 'beautiful', nor the expectation of a youthful and smooth appearance increasingly placed on all of those who identify as women, nor the capitalist imperative to sell 'solutions' to 'problems' as has been discussed

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[48] Nitrogen oxides.

in the extant literature on beauty. I argue that there are also important *material, spatial, and bodily* dynamics – the 'ground' of beauty (Davis, K. 1991: 33) – which *effect* this work: the products and their ingredients, the spaces through which they circulate and the infrastructure which enables this, the mechanisms for the disposal of the constantly-replenished products, the salons themselves, and the people who labour in the different spaces. These intertwining factors – the socio-cultural, the economic, the material, the bodily, and the spatial – which animate beauty work and so the notion of 'femininity' underpinning it suggest a productive bringing together of literature from critical beauty studies which has unpacked the production of 'feminine' bodies in the salon with research from urban sociology which has focused on the making of city spaces and the active and, at times, violent role of infrastructure. In this chapter, I have identified gaps where these two bodies of scholarship intersect: the material, bodily, and spatial contingencies of making 'femininity' in the beauty salon which have tended to be overlooked in the feminist work on beauty and, simultaneously, this version of 'femininity' as one of the social formations prompted by urban spaces and infrastructure, a topic largely neglected in the overly-masculine accounts of the city and its infrastructure (Watson 2015). To address these gaps, I have proposed a 'materio-centric' (Hurdley 2010) theoretical framework where things – beauty products in this case – are taken as active participants in the social world and implicated in the de/generative relationships between spaces and bodies.

I argue that a particular focus on the infrastructure which enables beauty work brings to the fore the dynamic, power-full, and harm-full intertwining of the spatial, the material, the social, and the bodily (although this latter is often neglected in macho and muscular but strangely a-corporeal accounts of the city [Watson 2015]). In this, infrastructure certainly has a 'social force' (Amin 2014: 145) playing a role in effecting the particular version of 'femininity' worked upon in London's beauty salons. Moreover, threaded through the de/generative interconnections between matter, bodies, and spaces are 'power geometries' (Massey 1993) where differently-situated people experience the production of space differently and so are differently impacted by the widespread 'direct harms' of beauty work (Widdows 2017). Again, an examination of the infrastructure of beauty work also underlines the forms of structural, spatialised, and slow violence (Boehmer and Davies, D. 2018; Davies, T. 2019; Nixon 2011; Rodgers and O'Neill 2012) which are imbued in the circulation of beauty products. I contend that the (potentially) violent impacts of this circulation are not merely consequences of beauty work but are fully entangled with the production of 'feminine' bodies as they are inseparable from how the products work, move, are disposed of, and are replenished. The dynamic connections between materials, spaces, and bodies and the (potential) harms are epitomised in the air that 'we' breathe where air – permeated by the very

petroleum products which enable the manufacture, distribution, application, and disposal of the products – marks as well as makes social differences.

Returning to Black's (2002: 3) contention that the beauty salon offers a 'microcosm within which to investigate wider social themes', I extend the socio-cultural concerns around beauty which have predominantly been the focus in critical beauty studies to further address questions of toxicity, the violence of infrastructure and the global logistics industry, the uneven distribution of air pollution and environmental injustices, embodied labour practices and their health impacts, the reliance on oil, the beauty industry's waste, and the planetary climate emergency. Building on a focus on the social-cultural dynamics of beauty work, these pressing sociological debates equally 'intersect in the world of the salon' (idem.). Not only does this allow me to make a contribution to critical beauty studies by examining beauty work's material, spatial, and bodily underpinnings but this also permits me to contribute to the sociology of cities by exploring how these spatial and largely urban processes are active in animating the version of 'femininity' made in salons. Building on the extant literature in both disciplines, the next chapter will consider what a thing-attentive methodology can offer to a sociological enquiry into the production of 'feminine' bodies and the socio-spatial oil-imbued harms which are co-extensive with this process.

Chapter 3 Making tracks: Journeying to and through London's beauty salons

[W]e have to follow the things themselves, for their meanings are inscribed in their forms, their uses, their trajectories … [F]rom a methodological point of view it is the things in motion that illuminate their human and social context (Appadurai 1986: 5).

3.1   Introductory remarks

In order to examine the material and spatial dynamics of the production of 'feminine' bodies in London's beauty salons, I have adopted a materially-attentive, multi-sited, and multisensory methodological approach. In this chapter, I discuss how the focus of my fieldwork and my methodological approach developed as my research progressed. I started by accompanying customers to their hair and beauty appointments and interviewing them about their engagement with beauty practices. I then conducted participant observation[49], observing and carrying out interviews whilst beauty therapists worked, asking them to narrate what they were doing. Lastly, I traced the journeys of beauty products to and through the salon, following them across the city from port through the factory and wholesalers to the beauty salon and 'finally'[50] to the incinerator going on self-guided and guided field visits of these different sites.

This evolving approach enables me to expand the purview of critical beauty studies by putting into relief the active role of the 'ground' – the materials and places – upon which the making of 'feminine' bodies is predicated. By leaving the salon, the more familiar research setting of critical beauty studies[51], and venturing into London and its hinterlands – places more commonly studied in urban sociology and usually implicitly read as 'masculine' – this approach also allows me to make a contribution to urban sociology by closely focusing on how city spaces and infrastructures play an active role in 'animating' (Watson 2015: 877) beauty work. It further draws attention to how petroleum products are implicated in this process as well as to the wide-reaching and asymmetrical forms of 'direct harm' (Widdows 2017) which are co-extensive with the production of 'feminine' bodies as, in a reciprocal relationship, spaces and bodies are textured by the products' journeys. These (potential) harms are epitomised in the air 'we' breathe, to

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[49] See footnote 13 on Back's cautioning of the limitations of the term 'observation' when conducting social research (2012a: 29).

[50] As I demonstrate in Chapter 6, this is far from the 'final' journey of the products (now as waste) as their effects endure much beyond their disposal and incineration.

[51] Within critical beauty studies there is also research carried out in homes, in gyms, and in pageant spaces as well as on online spaces.

which I became increasingly attuned as my fieldwork developed across different sites. Working across critical beauty studies and urban sociology, my methodological approach draws on both to build on customers' accounts of their beauty practices and explore how the 'ongoing process' of beauty work is materially effected and in a dynamic relationship with urban spaces and lives. I also turn to existing work from occupational health research and environmental science studies which has focused on emissions from pollutants in the salon and beyond, and the environmental and bodily impacts of these. Putting this research into conversation with my materio-centric and embodied methodological approach further emphasises how the making of 'feminine' bodies in the beauty salon is permeated with (potential) toxicity.

During three years of fieldwork (December 2016 – January 2020; see table 1), I accompanied ten women largely living in and around Park Village, a predominantly white and middle-class London neighbourhood, on their hair and beauty appointments both locally and in the city centre. I conducted thirteen interviews during or after these visits with these participants. I also carried out interviews with four other salon customers from the same neighbourhood whose appointments I was unable to attend.   Whilst accompanying customers to their appointments, I had the opportunity to interview four salon owners and/or workers. Expanding my interest to salon labour practices, I went on to carry out 'participant observation' whilst two beauty therapists performed treatments, interviewing them whilst they worked over five visits by asking them to narrate what they were doing. This latter set of interviews put into relief the different products with which the beauty therapists work and I started to question how these were also participating in the making of 'feminine' bodies. With my attention heightened to these products and becoming increasingly materially-focused, I turned to existing occupational health research on the issues associated with conducting salon labour (see section 4.9). I draw on the findings of these studies through the prism of 'new' materialist framings to explicitly recognise the liveliness or deadliness of things and how they 'bite back' on the beauty therapists' bodies (Engeström and Blacker 2005: 310 cited in Rich, C. 2014: 17). I also began to consider where the products were made, how they arrived in the salon, what happened once they were disposed of, and what they effected on these 'journeys' (Knowles 2014). As such, I expanded my enquiry from the beauty salon to map the trajectories of depilatory wax and other beauty products across London. Adopting a mobile approach, I visited places which are equally integral to the realisation of beauty work as the salon: guided tours of a wax manufacturers, a beauty wholesalers' store, and three municipal waste plants; and self-guided walking tours of the surroundings of the Port of

Tilbury through which the beauty products and their raw materials (may[52]) journey, the environs of peri-urban trading estates where the wholesalers' stores are located, and the neighbourhoods adjacent to the waste facilities. I also corresponded via phone and via email with people working in beauty product manufacture and distribution about how the products are made, what they are made from, and how they are transported to London. In this correspondence, I also (unsuccessfully [see section 3.11]) tried to arrange field visits to chemical and wax manufacturing plants, distribution warehouses, and London's cargo ports.

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[52] As I discuss in sections 3.11 and 5.4, there is some uncertainty about the exact journeys taken by the raw ingredients and products as they arrive in the UK as logistical pathways change depending on who can offer the quickest route for the best price (interview with Martin Garside, the Press Officer for the Port of London Authority, October 2019) and these spaces prove difficult to access (see section 3.11).

Who[53]	When	Where	What
Jayne Customer	December 2016 and April 2017	Park Village, South London	Accompanied hair salon appointment, interview immediately after appointment. Follow-up interview.
James Hair salon owner and hairdresser	December 2016	Park Village, South London	Interview during Jayne's appointment.
Laura Customer	December 2016	Park Village, South London	Accompanied manicure appointment, interview immediately after appointment.
Holly Customer	December 2016 and March 2017	Kenton, West London	Accompanied eyebrow appointment, interview immediately after appointment. Accompanied and participated in pedicure appointment, interview on journey to the salon.
Marie Customer	December 2016 and March 2017	Park Village, South London	Attended home hairdressing appointment. Follow-up interview.
Anne Customer	December 2016	Park Village, South London	Attended home hairdressing appointment, interview during appointment.
Joanna Home hairdresser	December 2016	Park Village, South London	Interview during Marie and Anne's appointment.
Helen Customer	January and April 2017	Modford, Central London	Accompanied hair salon appointment, interview during appointment. Follow-up interview.
David Hair salon owner	January 2017	Modford, Central London	Interview during Helen's appointment.
Fred Hairdresser	January 2017	Modford, Central London	Interview during Helen's appointment.
Gina Beauty salon owner and aesthetic surgeon	January 2017	East Slopes, South London	Interview.
Pippa Customer	February 2017	Park Village, South London	Interview.
Caroline Customer	February 2017	Park Village, South London	Interview.
Charlie Customer	February 2017	Park Village, South London	Interview.
Lydia Customer	March 2017	Park Village, South London	Interview.
Emily Customer	April 2017	Central Financial District, London	Accompanied eyebrow appointment, interview immediately afterwards.

[53] With the exception of Martin Garside, the Press Officer from the Port of London Authority, all names, places of work, and locations have been anonymised. I have not anonymised Garside as he was speaking to me as an official representative of the Port of London Authority.

Davina Customer	June 2017	Gossford, South London	Accompanied manicure appointment, interview on the journey to and from the salon.
Kerrie Customer	June 2017	Park Village, South London	Accompanied hair salon appointment, interview immediately afterwards.
Beckie Customer	June 2017	Park Village, South London	Accompanied hair salon appointment, follow-up interview.
Melissa Beauty salon owner and beauty therapist	January and March 2018	Gossford, South London	Interviews whilst participant carried out manicure, gel polish removal[54], and LVL lash[55] treatments.
Liz Beauty salon owner and beauty therapist	May and August 2018, and October 2019	Gossford, South London	Interviews whilst participant carried out leg waxing, eyebrow tinting, and lash extensions.
Mark Managing Director of Vela Wax Company	October 2019	County of East Angleford	Guided tour of wax manufacturers and interview.
Martin Garside Press Officer for the Port of London Authority[56]	October 2019	London	Over-the-phone interview.
Anna Sales Assistant at Metropolitan Beauty Supplies	October 2019	South London	Guided tour of beauty wholesalers store and interview.
Emma Public Relations Officer for Reuse and Recycling Centre	October 2019	London	Public tour of municipal recycling facility.
n/a	October 2019	Port of Tilbury	Self-guided visit to the port town.
James Quality Assurance Manager of Eastern Waxes	November 2019	n/a	E-mail correspondence with depilatory wax manufacturer.
Cynthia Public Relations Officer for Waste-to-Energy Centre	November 2019	London	Guided tour of municipal incinerator facility.
John Public Relations Officer for Energy from Waste Centre	January 2020	London	Guided tour of municipal incinerator facility.
Richard Business Manager of ChemCorp	February 2020	n/a	E-mail correspondence with chemical supplier.

Table 1

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[54] Gel nails are a form of manicure where the nail polish is 'cured' under a UV or a heat lamp. Pretty much unable to be chipped, the polish cannot be removed with ordinary remover and so many salons offer a removal service using acetone and tools to gently scrape it from the nails.

[55] LVL – 'Length, Volume, Lift' – is a lash perming, lengthening, and tinting treatment.

[56] The port authority who oversees all of London's ports (including the Port of Tilbury) and the marine traffic on its river. The individual ports are managed by private companies.

3.2   Structure of the chapter

Emphasising the emplaced nature of my fieldwork, I begin this chapter by discussing how interviewing *in situ* – whilst accompanying customers to their salon appointments, observing as hairdressers and beauty therapists worked, and going on guided tours **–** offered a particularly rich way of attuning to 'the *happening* of the social world' (Lury and Wakeford 2012: 2, original emphasis) (3.3). Additionally, I reflect on how being *in situ* very clearly raises questions of my positionality and the power dynamics and ethics of conducting research (3.4). In the following sections, I turn to the different interviews I carried out. I first consider the interviews with customers which aimed to explore women's engagement with beauty work and why they chose particular treatments (3.5). Whilst in the salon with the customers, my attention was drawn to what the hairdressers and beauty therapists were doing and so, expanding my focus, I started to conduct interviews with salon owners and workers (3.6). These were largely carried out whilst they performed treatments where I asked them to narrate what they were doing.

In these interviews, the products with which the beauty therapists were working came to the fore as important participants in their labour practices and, ultimately, in the making of 'feminine' bodies. As a result, I again developed my approach to more explicitly consider the materials involved in beauty work: how they behave and perform and the journeys they make to and through the salon (3.7). I reflect on the opportunities that following-as-method offers as I detail how I attended to these things, what they do, and how they move (3.8). As 'following things' involved movement from site to site, in the next section I consider how I employed a mobile methodology which enabled me to trace the journeys of these things taking me to some of the spaces through which they pass (3.9). This meant leaving the space of the salon where I had initially imagined my fieldwork would take place and heading out into London and, in particular, its 'edges' (see section 5.5). More specifically, I walked and cycled to visit factories, ports, warehouses, trading estates, recycling facilities, incineration facilities, and their environs. Thing-attentive, mobile, and largely on foot, in the penultimate section, I discuss the guided tours and self-guided visits of these different sites which are as key to London's beauty work and the associated production of 'femininity' as the salons (3.10). Once again *in situ*, I was able attune to what the products were effecting in these different sites and the traces left by them and their journeys. Finally, I reflect on the places I was not able to access and the uncertainties that persist to think through how these ambiguities are revealing of some of the broader power dynamics tied in with beauty work and the various spaces and infrastructures which enable it (3.11).

3.3   Interviewing *in situ*

Throughout the different stages of my fieldwork, I have conducted a range of interviews: with salon customers before, during, and after their appointments; with salon owners; with hairdressers and beauty therapists as they worked; and with different members of staff as they showed me around factories, wholesalers' stores, and municipal waste plants (see Table 1).   As a way of eliciting thoughts on experiences of the social world from research participants, interviews have become a 'mainstream' practice in social science research (Brinkmann 2012: 2). Interviewing participants offered opportunities to ask about their engagement with beauty work or their daily work practices, as well as to find out more about the products, their journeys, how they are made, distributed, and used, and what happens to them when they are thrown 'away'.

However, I want to caveat interviewing as a research method with Tom Harrisson's caution that:

> What you say to a stranger may, on many matters, differ from what you say to a friend, to yourself, to your wife or lover; also it may, and often does, differ from what you think, or from matters of 'fact' you are trying to remember or describe; or again from what you actually *do* (1947: 21 cited in Back 2012a: 27-28, original emphasis).

What people say can be partial, contrived for the interview situation, and, moreover, represents only a small part of social experiences; rich, multi-faceted, embodied experiences, much of which words alone undoubtedly miss.

Reflecting on interviewing as a method, Les Back precisely warns that the sociologist's 'addiction to the tape recorder has limited our attentiveness to the world' as 'the technological capacity to record voices accurately meant that researchers became less observant, less involved, and this minimised their attentiveness to the social world' (2012b: 251-252, 257). For Back, then, a challenge for sociologists is 'how to account for the social world without assassinating the life contained within it', how 'to find ways to represent … lives and objects that sustain rather than foreclose their vitality and ongoing life' (2012a: 21). He writes that an aspiration of sociology should be 'to hold the experience of others in your arms while recognising that what we touch is always moving, unpredictable, irreducible, and mysteriously opaque' as he cautions that merely 'the words of the respondents will not carry vivid portrayals of their lives' (2007: 3, 17). Celia Lury and Nina Wakeford underline that we need to find ways to 'enable the *happening* of the social world – its ongoingness, relationality, contingency, and sensuousness – to be investigated' (2012: 2, original emphasis). Yet cultivating a sociological attentiveness to the dynamic ways in which the social world unfolds has presented methodological challenges to researchers. As John Law

and John Urry have contended, social science methods have largely 'deal[t] … poorly with the *fleeting* … with the *distributed* … with the *multiple* … the *sensory* … the *emotional* … and the *kinsaesthetic*' (2003: 10, original emphases). Offering a productive avenue, in their 'manifesto for live methods', Back and Nirmal Puwar propose that 'the attentiveness that heightens our capacities as researchers needs to be in touch with the full range of the senses and the "multiple registers" within which social life is realised' (2012: 7, 11). For the researcher, an attention to bodily experiences and to 'a wider range of sensory experiences to include smell, taste and texture' means that 'not being limited to what people say explicitly enables us to train a kind of attentiveness to what remains unsaid and tacit forms of recognition and coexistence' (Back 2009: 14, 13). As such, a fuller awareness of our sensing, experiential, and emplaced bodies and their entanglements with things means that 'the sociologist becomes attentive not only to what people say but also to the *doing* of social life' (Back and Puwar 2012: 11, original emphasis).

With these provocations and the limitations of interviews alone to address them in mind, I was guided by Margarethe Kusenbach's development of the 'go-along', a 'research tool' somewhere between an ethnographic method and an interview (2003: 456)[57]. Kusenbach argues that the 'go-along', where the researcher accompanies participants on 'outings they would go on anyway' (i.e. not just for the purpose of the research), is an excellent approach for studies of space and place for it is well-suited to exploring 'environmental perception', 'spatial practices', 'biographies', 'social architecture', and 'social realms' emphasising that lived experiences are 'grounded in place' (ibid: 463, 456). It can also provide rich insights into bodily and emotional relationships with activities and places (Colls 2004; Lloyd and Hopkins 2015). Furthermore, Helena Holgersson has developed Kusenbach's analytic themes to add that this method can help the researcher to focus on the ways in which power is manifest spatially by centring experiences of belonging and exclusion and affective reactions which arise whilst walking with participants (2017: 73). In addition, for Holgersson, being *in situ* also notably emphasises the role of the researcher [see section 3.4]) (idem.).

Wanting to attend to the fullness of social life, its spatiality, 'the most trivial details of day-to-day environmental experience' (Kusenbach: 2003: 462), and the power dynamics therein, throughout my fieldwork, interviewing participants *in situ* has been central to my methodological approach. I initially

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[57] In my interviews with salon customers, I certainly noticed the differences between those where I had accompanied the participant to their salon appointment where conversation and reflection has been prompted by what had happened compared to those where (for scheduling reasons) I was only able to conduct an interview. These latter felt much more stilted and awkward and less alert to the '*doing* of social life' (Back and Puwar 2012: 11, original emphasis).

'went along' – accompanied and interviewed – with ten salon customers to their hair and beauty appointments. I attended four hairdressing appointments in salons; two home hairdressing appointments; two manicure appointments; two eyebrow shaping and tinting appointments; and one pedicure appointment. During these accompanied visits, I also interviewed two salon owners and two hairdressers whilst they worked. Building on the latter, I wanted to expand my focus to the labour performed in the salon and I arranged to interview two beauty therapists as they carried out leg and bikini-line waxing, manicures, LVL treatments, false lash application, and brow waxing and tinting treatments. During these interviews I began to foster a more explicitly materially-oriented approach, focusing on the beauty products themselves and questioning what they consist of, where they came from, and where they went once used. Finally, moving out of the salon, I organised visits to a depilatory wax factory, a beauty wholesalers store, and three municipal waste plants where I went on guided tours led by different staff members. These latter were more contrived than Kusenbach's 'go-along' method[58]. Nonetheless, being 'taken along' on these guided tours offered the opportunity to speak to participants *in situ* and ask questions prompted by what they were showing me and what was going on in the space I was visiting. Although still relying on what people say to a stranger in the engineered context of an interview, this emplaced approach enabled me to conduct interviews with customers, hairdressers, and beauty therapists and whilst on guided tours where my questions were stimulated by what was going on around us and, crucially, by *what was being done*. This opened up lines of enquiry that might have been missed in a more traditional sit-down interview (Moles 2008) resulting in my focus being drawn closely to the beauty products, to bodily interactions with them, and to the textures of the places I was in.

Being *in situ* meant that I was able to interview participants whilst simultaneously engaging in a form of participant observation: accompanying, participating alongside, travelling with, being shown around by, and simply sharing space. In this time spent 'observing' participants before, during, and after interviews, I attempted to produce what Clifford Gertz (1973) has classically formulated as 'thick description' through writing extensive fieldnotes, taking photos, making sound recordings and videos, and attending to the sensescapes of the salons and other places.

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[58] Some of these visits were clearly pre-prepared by my tour guide and included PowerPoint presentations, carefully-selected artefacts on display and brought out for show-and-tell, well-worn routes around the sites, and polished narratives.

dries v. fast
goes kinda matt + grainy
- nails are 2 mil thick
pink + white of nails can
still be seen
I am still worrying a/b
the length

when both hds done - ⊕
filing
LOADS of dust
on my hds - really want
to wash them, on my
jumper, on her hds,
on the counter

chatting to lady getting
infills done nxt to be
- has had them done
for yrs - nails now
completely acrylic
get used to them
just don't try + pick
coins off the floor!

I am completely imobilised
- hands spread in front
of me

finger tips slightly achy
wash hands
~~base coat,~~
put jumper + coat back
on, feels odd manoeuvring
hands inside

base coat, ~~top~~ colour x 2,
top coat

go to dryers - still
imobilised
stare at wall for 30 mins
whilst they dry
when dry - hd cream -
gets stuck w/ nails
try + do coat up -
difficult, frustrat'g,
kinda painful
I laugh it off
get £ of of bag + purse
- again difficult -
wincing
manage it though

get home + mk tea,
chop veg
every mv feels v. deliberate,

riders don't [?] th[at] n[?]
spy th[at] [?]'d me

sketches _____

mac

[sketch diagrams]
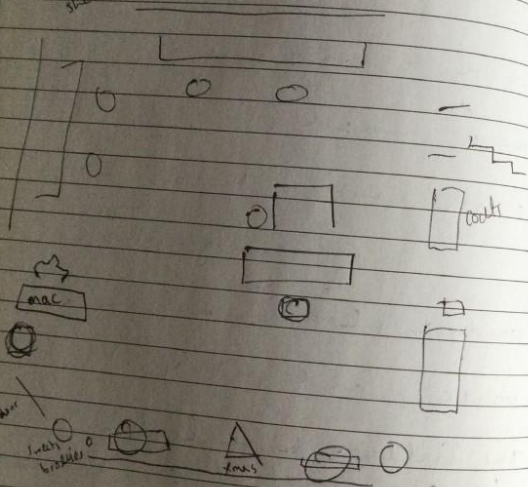
th one chair
writing desk

music gets lauder + [?]

filter coffee in cafetière
small jug of milk
push coffee cup

clears away champagne(?) glass

[redacted]

mirrors all along wall —
chairs + [?]

hv seen chgs in the [?]
— chat ab[t] restaurants
th[at] weren't there! Th[ey]
were there my not v. [?]

open 3 1/2 yrs

+ so opened

photos/art by a hippy '60s

pls th[at] don't [?] — too
many mirrors, not attr [?]
the dsign
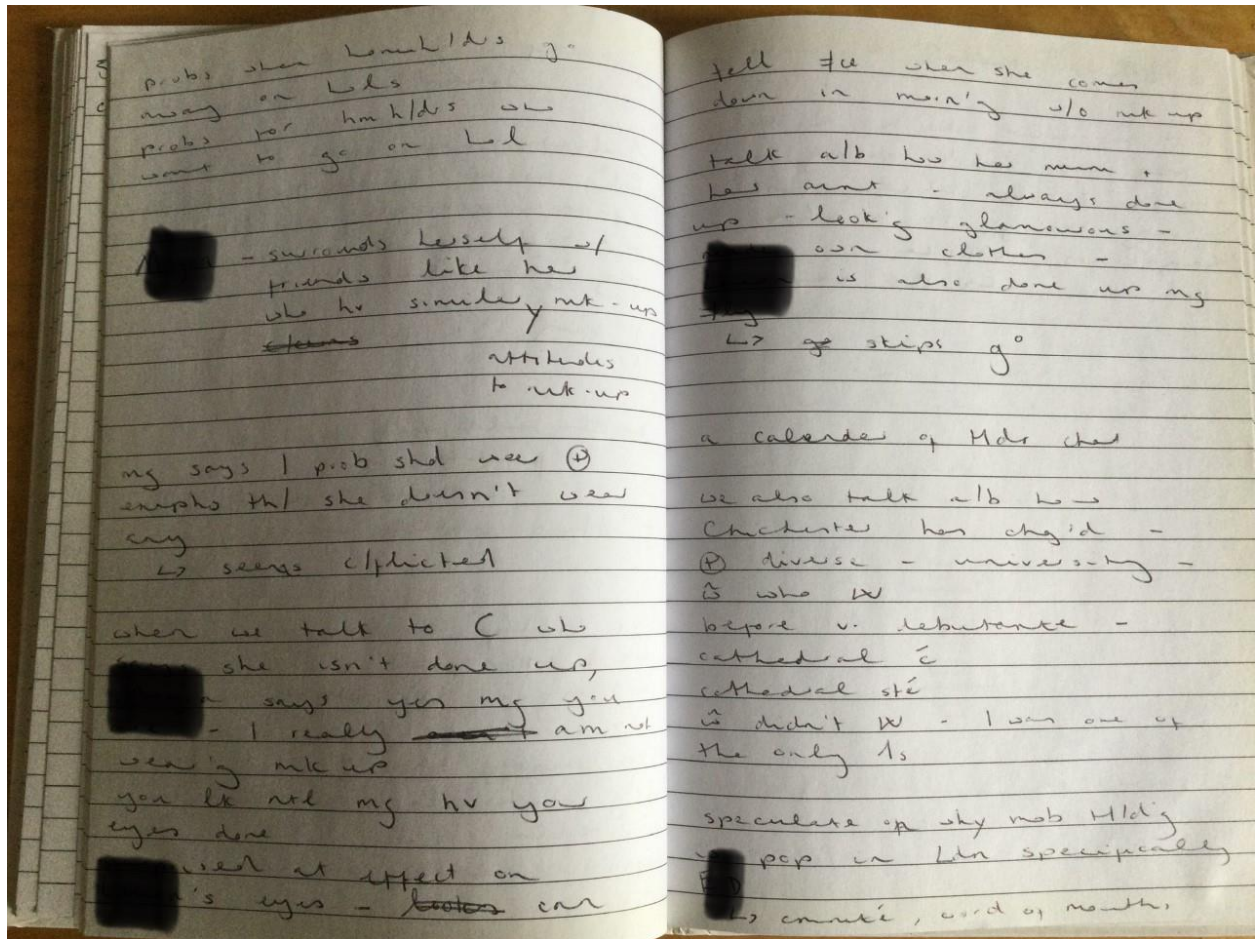
Figs. 1, 2, and 3: Images of my fieldnotes (photos: Louise Rondel, August 2022).

This participant observation which surrounded the interview encounters was crucial, for as P.M. Strong emphasises 'no form of interview study … can stand as an adequate substitute for observational data' (1980: 27-28 cited in Rapley 2004: 27) (conversely, one could equally argue that 'observational' data is made richer through having participants contextualise it and offer their perspective). Indeed, interviews alone are certainly not a reliable means of 'capturing' the fullness of 'the *doing* of social life' (Back and Puwar 2012: 11, original emphasis). However, combined with being *in situ* – accompanying participants on their appointments, being with them whilst they worked, or being shown around by them – my interviews were far from 'de-spatialised and culturally anonymous face-to-face encounter[s]' (McRobbie 2002: 136) 'often taking place across a table' (Back 2012a: 27), the interviewer and interviewee sitting opposite each other with a tape recorder placed in the centre. Rather, these emplaced interviews and guided tours meant that we shared a focus during the fieldwork encounters: something to look at, to listen to, to do, or to contemplate together, and to prompt conversation and reflections. They also meant that I was able to combine this with 'observational data', but with my attention attracted to what was not

only salient for me but for the participants and for us together. For example, when Cynthia (Public Relations Officer) was showing me around a municipal Waste-to-Energy facility (incinerator), we arrived at the platform above the tipping hall from where we could see mounds and mounds and mounds of rubbish awaiting incineration. Although she has surely seen this many times before, we stand there silently for a moment, stunned, both shaking our heads almost in disbelief. The rubbish, the smell, the noise of the machinery petrifies us both and afterwards we talk about our own consumption practices and attempts at recycling; the material, the space, and our embodied presence is this encounter guiding our conversation (fieldnotes, November 2019).

B*eing with, 'observing', participating alongside, and interviewing* participants on their already-occurring salon appointments, as they worked, or as they gave me a guided tour rather than only asking them about it offered an opportunity to reflect on everyday practices, the spaces in which these are lived, embodied experiences, and the things with which lives are entangled[59]. Recalling Harrisson above (1947: 21 cited in Back 2012a: 27-28), this is not only about what is being said but also about *what is being done*, *where*, *and with what*.

3.4   Situatedness

Being *in situ* with participants very explicitly puts into relief my role as a researcher. Being there with them meant that this was clearly not 'the God-like trick of the invisible, omnipresent narrator' (Crang 2003: 499). Rather, the data collection was fully 'situated and embodied' (Haraway 1988: 583) and so undeniably inseparable from my own social positionings, biases, and agenda. In other words, what I 'found out' emerges from a 'view from a body, always a complex, contradictory, structuring, and structured body' (ibid: 589), far from the neutral or objective a-corporeal observer previously idealised in social science research.

Reflecting on my 'situatedness' (Haraway 1988: 583) in the research process, as Adrienne Rich instructs, I want to 'begin … with the geography closest in – the body' (1987: 212). I am positioned as a white, middle-class, heterosexual, cis-gendered, able-bodied woman. I must recognise 'this white skin, the places it has taken me, the places it has not let me go' (ibid: 216). I must also recognise my middle classness, equally worn on and read off my body (Bourdieu 1984) and the privileges these positionings have afforded me including my position within the academy (Puwar 2003). As a white, middle-class, cis-gendered, able-

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[59] The practicalities of interviewing many of the customers as I accompanied them to the salon meant having to conduct 'face-to-face' (McRobbie 2002: 136) interviews after the fact, albeit prompted by our time in the salon together. However, scheduling issues meant sometimes foregoing the salon visit all together, resulting in a fairly 'a-spatial' interview encounter (see footnote 57).

bodied academic researcher, I have been able to make contact with and meet participants, easily walk and cycle to and around fieldsites, take public transport, climb aboard boats, and take tours around different industrial facilities. These social positionings will (and often in unknown and unanticipated ways [Rose 1997]) always have effects on the research in what I bring to and take from the encounter. Additionally, I impact on the data collection and analysis in other ways too. In the selection of the topic, the literature read, the delineation of the fieldsites, methods selected, recruitment of participants, questions asked during the interviews, what is noticed during the observations, and the quotes or fieldnotes written into the final thesis, I have made decisions which (implicitly or explicitly) reflect my social positionings, biases, and agenda.

Moreover, being *in situ* with participants brings to the fore the power dynamics of conducting research as I share in a part of their life. Whether interviewing customers with whom I share particular social characteristics[60] and so perhaps appealing to the 'delusion of alliance' (Stacey 1988: 25), or hairdressers and beauty therapists who were at work, or others involved in the beauty industry who were equally at work and taking time out of their day to show me around, the unequal researcher-researched power relations were stark albeit differently manifest in these encounters. Despite adhering to Ann Oakley's guidance for conducting feminist interviews such as speaking about my own beauty work and salon experiences and eschewing the advice, as she does, to respond to interviewee's questions with 'a head-shaking gesture which suggests "That's a hard one!"' to avoid being drawn into conversation (Goode and Hatt 1952: 198 cited in Oakley 1981: 36), these interviews were far from equitable experiences. In all the interviews, I hoped interviewees would be more frank with me than I was with them (Patai 1991: 142). For example, during the interviews, I offered anecdotes and opinions on my own beauty practices however I had the distinct sensation that this was in order to create *an impression* of shared experiences and to encourage participants to open up more. Therefore what may, on the surface, have appeared as equitable sharing, in fact felt very calculated and instrumental as I hoped that the interviewees would speak more than me. And, ultimately, I left the encounter with '*my* data' – including more than what participants said, rather extending to descriptions of their appearance, house, workplace, car, food served (ibid: 140) – which I will then interpret (Bhopal 2001) and transform into a representation of them, a

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[60] Like the customers I interviewed, I am a cis-gendered, heterosexual woman, racialised as white, and viewed as middle-class by dint of my education, job, accent, tastes, and style. I am also taken for English (although coming from Jersey in the Channel Islands, my nationality is sort-of British [see Austin-Vautier 2008]). I share with many of these participants social and cultural capital (Bourdieu 1984). When I met them at their home, I felt immediately 'at home', or the cafés they selected for the interviews were not dissimilar to those I would frequent.

representation which they may not recognise (Borland 1991)[61]. In addition, afterwards we will likely never see each other again (Patai 1991) and what I then go on to do with 'my data' serves to (hopefully!) advance my academic career (Skeggs 1994).

These power relations were perhaps most glaring when I was in the salon, observing and interviewing the hairdressers and beauty therapists and, to a slightly lesser extent, being taken on guided tours of different spaces. Here, I was interrupting people's workday with potential impacts on their livelihood; I was asking them to talk about their work, possibly the last thing anybody wants to have to talk about; and I was asking them to narrate what they were doing or asking them to respond in detail about the minutiae of their workplace, exhausting things to have to do. For those working in the salons the power differentials were most acute. As a salon customer, I already occupied a privileged position being able to sit in the salon chair or lie on the bed whilst the beauty therapists worked on my body, and often in intimate ways: filing my nails, waxing my labia, spray tanning my naked body; close-contact services for which I have been able to very easily pay and find time. During the interviews, the beauty therapists or hairdressers were often 'serving' one of the participants or me, performing treatments on our bodies in a relationship in which the power dynamics are already skewed. What is more, they likely felt that they had little choice but to answer my questions; and, apart from our being customers there, they will receive no recompense for my mining of their words and their actions.

In sociological research, there are a set of guidelines for ethical practice designed to take account of these power relations and to ensure that the participants and what they disclose are treated in an ethical and care-full manner. Following these, all participants were provided with an information sheet about the research project (see appendices 1 and 2). Ahead of the interview or guided visit commencing, I explained to them that their details (name, place of residence or work) would be anonymised and that they were able to withdraw from the research at any point, including after the interview. Once this had been explained, they had read through the information, and they had had an opportunity to ask questions about the project, they were asked to sign a consent form (see appendix 3). Although participants were informed about the project and provided their consent to take part in it, these ethical considerations in no way can be considered to overcome the power differentials discussed above.

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[61] Although as Back reminds us, 'describing is always a betrayal – albeit a necessary one – of … the person about whom one is speaking' (2007: 4). In other words, it is important to recognise that the representation of the participant which appears as I write will not be them but rather my version of them (and, indeed, a different version might appear for those reading the text).

3.5   Interviews with customers

Getting in touch with already-established contacts and using a snowballing technique, I recruited fourteen women mostly living in and around Park Village, an affluent suburban neighbourhood in South London with a predominantly white and middle-class population. These participants frequent hair and beauty salons locally, in Modford a fashionable district in the centre of London, and in the Central Financial District to where I accompanied them on their appointments.

All the customers self-identified as female and white; nearly all (with the exception of two who identified as working-class) identified as middle-class; with the exception of one who is a stay-at-home parent, all work or worked in professional occupations; and they are aged between 25 and 75. With these participants, I conducted semi-structured interviews, 'the agenda … set by [my] interests yet with room for the respondent's more spontaneous descriptions and narratives' (Brinkmann 2012: 2; see appendix 4 for the interview schedule). Ideally (if our respective timetables allowed and the participant and salon staff were happy for me to do so), I would accompany the participant to her salon appointment and then interview her either immediately or shortly afterwards (thirteen interviews[62]). Where we were unable to co-ordinate a salon appointment, I would meet the participant either at their home or in a nearby café and conduct a similar interview albeit without the prompts of what had taken place in the salon (four interviews). On one occasion – at the end of the day on a Saturday when it was just me, the participant, and her hairdresser left in the salon – I was able to record the interview whilst she had her hair cut and dyed, but generally the atmosphere and noise of the salon did not allow this. These interviews were recorded and transcribed (with the exception of one where my dictaphone ran out of batteries and I wrote extensive fieldnotes immediately afterwards); where possible, I wrote notes on what was happening in the space, the décor, the atmosphere, who was there, and what they were doing as I was in the salon and expanded on these immediately afterwards (see figs. 1, 2, and 3).

Picking up on details that I had noticed whilst we were together in the salon, during the semi-structured interviews, I asked the participants to elaborate on the experience of the appointment, why particular treatments were chosen, their choice of salon, past beauty work, possible future beauty work, and treatments they would never consider or might like to try. I also asked them about their neighbourhood, specifically about the salons located there and about their perceptions of the beauty work of other women

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[62] Some of the participants whom I accompanied to their salon appointments were interviewed twice, a short interview immediately following the appointment and then a longer interview a short while after when our respective schedules allowed.

in their neighbourhood. This, I hoped, would offer an opportunity to speak about their engagement with beauty work and reflect on their choices.

In these interviews, it emerged that their rationales for going to the salon very much reflected the tensions which have been explored in the extant critical beauty studies' literature. Certainly, interviewees referred to social expectations when discussing their beauty practices: dying hair or having Botox makes them look younger, body hair is removed to look 'feminine', or a sharp haircut or well-polished manicure can help make them look professional at work. At times, there was clear pleasure in their accounts: in a fake tan that makes you look like you have just got back from holiday in the grey British winter, in a bright shade of lipstick, or some trendy nail art; and of course in massages or relaxing facials. Mostly, though, there was ambivalence. For example, interviewees often described looking 'nice': wearing shorts whilst having smooth and tanned legs in the summer would look 'nice'; having hair extensions looks 'nice'; it is 'nice' to have your hair cut and styled. In these moderate reactions, there is an awareness of other's judgements and expectations but also a recognition that it feels 'nice' to look 'nice'[63]. As has been parsed in critical beauty studies, in their engagement with beauty practices, these women were not cultural dupes but not entirely free to do as they please either. Sometimes they expressed quiet resignation to the treatments because it is what is expected. At other times, they even desired them. But mostly they were just getting on with them. In their accounts, these participants' reasons for engaging with beauty work were attributable to a complex interplay of factors – for example, social expectations, constructions of 'femininity', personal preferences, notions of appropriateness, pleasure – as has been discussed in the existing work on the topic. As my findings from these interviews mirrored rather than advanced the conversation in feminist work on beauty, I began to find my attention drawn to what else was happening in the salon; specifically to those working there and to what they were doing. And, eventually, to what they were doing it with; to the dynamic entanglement of customers, workers, occupational practices, tools and products, and the space of the salon itself.

3.6   Interviews with salon workers

Being in the salon or at the home appointment with customers occasionally offered an opportunity for me to talk with or formally interview members of staff and/or salon owners and ask them about the types of treatments they perform, their customers, their working lives, and the salon itself. This resulted in two hairdresser interviews and two salon owner interviews; two of these are recorded and transcribed; I wrote extensive fieldnotes on what was spoken about after the others. Following these early interviews and

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[63] Interviews with Jayne, Laura, Marie, Helen, Pippa, Caroline, Lydia, and Beckie, December 2016 – June 2017.

developing an interest in those working in salons, I wanted to expand my focus and more explicitly explore the labour practices associated with the production of 'feminine' bodies; practices which, as I was increasingly becoming aware of, are thoroughly embodied, dynamically spatial, and highly material. As such, I approached two beauty therapists who I knew from being a customer of theirs and asked if I could interview them about their work.

The most practical and potentially least disruptive[64] way of doing this was to interview the beauty therapists at work and it is when I began to do this whilst they were performing treatments that the importance of things in the salon became even more salient. This extract from the first interview which very almost did not pan out indicates what interviewing beauty therapists *in situ* and during activity can offer. It also puts into relief the centrality of the products and tools for this 'feminising' work in combination with the embodied craft of the beauty therapists, itself developed in interaction with the materials (O'Connor 2007):

I have been going to Melissa's salon in Gossford (South London) for manicures for about four years. One Saturday afternoon in December, I am there to get my nails done ahead of the Christmas party season and whilst she is painting them, our conversation turns to my studies. Having never really gone into much detail before – I've just enjoyed getting my nails done without it being 'for research' – I tell her a little bit more about my project, that I am interested in women's engagement with beauty work. And, nervously, I ask if she would mind if, next time I'm in, I could record an interview with her about her work whilst she removes the gel polish. She says, yes, of course, she doesn't mind at all. Our conversation returns to chatting about Christmas parties, families, and presents.

Three weeks later, with my dictaphone and a consent form in my bag, I return to have the gel polish removed. When I arrive, I double-check that it's still okay to record our appointment and Melissa replies that she thinks next time would be better as she's 'not really going to be doing anything' today, just removing the polish. My heart sinks and I feel deflated, this is awkward. Clearly she didn't want to participate and was just being polite but I cheerily respond 'ok, no problem, next time'.

As we settle down and she starts to wrap my nails in acetone-soaked cotton wool pads, I decide to ask a few questions about the process so that, at least, I can do some research about it at home. From here, whilst she works, we begin to talk about different brands of nail polishes and their varying qualities, different removal techniques, different methods of application, and the tools she is using and she exclaims 'Gosh! There's actually quite a lot to talk about! I thought I wasn't doing anything but I'm actually doing quite a lot!'. I emphatically agree and I am relieved, it wasn't that she didn't want to participate, it seems she genuinely thought that she wasn't doing anything and that we would have nothing to talk about.

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[64] Although I am not under the impression that this was in no way disruptive. Indeed, the treatments conducted whilst being interviewed took significantly longer than regular salon appointments suggesting that I was slowing down the beauty therapists' working with impacts on their livelihood and on other customers.

As we get to the end of the appointment, Melissa says that she has enjoyed talking me through the treatment as she can do nails all day long and no longer has to think about what she is doing and that, in fact, she was really surprised when she thought about how much she was actually doing and we agree to do an interview next time I'm in.

(Fieldnotes, December 2017 – January 2018).

Of course, it is my pressing her to explain what she was doing that makes this conversation possible (and the fact that I was a customer so perhaps she felt she had little choice). However, talking about what she was doing whilst doing it not only removed some of the awkwardness from the encounter but, what is more, Melissa became rather animated in her descriptions surprising herself at how much she actually had to say. This felt far from the de-spatialised and anonymous interview described by Angela McRobbie (2002: 136) above. It felt alert to 'the *happening* of the social world' (Lury and Wakeford 2012: 2, original emphasis) and to the embodied, material, spatial, and kinsaesthetic rhythms of performing beauty treatments whilst Melissa was able to contextualise the process and explain how she experiences the work. Additionally, this interview put into relief the role of the products with which the beauty therapists collaborate (Kontturi 2018: 110 cited in Coleman 2020: 32) as they work together to produce this manicured version of 'femininity'. As Melissa talked about what she was doing, it was the products and her knowledge of working with them in practice (knowledge which is at once intellectual, embodied, and materially-animated [O'Connor 2007; see sections 4.6 and 4.7]) which became centralised.

Prompted by this encounter with Melissa, I wanted to carry out further interviews with salon workers that were more explicitly spatially- and materially-attentive. Building on my conversation with Melissa which had heightened my attention to the salon products, the subsequent interviews became increasingly thing-oriented. Thus, in the next stage of my fieldwork, I arranged more participatory 'observational' interviews *during* treatments, interviewing Melissa and Liz (both self-employed beauty therapists) *in situ* and not only discursively but *physically around* the work they do, the customer's body, and the beauty products and tools. Over a further four relatively unstructured interviews, my questions and their responses prompted by what was going on in the salon, I spoke to the beauty therapists about their work whilst they worked. In particular, I asked them to narrate what they were doing (literally by asking them 'can you tell me about what you are doing now?' or 'what's this? What does it do?'). This was still 'my agenda' (Brinkmann 2008: 2), asking them to describe what they were doing and with what but also letting our conversation be guided by what was happening. My focus expands on the work of, for example, Black (2004), Debra Gimlin (1996), and Kang (1997, 2003, 2010a) who emphasise the inter-personal aspects of salon work and how socio-cultural standards of beauty figure in these. It also builds on literature which

has concentrated on the materials of salon life such as Holmes' (2014a, 2014b) work on craft and Earys' (1993) study of tool and product use in hairdressing. Extending this research into salon labour, my approach of interviewing around the work was both materially and spatially oriented as well as bringing to the fore the beauty therapists' dynamic and highly corporeal engagement with the customer's body, products, and tools. In this, it drew attention to how the therapists' spatial negotiations, bodily movements, and bodies themselves are affected and effected by this labour as, simultaneously, they work to make 'feminine' bodies.

These increasingly thing-attentive fieldwork encounters led me to further question how the beauty products worked, of what they consisted, how they arrived in the salon, what they left behind, what happened to them once disposed of, the corporeal and spatial impacts of these processes, and how all of these are entangled in the production of 'feminine' bodies. As such, prompted by what was happening in the salon and the beauty therapists' working relationship with the materials, I again expanded my focus to consider the spaces through which the products move and what they effect on their journey to and through the salon.

3.7   Dialogue with a pot

Developing my approach to examine the materials of beauty work, it became clear that attending to things, how they behave, and what they effect poses challenges for researchers. Firstly, although we can ask questions of human participants, as anthropologist and archaeologist Christopher Tilley reminds us, '[s]uch dialogue is not possible with a pot!' (1994: 73). As Kathleen Stewart asks:

> [How] to pull academic attunements into tricky alignment with the amazing, sometimes eventful, sometimes buoyant, sometimes endured, sometimes so sad, always commonplace labour of becoming sentient to a world's work, bodies, rhythms, and ways of being in noise and light and space[?] … [whereby] things matter not because of how they are represented but because they have qualities, rhythms, forces, relations, and movements[?] (2010: 445).

In other words, how can we seek to move beyond what is said to take account of the ways in which things are significant participants in the social world in their own right? This, of course, recalls the arguments raised above by Back (2012a, 2012b), Back and Puwar (2012), Law and Urry (2003), Lury and Wakeford (2012) about the paucity of social science research methods to deal with the multisensorial, mobile, and fully material complexities of the social world (see also Vannini and Vannini 2017). Yet, by fostering a particular mode of attention to the thing – for example, being in place, adopting a multisensorial approach, examining its properties and affordances, attending to the minutiae of how it behaves and how

people interact with it, and moving alongside it – a pot is able to communicate in other ways[65]. Bennett posits that to explore 'a nonhuman, thingly power, the material agency of natural bodies and technological artefacts':

> What is needed is a cultivated, patient, sensory attentiveness to nonhuman forces operating outside and inside the human body … an attentiveness to things and their affects (2010: xiii-xiv).

She contends that we must allow ourselves to be caught up in these impersonal affects, that we need 'at least for a while, to suspend suspicion and adopt a more open-ended comportment' cautioning that '[i]f we think we already know what is out there, we will almost surely miss much of it' (ibid: xv). As such, we need to cultivate 'a certain anticipatory readiness on [our] in-side … a perpetual style open to the appearance of thing-power'[66] (ibid: 5). This is not about getting a pot to *speak*, this is about staying with its lively and deadly effectuations and fostering an attention to not what it is but what it is like, how it behaves, and what it effects (Institute of Making 2020; see footnote 65 and appendix 5).

A second challenge was selecting the things on which I should focus as, recalling Tonkiss' critique, in these studies of materials it is important to '**distinguis[h[between what is active, what is latent, what is incidental, and what is simply *around*' (2011: 585, original emphasis). With regards the tricky question of which things to prioritise – in other words, which are counted as meaningfully active – my (perhaps unsatisfying) answer is that, like Bennett, some products more than others 'commanded attention' and 'issued a call' (2010: 4), 'seizing' (Linz 2017) the research participants and me. These particular products – above all the wax used for the removal of 'unfeminine' and so unwanted hair, 'disgusting', 'gross, and, if left, antithetic to 'femininity' (interviews with Pippa and Marie, February – March 2017) – were central to the treatments underway or prominently featured in the interviews. These were thus identified as important for the customers' beauty practices or the performing of the services and so, ultimately, for the production of 'feminine' bodies. In appearing significant in these encounters, these were highlighted as productive leads to (literally) follow.

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[65] I have sat with a pot of depilatory wax on my desk for nearly three years, 'dialoguing' with it through picking it up, feeling it, squeezing it, pressing it, smelling it, literally get stuck to it as the wax has proved impossible to contain once the lid was prised open and it oozed out (see section 4.5). In July 2020, I participated in an online Materials Library Drawing workshop facilitated by the Materials Library (UCL) in which we were invited to consider the behaviours of different objects and materials as we drew them, instructed to draw 'not what it is, but what it's like' (Institute of Making 2020; see appendix 5).

[66] See section 2.5 for a critique of considering thing-power as an entity separate from the socio-spatial contexts in which the things are participating.

3.8   Following the thing

A useful starting point for examining the effectuations of things is Arjun Appadurai's contention that 'commodities, like persons, have social lives' and his instruction that to consider these lives, 'we have to follow the things themselves' (1986: 3, 5). Where 'Appadurai … signalled the importance of the social trajectories and biographies of things', this has been taken up and extended 'by geographers who have argued that commodities also have spatial lives' (Mansvelt 2005: 8). In particular, this geographical research has demonstrated how 'sites are connected up across the whole world in ways that are increasingly common' (Jackson and Thrift 1995: 213) and have thus responded to David Harvey's provocation that:

> The grapes that we see on the supermarket shelves are mute; we do not see the fingerprints of exploitation upon them or tell immediately what part of the world they are from. We can, by further enquiry, lift the veil on this geographical and social ignorance and make ourselves aware of these issues … (1990: 423).

To different degrees, in its engagement with the socio-spatial lives of commodities, 'following' research[67] has highlighted the gamut of different actors – governmental, policy, legal, corporations, workers, consumers, capital – who are implicated in the thing's journey and play a role in the ways in which 'commodity chains culminate in the production of space' (Leslie and Reimer 1999: 402). Crucially, as per Harvey (1990), this thing-following research has also put into relief how 'people, entities, and things are caught up and shaped within spatial systems and networks connected with particular geometries of power' (Mansvelt 2005: 16).

In sociology too, 'following' studies such as Knowles (2014) on flip-flops or David Redmon (2014) on Mardi-Gras beads have demonstrated global connections through the prism of a consumer product and, more precisely, how the meta processes associated with globalisation are intimately manifest in ordinary lives,

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[67] Geographical work which has studied the movements of commodities, the political economies in which these are embedded, and the constitutive connections between places includes Barrett et al. (2004) on fresh horticultural produce from sub-Saharan Africa, Busch and Juska (1997) on rapeseed, Cook et al. (2004) on mangoes, and Watts, M.J. (1999 cited in Mansvelt 2005: 102) on oven-ready chicken. Departing from food, 'following' research also includes Crewe on the 'labyrinthine, convoluted and tortuous' commodity chains of fashion (2004: 202), Hughes, A. (2000) on cut flowers, and Leslie and Reimer (1999) on home furnishings. Other non-geographic academic work which has followed things includes environmental social scientist Barndt (2007) on tomatoes; sociologists Knowles (2014, 2015) on flip-flops, Coleman (2019, 2020) on glitter, and Redmon (2014) on Mardi Gras beads; and anthropologist Tarlo (2016) on hair. Activist work includes Marriott and Minio-Paluello (2013a) who followed 'the oil road' in which they traced oil pipelines and tankers (and the profits from oil) from Baku, Azerbaijan to BP's headquarters in London.

on the ground. For example, following the thing, Knowles uses the flip-flop as a 'key investigative tool' to 'excavate … everyday lives and landscapes' 'unfolding its human and environmental textures along the way' to examine how 'social and material fabrics, social and material worlds, are intimately connected' (2014: 4, 3). By using the flip-flop and its journey to examine 'the human substance of globalisation', she shows how 'globalisation produces fragile and precarious lives' for some of those along the trail by revealing 'the contours of comparative (dis)advantages' (Knowles 2015: 11, 9). In other words, the thing and what it is made from (oil) and their journeys contribute to the making of lives in highly differentiated ways, and 'following the thing' brings these spatialised and embodied effects to the fore. Similarly, following glitter which '[a]s it moves, [it] makes worlds, it brings these worlds to life', Rebecca Coleman argues that 'methodologies of following' are 'a productive means of responding to the liveliness of things', of 'drawing attention to [their] material properties and the affects [they] elicit' (2020: 1; 2019: n.p.). In other words, by following things and so moving alongside them, the researcher is better able to attend to how these things actively participate in the making of social worlds; to attend to, in Stewart's words, their 'qualities, rhythms, forces, relations, and movements' (2010: 445); to how they interfere (Whatmore 2002: 2); to what they do, to where, and to whom as they move, and to the de/generative and asymmetrically-experienced bodily and spatial traces left by their journeys. Guided by this work, I too consider the dynamic and power-filled interlacing of materials, spaces, bodies, and social worlds through the prism of beauty products. In particular, I attend to what these products *effect* in the spaces through which they move and to the people who come into contact with them on their way to and through the beauty salon.

3.9   In motion

Following things to and through the salon necessarily involved movement. Moving from site to site presented me with a further opportunity to foster a particular mode of attention to what things do. More specifically, an attention to what they do *whilst they journey*, to the spatial and bodily formations they animate and which, reciprocally, enable their movement, and to the traces they leave.

In a much-quoted passage, Paul Stoller describes how:

> Stiffened from long sleep in the background of scholarly life, the scholar's body yearns to exercise its muscles. Sleepy from long inactivity, it aches to restore its sensibilities. Adrift in a sea of half-lives, it wants to breathe in the pungent odours of social life, to runs its palms over the jagged surface of social reality, to hear the wondrous symphonies of social experience, to see the sensuous shapes and colours that fill windows of consciousness (1997: xi-xii).

Responding to this provocation for a more sensuous and embodied approach to social research, Charlotte Bates and Alex Rhys-Taylor propose that social scientists walk[68], for:

> Walking is a brilliant form of exercise for our stiff bodies and a way of reinvigorating our engagement with the social world. It induces a mobile, grounded perspective and foregrounds corporeal, sensual, affective matters. Walking collects together visions, smells, tactilities, sounds and tastes with various degrees of association and intimacy … Moments of encounter forged between feet and the ground remind us of the emotional and embodied textures of our lives and bring to attention the sensuality of social life (2017: 4).

By walking and cycling to and around the different spaces through which beauty products journey, I was able to more thoroughly engage with the fully material, spatialised, embodied, and affective dimensions of the social world and, in particular, with the role of the wax and other beauty products in this.

3.10   *To and through* the salon

Developing a focus on the materials of beauty work and starting to adopt a mobile approach, the final part of my fieldwork involved mapping the spaces through which the products journeyed and visiting some of these. Increasingly central to my investigation, I was coming to understand that not only the materials but also that these spaces were integral to the realisation of beauty work and the associated production of 'feminine' bodies. Using the labels on products, Google searches, Google Maps, and my own knowledge of London and its environs, I was able to begin to build a picture of where the various products are made and what they are made from, where they go, the routes they follow from ports to factory, to wholesalers, and onto the salons, and what happens when they are disposed of.

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[68] This movement is dependent on my privileges as an able-bodied researcher able to walk for many miles, cycle confidently on busy roads, and easily access different forms of public transport.

Standing in front of the display of false lashes in my local hair and beauty shop, I am baffled by the range of lashes on offer: hundreds of packets containing strip lashes, single lashes, clusters; different brands, different lengths, different thicknesses. Each packet has a seemingly arbitrary number. I select Response Remy Natural+ Lashes 'Item # 00105 Black' and 'Item # 00126 Black', two pairs of strip lashes, one with longer lashes than the other and which appears fuller, both slightly uncanny as they form the shape of a perfect sets of lashes which are stuck gently to the plastic packaging. The packets are bright pink with a photo of a woman's eye, heavily eyelined, a perfectly-arched brow with long lashes which almost meet the brow line. The packets tells me that the lashes are made from '100% human hair' with a 'fresh natural band'. They are, apparently, 'easy to apply'. As well as the strip lashes and a tube of eyelash glue, I also buy a packet of individual lashes 'Item # 00143 – single short black' (fieldwork notes).

Like so many false lashes, both the strip lashes and the individual lashes I have bought are made in Indonesia.

Selection of false lashes from a hair and beauty shop. Photograph: Louise Rondel

The manufacturing

Purbalingga, Central Java, Indonesia: 'Capital of False Eyelashes' (Rachmawati 2016: 155).

Since investment in the manufacture of false lashes in Purbalingga in 2007, 'it has become the second biggest false hair industry in the world after Guangzhou in China' bringing improvement to the livelihoods of 11,413 poor households in the town (Rachmawati 2016: 155-156).

About us[1]

In 1968, PT. Royal Korindah started as a one-man operation of making and delivering custom-ordered eyelashes to local beauty salons. The venture steadily grew to become the world's leading manufacturer of false eyelashes.

Today, our factory is 26,359 square meters in area with 4,046 employees and produces 30-million pairs of eyelashes annually. In the town of Purbalingga, Indonesia, PT. Royal Korindah is the single biggest employer and contributor to the livelihood and economy of Purbalingga. Many of our employees have been with us since the early days of our factory, and some, from the very beginning …

The transportation

The port at Jakarta is a seven hour drive from Purbalingga
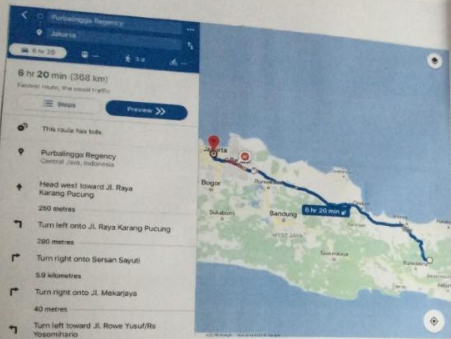
The Danish shipping company Maersk, the world's biggest shipping company (UNCTAD 2018: 32), have thirty-four 'Asia feeder' shipping routes. These are routes which move goods from different ports within Asia to ports from where they can be shipped to the rest of the world.

From Jakarta, the lashes may be shipped to Singapore, to Tanjung Pelepas (Malaysia), to Xiamen (China) or to any of the other ports in which the ships stop in along their routes.
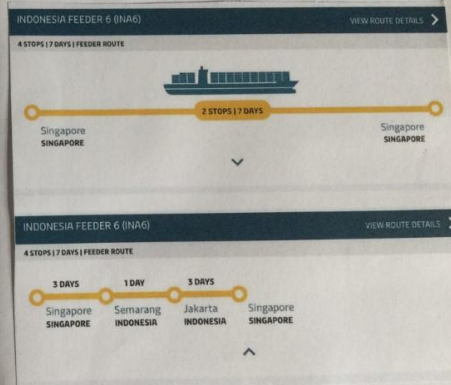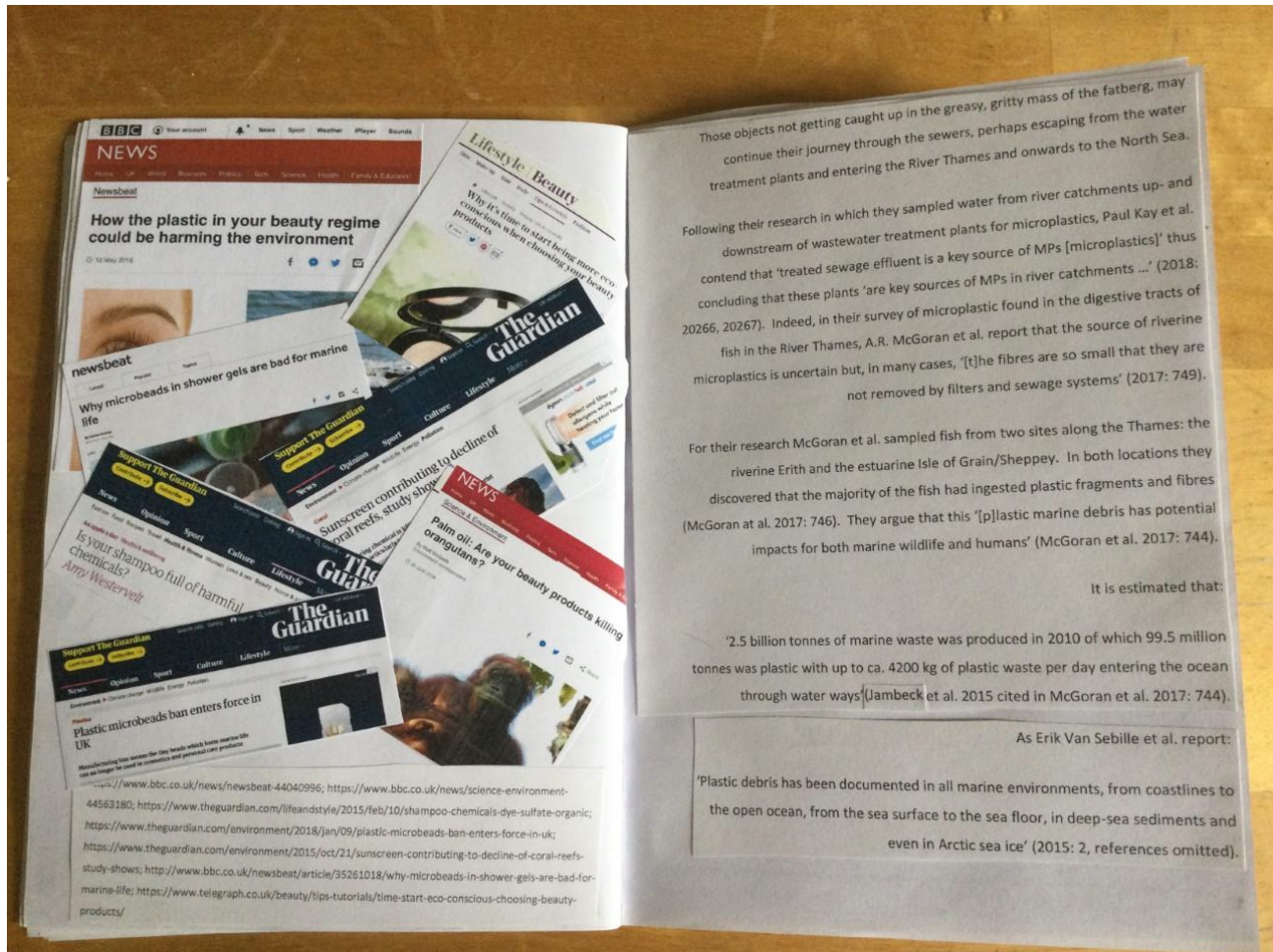
Figs. 4, 5, 6, and 7: Images of *lash zine*. A zine I made in December 2018 mapping the journey of false lashes from factories in Indonesia to their 'afterlives' (Hawkins 2013b) (photos: Louise Rondel, August 2022).

Turning my focus to depilatory wax and using these rudimentary maps (see figs. 4, 5, 6, and 7) and multiple internet browser tabs to follow it, I left behind the carefully-crafted aesthetics of the salons and the work of the beauty therapists to look for factories on the edges of the city's commuter belt, to cycle to the city's edges and walk through the light industrial estates that encircle London and along port approach roads, and to stand on a grassy verge watching municipal refuse lorries arrive at an incineration facility. On these visits as I walked or cycled around, I took extensive fieldnotes, took photographs, and made sound recordings, attentive to my embodied and emplaced experiences as well as to the circulation of people, goods, motorised traffic, and waste which dominated in these places, increasingly becoming attuned to the air that 'we' breathe.

In addition, in several of the sites, I was able to arrange a guided tour, at times alongside an interview. In a depilatory wax manufacturer's factory and warehouse in the county of East Angleford, I went on a

private tour with the company's Managing Director (visit and interview recorded and transcribed). In a hair and beauty wholesalers store, I was given a private tour by a Beauty Sales Assistant (visit and interview recorded and transcribed). I attended a public group tours of a municipal recycling plant and an incinerator facility with an opportunity to ask questions of our guide (I took extensive fieldnotes after the tours). Finally, I arranged a guided tour for myself, other researchers, and members of the public at another municipal incinerator facility (I took extensive fieldnotes during and after the tour). Although unable to get access to the city's ports (see section 3.11), I had a long phone conversation with the Press Officer from the Port of London Authority during which I took extensive notes. During these visits, I conducted a mix of semi-structured interviews where I had the opportunity to ask questions, 'interviews' led by the tour guides, and unstructured interviews where questions were prompted by the place I was visiting and what was happening these: 'what is this?', 'what does this do?', 'can you tell me about this?', 'how does this work?'. Where I was unable to record (on public visits for example), I made notes about what I was told and what arose during the question-and-answer sessions. Furthermore, I tried to take account of what George Perec terms 'the infra-ordinary', noting down what I saw (and not only what I saw but also what I heard, smelt, and felt and my emotional experiences) and tuning into minute details (2008: 150). My fieldnotes describe what was going on in the space: the sounds, the smells, who else was present, what they were doing, how the goods were moving through the spaces.

Ahead of each of these visits, I would arrive early and spend some time walking in the surrounding area, noting down what the neighbourhood was like, who was there, what the houses and streets were like, what was happening in the spaces, what the traffic was like, and how easy it was to negotiate as a cyclist or pedestrian. This formed an important part of my methodological approach as the places I was visiting were not bounded from the neighbourhoods in which they were sited nor from the rest of the city nor beyond. What was happening in my fieldsites 'proper' leached outside, infusing the surrounding places and the bodies and lives of the people and other species who live there. Perhaps due to my experience cycling or walking, in my observations, the air that I was breathing in these different fieldsites increasingly came to the fore, its cleanliness and what exactly I was inhaling becoming more salient as my research developed. Certainly unbounded. With my attention focused on air, back at my desk, I used the London Air Quality Network (2018) map and the London Atmospheric Emissions Inventory map (Greater London

Authority 2016) to look at the levels of NO_2[69], NO_x, PM_{10}[70], and $PM_{2.5}$[71] registered in the areas in which I had been and the broader distribution of these emissions across the city.

This approach enabled me to centre the products themselves, their journeys, and the conspicuous ways in which they participate in the social world. For instance, in the Quality Control Laboratory at the depilatory wax factory, the salience of the wax as a material was underscored. Amongst test tubes, beakers, pipettes, and scales, the properties of each batch of wax are meticulously tested and recorded because what it is (from which ingredients it has been blended) and so how it behaves will affect how it acts in practice (fieldnotes, October 2019). Not only the products themselves but the materiality of their onwards journey was put into relief as I made my way by bicycle to the wholesalers. Trying to negotiate road layouts designed around large amounts of motorised traffic and coughing in the smoggy air, the imperative to get these goods to their markets was visceral (fieldnotes, October 2019; see Chapter 5). As well as underscoring the material activity and the active materiality of the products and their trajectories across the city, these visits were very obviously spatial. This was starkly brought to the fore by my emplaced and mobile approach. Leaving the salons, navigating my way to the London's edges, being overtaken by heavy-goods vehicles on my bicycle, watching as both goods and discarded packaging and materials moved along conveyor belts, moving out the way of forklift trucks, or driving down A-roads from the factory to the warehouse with the Managing Director, the spatiality of these fieldwork encounters was unmistakeable. My thing-attentive and following methodological approach enabled close attention to how materials, spaces, and bodies de/generatively interact, sometimes whilst being contextualised by my tour guides. Being *in situ*, adopting a multisensorial, multi-sited, and thing-centric approach, moving alongside the products, and trying to focus on the minutiae of these encounters, my attention was brought to the broader spatial, bodily, and material contingencies and impacts of the work to produce 'feminine' bodies in the salon, most acutely palpable in the air that I was breathing.

3.11   Uncertainties

Although my aims have been to examine how different materials and spaces are implicated in beauty practices as well as how these are permeated by oil and imbued with geometries of toxicity, I certainly cannot suggest that I have garnered a complete picture of this 'feminising' work, the products involved in this, their journeys, and their impacts. Not only do the positionality of the researcher and the decisions

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[69] Nitrous dioxide.
[70] Particulate matter: Particles with a diameter of 10 microns or less.
[71] Particulate matter: Particles with a diameter of 2.5 microns or less.

made in the research design impact on what is and is not remarked upon but, as this fieldwork encounter demonstrates, the workings of the beauty industry and its infrastructures are (deliberately) opaque(d):

Sitting in the boardroom at the beginning of my visit to the wax-blending factory, Mark, the Managing Director starts the interview with a laugh: 'So, in the land of the blind, the one-eyed man is king'. Later, into the third hour of my visit, Mark is showing me around the factory warehouse, pointing out the different raw materials, telling me where they come from, and explaining how they are used. It suddenly strikes me that he has told and shown me an awful lot about what his company makes and how they do it. Rather awkwardly I ask him why he has been so open with me; how can he be sure that I am not there to conduct industrial espionage? Without missing a beat, he says that he is not worried, that he can show me everything they do but that does not mean I will see.

(Fieldnotes and interview with Mark, October 2019).

These two comments which marked the beginning and the end to my visit encapsulate much of my experience of trying to trace the journeys of beauty products. Emails to companies who I believed made some of the raw materials for blending wax received apologetic responses: they do not or no longer make such-and-such a product. Or, they cannot tell me too much about their manufacturing processes nor offer visits for proprietary reasons. Or, they deflect me to other companies where my emails go unanswered. Ports, wholesalers' warehouses, and ingredient manufacturers and suppliers prove particularly impossible to access, emails are either not responded to or my requests to visit are politely refused:

> You are correct in that [we] supply a wide range of waxes, some of which are used within the manufacture of Depilatory Waxes [sic.], however, we are several steps removed from the consumer so we do not have the intimate knowledge of current trends either for performance or regulatory requirements. With this in mind, may I take the opportunity to introduce a peer of mine within the wax formulatory community …

> [M]ay I take this opportunity to offer you the best of luck with your research.

(Email from ChemCorp, chemical supplier, November 2019).

> Although I can't go into too much detail due to the proprietary nature of our products (as I'm sure you understand), the following will hopefully give you a rough overview …

> I'm afraid our production facility isn't available for public visits, but I hope this has been of some help and wish you all the best with your dissertation.

(Email from Eastern Waxes, depilatory wax manufacturer, November 2019).

> As I'm sure your aware we are currently in the process of a large port development. Due to other commitments at this stage we aren't in a position to facilitate any visits.

Sorry we can't assist at this time.

(Email from Forth Ports, the private port authority who manage the Port of Tilbury, November 2019).

The lack of access and the uncertainties with which I am left in trying to make connections between beauty work and the petroleum industry, uneven geographies of toxicity, global logistics, labour markets, occupational health concerns, and waste disposal processes are perhaps indicative of, amongst other things, the beauty industry's proprietary regimes and the competitiveness between companies in this lucrative growing market[72]. It is also made difficult by the complexities of employment in the hair and beauty industry itself: employed, self-employed, renting a chair, mobile therapists, 'businesses not registered for VAT and/or PAYE which includes many sole traders, self-employed individuals, and micro-businesses' (see British Association of Beauty Therapy and Cosmetology 2019: 20-21 on the underestimations of the ONS data and the reasons for this), or those who are otherwise operating informally. Other obfuscations may include the securitisation and secrecy of the oil and petrochemical industries (Knowles 2014; Marriott and Minio-Paluello 2013a) which provide key ingredients for the manufacture of wax and many other cosmetics, their packaging, and the fuel to transport them. Spaces pertaining to the global logistics industry and, in particular, port spaces are similarly subject to regimes of security and secrecy and so are difficult (if nearly impossible) to access for members of the public and researchers. In their studies, both Laleh Khalili (2020 on international shipping) and Knowles (2014: 119, 207 n.2 on the global journeys of flip-flops) note the inaccessibility of ports. It is only by travelling as a passenger on board freight ships for several weeks that Khalili is able to make portside visits (2020: 6; 2019)[73]. Also complicated/complicating at the time of my fieldwork (December 2016 – January 2020) were the uncertainties of Brexit which was impacting on the people working in the beauty industry, on the supply chains of the goods, and on the different and changing national regulatory frameworks for cosmetics and their raw materials (interview with Mark, October 2019; interview with Martin Garside

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[72] For example, in our interview at the wax manufacturers, the Managing Director explains to me how the precise/imprecise listings of wax ingredients ensure the products are legally compliant whilst also enabling the company to maintain exclusivity over certain ingredients. He describes how they have state the INCI (International Nomenclature for Chemical Ingredients) name but that, firstly, 'what we don't have to declare is the method in which it's being prepared' and secondly, 'our declared ingredient listing is absolutely accurate as it has to be *by law* but it actually doesn't tell you much' as they might have sixteen or seventeen of a particular polymer in stock 'and each one will give different properties' (interview with Mark, October 2019, original emphasis).

[73] In order to carry out research on 'shipping and capitalism in the Arabian Peninsula' and access port spaces, Khalili undertook two several-week long trips on different container ships as a paying passenger. In a lecture (2019), she acknowledges the research funding and her partner's ability to take responsibility for childcare which enabled these trips and in her book she thanks her employers for allowing her 'such a long time away' (2020: xv). As a self-funded graduate student who is working in several part-time jobs, such a research trip was unattainable for me.

[Port of London Authority], October 2019)[74]. Furthermore, the onwards (and far from 'final') journey – as used beauty products and packaging are disposed of, recycled, incinerated, or landfilled – is equally difficult to unpick due to the ever-shifting terrains of the transnational waste and recycling industry (Mah 2022; Minter 2013; O'Neill 2019) and the complexities of plastics[75], what they are made of, and how they can be recycled or not (Liboiron 2013a)[76]. Thus, in this thesis I present what I have been able to find out whilst acknowledging that this is not a complete account of how the making of 'feminine' bodies in the beauty salon actually happens. There are certainly inaccuracies but this partiality is telling of power relations and associated inequalities bound up in the processes of making, distributing, using, and disposing of these products.

The difficulties and frustrations I experienced in navigating London's beauty industry, the provenance of its products and their raw materials, and their journeys and 'afterlife' (Hawkins 2013a) return me to the Managing Director's enigmatic comment in the factory warehouse, said with a laugh, perhaps I was never meant to see.

3.12   Concluding remarks

Expanding my focus from the accounts of white, predominantly middle-class women about their engagement with beauty work to exploring how this work actually gets conducted in salons to following the products themselves and examining what they effect on their journeys, this chapter has reflected on how my methodological approach evolved as my fieldwork progressed. Increasingly interested in the materials and spaces upon which beauty work and the associated notion of 'femininity' are contingent, this chapter has emphasised the *in-situ* nature of my approach. This has enabled me to examine how

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[74] See for example Criado-Perez's (2019) article in *The Guardian* 'Carcinogens in your cosmetics? Welcome to Brexit Britain' in which she outlines the different regulatory frameworks in the EU and the US for personal care and beauty products and speculates on what Britain's exit from the EU might mean for regulations surrounding the ingredients that can be used.

[75] Note: plastic*s* plural (see Liboiron 2013a, 2020; Mah 2022).

[76] The shifting terrains of recycling mean that it is difficult to know with any precision where plastic will 'end' up. For example, Minter's account of plastic recycling in Wen'an County – 'the place where Beijing's plastics go' (2013: 144) – in China was published in 2013 but the geographies of plastic recycling change quickly. Indeed, Minter visits the County with a friend, a professor of contemporary Chinese history, who begins a 2013 lecture on the subject by qualifying: 'this is already history, what I'm going to tell you is already over with' (Goldstein 2013). Likewise, O'Neill reports that '[i]n 2016 China, accounted for 27 percent of all global waste and scrap imports, including … 51 percent of global plastic scrap (2019: 154). However, in March 2018, as part of Operation National Sword, 'China stopped importing plastic, paper, and other types of low-grade scrap' (ibid: 150). This led to '[p]iles of discarded plastic quickly buil[ding] up in ports and recycling facilities all over the world' as well as increased quantities of plastic scrap being imported for recycling to Vietnam, Thailand, Indonesia, and Malaysia, countries which quickly found themselves overwhelmed by the amounts and also banned these imports (ibid: 150, 160).

'femininity' is worked upon in the beauty salon and the widespread and asymmetrical impacts of this production as spaces and bodies far outside the salon are enrolled in this repetitive process

Over three years of fieldwork, I accompanied women to their salon appointments, observed hairdressers and beauty therapists as they worked, and went on self-guided visits or guided tours of different sites. Being *in situ* enabled me to interview participants prompted by what was going on around us, 'observe' participants in place, and try to attune to the material and spatial dynamics implicated in the production of 'feminine' bodies in some of London's beauty salons. This emplaced approach raises crucial questions about my positionality in the research, the unequal power dynamics between researcher and researched, and the ethical dimensions of conducting fieldwork as I share in a part of the participants' lives. Turning to the interviews themselves, this chapter has discussed the interviews I carried out with customers about their salon appointments about their beauty practices and with beauty therapists whilst they worked asking them to narrate what they were doing.

With my attention heightened to the materials of beauty work, I reflected on how my approach developed to follow depilatory wax and other beauty products, attending to where they go and what they do as they journey across London. This led me out of the salons to visit factories, warehouses, wholesalers' stores, trading estates, municipal waste facilities, and their surrounding areas; at times these visits were self-guided and on other occasions, I was able to arrange a guided tour. All of these visits were heavily material and highly spatial to which my emplaced, multi-sensorial, multi-sited, and thing-focused methodology draws attention. Finally, considering the uncertainties that persist, I think through how these are telling of various forms of power imbued in beauty work and the products and infrastructures which enable it. Reflecting on my evolving methodological approach, this chapter has proposed that being *in situ* in multiple sites, interviewing people prompted by what is going on around us, and 'observing' the dynamism of things in these encounters has offered a productive way of attending to the different spaces, bodies, materials, and associated asymmetries implicated in the realisation of 'femininity' in the salon. Epitomising these dynamic but unequal de/generative relationships, as I followed the wax and other beauty products across London, this materially-attentive, multi-sited, and multisensorial approach increasingly attuned me to the air that 'we' breathe.

Chapter 4 'It's all about how it acts': The effectuations of oil in the beauty salon

[In depilatory waxing] the excrescences of transnational oil production have been turned into gold
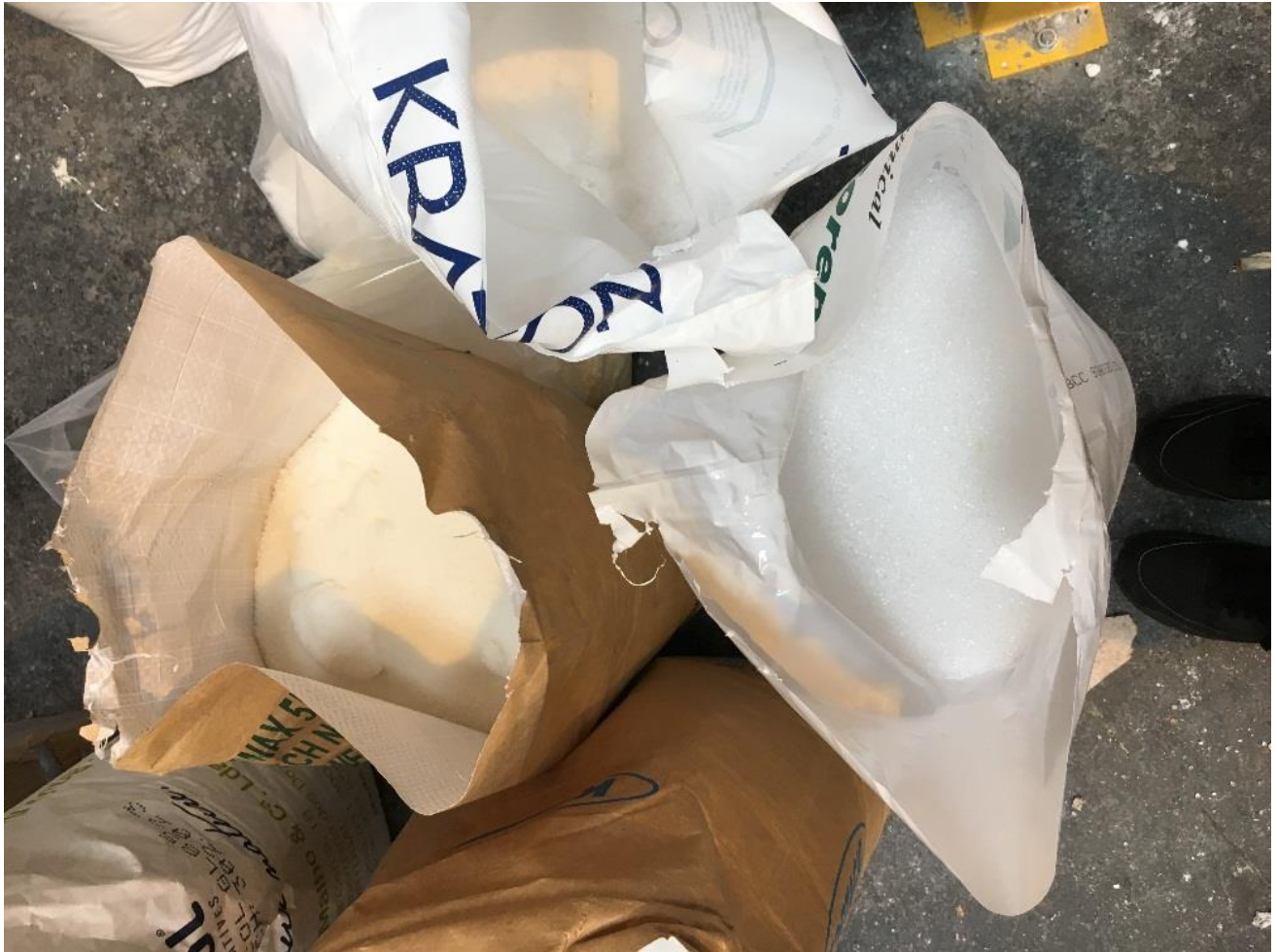
(Herzig 2015: 144).

Fig. 8: Sacks of raw materials. Materials – including petroleum-derived products – used in blending depilatory waxes in Vela Wax Company's factory warehouse (photo: Louise Rondel, October 2019).

4.1   Introductory remarks

A brief scan of the ingredients of the different products in my bathroom cabinet, my make-up bag, and on my dressing table reveals the omnipresence of petroleum-derived compounds in my daily beauty regime. These in addition to those products with which I only come into contact in the salon, equally replete with oil's by-products: wax for depilating body and facial hair, gel nail polishes and acetone removers, tints for eyebrows and eyelashes, glues for attaching false lashes, and spray tanning mist, to name but a few. In addition, the majority of these products come in some form of plastic packaging – pots, tubs, or bottles, wrapped in cellophane wrap – of which oil, of course, is a key ingredient.

(Fieldnotes, January 2020).

Oil is central to contemporary life. It shows up in everything, 'ooz[ing] through the socio-material world in unexpected and often difficult-to-appreciate ways' (Savitzky and Urry 2015: 181, reference omitted) and so it should come as no surprise that it 'shows up' in cosmetics and in beauty practices. By examining what depilatory wax is – what it consists of – and so what it does, this chapter looks at the different ways in which oil animates the socio-material production of the particular version of 'femininity' made in the beauty salon. The chapter investigates how the product[77] and its packaging perform. In addition, it explores how the beauty therapists acquire a materially-informed skillset. The chapter also considers the (largely petroleum-derived) harms implicated in the processes of beauty work, a (potential) toxicity which is unevenly borne by the beauty industry's feminised and often minority-ethnic-in-the UK-and-US and socially disadvantaged workforce.

Oil affords wax certain 'performance characteristics'[78]. In an email correspondence with the Quality Assurance Manager for a wax-blending company, he explains that amongst other ingredients, oil-derived products make wax malleable. They also enable it to set quickly and to be non-tacky once set. Petroleum-based products make waxes smell pleasant, 'improv[ing] their scent'; floral fragrances are popular and, during my visit to the wax-blending factory, a summer cocktail-inspired range was being developed. Colour is equally added, usually pinks, oranges, soft reds, 'for aesthetics'. By dint of its various 'performance characteristics', the wax is able to remove 'unfeminine' hair, and remove it from more and more parts of the body, serving to reinforce and extend the ubiquitous hairlessness of 'femininity'. Oil also enables the pots in which the wax is packaged to be *plastic*; that is to say, oil-derived polymers mean that these pots are mouldable to the correct size and shape so that they fit in the wax heaters. They make the pots heat-conducting but also heat-resistant so that the wax can be warmed and melted but the pots

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[77] Again, I want to note that few beauty therapists perform only waxing and so their skillset and the (potential) toxic exposures they experience originate from a gamut of products used in a range of beauty treatments (see section 4.9 and footnote 9).

[78] Email correspondence with the Quality Assurance Manager from Eastern Waxes, November 2019.

remain in-tact. Petroleum products also make the packaging disposable and easily and cheaply replaced, crucial for the 'ongoing process' where replenishment is vital. Polymers also make the pots transparent so that the product is visible adding a fun, 'feminine' pop of colour to the salon's shelves. The plasticity of its packaging means that the wax is a usable product: petro-materials are deployed in order to be able to consume other petro-materials. In the salon, this ultimately enables the removal of unwanted hair amongst other forms of beauty work.

The chapter additionally considers how the products' petroleum-infused characteristics animate the embodied enskilment (Ingold 2000) of the beauty therapists. I also examine the (potential) health impacts of carrying out the repetitious and product-laden waxing treatments and other services. Attending to the air that 'we' breathe as it circulates in the salon puts into relief not only what can be emitted during beauty work but how this toxicity is unevenly distributed, with some groups more vulnerable than others. In this chapter, I centralise the oil-animated properties of the wax and its plastic containers to examine what these *do*, the actions they prompt (Hawkins 2009: 189), the effects they generate (Hawkins 2013b: 52), culminating in the making of 'feminine' bodies in the beauty salon, a production (potentially) replete with toxicity.

Fig. 9: Beauty salon work station. The wax in its plastic pots in the heater plus the other paraphernalia needed for removing unwanted body hair (photo: Louise Rondel, October 2019).

4.2   Structure of the chapter

Centralising the role of petroleum products, I begin at the wax-blending factory to consider the growing demand for depilatory waxes since the 1980s and how the 'performance characteristics' of the product have served not only to respond to but, synchronously, to *animate* this demand and the associated expectations of 'feminine' hairlessness (4.3). In the next sections, I look closely at the composition of the wax (4.4) and of the standard-sized 450g polypropylene pots into which it is packaged (4.5). Then, turning to the properties of the wax (4.6) and its plastic containers (4.7) *at work*, I examine the affordances of petroleum products amongst other ingredients in the beauty salon as they enable the wax to perform in particular ways. Attending to what wax does – 'how it acts'[79] – puts into relief how materially-prompted skill becomes 'embedded' into the beauty therapists' bodily repertoire (Sennett 2009: 50). Moreover, as I examine in the next sections of this chapter, the lively (or deadly) materiality of the wax and other salon products is further embedded into spaces and bodies, (potentially) harmfully or even mortally effecting changes on a dermatological, muscular, or cellular level. To investigate these impacts, I consider the toxic 'constant interchange' between bodies and their environments (Gatens 1996: 110 cited in Alaimo 2008: 255) (4.8). Drawing together the concept of toxic interchanges with occupational health research into the different physiological impacts of performing beauty work and emissions in salons, in a final section I specifically explore how the products (may) penetrate viscously porous (Tuana 2008) corporeal boundaries in the salon (4.9). That is to say, I discuss how beauty therapists' bodies are impacted by the treatments they perform and the products with which they work. This research highlights the unevenly distributed toxicity of beauty work as the emissions from the ubiquitous petroleum products which constitute cosmetics permeate the air that 'we' breathe. Percolating into bodies, some people are more susceptible to harm than others as forms of inequality are experienced materially and become literally incorporated.

4.3   Supply-demand-supply

At the beginning of my guided tour of Vela Wax Company's wax-blending factory, I am sitting in the boardroom opposite a glass-fronted cabinet whose shelves are filled with the impressive range of products made by the company. After offering me a cup of tea, the Managing Director Mark starts the visit by talking me through the uptake of waxing in the UK since the 1980s. For Mark, describing the boom in waxing, the changing trends in waxing are largely attributable to cultural preferences. For example, he explains that there is 'no shadow of a doubt' that the contemporary growing demand for less body hair

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[79] Interview with Liz, October 2019.

and on increasing body parts is linked to the availability of internet pornography and associated expectations of hairlessness for women where 'girls now and boys now see body hair as just being weird'[80]. As he centralises changing fashions and pornography as key drivers for the demand for waxing, in what appears a linear chain of events, it seems that Vela Wax Company have developed products which respond to this growing demand and the social expectations that more and more body parts will be free from hair. Viewed thus, the material properties of the wax appear incidental, developed only to satisfy changing customer demands.

Yet in Mark's account, the cultural preferences for 'feminine' hairlessness and the material innovations in the products come to be (perhaps unintentionally) interwoven; as he moves backwards and forwards between explaining social trends in waxing and developments in wax, the linearity of simply supplying a demand is disrupted. Contained in the glass hutch, the dynamic materiality of the products may appear somewhat muted. And certainly for Mark, there seems to be a straightforward logic from demand (cultural preferences; porn) to supply (the waxes they produce and the ways they perform). But in the fast-paced telling with which I struggle to keep up, preferences for hairlessness and developments in the products which enable extended hair removal come to be inseparable:

> Mark: [In the mid-1980s, wax-blending companies] started mixing rosin esters with some plasticisers, oils and they came up with a wax that looks very similar but is much much softer and that really took off in Europe … But it was really only good for below the knee because it's very firm there and you've got muscle here, so below the knee, soft and sticky isn't a problem. But above the knee, it's much more problematic because you've got no muscle in the most sensitive areas, you've got no muscle or bone there to support it so what you end up doing is stretching the skin and you snap the hairs off and it hurts like hell … whereas if you can get the wax to actually sheer off properly. It's almost as if I've got a crib sheet there [indicates flipchart behind me with some indecipherable words and formulas written on it] because I can see it all there [laughter].

(Interview with Mark, October 2019)

Almost without drawing breath, he continues to explain how waxes were developed with increased dilatancy which mean ripping them away from the skin would be less painful and 'then it became a lot more fashionable to start getting rid of all body hair'. Concurrent with innovations in waxes, fashions for 'feminine' hairlessness also evolved. Reflected by Mark's explanations in which social expectations and the material and technological developments are dizzyingly merged, the linear pathway from a demand for hairless thighs to new forms of wax is disrupted. Rather the cultural preferences for hairlessness and

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[80] Interview with Mark, October 2019.

the material developments in what wax can do are entwined in his narration. In a reciprocal relationship, as techniques and formulas are developed which change the wax in what it is and thus in what it is able to do, ever-more areas of the body are waxed and so become normalised as hairless. From this perspective, it is not that women suddenly started to demand hair-free upper legs, Brazilians, or Hollywoods[81] and the company started to produce the wax capable of this. Instead, as in Mark's deceptively non-linear account, the growing and changing demand and associated expectations of hairlessness are synchronous with and so inextricable from the developments in the wax's capabilities.

Viewed thus, the wax is actively implicated in prompting the trends for waxing treatments and entrenching the growing associated social expectation of 'feminine' hairlessness. Although contained and subdued in the boardroom, the dynamism of the wax is perhaps unintentionally highlighted by Mark's narrative. Its different properties and ways of performing respond to but also, simultaneously, *animate* the growing 'hairlessness norm' (Tiggemann and Kenyon 1998). The materials are participating here: they are not only formulated in response to changing demands but, rather, synchronously they work to *effect* certain practices by dint of their material capabilities. In this, wax works to *effect* a particular version of 'femininity' as its 'performance characteristics' enable it to remove 'unfeminine' hair from more and more parts of the body: including but not limited to legs, arms, pubic region, vulva, anus, underarms, eyebrows, upper lip, chin. Hairless 'feminine' bodies are, then, entangled with the ways in which depilatory wax performs which, in turn, are thoroughly imbued with oil.

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[81] An intimate form of waxing where all the pubic and anal hair is removed.

4.4   The wax
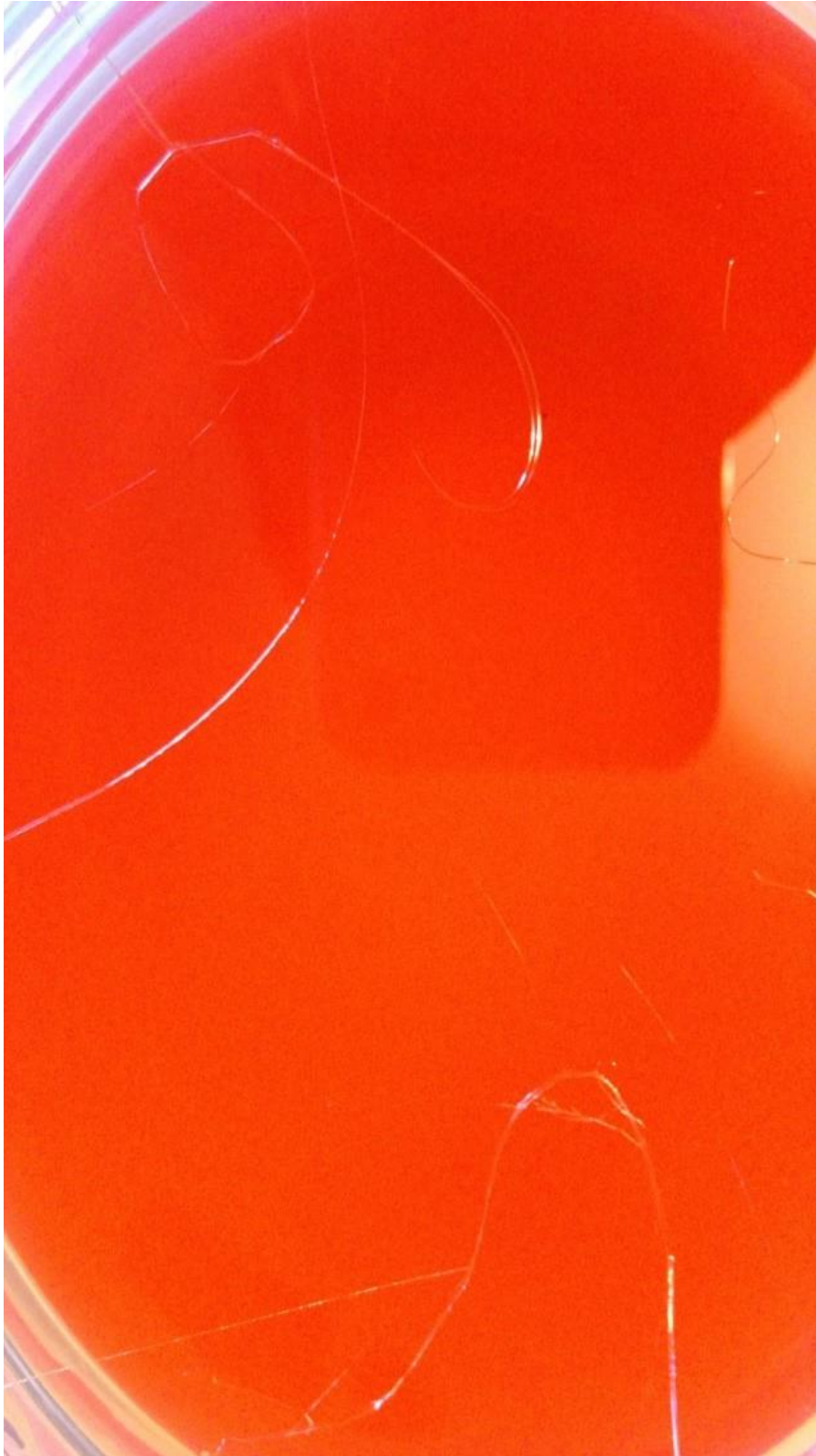
Fig. 10: Jasmine Blossom Easy Gel Wax (photo: Louise Rondel, December 2021).

What does wax consist of?[82] What affords it its 'performance characteristics'? What enables it to act as it does? Selecting a pot of wax from the wholesalers' shelves which I recognise from the beauty salon and which is blended (as most depilatory waxes are) by Vela Wax Company, I read the list of its ingredients:

Polycyclopentadiene

Paraffinum Liquidum

Jasminum Officinale (Jasmine) Flower Extract

Parfum

Linalool

Eugenol

Limonene

CI 26100

(Ingredients listed on Jasmine Blossom Easy Gel Wax, fieldnotes, October 2019).

At the very least, the two main ingredients – polycyclopentadiene and *paraffinum liquidum* – are by-products of the petroleum industry[83].

As one of the oldest forms of hair removal, waxing was previously performed with homemade compounds made with beeswax, gum rosin, or sugar (Herzig 2009, 2015; interview with Mark, October 2019). By contrast, today's commercially-produced waxes are manufactured on an industrial scale and heavily interlinked with the oil industry using petroleum's by-products in their ingredients (Herzig 2009, 2015) (as well as for their packaging; see section 4.5). In order to remove hair, depilatory wax must be able to be heated and melted, it must be malleable, sticky, and spreadable, it must be able to cool once applied and harden but not too much as it must remain flexible. Crucially it must be removable from the skin taking the hair with it. It is an added bonus if it smells pleasant and is colourful. Amongst the other ingredients, petroleum products enable wax to be and *to do* these things.

In particular, I want to centralise the importance of petroleum products in wax. For example, underlining waxing's connection with oil, at the wax-blending factory, the Managing Director Mark (who used to work for 'a big oil company' himself) tells me with some delight of the irony of the current demand for 'vegan' waxes. He explains that this involves replacing beeswax which is one of the very few 'natural' ingredients left in some waxes with yet more oil-derived ingredients. These are, of course, just another form of

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[82] See section 3.11 and footnote 72 on lack of precision in ingredient listings.
[83] Depending on what type is used, parfum is also potentially a by-product of the petrochemical industry (see section 3.11 and footnote 72 on lack of precision in ingredient listings).

animal-based products and ultimately result in an increased reliance on the petroleum industry amongst people trying to be eco-conscious: 'but it's the oil companies who are the bad guys isn't it?!'[84]. In an email correspondence, responding to my question about how depilatory waxes are made, the Quality Assurance Manager of Eastern Waxes also highlights the role of petroleum as he details how oil's by-products are used in depilatory wax to provide colour, fragrance, and other properties:

> Depilatory waxes are typically made of blended resins and oils. The base resins and oils can be of natural, petroleum, or synthetic origin. Once the base product has been formulated, additional components may be added to enhance certain characteristics, such as dyes (for aesthetics), fragrances (to improve their scent – rosins don't tend to have a pleasant odour!), essential oils (for therapeutic benefits), or other waxes (to improve the product performance). Antioxidants can also [be] added to help prevent product deterioration due to oxidation.
>
> (Email correspondence with Eastern Waxes, November 2019).

In addition, for stripless or hot waxes[85] which need to 'remain malleable enough to be removed without the need for cloth waxing strips' and are typically used for intimate forms of waxing such as Brazilians or Hollywoods, polymers are added in order 'to provide these performance characteristics'. The Quality Assurance Manager continues to explain that white oil ('INCI *Paraffinum liquidum*') – a by-product of the petroleum refining process – is 'also fairly commonly used in depilatory products'[86]. Contacting a UK-based supplier of white oil[87], they tell me that the 'major global producers' of medicinal white oil which goes on to be used in cosmetic products are Exxon and Petro-Canada[88].

White oil, polymers, parfum, colours, hydrocarbon resins: I contend that waxing practices, salon labour, and 'feminine' hairlessness are effected by these petroleum-derived products. These various by-products of oil are blended into the wax to enable it to flow, to stick, to harden, to be ripped off, and to take the unwanted hair with it. As such, with increased demand for hairlessness, in the words of Herzig, petroleum waste has been elevated into a 'valuable cosmetic by-product' and, simultaneously, as oil companies sought novel ways to profit from their waste, of converting their '"excess" into useful commodities', new

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[84] Interview with Mark, October 2019.

[85] In the rest of this chapter, I focus predominantly on gel or warm waxes as these are used in the beauty salons where I have conducted fieldwork. Both hot and gel waxes are produced by Vela Wax Company.

[86] In an email correspondence, a UK-based supplier of white oil explains how this oil is produced by passing vacuum gasoil and hydrogen through a two-stage hydro-treatment process (email correspondence with ChemCorp chemical supplier, February 2020). *The Dictionary of Energy* explains that vacuum gasoil is 'a feedstock for fluid catalytic conversion units, used to make gasoline, no. 2 heating oil, and other by-products' (Cleveland and Morris 2014).

[87] Email correspondence with ChemCorp chemical supplier, February 2020.

[88] ExxonMobil is ranked fifteen in *Forbes Global 2000* 'the world's largest public companies' in 2022 with a market value of $359.73 billion (the second largest oil and gas operations company after Saudi Arabian Oil Company); Suncor Energy (Petro-Canada's parent company) is 262nd in the list with a market value of $46.27 billion (Forbes 2022).

parts of the body became targeted for hair removal (2009: 255). In waxing, petroleum products are active in working to produce the hairless version of 'femininity' as they afford the wax particular ways of working to remove unwanted hair. As in Mark's explanations where social expectations and material products developments are entwined, a particular hairless version of 'femininity' is produced which is at once socially, culturally, and materially animated, and thoroughly saturated with oil.

4.5   The pots

Fig. 11: Plastic pots. Empty containers ready for filling inside Vela Wax Company's factory warehouse (photo: Louise Rondel, October 2019).

The 450g cylindrical polypropylene pots which are used to package the gel wax[89] are an equally important part of hair removal practices.   Like the wax itself, these pots also connect the petroleum industry with hairlessness, serving to prompt the associated consumption and labour practices and reinforce this particular aspect of a 'feminine' body. An attention to the materiality of these pots (*plastic*), to how this material behaves (*plastically*), and to what this enables them to do further highlights some of the ways in which oil seeps into beauty practices and the work of the salon.

Made from polypropylene[90], one of the 10,000 plus plastic polymers in use (Gabrys et al. 2013: 4), these commonplace but far-from-unremarkable containers form part of the 299 million tonnes of plastic which are produced each year (Liboiron 2016: 95): 'Where is plastic?': 'Here, there, anywhere, everywhere; surely somewhere … we are (en)plasticised' (Ghosh 2019: 277; Mah 2022). In the 'Plastic Age' of the twentieth century (Bensaude Vincent 2013: 17):

> From the latex paint on the walls, to the carpeting, tiling or varnish on the floor, the chair you sit
> in, your shoes, watch and cell phone, right down to the elastic in your underpants, you are a Plastic
> (Wo)Man (Liboiron 2013b: 139).

Of the 299 million tonnes, 'thirty-five per cent of plastic produced is for the purposes of packaging' (Davis, H. 2015: 352) 'accounting for around 8 per cent of the world's annual oil production'[91] (Liboiron 2013b: 139). Irrefutably surrounded by plastic, Gabrys et al. describe how plastic 'was the material that democratised consumption' (2013: 9) as more and more goods could be produced on a mass scale and at low cost. More specifically, Andrea Westermann argues that '[p]lastic packaging, in particular, facilitated mass consumption' (2013: 76). Thus, not only the goods themselves, but their usually plastic packaging prompts particular social, consumption-oriented practices[92]. Indeed, after handing out ice cream to conference-goers, activists James Marriott and Mika Minio-Paluello demonstrate how 'ice cream cannot exist without its containers … Take it out of its box and it becomes a runny, fairly inedible and unsatisfying mess within minutes' (2013b: 171, 172). Gel wax without its plastic pot would, arguably, be worse: an

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[89] Hot wax which is typically used for intimate waxing is generally sold as small pea-sized beads of wax and packaged in plastic bags

[90] 'A thermoplastic material made by polymerisation of propylene (CH_2:$CHCH_3$). It is similar to high-density polythene but stronger, lighter, and more rigid' (*The MacMillan Encyclopedia* 2003).

[91] The manufacture of plastic packaging 'use[s] about 4 per cent of the world's oil in material substance (and 4 per cent of the world's oil in the form of energy for manufacturing)' (Bensaude Vincent 2013: 24).

[92] This is not to suggest that the use of single-use plastic packaging is a natural nor incidental outcome. As Mah shows, petrochemical companies have been heavily invested in creating markets for their wares and single-use plastics offer seemingly never-ending opportunities for growth and profit (2022: 24-45): 'the future of the industry is in the trash can' (Stouffer [editor of *Modern Packaging Magazine*] 1963 cited in ibid: 8).

oozing, sticky, uncontrollable messy goop that acts as a liquid glue, viscously creeping and attaching itself to everything within reach and near impossible to remove. On my visit of Vela Wax Company, as we open the factory door to watch the wax being blended, Mark warns me '[w]ax is messy stuff, it's sticky stuff. You'll be two inches taller when you leave!' and immediately I regret wearing my best Nike Air Maxes as they squeak and I feel them stick to the factory floor. I quickly notice that nearly everybody (including Mark the Managing Director but not Gary, the new Sales Representative who is still learning the ropes) is fairly scruffily dressed – fleeces, tracksuit bottoms, and old trainers – all stained with strings and patches of once-sticky-now-hardened-on wax. Likewise in the salon, Liz tells me:

> That's a fun game, getting wax off the floor! … That's what I spend most of my life doing, is cleaning wax off the floor, honestly! Because you've got wax every time, somehow, you can walk in it so you can hear it, and my shoes stick!

> (Interview with Liz, October 2019).

Without plastic containment, the gel wax oozes and drips, it escapes and stubbornly sticks to what it should not. What is more, its packaging is also key to be able to heat, melt and, thus, use the wax to remove hair. Without the polypropylene packaging, like the ice cream, wax is rendered useless. As Marriott and Minio-Paluello continue, the plastic pot 'is now a necessary ingredient in the [consumption] experience' (2013b: 172). Or, rather, the plastic pot plays a central role in enabling the consumption of its contents.

Key to consumption practices are plastics' properties which mean that wax and other beauty products can actually be used. On the development of polypropylene, John A. Brydson writes that in the 1950s, the chemical engineer and Nobel Laureate G. Natta of Milan 'was able to produce a number of different types of high molecular weight polypropylenes which differed extensively in their properties. One form, now known as isotactic polypropylene, was in many ways similar to high-density polyethylene but with a higher softening point, rigidity, and hardness' (1999: 247). Once produced, '[c]ommercial exploitation was very rapid … with the material becoming widely used for fibres, films, and injection mouldings' (idem.)[93]. In order for the depilatory wax to make its way to the salon and to be used in the removal of body hair, its packaging needs to be strong but with some give. The pots need to be rigid to pack and stack neatly, they need to be lightweight, they need to be hard and unbreakable, they need to conduct heat so that the wax melts but they need a high softening point so that they do not melt themselves, they need to hold their shape, they need to be resealable, they need to be mouldable into the correct size and

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[93] See Brydson (1999: 253-259) for more details on the properties of polypropylene.

shape, they need to be able to have the label in-moulded directly into it, they need to be transparent so that the brightly-hued wax can provide an eye-catching pop of colour on the wholesalers' shelves or in the salon, once emptied, they need to be disposable (see Chapter 6), and more always need to be manufactured, quickly and cheaply. For all of this to happen so that the unwanted hair can ultimately be removed, the wax's packaging needs to be literally plastic, in this case, materially polypropylene.

Guided by Gay Hawkins, I want to think of 'the ways in which the materials might participate in processes of invention and translation [to use] – how they might inform or have a say in what they become': the performativity of the materials (2013b: 54). Thus, rather than saying 'the pots need to …' as per the above, I want to re-frame this as 'the material properties and affordances of the polypropylene enable the pots to …'. As with the wax itself, viewed in this way the social demands and material innovations do not enter into a linear demand-supply relationship, rather an attention to the properties of the polypropylene shows that these are inextricably and co-constitutively entwined. By approaching the pots thus, the relationship between their material properties, how they act, and what they prompt comes into view. Combined with the wax, by dint of their capacities afforded by their oil-derived materials, the polypropylene pots effect particular practices and formations. This includes enabling the production of 'feminine' bodies as hair is removed. In addition to their material properties, the low cost of plastics coupled with their seemingly infinite raw materials and so their apparently interminable mass production equally features in animating the 'ongoing process' of hair removal.

As I will show in the following sections, in what they are and so what they do, the wax and the pots not only enable hair removal to actually happen but they also effect the embodied labour of performing waxing in the salon. They are also implicated in prompting other social, economic, and work practices. Through all of this, they entrench the hairlessness norm for a 'feminine' body by making hair removal and its repetition possible. As Heather Davis describes in her 'short history of plastic', 'now it is chemical engineers who re-make and re-fashion the earth' (2015: 348): spaces, bodies, practices, skill, toxicity, 'femininity'.

4.6   Wax at work

Watching waxing happening in the beauty salon underscores that wax has its own ways of working, of moving, stopping, sticking, not-sticking, drying, cooling, spreading, hardening, flexing. The wax's 'performance characteristics' are central to how the work of removing hair is carried out in the salon. Explaining to me what she is doing as she performs a leg and bikini wax, Liz explicitly underlines the

importance of the wax with which she is working: 'for me, it's all about how it acts'[94]. Rotating the wooden spreading spatula, she tells me 'what I know from working with this … you need to move it constantly otherwise it's just going to pour off this [spatula]' as she twirls just the right amount of wax at just the right heat and consistency until, as if second nature, she is ready to spread it/it is ready to be spread[95]. For Liz, the behaviour of the wax is key to how she interacts with it, to her bodily movements, and to how she wields her tools and navigates the salon space. Watching her perform the treatment further highlights how Liz is 'engaged in a continual dialogue with materials' (Sennett 2009: 125):

Once the client has removed the necessary clothes and is lying on the raised bed, Liz begins the depilatory treatment by dipping a wooden spreading spatula into the perfectly pre-heated wax, scooping up the perfect amount, and swiftly but not hurriedly moving it from the pot to the client's body whilst twirling the stick continuously, not letting a drop of wax fall, before applying a swatch of the perfect length, width, and thickness to the shin (perfectly following the direction of the hair growth). Leaving it for a few seconds to dry slightly and reach the ideal tackiness, she then takes a fabric strip which she smooths over the wax, adjusts her body's position to the correct angle and, holding the client's skin taut, rips the strip off in the opposite direction to the hair growth leaving a patch of hair-free skin. She uses the strip to pull off any remaining traces of wax and hair, before deftly folding it over, putting it into the pedal bin by her feet, and repeating the process with the next segment of leg.

(Fieldnotes, February 2018 – October 2019).

Crucial to this process is the wax itself but also important are the client's body, the particular body part to be waxed, the spatula, the fabric strip, and how all of these interact; all are negotiated deftly and skilfully and all this is carried out whilst reassuring the client or chatting to them about their workday or upcoming holidays. 'How [the wax] acts' informs Liz's movements and how she manages the other objects. These are materially-animated interactions or 'a practical engagement in the world' which are a key feature of 'enskilment', a process of the acquisition of skill taking place in a lived, dynamic, and thing-filled environment (Ingold 2000: 416).

Furthermore, for those working in the salon, the knowledge of wax's idiosyncratic characteristics– how it moves, sticks, heats up, and cools down – becomes literally *incorporated* as they collaborate with the material and other waxing paraphernalia (Kontturi 2018: 110 cited in Coleman 2020: 32). Through continuous practice, the materially-animated skillset comes to be deeply embedded into the beauty therapist's body. As well as watching her deftly twirl the perfectly wax-laden spatula, this incorporation of skills is further underlined on listening back to and transcribing one of the interviews I conducted in the salon during a leg-waxing treatment when I asked Liz what she was doing. The transcript itself is practically

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[94] Interview with Liz, October 2019.
[95] Fieldnotes and interview with Liz, February 2018.

nonsensical as she was using her client's leg and her own bodily movements to explain angles, traction, and 'flat resistance'; knowledge which is now so profoundly embodied, it was difficult if not impossibe to articulate with words alone[96] (Lyon and Back 2012: 2.4). In visceral interaction with her tools, materials, and clients' bodies, Liz has developed the 'corporeal comprehension' identified by Erin O'Connor (2007). O'Connor elaborates that this is a spatio-temporal relationship between the practitioners' body and their materials, 'read[ing] spatially for the right moment of bodily intervention, to see when the time is right' (ibid: 134). This 'seeing' is not purely visual. Drawing on Loïc Wacquant's work on boxing, O'Connor (ibid: 138) emphasises 'corporeal sight': 'that you do not truly see … until you have already understood a little with your eyes, that is to say, with your body' (Wacquant 2004: 118) and difficult to put into words. In waxing, angles, pressures, thicknesses, bodily adjustments, viscosities, tackinesses are all corporeal-intellectual-visual-spatio-temporal whilst revolving around – or *being effected by* – the properties of the materials with which the beauty therapist is working; here, chiefly the wax itself. In addition to the treatments and their bodily modifications, the incorporation of the skill of beauty work is another way in which petroleum products come to shape bodies in the salon. 'How it acts' or, rather '*how these ingredients make it act*' becomes absorbed into the beauty therapist's bodily repertoire.

4.7   Packaging at work

Much like the wax itself, the plastic pots in which the wax is packaged are also active participants in the work that must be done for depilatory treatments to happen. More than containment and preventing the wax from becoming a sticky, unusable mess, the material affordances of these pots allow the wax to be delivered from factory to salon, to be heated and melted, and to be applied. Its characteristics also enable the packaging to be easily replaced once emptied, each pot waxing seven clients on average (depending on the size of the client and the body parts being waxed) (interviews with Anna and Liz, October 2019). Like the wax, in their plastic materiality the pots animate particular formations, economic practices, and bodily and spatial interactions.

Ahead of their arrival in the salon, the size (450g, three and a half inches high and in diameter), shape (standardly cylindrical), and material (easily moulded, flexible, strong, rigid, heat resistant, transparent [i.e. plastic]) of the pots are key features of the workplaces and working lives of Mark and those who he employs in the factory and warehouse and of Anna and the other Sales Assistants at the beauty wholesalers. In these different sites and with these different people, the polypropylene pots' plastic properties and capabilities 'generate effects' (Hawkins 2013b: 52). For example, far from an

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[96] Fieldnotes and interview with Liz, October 2019.

unexceptional bit of packaging, merely a vehicle for the wax, on our tour of the wax blending factory, the Managing Director tells me about how these pots present 'a barrier to entry' for would-be competitors:

> … So what we've done is, we've made the packaging better. That pot is our tool and it's unique and it *fits* the heaters across here [gestures to pot heaters on display in the boardroom cabinet] … If you want to compete in the UK market, you've got to get a pot shaped like that. And a pot shaped like that, a tool for that is about £80,000. So you're not going to do that in your shed are you?

(Interview with Mark, October 2019, original emphasis).

He explains that another of the pots' advantages for Vela Wax Company is the possibility of in-moulding the labels straight into the packaging, something which is now demanded by the UK's largest beauty wholesaler and which gives Mark a clear advantage over his competitors as 'we own that equipment as well!'. It is the affordances of the polypropylene's properties – mouldable to a particular size and the ability to have the label etched onto the plastic – which cement this 'barrier to entry'.

When Anna, a part-time Sales Assistant and beauty therapist herself, shows me around one of the wholesalers' stores, she too comments on the pots:

> … It's quite good with the wax pots, all the wax heaters … they all fit all the pots so it's not like if you bought this and the same brand wax heater, you can't use any other one in it. They're quite general so they all fit in and so you quite literally put the whole pot in the heater and it heats the whole pot.

(Interview with Anna, October 2019).

For Mark, the shape of the pots and the possibility of in-moulding the label prevent Vela Wax Company's potential competitors from easily accessing the market. For Anna, unaware of the economic logic of the pots, the standard-sized containers seem almost fortuitous as it means that her store customers are able to try different brands of wax without needing to change their salon equipment.

At first take, these pots may have seemed rather commonplace or taken-for-granted as a piece of eventually-disposable (see Chapter 6) packaging. However they are, in fact, central to how the wax figures in the daily work lives of those who come into contact with it on its journey to the salon. Their size, shape, density, rigidity, ability to be moulded – their *plasticity* – actively impinge on the ways in which they maintain Vela Wax Company's monopoly on the market and how they are transported, stacked, and sold (see Chapter 5). Along with their contents, the pots' material characteristics also effect particular ways of working in the salon and on the treatments which are possible.

Indeed, for Liz the beauty therapist whose most popular service is depilatory waxing, the design and materiality of the polypropylene pots have implications for her bodily work practices and so on the services she can provide:

In the centre of Liz's well-lit treatment room is a reclining bed which is set at different angles depending on the treatment being performed and which is often adjusted during the treatment: sitting up for front of the legs, laying further back for eyebrow and facial waxing, or completely horizontal as the client lies on their front as Liz waxes the backs of their legs. In the corner of the space, there is a glass cabinet in which Liz keeps unopened pots of bright pinky-orange wax, fabric strips, and spatulas, still wrapped in their plastic packaging. This is adjacent to a door to the stock room in which she stores still more boxes of wax that she has bought 'massively in bulk … if you're [going to the wholesaler and] never not sure what I need, just get me wax and wax strips!'. Apart from the client with whom she chats as she performs the treatment, Liz's focus is on a waist-height caddy on casters just next to the treatment bed. This is perfectly positioned so that she is able to turn from the caddy to the bed and minimise the amount of movements she needs to make to negotiate the client's body and the treatment. Atop the caddy are a pot filled with the fabric strips she will need for the client's waxing treatment, some wooden spatulas, cotton pads, bottles of cleansing and soothing lotions, and a double wax heater containing two of the plastic pots. The heater is always switched on ahead of the appointment to ensure that the right amount of wax is heated to the right temperature before the treatment begins.

<div align="right">(Fieldnotes and interviews with Liz, March 2018 – October 2019).</div>

Each of the pots held in the heater contains a different volume of wax and each heater is set to a separate temperature (see fig. 9). Liz explains: 'You have the option with this [indicates her heater] of having one set at a different temperature if you wanted to do that for different body parts'[97]. There are other calculations going on with regards heat, wax volume, and body part to be waxed, all in interaction with the plastic packaging and how it acts:

> Liz: The problem is when the wax gets low in the pot, it's actually very hard to do a full leg wax when you've only got that much coming out on your stick. So you have to use bigger [fuller] pots so what you then tend to get… you can mix them up. So I can put them together if I want to … You can mix them or you can keep the smaller [less full] pot, that's just for smaller areas. The risk in doing that is the lower down in the pot the wax is, the hotter I think it gets. So I don't do that, I mix them together. Yeah, it's just too little [in] there to heat it so it gets hotter. So once it's so low I don't like doing eyebrows with it so I'll get out something else [a new pot] and add to it.

<div align="right">(Interview with Liz, October 2019).</div>

Like her engagement with the wax itself, the size, shape, and material of the pots are not only incorporated into the beauty therapist's corporeal, intellectual, and spatial working practices but I argue they work to actively generate these skilled practices. The well-ordered organisation of the products and

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[97] Interview with Liz, October 2019.

implements and the placing of the caddy are carefully thought through in order to make her work as efficient as possible as well as to keep the wax at the optimum temperature as it transfers from pot to spatula to client's body. From the positioning of the caddy and the heaters to the micro-movements of the beauty therapist's body and calling into play her materially-informed skills and knowledge, the wax-filled plastic pots produce particular spatial and bodily configurations and practices. In other words, not only the wax but the polypropylene containers and their material affordances are integral to the beauty therapists' enskilment. And, of course, threaded through with petroleum, the wax, its packaging, and the skills of those working in salons come together to enable the removal of the unwanted body hair.

4.8   Toxic exchanges

The oil-laden wax and other beauty products permeate the salon space and, simultaneously, become incorporated in other ways and in more (potentially) harmful or even deadly ways as their contents participate in another set of effectuations. After the treatment has been completed, the client re-dressed, an appointment booked for next month, the transaction paid, and the door swings shut, the remnants of the service persist in the salon as the beauty therapist prepares the treatment room for her next appointment. These traces linger in the room, on the beauty therapist's clothes and skin, in her muscles and joints, and in the air she breathes. In particular, attending to the air that circulates in the salons puts into relief the geometries of toxicity at work in the salon; for this is air which passes in and out of the lungs of the beauty therapists who spend seven or eight hours a day, up to six days a week working there, performing treatment after treatment on client after client, inhaling, metabolising.

Useful for thinking through the intimate, (potentially) harmful or even fatal, and unevenly impacting relationship between salon workers' bodies, their workplace, and beauty products, Nancy Tuana focuses on the absorption of PVC into human bodies to precisely highlight the 'viscous porosity of the flesh – my flesh and the flesh of the world' (2008: 199). In particular, the concept of 'porosity' emphasises the ways in which bodily 'boundaries' are permeable, able to be penetrated. This porosity is perhaps most literal in the air that 'we' breathe, in the gaseous exchange with our surroundings as we take air and its contents into our lungs. In such continuously-occurring 'molecular interaction[s]' (ibid: 202), the porous body is constantly being shaped by its 'outsides', the environment and the things or materials in it. Recognising the dynamic interactions between bodies, spaces, and materials puts into relief how that which lingers after the treatment, released into the salon air and is inhaled or gets attached to skin, hair, or clothing and is carried home participates in the composing, recomposing, and decomposing (Gatens 1996: 110 cited in Alaimo 2008: 255) of the salon workers' bodies. Bodies are not discreetly bounded entities

(Shildrick 2015: 13; see also Latour 1993) but rather made and re-made through contact with their environment and the things in it; generative relationships which can also be degenerative, harmful to the body, decomposing it. Seen in this way, through close contact with the products with which they work, the salon workers not only develop an embodied skillset, but they literally incorporate the products' materiality into their flesh, organs, and cells. The traces of this 'feminising' work can (potentially) have destructive corporeal effects, performing a form of 'chemical and radiological violence … [which is] somatised into cellular dramas of mutation', a form of 'slow violence' (Nixon 2011: 6).

A common pattern with forms of slow violence, the (potentially) toxic interchange between bodies and salon environment does not affect everybody (every body) in the same way:

> Thinking through toxic bodies allows us to reimagine human corporeality and materiality itself, not as a utopian or romantic substance existing prior to social inscription, but as something that always bears the trace of history, social position, region, and the uneven distribution of risk (Alaimo 2008: 261).

In her reading of Tuana's 'viscous porosity', Sasha Litvintseva precisely contends that 'the idea of *viscosity*, as opposed to *fluidity*' is important 'for not eradicating boundaries altogether … resist[ing] an erasure of distinctions between those most affected and those responsible' (2019: 157, original emphases). That is to say, it recognises the differential vulnerabilities to and experiences of exposure, the ability (or not) to 'weather' (Neimanis and Hamilton 2018) these exposures, and the protection (or not) offered by legislative bodies to different communities (Sealey-Huggins 2018: 103; see Kang 2010a on the [lack of] legislation to protect nail salon workers in some states in the US). Or, as Olga Cielemęcka and Cecilia Åsberg ask 'who gets to live, play, thrive, and survive, and who gets to suffer and die from the "slow violence" of toxic compounds and socioeconomic vulnerability [?]' as they instruct that we need to understand environmental toxicity as 'intertwined with power relations' (2019: 102). Indeed, 'toxic bodies insist that environmentalism, human health, and social justice cannot be severed' (Alaimo 2008: 262; see also Chen 2011; Davies, T. 2018, 2019; Nixon 2011; Pellow 2016; Sealey-Huggins 2018). For, although all bodies and spaces interchange and all bodies are porous, this is a slow-burning, environmental-bodily violence which is entwined with structural violence where some people are more impacted than others (Galtung 1969; Nixon 2011: 10-12). The work that takes place in salons – so entwined with the affordances of petroleum products and entirely inseparable from their emissions – is thoroughly entangled with these forms of toxic, slow, and structural violence.

4.9   Toxicity at work

The occupational health concerns experienced in the salon are manifest in various ways as beauty therapists carry out repetitious and manual labour and come into contact with a wide-range of (potentially) noxious emissions. For example, performing the depilatory treatments, the beauty therapist is continuously in motion. Negotiating the wax and other products, the tools, and the client's body, she repeats the movements of bending over the treatment bed, applying the wax, smoothing the strip, and ripping it off. The repetitiveness of the work is emphasised when the beauty therapist I am observing briefly moves her bin from its usual position under the treatment bed to show me something. Forgetting to replace it, she is discombobulated, unthinkingly and automatically making a gesture which she makes tens if not hundreds of times a week and going to throw the used strip into a bin that is not there; a gesture deeply written into her muscle memory[98]. Studies in occupational health and social science research have drawn attention to some of the harmful bodily impacts of carrying out these repetitive and close-contact cosmetological treatments. For instance, there are reports into musculoskeletal issues and joint pain from long hours of standing and performing repetitive actions in the salon (de Gennaro et al. 2014; Mandiracioglu et al. 2009; Yeomans et al. 2009). There are also risks of injury from thrashing customers undergoing painful waxing treatments (Herzig 2009: 258), risks of bacterial, fungal, or viral contamination between clients and workers (Enemour et al. 2013; Mancini et al. 2017), and hazards from contact with hot wax and sharp tools (Eayrs 1993). Concurrent with the incorporation of the skill which allows them to make a living, these work practices (potentially) painfully become ingrained in the salon workers' skin, muscles, and joints.

Beauty products and their contents infuse the salon space and the 'viscously porous' (Tuana 2008) bodies working therein in still more ways. For instance, at the end of every leg waxing appointment, there are always small strings of wax which have stuck themselves to the client's legs and clothing and to the towels on which they have been lying as well as to the beauty therapist's clothes and to the salon floor. These are usually accompanied by small white threads which have been shed from the fabric strips used to pull off the wax. This is only a small of the debris produced by beauty treatments, a sizeable amount of which has its origins in petroleum and which is harder to spot than strings of wax and shed cotton. Although the wax itself might not be toxic, an attention to the air that circulates in the salons reveals the more noxious and insidious ways in which oil permeates environmental-bodily 'molecular exchanges' (Tuana 2008) during beauty work. For example, occupational health studies into salon work have reported on concerns

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[98] Fieldnotes, February 2018.

around exposure to propylene glycol, ethoxydiglycol, phenoxyethanol, and pentanediol from spray tanning mist (Yeomans et al. 2009)[99]. Emissions of tosylamide formaldehyde resin, formaldehyde, acrylates, and methacrylates from regular, gel, and acrylic[100] manicures are also reported (Dekoven et al. 2017: 340; see also Ford and Scott 2017; see figs. 12 and 13). Other product-engendered exposures noted in salons include Volatile Organic Compounds (VOCs) such as phthalates and further pollutants such as carbon monoxide, benzene, toluene, ethylbenzene, xylene (Hadei et al. 2018: 1), parabens, lead, mercury, triclosan, and benzophenone (Zota and Shamasunder 2017: 418) emitted from a cocktail of products used in hair and beauty treatments.

The (potential) bodily health risks prompted by coming into close and daily contact with these salon emissions are numerous and can be long-term. For example, the National Hairdressers' Federation report that, after florists, hairdressers and barbers represent the occupation with the second highest rate of work-related skin disease in Great Britain in 2016, followed by beauty therapists in third (2017: 7). In their study into 'indoor air in beauty salons', Alexandra Tsigonia et al. describe how '[o]ccupational skin and respiratory disorders, and disputable[101] reproductive and genotoxic effects have been linked to chemical exposures of beauty workers' (2010: 315; see Hadei et al. 2018). Likewise, Ami Zota and Bhavna Shamasunder report that 'exposure to [the chemicals found in beauty products] has been linked to endocrine disruption, cancer, reproductive harm, and impaired neurodevelopment in children' (2017: 418). Samuel DeKoven et al. point to 'a growing trend of nail technicians with [acute contact dermatitis] associated with occupational (meth)acrylate exposure' (2017: 342, 343). In their study for the Health and Safety Executive, Jo Harris-Roberts et al. note that other potential health risks from performing nail treatments is the 'inhalation of and skin contact with solvents, lacquers, acrylic polymers (including [EMA]), adhesives, and dust' (2008a: 1). Additionally, the phthalates and parabens present in many cosmetic products are known endocrine disruptors which interfere with the body's hormones (Dickinson 2019; Zota and Shamasunder 2017). Indeed, writing on nail bars for *The New York Times*, investigative journalist Sarah Maslin Nir describes how the manicurists whom she interviews speak of miscarriages, cancers, coughs that will not go away, nose bleeds, sore throats, painful skin afflictions and children born

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[99] In their Health and Safety Executive report on 'occupational health risks for beauty therapists who carry out massage and spray tanning treatments', Yeomans et al. report that 'workers' personal exposures to specific volatile and semi-volatile organic compounds were all low', but these compounds were nonetheless detected (2009: i).
[100] To create acrylic nails, the natural nail is built upon and extended using an acrylic product before being sanded smooth (a process which produces a plastic-dust like residue [see Rondel 2016; fig. 12]) and the polish applied.
[101] See footnote 6 on the use of 'potentially' which reflects the relatively little amount of research that has been conducted into toxic exposures in hair and beauty work.

with learning or physical difficulties (Maslin Nir 2015; see also Ford and Scott 2017; Harris-Roberts et al. 2008a; Harris-Roberts et al. 2008b; Harris-Roberts et al. 2011; Kang 2010a; Quach et al. 2015). It is not only skilled practices which are embedded into bodies but their work practices, tool use, contact with customers' bodies, and the (potentially) toxic traces of the products become literally incorporated in the salon workers' flesh as this materially-inflected labour effects a suite of bodily re-configurings.

Recalling the *viscosity* of bodies whereby some people are more vulnerably porous than others and so more susceptible to the harmful effects of the materials with which 'we' co-emerge (Litvintseva 2019; Tuana 2008), the bodily effects of beauty work are asymmetrically distributed. Like 'the dust [that] Karl Marx noted as the most noxious and damaging of all the consequences of industrialisation, that rose in great clouds as the rag-pickers worked in the first stages of paper-making' (Steedman 2001: 157), some bodies more than others are more easily penetrated by beauty products' oil-derived particles, less able to resist, and, once permeated, more susceptible to their harms.

Fig.12: Acrylic dust (photo: Louise Rondel, February 2018).

Fig. 13: Inside the air filter at a nail salon (photo: Louise Rondel, November 2015).

As with so many toxic exposures, vulnerability to these impacts is patterned by long-standing forms of structural disadvantage and systemic discrimination where levels of exposure to the (potentially) noxious salon debris and the ability or not to withstand these are stratified by intersecting social dynamics. For example, in the beauty salon, this (potential) toxicity falls more heavily on the disproportionately feminised workforce, and within this on disadvantaged and marginalised women (and their children[102]). The National Hair and Beauty Federations' (2019) industry statistics show that in the UK, '83% of people working in hairdressing and barbering and 94% of people working in beauty are female'. What is more, this is work which is perceived as 'low-skill' and classified as 'low-status' (Widdows 2017: 15), generally

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[102] As Maslin Nir's (2015) report makes clear, these effects are inherited by the children of the manicurists as the materiality of the work and its unequal impacts are literally passed on along bloodlines; moving slowly, spanning generations, a form of 'slow violence' (Nixon 2011).

performed by women with few higher-level qualifications[103], who receive a relatively low wage[104] for their work (see Khan 2015), and who can be 'vulnerable to exploitation' (Widdows 2017: 15). Additionally, products associated with Black hair styling and beauty practices are amongst the most noxious (Zota and Shamasunder 2017: 418-419). Zota and Shamasunder point to the use of products such as hair relaxers, skin lighteners, and odour-masking products and argue that the use of these is related to '[r]acial discrimination based on European beauty norms' (ibid: 419). They thus underline how 'beauty product use may be one may that structural discrimination becomes biologically embedded' for both clients and workers (idem.). Furthermore, as other US- and UK-based researchers have highlighted, migration status may also impact on exposure to these harms as workers who have irregular statuses may be less likely to speak out against the practices in their workplaces due to anxiety about the consequences (Ford and Scott 2017; Kang 1997, 2010a, 2010b; Maslin Nir 2015; Quach et al. 2015). In her work on Korean-owned nail salons in New York, Kang further notes that, also intertwined with migration patterns and racial discrimination, language barriers may also make it difficult for manicurists to access information or report misconduct (1997: 158-159). In the US and UK, it is women and in particular minority-ethnic-in-the-UK-and-US, less-privileged, lower-class, apparently 'low-skilled', low-paid, migrant, non-English-speaking, precarious women who are therefore more likely to, literally and harmfully even mortally, 'shoulder' the 'third shift' of beauty (Kang 2010a: 15) and the associated toxic burden, coming to incorporate the (potential) toxicity of the products with which they work.

4.10   Concluding remarks

Closely attending to the properties of wax and the pots, in this chapter I have explored how these work to prompt particular practices and to effect hairlessness. In particular, looking at what the wax and plastic pots are and so what they *do* has highlighted how petroleum products are central to beauty work and actively implicated in the production of hairless 'feminine' bodies in the salon. Oil gives the wax and its plastic packaging certain 'performance characteristics' enabling them to be used to remove unwanted hair. Rather than merely responding to consumer demands, these properties mean that increasing and novel parts of the body are able to have hair removed from them. In other words, a growing demand for

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[103] In their industry overview, the Hair and Beauty Industry Authority (Habia) reports that 18.3% of those working in the industry have below Level 2 or no qualification, 35.3% have Level 2, 37.8% have Level 3, 5% have A-Level or Vocational equivalent, 8.5% have Level 4 and above, 2.9% have a degree ('figures provided by VTCT and endorsed by Habia based on research conducted 2016-2017') (Hair and Beauty Industry Authority n.d.).

[104] The National Careers Service reports that the average annual salary for a hairdresser is between £14,000 (for a starter) and £30,000 for an experienced hairdresser (National Careers Service n.d.a) and the average annual salary for a beauty therapist is between £15,000 for a starter and £20,000 for an experienced therapist for a thirty-seven-to forty-hour week (National Careers Service n.d.b).

hairless bodies is not propelled solely by socio-cultural expectations but, synchronously, the materials which afford wax its innovative characteristics animate and expand hairlessness: as more becomes possible, more is expected and so demanded. Furthermore, as my discussion of the materially-informed acquisition of the skill of waxing has demonstrated, oil also in-part prompts the embodied enskilment of the beauty therapists as 'how [wax] acts' becomes literally incorporated as craft.

The space of the salon and bodies working there are infused by the wax and other oil-laden beauty products in more insidious ways too. The very petroleum by-products which provide the products with their performance properties become literally and (potentially) harmfully incorporated as the beauty therapists perform repetitive movements or as traces of the 'feminising' work are emitted, released into the water, and fall onto the clothes and skin and are inhaled or absorbed into the body; traces which linger after the client has left the salon and most acutely circulate in the air that 'we' breathe. Tuana's (2008) notion of 'viscously porous' bodies highlights how the (potential) harms of the beauty industry are ingrained into the body. That is to say, how the people who work with the products are permeated and re-composed (or de-composed) (Gatens 1996: 110 cited in Alaimo 2008: 255) by the materials' liveliness or, perhaps, deadliness. What is more, these (potential) harms are unevenly distributed. In constant interchanges with the salon environment (idem.), research suggests that it is predominantly disadvantaged, poorly-paid, minority-ethnic-in-the-UK-and-US women who are often socially marginalised in some way who come to bear the most noxious effects. How the products act, what they enable, the enskilment of the beauty therapists, and asymmetric toxic environmental-bodily interchanges are inseparably entangled as 'feminine' bodies are made in the salon.

Chapter 5   'Whizzing boxes': The 'forgotten' landscaping of logistics

The apparently "smooth" system of cargomobilites is anything but (Birtchnell et al. 2015: 7).

Fig. 14: The road to the Port of Tilbury (photo: Louise Rondel, October 2019).

5.1   Introductory remarks

Following on from the previous chapter's focus on the role of wax, its packaging, and their constituent petro-ingredients, I now turn to the logistical infrastructures of transit and distribution which enable the wax and other beauty products to '*journey*' to the salon, shaping spaces and so lives as they go (Knowles 2014: 7-8). Hair removal and other forms of beauty work are indeed, as the interviewee Marie wearily describes, 'quite an ongoing process'[105]. They are never-ending, one has to continuously engage with this work, returning to the salon again and again and again to maintain an 'appropriate' 'feminine' appearance (Black 2004: 11). The work of the beauty salon is thus predicated on ephemerality, on repetition and replacement. It requires a constant supply of products and, of course, the infrastructures and the fuel which provide for this. Simultaneously, I argue that these infrastructures serve to animate the 'ongoing process' as they facilitate the circulation of increased quantities of goods, at greater speed and lesser cost, replenishing the shelves and expanding the possibilities for more beauty work. Considering how logistical infrastructures are implicated in this work further underlines how the particular version of 'femininity' worked upon in the beauty salon is not only socio-culturally impelled but also materially and spatially contingent. The expectations of 'femininity' – in this case, the expectation that to appear 'feminine' is to be hairless – cannot then be attributed to socio-cultural dynamics alone. The ever-growing 'minimal requirement' of beauty work (Widdows 2018: 97) is predicated on the availability of products to (temporarily) fulfil it and so on the means to transport these to the salon.   What is more, a focus on logistical landscapes shows another way in which oil is entangled in beauty practices as the means of distribution are heavily powered by petroleum, infusing these spaces in (potentially) harmful ways.

In this chapter, I trace the wax's journey through London's 'peri-urbs' or 'edgelands': 'the grey area that lies between the brown and the green of town and countryside' 'characterised by rubbish tips and warehouses, superstores and derelict industrial plant, office parks and gypsy encampments, golf courses, allotments and fragmented, frequently scruffy, farmland' (Shoard 2017: 5). Places where the wax and other beauty products are made, stored, and sold in bulk before they arrive at London's salons. Places which are, simultaneously, shaped by these processes of warehousing and distribution; a 'grey' and 'scruffy' backstage to the carefully decorated salons in which I started my study. Following the wax across these landscapes, I move between Vela Wax Company's factory and depot, the Port of Tilbury (one of London's most important commercial goods ports through which beauty goods may[106] journey), and the

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[105] Interview with Marie, March 2017.
[106] As I will discuss in section 5.4, it is difficult to say which routes through which ports the wax, its raw materials, and other beauty goods take with any precision (see section 3.11 and footnote 52).

beauty wholesalers' warehouses and stores whilst negotiating road networks, traversing waterways, and navigating trading estates. As I do so, I consider how these logistical infrastructures play a central if largely obscured part of daily life and, guided by work in critical logistics studies, I problematise the idea that the workings of logistics are invisible. Interrelatedly I question the idea that the goods **'**flow' 'smoothly' across space as they make their way to the salon. This is a notion of 'smoothness' promoted by the logistics industry whereby consumer items can move without arrest from space to space and across borders, a 'flow' enabled by multi-modal transportation, free trade zones or free ports, and erosion of trade unions (Chua et al. 2018; Cowen 2014; Danyluk 2018). As in the epigraph with which I opened the chapter, this 'smoothness' is ultimately shown to be a fiction (Birtchnell et al. 2015: 7). Indeed, I examine how far from a 'smooth' 'flow' across an ice-rink-like surface, the different spaces through which wax and other salon-bound products journey are shaped by this circulation with highly palpable effects as different trajectories, in Massey's terms, 'come into collision' (2005: 155). Above all, belying the ideal of the 'smooth' 'flow', I emphasise the intertwined spatial and bodily impacts of this diesel-driven movement which leaves its (potentially) toxic traces along roadsides and waterways. As in the salon, attending to the air that 'we' breathe underscores that the harmful impacts of the goods' journeys from port to factory to wholesalers to salon are asymmetrically experienced. Across the city and beyond, the burden of toxic environmental-bodily interchanges is most heavily borne by socio-economically disadvantaged and minority-ethnic-in-the-UK communities.
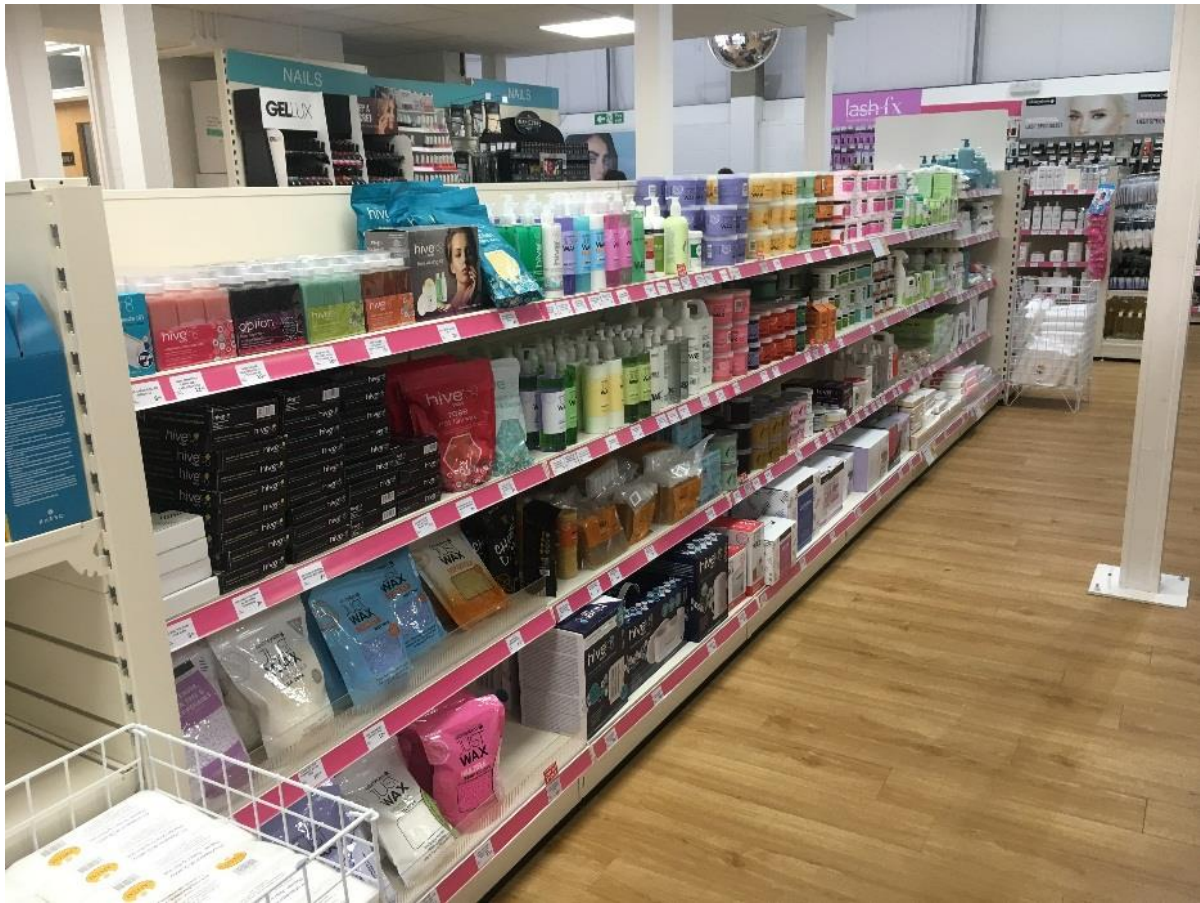
Figs. 15 and 16: 'Like a Superdrug on steroids'. The goods on display at the wholesalers' store. The shelves need and are able to be constantly replenished (photos: Louise Rondel, October 2019).

5.2   Structure of the chapter

I begin this chapter by discussing research in the field of critical logistics studies and, in particular, studies which have put into relief the spatial dynamics of the logistics industry (5.3). In the second section, I underline the importance of the different sites I visited to London's daily consumption habits; a significance which is juxtaposed with their purported 'invisibility' to most consumers (5.4). In the third section, following the wax, I describe in more detail how the environs of the port, distribution centres, warehouses, and wholesalers' stores are dynamically made through the journeys of goods and concomitantly inflected by the violence of logistics (Cowen 2014) (5.5). In the rest of the chapter, I concentrate on two specific ways in which places, the circulation of beauty products, demand for beauty work, and human and more-than-human bodies are entangled in (potentially) toxic ways: in the road networks necessary for their transportation (5.6) and in a final 'forgotten space' – 'the most forgotten' space (Sekula and Burch 2010) – the sea (5.7). Focusing on the sea and how it has historically bound and

continues to bind places together (Steinberg 2015: 40) in highly uneven relationships (Neimanis 2017), the chapter ends by drawing on Christina Sharpe's notion of the wake – 'the track left on the water's surface by a ship; the disturbance caused by a body swimming or moved, in water'– and, in particular, 'the weather of being in the wake' where 'the weather is the total climate; and that climate is antiblack' (2016: 3, 105, 104). Sharpe's work helps to put into relief how forms of racialised violence percolate through the beauty industry, not only in terms of definitions of beauty (see section 2.3) but also materially, spatially, and bodily. This at once ecological and social violence (Ferdinand 2022) is embodied in the diesel-driven trajectories of beauty products and the colonial trade routes these continue to ply, encapsulated in the ability (or not) to breathe (Sharpe 2016: 108-111).

5.3   The power of logistics

Showing me around Vela Wax Company's factory depot, the Managing Director points to the stacks of goods stored there and tells me from where they have journeyed: depilatory waxes are blended with raw materials from Portugal, China, France, the Netherlands, Taiwan, and Malaysia amongst other places, before the finished products are shipped worldwide (fieldnotes, October 2019; see figs. 17 and 18). False lashes are manufactured in Indonesia (Chamberlain 2013; Diani 2013); nail polishes are produced in China, the UK, Spain, and the USA; Botox in laboratories in Ireland (Bailly 2018); the methyl methacrylate (MMA) for use in acrylic nails is produced in Jurong island, Singapore; hair extensions are made in China from hair from India or Myanmar (Tarlo 2016). From these places, the products make their journeys to the salons of London.

Figs. 17 and 18: The raw materials for wax. Materials from Portugal, China, France, the Netherlands, Taiwan, Malaysia, packed in boxes, wrapped in Cellophane, and stacked on pallets inside Vela Wax Company's factory warehouse (photos: Louise Rondel, October 2019).

Like '90% of everything' (George 2013)[107], at some stage these goods will likely pass through one of the UK's seaports[108]. From Vela Wax Company's factory depot in East Angleford, wax produced for the UK market is delivered by road to the warehouses of wholesalers like Metropolitan Beauty Supplies. From the wholesalers' warehouses, goods are distributed nationwide in daily lorry deliveries to their commercial stores. Here, on peri-urban trading estates, the beauty therapists arrive at big box stores to buy waxes, spatulas, fabric strips, soothing creams as well as nail polishes, acetone removers, false lashes, tints and dyes, bed roll, cotton wool pads etc. (fieldnotes, October 2019; see figs. 15 and 16)[109]. These are some of the sites through which the wax and other beauty products – packaged into pots, packed into cases, stacked on pallets, and loaded onto road-going and sea-faring vehicles – 'whizz'[110] in anonymous (anonymous to me anyway [Aguirre 2019]) boxes.

These products form part of the 'fifty-three million tonnes of cargo' (and growing) which journeys through London's ports and other logistical spaces annually, making their way to the city's consumer markets (Port of London Authority 2019: 21). Yet, as Deborah Cowen highlights, '[t]he entire network of infrastructures, technologies, spaces, workers, and violence that makes the circulation of stuff possible remains tucked out of sight for those who engage with logistics only as consumers' (2014: 1). That is to say, as with the many forms of infrastructure which undergird daily life, the ships, ports, trading estates, wholesalers, roads, rivers, and seas are places that, although crucial for consumption and, in the case of the salon, for beauty work, *are not thought much about* (Star 1999: 380). Unlike salons which are omnipresent in the urban landscape, the ports, trading estates, and beauty wholesalers' warehouses and stores are usually sited on the 'edges' of the city, 'out-of-sight' to (most of) the consuming public; they are seemingly 'forgotten spaces' (Birtchnell et al. 2015: 5-7; Khalili 2020; Sekula and Burch 2010).

Centralising this seemingly opaque(d) movement of wax and exploring the unevenly-distributed (potentially) toxic impacts of its circulation, I want to approach the production of the places through which it journeys by drawing on studies which have put forward a critical engagement with logistics. Within this,

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[107] Martin Garside, the Press Officer from the Port of London Authority, tells me that 95% of all UK imports and exports come in and go out via sea (October 2019).

[108] As will the oil which is necessary to make and transport these goods. Indeed, Khalili reports that '[c]rude oil, carried in tankers, constitutes nearly 30 per cent of all maritime cargo; almost 60 per cent of world trade in oil is transported by sea' (2020: 1). She highlights the ways in which the global circulation of oil and its geo-politics have been (and still are) instrumental in the formation of shipping routes and the building and establishment of harbours (ibid: chapters 1 and 2).

[109] Anna, the Sales Assistant at Metropolitan Beauty Supplies, explains that only qualified hairdressers and beauty therapists who have a trade card are able to shop at the stores.

[110] Interview with Martin Garside from the Port of London Authority, October 2019.

I look to work which has, in particular, focused on the unequal spatial dynamics (and implicitly the bodily dynamics) of the transportation and distribution of goods as places and bodies come to be permeated by the diesel which (literally) drives this movement. The spaces of logistics are resolutely not 'out-of-sight' nor 'forgotten' places. These are places in which people live, work, and breathe.

Described by Charmaine Chua et al. as '[a] new global industry' (2018: 618), logistics is 'the management of the circulation of goods, materials, and related information' and 'a multitrillion-dollar business with a central role in the functioning of the global economy' (Danyluk 2018: 630). Above all, the promise of the 'logistics revolution' is 'to make logistics systems "seamless"': a 'smooth' movement of goods across space (Cowen 2014: 55). That is to say a 'smooth' movement or 'flow' of goods which is unimpeded by borders[111], customs, or labour stoppages; and which utilises technologies (including polypropylene pots, cardboard boxes, wooden pallets, plastic wrap, containers, trucks, container ships, and cranes) to hasten the previously time-and labour-intensive loading and unloading processes (idem.)[112]. This is a 'smooth movement of *goods* [which] has its basis in the need to ensure the uninterrupted circulation of *value*' (Danyluk 2018: 637, original emphases). However, as this literature shows, the movement of goods is, in actuality, far from a 'smooth' 'flow' across space. Rather, as these studies demonstrate, it is full of friction. Indeed, as Chua et al. underline, as well as goods, logistics also 'distribute[s] inequality, immiseration, and vulnerability to premature death' (2018: 624, reference omitted); in other words, logistics has a 'deadly life' (Cowen 2014).

I draw on these critical engagements with logistics to interrogate the circulation of beauty products not as 'a mundane science of cargo movement' nor 'a practical, banal business science' as goods move abstractly in an aspatial fashion (Chua et al. 2018: 618). Instead, I take this movement and the logics driving it as fully spatialised and, moreover, as thoroughly imbued with power geometries. It is not merely that logistics has a spatial component, it is fully implicated in the production of spaces:

> It is better understood as a calculative rationality and a suite of spatial practices aimed at facilitating circulation – including, in its mainstream incarnations, the circulatory imperatives of capital and war … [L]ogistics, far from being an apolitical field, in fact has profound social and

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[111] It is important to underline that the movement that is privileged is the movement *of goods* which are able to move more freely and easily across borders than (some) people (see Daikon Zine 2020).

[112] And which is also fastidiously defended against piracy and other forms of 'trespass' (including, for example, union-endorsed labour actions) (Cowen 2014: 55).

spatial underpinnings and consequences as it seeks to smooth the movement of goods and people (idem.).

Martin Danyluk precisely demonstrates how logistics is 'profoundly spatial' and stretches far beyond its obvious sites as:

> [T]he same logic of frictionless flow that animates the corporate distribution centre and the automated container terminal becomes inscribed in the physical and social fabric of entire urban areas (2018: 631, 640).

This is, in Knowles' terms, a 'journey' where the goods 'bump awkwardly along the pathways they create as they go' (2014: 7; see section 1.7). Logistical arrangements, thus, play a role in making the spaces – ports, trading estates, and warehouses as well as the landscapes surrounding these – through which consumer goods travel. These places are explicitly designed in order to 'smooth' the 'flow' and so are infused with 'specific geometries of power fostered by logistical thought and practice' (Chua et al. 2018: 621).

Further belying the notion of a 'flow' and underlining the power dynamics imbued in logistical arrangements, it is crucial to note that the routes taken by goods are not accidental nor incidental. As Khalili describes, prioritising the imperatives of European colonialism and the interrelated transit of oil, maps have been drawn and continue to be re-drawn in order to facilitate trade where '[t]he earth and the sea are assumed to be malleable' (2020: 3, 78). In other words, spaces are intentionally shaped to find and foster the path of least resistance (material, aqueous, human, or otherwise) expediating the movement of goods and, thus, the accrual of their value. If the places through which these goods move are made by their trajectories then these trajectories 'come into collision' (Massey 2005: 155) with the people and other species who dwell along the pathways. The notion of a 'frictionless flow' is thus a fiction (Birtchnell et al. 2015: 7) and one which intentionally disregards both the colonial foundations and the ongoing injuries wrought by this ideal; damage which is considered merely collateral and subsumed to the logic of capitalist accumulation. Describing how 'the architectures of contemporary trade are rooted in a longer history of imperialism, dispossession, and territorial conquest', Chua et al. instruct that we need 'to critically interrogate the structures of governance, exploitation, dispossession, and domination that underpin logistical and practices, and the effects of those processes on everyday life' (2018: 619). Effects which are undeniably spatial and unevenly distributed, at times violent, as quotidian spaces bear the toxic traces of this global 'flow' of goods.

Guided by this literature, in the rest of this chapter I focus on the journey of the wax and other beauty goods through London – port to factory[113] to wholesalers to store to salon (and in the next chapter, to the incinerator) – in order to explore some of the violent and asymmetrical impacts of the 'logistics revolution'. I examine where spatial and bodily harms intersect with forms of structural violence and indeed forms of 'infrastructural violence' (Rodgers and O'Neill 2012), slowly and unevenly seeping into places and into bodies (Nixon 2011). Enabling more and more goods to journey to the salon, logistical landscapes mean that the 'ongoing process' of making 'feminine' bodies can continue apace as the increased, faster, and cheaper circulation of beauty goods expands the possibilities of what can be done in the salon. Simultaneously, the landscapes through which the goods pass and the lives lived there are shaped by this movement. Most acutely, as in the salon, they are permeated by the very petroleum products which fuel the journeys: NO_x and particulate matter emitted by ships, lorries, and vans to be taken up in toxic environmental-bodily interchanges. Viewed thus, the harmful or even deadly bodily-spatial configurings of the logistics which enable beauty work are inseparable from the production of 'feminine' bodies in the beauty salon.

5.4 'Part of daily life'[114]

Given that 90-95% of everything is transported by sea, it is axiomatic to state that the shipping industry, the ports, and the associated infrastructures that keep the goods moving are part of everyday life. Yet, despite the fact that this sea-going 'cargo is vital to the daily lives of millions of people', the Port of London Authority are aware that few people recognise the role of shipping (2019: 21). To emphasise its much-ignored importance, on their website they rhetorically ask:

> How many people realistically give the [ports] a thought when they wake up in their nice warm house and enjoy a hot shower and a reviving cup of tea, possibly with sugar in?

> Do they think of quaysides and cranes as they munch on cereal, toast and butter while reading the newspaper? Do they consider tankers and pipelines as they set out in their car and drive to work via the petrol station? (Port of London Authority n.d.).

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[113] Or port to factory to port in the case of the raw ingredients arriving in the factory to produce those waxes which will be exported overseas.
[114] Cited from the Port of London Authority's (n.d.) website

And to this list, of course, I would add whilst they are having their legs, bikini lines, eyebrows, arms, or underarms waxed? or other myriad beauty treatments? The answer: 'probably not' (idem.)[115].

Talking to Martin Garside, the Press Officer for the Port of London Authority, the separation or even *occlusion* of the workings of logistics from daily life is reinforced. For example, I optimistically ask him if it is ever possible for members of the public to visit London's goods ports. Having just spent half an hour going through a detailed history of the city's waterways, the different cargoes carried, and how they arrive into the various ports from different places, he seems rather taken aback by this question. He replies that he is 'not sure what you would actually learn from visiting a port, you would just see lots of vehicles and boxes whizzing around', I wouldn't be able to open nor see inside any of the containers and so I would be no clearer on the actual trajectories taken by the wax, its raw materials, or other beauty products. He adds that as cosmetics are relatively 'low-value' and 'non-luxury' products coupled with their multiple points of origin and destinations, it may be impossible to definitively say which port or how they are transported as they 'whizz' through London's docks in containers and on the back of trucks. He also tells me that the private port authorities do not tend to grant access to members of the public as for health and safety reasons, they don't want people wandering around amongst all the whizzing boxes[116] (interview with Martin Garside, October 2019). Logistics, then, appears boring; the mundanity of moving stuff from one place to another as quickly as possible and at the cheapest price, best done without members of the public getting in the way and gawping. And behind the walls of the port, obscured from public view, it just seems to happen.

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[115] They are also unlikely to think about the labour necessary for the movement of these goods. Indeed, George describes shipping as an 'invisible industry', stating that these are 'place[s] and space[s] that [are] usually off-limits and hidden' where '[t]here are no ordinary citizens to witness the workings of an industry that is one of the most fundamental to their daily existence' (2013: 2; see also Squire 2015). This occlusion has significant consequences for those working in shipping and across the logistical sector where the violence of logistics is manifest in the demand for speed and for the cheapest price. The monetary, bodily, and psychological cost of this is borne by seafarers (George 2013; Khalili 2020), dockworkers (Cowen 2014), distribution centre workers, and delivery drivers (De Lara 2012; Kanngieser 2013; Loewen 2018). It is also apparent in the 'complex web' of shipping (Barton 1999: 148 cited in Cowen 2014: 46), including practices of 'flagging out' (registering ships to countries with low taxes and lenient labour laws) which can be used to evade accountability for these labour abuses.

[116] This is later borne out in emails from the private port authorities who either do not respond to my request for a visit or reply that they are unable to facilitate public visits. Likewise, despite several (unanswered) emails and phone calls to the wholesalers Metropolitan Beauty Supplies' head office, I am unable to arrange a visit to their warehouses (see section 3.11).

Reflecting this lack of public access and the ways in which logistics is largely outside the purview of many people, Thomas Birtchnell et al. describe how 'there has been a de-linking of the landscapes and seascapes of cargomobilities away from the quotidian spaces of the city' (2015: 6). They continue that this has resulted in the erasure of the workings of circulation from public consciousness and the purported '"forgetting" of the spaces of distribution' (idem.). Indeed, like the Port of Tilbury, on the 'edge' (Parker 2013; Phelps 1998) of the city, London's peri-urban light industrial estates which I visited are also 'part of daily life' but largely abstracted from most people's quotidian experience in both social and geographic terms. Nonetheless, these trading estates equally play a key role in supplying 'the greedy continent' (Sekula and Burch 2010) by keeping in motion 'the "moving materials" which are central to modern social and economic life' (Birtchnell et al. 2015: 1). Visiting the trading estates where the wholesalers' commercial stores are located, I came across not only beauty supplies' stores but also supermarket distribution centres, builders' merchants, plumbing and electrical supplies, telegraph pole storage yards, car valeting services, waste plants, and recycling facilities (fieldnotes, April – October 2019). The city's 'edges' are essential in keeping London consuming and disposing. But, like the ports, these are spaces which are largely obscured, spaces about which 'few people … give a thought' (Port of London Authority, n.d.).

Despite this apparent occlusion, these are spaces which are not only 'part of daily life' (Port of London Authority, n.d.) and part of the demand for beauty work but I argue they are *central* to these. The ongoing beauty work that takes place in the salon could not happen without these spaces which are integral to its supply chain. Or, rather, which serve to *animate* the circulation of goods. Moreover, as Laida Aguirre (2019) argues, 'at a global scale, shipping and handling operates as part of the abstract … [b]ut at the human scale, it is palpable'. Far from 'de-linked' (Birtchnell et al. 2015: 6) for everybody, for those working in and living alongside logistical landscapes, not only do these networks bring the goods necessary for daily life but the diesel-driven journeys of these goods penetrate in other ways too as they leave (potentially) toxic traces in spaces and, concomitantly, in viscously porous bodies (Tuana 2008).

In order to counter the purported separation of the logistical landscapes from daily life and the associated notion that the workings of logistics are somehow invisible whilst simultaneously bringing to the fore the palpability of the goods' circulation, in this chapter I intersperse analysis with images and lengthy extracts from my fieldnotes as I journeyed alongside the wax and other salon-bound products. These, I hope, serve to emphasise the emplaced, embodied, and at times violent dynamics of logistics. Certainly these

may be obscured for most relatively privileged consumers[117], however cultivating a close corporeal attunement to where and how the goods journey underlines that this movement is far from the abstracted ideal of a 'smooth' 'flow' across the city and far from 'de-linked' for everybody (every body). Standing at the entrance to the port as HGVs roared past, their downdraft nearly knocking me off my feet, or walking and cycling along the smoggy A-roads along which the products travel to the wholesalers and onto the salons, it is very difficult to imagine the goods' movement as 'smooth' or as something about which little could be thought (Port of London Authority n.d; Star 1999: 380). In these fieldnotes extracts and images, then, I foreground the spatialised and bodily dynamics of the journey and, in particular, show how my attention was drawn again and again to the (potential) toxicity of this movement.

5.5 Logistics landscapes

Perhaps not a common experience for most people, but if one happens to be in the areas where the port or the wholesalers' warehouses and stores are located, it becomes difficult to think of the circulation of beauty goods as 'invisible', of their trajectories as 'smooth', or of the places through which they journey as 'forgotten'. In this section, I want to outline some of the ways in which the movement of depilatory wax and other beauty products shapes the port spaces and London's 'edgelands' where the trading estates I visited are located. Drawing on the literature from critical logistics studies reviewed above, I argue that these spaces are continuously made and remade through the closely-managed, securitised, and expediated circulation of goods such as those destined for the city's beauty salons. Interrelatedly, I contend that these spatial formations play a role in animating the demand for beauty products as they are able to be delivered faster, cheaper, and in greater quantities. In a reciprocal relationship, these logistical landscapes facilitate the 'ongoing process' of beauty work and work to entrench the particular notions of 'feminine' bodies as hairless, youthful, manicured, tight-skinned, smooth ...

Key to 'seamless' intermodal transport and playing a significant role in producing spaces, it is somewhat of an aphorism to state that the shipping container[118] is 'the box that changed the world' (Donovan and Bonney 2006; see also BBC 2013; Birtchnell et al. 2015; Levinson 2006; Squire 2015). As Cowen details:

> More than fifty years after its introduction as an efficient means of moving military equipment to the front, the container has been celebrated as the single most important invention in the

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[117] Myself included here as ordinarily I pay very little attention to where the things I consume come from and to how they travel across the city.

[118] Khalili reports that 'containerised cargo accounts for some 23 per cent of all dry cargo by volume [and] constitutes 70 per cent of all world cargo by value' (2020: 1).

economic globalisation of the decades that followed … Containerisation radically reduced the time required to load and unload ships, reducing port labour costs and enabling tremendous savings for manufacturers, who could reduce inventories to a bare minimum. Containerisation was thus a necessary underpinning for the rise in just-in-time (JIT) production techniques. For JIT to become a globalised system, inputs and commodities had to be coordinated and transported quickly and reliably across space (2014: 41).

On their website, Forth Ports[119] (n.d.) market the Port of Tilbury by highlighting not only its proximity to London's consumer markets but also the *ease of access* to these markets via the M25 and onsite railheads. They emphasise that this is facilitated by the port's 'strong multimodal transportation links by road, rail, and barge' which 'remove complexity from the supply chain [and] reduc[e] journey miles …' (idem.). Multimodalism, of which the container is a – if not *the* – central technology, is key in the formation of 'a single system' which 'smooths' the interfaces between the various modes of transport (Birtchnell et al. 2015: 3-4). What is more, this container-centric multimodalism produces new spatial formations as '[p]ort terminals, rail yards, warehouses, even the turning radii of streets – all these infrastructural elements have been redesigned around the container's standard dimensions' (Danyluk 2018: 640). 'The box that changed the world' (Donovan and Bonney 2006) quite literally as spaces of work and life are shaped around or, rather, *by* the container.

Another prominent way in which containers have shaped urban landscapes is in the shift from city-centre docks to down-river, deep-sea ports. The increase in size of the ships which carry containers and the ways in which goods are unloaded and transported onwards 'required new forms of port technology and capacity' (Mah 2014: 2). 'Older ports … were unsuited to the requirements of the new technology (such as deep-water, road and rail networks)' and so experienced a severe decline (El-Sahli and Upward 2017: 226). These closures changed the texture of London's riverfronts profoundly as up-river Thames-side neighbourhoods were 'ruined by de-industrialisation, dock closures resulting from containerisation and urban decline' (Back 2017: 21; see also Lyon and Back 2012):

> The docklands transformed from a vibrant space of employment, trade, and a buzzing everyday life, where noise filled the air and workers spilled out from the many public houses on the waterfront at night, to a series of wastelands in the space of just a few years (Watson 2019: 85).

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[119] The private authority who operates the Port of Tilbury amongst other ports across the UK.

As Martin Garside from the Port of London Authority succinctly told me on the revolution in logistics and the shift to containerisation, 'the container did in docklands'[120]. On the other hand, the new down-river ports like the Port of Tilbury were designed for greater volumes of throughput at greater speed and less cost; a 'smoothing' encapsulated by the container and shifting activity and livelihoods to the 'edges'[121].

Following the wax from Tilbury towards the city, as 'logistics networks inevitably extend inland' (Cidell 2015: 17), places outside the port's immediate surroundings are also textured by this 'smooth(ed)' circulation of goods. If the logistical imperative is to keep the goods in motion, this is in order to transport them ever-closer to London's markets. But the city presents logistical challenges: it is congested, the roads are narrow, and land is expensive and not conducive to large warehouses, distribution centres, nor HGVs (Cowen 2014: 180). To overcome these challenges, places are sought which have easy access both from the ports and to the markets; places where land is less expensive and is suitable for large constructions; places which are on the city's 'edges' (Parker 2013; Phelps 1998) in the so-called 'invisible metropolitan hinterland' (De Lara 2012: 76; see also Cidell 2015: 21). Places such as London's peri-urban neighbourhoods where the beauty wholesalers' commercial stores are located:

Walking through the outskirts (if there is such a thing) of the peri-urb on my way to Metropolitan Beauty Supplies' store, I am immediately struck by the number of massive 'barn-like' (Hatherley 2010) structures on the seemingly endless light-industrial and trading estates through which I pass. Bin lorry depots, scrap metal yards, large box stores, supermarket distribution centres, and warehouses dominate the vista in this part of the outer-London borough. The trading estate where Metropolitan Beauty Supplies has one of their stores is a short distance from an A-road which eventually turns into a motorway a few miles south of the peri-urb. The units on this estate are all identical red brick boxes with dark grey metal roofs with ample parking, capacious delivery doors, and large wheelie bins. Any greenery along the roadside and between the units looks a bit opportunistic and uncared for which adds to the somewhat bleak atmosphere of the estate despite the brightening day. As I walk around the neighbourhood, even in the relative peace of a local park, I can see another massive grey and box-like warehouse through the

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[120] Since the 1980s, containerisation has landscaped UK cities in other ways too. For example, in London, connected to processes of financial deregulation and the necessity to house the banking industry and its workers, investments have been made in the former docklands transforming them into spaces for (financial) trading, aspirational living in waterfront apartments, leisured consumption, and cultural experiences (Mah 2014; Massey 2007 on Canary Wharf; Watson 2019: 86). A more recent impact of containerisation on urban landscapes has been the increase in 'Box-Park' developments where shops, cafés, bars, restaurants, and even a library are housed in empty shipping containers (Parker 2013; Squire 2015).

[121] At the time of my fieldwork, following a £1 billion investment programme (Forth Ports 2019), '[a] brave new Tilbury' (Port of London Authority 2019: 75) was being touted. Tilbury2 was 'expected to be ready for work in the first half of 2020' with a projected 'doubling of volumes across [Tilbury's quays] in the next ten to fifteen years' (idem.). The *Port of London Authority Handbook* describes this 'expan[sion] into a 152-acre site next door to the port' as a means to 'continue to create and grow dynamic supply chain solutions …' (idem.).

autumnal trees and the gentle sounds of the park's birdlife start to mingle with reversing beeps from lorries and crows cawing as they scavenge the mounds of rubbish piled up at a nearby waste plant.

(Fieldnotes, April – October 2019).

Figs. 19, 20, and 21: The peri-urban 'edges' (photos: Louise Rondel, April – October 2019).

This outer-London borough has long-been conceptualised as an 'edge city', intimately connected with yet separate from the city. Nicholas Phelps describes how a 'defining feature of [an edge city] economy [is] … in its proximity and relationship to other settlements' (1998: 453). Simultaneously, Phelps describes how in the development of such 'edge cities', there is 'a degree of city-centre dependence on suburban growth' (ibid: 443). This is a dynamic relationship between the centre and its 'edges': the consumption of the former constituted by the landscape of the latter and vice versa. Dominated by trading estates and huge metal boxes, this London peri-urb is an 'edgeland' in another but interrelated sense too: 'an undefined place which is neither city nor country, a place where things are assembled, stored, moved from and to' (Parker 2013: 379). Places, which Martin Parker (idem.) argues, were made by the container. Most straightforwardly, these 'edges' are needed to supply the goods to the centre. However, as I contend, these 'edges' with their light industrial estates, large warehouses, capacious loading bays, wide roads, and motorised-traffic-oriented layout also prompt the demand for these goods as the very spatiality of these places enables increasing amounts of goods to journey through them.

Ports, port cities, their immediate hinterlands, 'edge cities', and the city's 'edgelands', then, are in-part made by the circulation of goods and, thus, by the imperative of the global logistics industry to keep stuff moving. These, in turn, animate demand for these goods as increasing quantities are able to be moved through them to the city centre. Thus, there is always something more to buy, something more to consume, and, in the case of the 'ongoing process' of beauty work and an industry predicated on repetition and replacement, something more to do to maintain a 'feminine' appearance. Having sketched some of the ways in which the city's 'edges' are fashioned by the movement of goods, in the following sections I focus on two spaces in which this is most palpable: in the impacts of the transportation of the goods overland via road networks (5.7) and in 'the forgotten space' (Sekula and Burch 2010) of the sea (5.8). As with all forms of spatial production, there are deep-seated inequalities in how this shaping of space is experienced and by whom. These geometries of toxicity are epitomised in the air that 'we' breathe as the diesel-powered journeys of beauty goods come to permeate the environment and penetrate viscously porous bodies.

5.6   Via road

In-part enabled by the material technology of the container[122] and enrolling purportedly 'expendable' human labour (see footnote 115), the logistical ideal is for goods to seamlessly 'flow' from ship to lorry to warehouse to the consumer. This purportedly 'smooth' transportation requires in-land infrastructures: for example, well-tarmacked and wide roads, drivers, vehicles, service stations, and diesel. Yet this circulation via road has implications which further bely the notion of the 'flow' idealised by the logistics industry. As the movement of goods shapes landscapes, the fictions and frictions of the 'flow' are revealed as this road haulage leaves pernicious, creeping, and long-lasting toxic traces in places and in bodies.

Discussing 'the intimate relationship between state violence and commercial trade in the modern era', Chua et al. emphasise how '[o]ne expression of this relationship is witnessed in the harm inflicted on people who work in and live around freight networks' (2018: 620). They underscore how 'state and corporate investments in large-scale infrastructures of circulation and extraction have profoundly reshaped the landscapes through which things move, toxifying the environments of [neighbouring] communities' (idem.). Likewise, in their report into the health, social, and environmental impacts of global trade, Martha Matsuoka et al. highlight the 'negative environmental, health, labour, and community consequences' such as 'air and water pollution … with nearby community residents (or marine life, in the case of ships) exposed to diesel particulate matter and noise' (2011: 3). As the below excerpts from my fieldnotes from my visits to Tilbury and the wholesalers' stores indicate, these effects are highly palpable in the nearby neighbourhoods:

In Tilbury, cycling from the passenger ferry terminal towards the port entrance, I am relieved that the pavement running along the single road is a shared-use pedestrian-cycling path as I don't much fancy cycling on the road with its stream of heavy goods vehicles (see figs. 14 and 22). As I approach the main entrance to the docks, the flow of freight traffic – either roll-on-roll-off (ro-ro) vehicles, pulling containers, or tractor units arriving to collect their cargo – builds significantly. Apart from a woman walking to start her shift at the giant supermarket box store, I do not see any other pedestrians or cyclists along this stretch. I stop to take some photos and I am almost blown over by the downdraft of two passing HGVs. As the lorries thunder past, I start to feel frightened (in my notebook I write 'actually terrifying') and grip the handlebars of my bike a little harder to buffer myself against their force.

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[122] Inside the shipping container, the pallet (Dommann 2009], the cardboard box (Angélil and Siress 2011), and the plastic pot are all material technologies which equally serve to facilitate the 'smooth' movement of goods to the market.

Fig. 22: Cycling towards the Port of Tilbury (photos: Louise Rondel, October 2019).

Following the wax to London's peri-urbs where the wholesalers' stores are located, I am expecting a similar landscape, to see wide roads lined with industrial estates, warehouses, and big box retailers, an area devoid of habitation. Mostly this is the case. Yet, I am surprised to see some short sections of the A-road along which I am walking are lined with 1930s terraced housing, their front doors a mere five metres from the dual carriageway. With net curtains hung to shield the life within from the peering eyes of the drivers waiting at the traffic lights, these houses could be on any suburban street. However, their proximity to the A-road's incessant traffic means that they look grubby and worn out from the pollution and noise. Just looking at the houses gives me the sensation of sleepless nights listening to the din and feeling the vibrations as the non-stop cars, vans, and lorries pass right outside the bedroom windows[123]. I wonder who could live here, if they have adapted to the noise so that they no longer notice it, and if they are ever able to open their windows? What about their lungs?

The trading estate itself is based around a single straight road with units on either side, about thirty units in all. As well as the beauty wholesalers, there are also builders' merchants, a car valeting service, and some sort of industrial catering premises. On foot and crossing paths with a male delivery driver in a hi-viz jacket, I definitely feel conspicuous and 'out-of-place' as I have no discernible reason to be there, especially as a pedestrian, perhaps more so as a woman. I decide, if asked, I will say that I am waiting for my car to be valeted. The pavement which runs the length of the estate is punctured every five metres with turnings into the forecourts of the units where bigger-than-usual parking spaces are marked. Along each segment of pavement, there are three giant wheely bins housed in a wooden structure. The road

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[123] Recording made from the side of the peri-urban A-road: https://soundcloud.com/user-10454219/peri-urb

which runs the length of the trading estate is wide and relatively smooth. This feels as if it is a place explicitly designed around distribution[124] (see fig. 23).

(Fieldnotes, April – October 2019)[125].

Fig. 23: A peri-urban trading estate. A landscape for driving, deliveries, and disposal (photo: Louise Rondel, October 2019).

Showing me around one of the wholesalers' stores, the Sales Assistant Anna tells me that a key advantage

of shopping there is the discounts they offer on bulk buying[126]. This is important for those working in

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[124] On their website, the company who manage the trading estate where one of the wholesalers' commercial stores is located highlight its proximity to some of London's major A-roads, various trunk roads, and motorways (Anon n.d; I am keeping this source anonymous in order to maintain the anonymity of participants and where they work).
[125] In spring and summer 2020, following the introduction of traffic-calming measures by the local council, the subject of traffic, the pollution it causes, and who experiences the worst of it have become increasingly contentious issues in the neighbourhood where this trading estate is located (fieldnotes, July 2020).
[126] Interview with Anna, October 2019.

salons as, for example, a 450-gram pot of gel wax will serve between four and ten clients[127], spatulas are thrown 'away' after every customer[128], and approximately twenty-five fabric strips are used per leg-waxing treatment. This is not to mention all the other goods used in the salon which need constant replenishing. At the wholesalers, a case of twenty-four wax pots is much better value than buying a single one, likewise twelve packets of one hundred fabric strips rather than one pack; saving money and reducing the time spent going to the store but resulting in a boot-full of goods. The vehicle-centrism of this bulk buying is reflected in the relatively 'out-of-town' and accessible (by car) location of the industrial estate and the space given over to parking in front of each unit. Bulk buying also requires a steady supply of deliveries and the Store Manager comments that they receive a pallet-load of goods nearly every day from their central warehouse, the vans travelling via motorways and A-roads. Accessibility as well as the ability to unload and store their stock are all important and the units on the industrial estate are shaped to accommodate these daily deliveries with wide unloading bays, up-and-over loading doors, and large stock rooms. This is a landscape made by buying in bulk; but, equally, buying-in-bulk is made possible by the landscape.

At the entrance to the port watching the huge, container-pulling lorries whose engines create one roaring block of sound and who shake the pavement on which I am standing, or looking at the grubby façades of the houses along peri-urban A-roads, or cycling to visit one of the wholesalers' stores, the toxifying effects of this endless movement in beauty goods is palpable. This is clearly reflected by the London Air Quality Network's (2018) most recent map of annual mean pollution[129]. The map marks the roads along which I walked and cycled to reach the wholesalers' stores as experiencing levels between 55 and >58 microgrammes of NO_2 per metre cubed ($\mu g/m^3$) in 2016[130]. This is at the most severe end of the scale and means these sections of road 'fail annual mean objective' of $40\mu g/m^3$ (idem.)[131]. For Tilbury, the Thurrock Council *2019 Air Quality Annual Status Report* reports levels of NO_2 between 32.88 and $42.39\mu g/m^3$ for different sites around Tilbury (2019: 7), some monitoring stations registering above the level of $40\mu g/m^3$

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[127] This depends upon the treatments the clients are having done and the size of the clients (interviews with Anna and Liz, October 2019).

[128] Or in some salons, spatulas are thrown 'away' after every application for 'a lot of places don't double dip so you'll change, instead of going to get more wax [with the spatula], you'll bin it' (interview with Anna, October 2019).

[129] It is important to note that air pollution levels do not represent an objective measurement as decisions are made about where to place sensors and which pollutants are to be prioritised for monitoring (Gabrys 2017: 153; see section 6.6).

[130] 'Why 2016?' 'We have chosen this year because it is the latest year for which an accurate model is available' (London Air Quality Network 2018).

[131] The annual mean limit set by Directive 2008/50/EC on ambient air quality and cleaner air for Europe is $40\mu g/m^3$ of NO_2 (Barnes et al. 2019: 56).

of NO$_2$ set by the EU. In their introduction to the report, Thurrock Council specifically underline the role of commuter and logistical traffic in generating pollution and where is most impacted, stating that the affected roads 'are often saturated with traffic during peak hours and in many of these areas there is relevant public exposure, predominantly in the form of residential dwellings which are in relatively close proximity to these roads' (ibid: i). As well as these official measurements from air monitoring stations, the pollution from traffic may be experienced in more prosaic but equally significant ways, as sleep disrupted by the constant rumble of traffic, the oily smell of diesel fumes, difficulties in crossing road systems which privilege motor traffic, a tightening of the lungs, or a persistent cough. The reported long-term impacts of proximity to these forms of pollution are also multifaceted, studies have linked vehicular emissions to 'multiple health effects ranging from respiratory irritation to cardiovascular diseases and premature death' (Fecht et al. 2015: 201) as well as to 'diminished social integration, … lower quality public (especially green) spaces [and] reduced physical activity' (Barnes et al. 2019: 57-58, references omitted).

Mirroring the patterning of noxious emissions in the salon explored in the previous chapter, the toxicity of the goods' journey to the salon is unevenly distributed and experienced across London[132]. Research into the geographies of air pollution and its health issues has precisely highlighted the asymmetrical geometries of toxicity. Writing on road traffic pollution in London, Franca Marquardt describes '[b]y intentionally building and maintaining cities according to hegemonic visions of economic progress, forms of slow violence are being executed, marking some lives and landscapes as favourable and some as "disposable"' (2022: 27). Likewise, Juan De Lara contends that the distribution networks necessary for global commodity chains significantly 'contribute to the environmental degradation in poor communities' (2012: 75). As Nadine El-Enany (2019) stresses, speaking about race and the air 'we' breathe: it is 'racialised populations [who] find themselves trapped in the city in zones which make them vulnerable to harm and premature death'. In other words, motorised movement and the consumption practices it enables are privileged to the detriment of particular communities. The uneven distribution of pollution which results from this incessant diesel-fuelled movement is borne out by studies in environmental health sciences and transportation research. For instance, in their study of the associations between air

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[132] The interrelation between the locat*ing* of particular types of industry, forms of air pollution, and who experiences the most harmful effects follows a common and long-standing pattern in large industrial cities. For example, see Rhys-Taylor (2013: 242) on London's prevailing westerly winds and their impact on what and who is located where; or Heblich et al. (2021: 1511) whose study of historical pollution and neighbourhood sorting 'show[s] that the high level of temporary pollution from industrial coal use modified the spatial organization of cities in the long run'.

pollution, and socioeconomic characteristics, ethnicity, and age profiles of UK neighbourhoods, Daniela Fecht et al. report that neighbourhoods in the most deprived quintile 'experienced on average 2.6µg/m^3 higher levels of PM$_{10}$ and 7.9µg/m^3 of NO$_2$' than those living in the least deprived quintile (2015: 204; see also Barnes et al. 2019; Dorling 2010; Mitchell and Dorling 2003). They also 'found that at the national level[,] neighbourhoods with >20% non-White [residents] had statistically significantly higher mean PM$_{10}$ and NO$_2$ than neighbourhoods with <20% non-White [residents]' where the difference for PM$_{10}$ was 4.2µg/m^3 and for NO$_2$ it was 13.5µg/m^3 (Fecht et al. 2015: 204; see also McLeod et al. 2000).

Inhaling and coughing along the port approach road or the peri-urban A-roads and feeling frightened by the scale of the traffic, I am grateful that I do not live here and that at the end of my visit I can cycle away and return to my (marginally) less polluted area[133]. However, I am also left wondering about who, in El-Enany's (2019) terms, is 'trapped' here; who is considered, as Marquardt describes, 'disposable' (2022: 27); whose life is subsumed to the imperatives of the 'flow' of goods. Reflecting the environmental science research reviewed above, using data from the English *Indices of Deprivation* 2019 map and the 2011 Census (Nomis n.d.b; n.d.c, n.d.d)[134], it is shown that many of the areas alongside the Port of Tilbury and the peri-urban roads along which the wax journeys fall into the most deprived quintile of the UK's population and (with the exception of Tilbury) have ethnically-mixed populations with significantly more than 20% of the residents identifying as 'non-White'. In the city, as in the beauty salon, the toxicity of the wax's and other beauty goods' diesel-fuelled journeys is disproportionally borne by impoverished, disadvantaged, and black and minority-ethnic-in-the-UK communities.

I am writing this thesis a ten-minute walk from the busy A205 in London, almost constantly bumper-to-bumper with private cars, buses, and goods lorries delivering to nearby trading estates and heading into and out of the city (see black & brown 2021). This is a short distance from where nine-year-old Ella Kissi-Debrah lived and died in 2013, and who, in December 2020, became the first person for whom air

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[133] The London Air Quality Map (2018) for 2016 shows the roads immediately surrounding where I live as registering between 31-37µg/m^2 of NO$_2$, slightly within the limit of 40µg/m^3 set by the European Union. Two roads over, on a busier main road, this quickly increases to 40-43µg/m^3.

[134] The local area reports from 2011 UK Census data for all usual residents aged 16-74 show that most of those living alongside the Port of Tilbury identify as White (82.3%) (Nomis n.d.b); the population living alongside the one of the peri-urban A-roads adjacent to one of the wholesalers' stores is ethnically mixed with 31.4% of residents identifying as White, 24.9% as Black/African/Caribbean/Black British, and 33.6% as Asian/Asian British (Nomis n.d.c); and the population living alongside another of the peri-urban A-roads near to another of the wholesalers' stores is also ethnically mixed with 43.8% of residents identifying as White, 35.3% identifying as Black/African/Caribbean/Black British, and 10.1% as Asian/Asian British (Nomis n.d.d).

pollution was listed as a cause of death (Laville 2020)[135]. The absorption of tiny but deadly nitrous oxide particles and other particulate matter which gradually and mortally restricted the functioning of Ella's lungs – which '"made a material contribution" to her death' (BBC 2021)[136] – is a form of what Nixon (2011) has identified as 'slow violence'. This is a violence which is creeping and thus (almost) imperceptible, easily attributable to other causes, and for nearly eight years[137] after her death deniable, or at least, unprovable. Reflecting on Ella's – a vivacious, clever, sporty, determined child – shortened life, the violent material and bodily impacts of the logic of the supply chain and the insatiable consumption practices it animates are certainly palpable[138].

Responding to Ella's death and the air pollution which is pervasive along the A205 and in the surrounding residential roads near to where she lived, the artwork *Breathe:2022* has been installed across Lewisham, south-east London by the artist Dryden Goodwin (Goodwin 2022; Invisible Dust 2022; see figs. 24 and 25). With images pasted on the town hall, flyposted under railway bridges along the South Circular and A20, and encased in JCDecaux digital screens along the borough's busy high streets, the installation 'connect[s] this global health emergency of air pollution to the daily lives of Lewisham locals and those campaigning for clean air worldwide' (information from installation 2022). Perhaps going unnoticed by drivers and their passengers unless they are stuck in traffic, these powerful and deeply affective images depict local residents and clean air activists 'fight[ing] for breath' (Invisible Dust 2022); a way of, in the words of Ella's mother, 'making the invisible visible': 'it's a red alert, it's a public health crisis' (Rosamund Adoo-Kissi-Debrah cited in idem.). Enlarged to life-size and posted alongside the South Circular, the pencil-drawn images show a person inhaling and exhaling, their head tipped back and their chest expanding, appearing to struggle. Under the claustrophobic bridge where the air coming from the exhaust pipes seems to be trapped, these delicately drawn images feel incongruous. The person in them looks fragile, maybe panicked as they gulp down air. Leaning my bike up under the railway bridge to take a closer look at the installation and momentarily running my hand along the sooty metal railing (see fig. 26), I suddenly feel

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[135] *The Guardian* reports that '[l]evels of nitrogen dioxide and particulate pollution around the South Circular breached legal limits for much of the time Ella was ill' (Laville 2019).

[136] These are the words of the coroner who led the inquest (BBC 2021).

[137] Speaking at the Horniman Museum as part of the *We Breathe, Together* event (September 2022), Rosamund Adoo-Kissi-Debrah, Ella's mother, describes how she had to fight for a second inquest into Ella's death after the first was inconclusive about the causes and the role played by traffic-originated air pollution.

[138] For more on Ella's legacy and the campaign for reducing air pollution and education around childhood asthma see the Ella Roberta Family Foundation website http://ellaroberta.org/

very vulnerable, the noisy dominance of the traffic reminds me that this road choked with cars and lorries carrying stuff is not a place to linger and breathe.

Figs. 24 and 25: Images from *Breathe:2022*, art installation by Dryden Goodwin on the South Circular (photos: Louise Rondel, July 2022).

Fig 26: Under the railway bridge on the South Circular (photo: Louise Rondel, July 2022).

5.7   'The forgotten space'[139]: The sea

I want to end this chapter with another purportedly 'forgotten' space or, as Allan Sekula and Noël Burch (2010) describe it, 'the most forgotten space': the sea. This is a space whose role as it pertains to the transportation of goods and so to international capitalism seems to be 'forgotten' by most consumers. Indeed, as Sekula and Burch argue, containerisation has 'made cargo anonymous, odourless, secretive, abstract' and so its movements and pathways are rendered easily ignorable (idem.)[140]. As along the road networks of which most people are at the very least aware, the global transportation of commodities also leaves its traces in the (largely) far-away waters through which the goods sail. The contemporary shipping industry with 'more than 100,000 ships at sea carrying all the solids, liquids and gases that we need to

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[139] Sekula and Burch (2010).

[140] The sea is not 'forgotten' in all contexts as harbours and former docks are redeveloped for leisure and different kinds of labour practices. For example, Sekula describes how '[t]he old harbour front … is now reclaimed for a bourgeois reverie on the mercantilist past … Busboys fight over scarce spoons in front of a plate-glass window overlooking the harbour. The backwater becomes a frontwater. Everyone wants a glimpse of the sea' (2014: xiii).

live' (George 2013: 3) (and those that we 'need' precisely because of the ease their availability) has massive ecological and usually 'unseen' oceanic effects (Sekula and Burch 2010). For example, Rose George reports that the industry impacts hugely on marine animals noting an increasing scarcity of whale food, significant changes in the underwater sonic environment brought about by constant shipping activity, and collisions between vessels and whales which are especially prevalent when 'feeding grounds coincide with shipping lanes' (2013: 214; 215-219, 210; see also Khalili 2020: 76-77 on different forms of marine pollution caused by the shipping industry).

Fig. 27: The Celestine. Image taken from the ferry on the return journey from Tilbury. A ro-ro cargo ship leaving the one of London's ports to travel to the Netherlands. Flying under a Maltese flag[141], she is one of the 100,000 ships at sea[142] (photo: Louise Rondel, October 2019).

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[141] See footnote 115 on the practices of flagging out and its consequences.
[142] The website www.marinetraffic.com was used to identify vessels and their journeys.

From the commercial port at Tilbury, I return to the ferry pier and board the small passenger boat to traverse the river back to the train station. The 4pm crossing is busy and the ferrymen tell us that earlier that day they had spotted what, at first, they thought was a seal and so they took a trip out to take a closer look. As they approached, they realised it was a small dead whale and so they informed the river authorities who collected it and took it further downstream where it was lifted out of the river. This is the second whale in as many weeks to be found dead in the Thames after Hessy, a humpback whale, was found a fortnight earlier (Mohdin 2019). Hessy's post-mortem revealed 'a large wound on the underside of the head' which was 'most likely a result of ship-strike' (Rob Deaville of ZSL's cetacean strandings investigation programme cited in idem.). It was not clear what this second whale had died from but local news report that it was 'caught up in some stuff' (McPolin 2019). One of the passengers jokingly says the whales are coming upstream due to Brexit. The ferryman, gazing down the river, sadly responds that he saw a documentary on the BBC about the effects that climate change is having on whales.

(Fieldnotes, October 2019).

Hessy and the second, unnamed, whale are but one of the marine species whose trajectories literally and mortally 'come into collision' with the trajectories of international capitalism materially and aqueously manifest in the passages of container ships (Massey 2005: 155; George 2013).

This moment during my fieldwork served as a pertinent reminder of the ecological impacts of the global transit of beauty goods. It is certainly not my intention to prioritise the plight of whales at the expense of a recognition of the violence wrought on people by the long-standing colonial and racist capitalist connections between places, trade, and the sea. But nor do I want to say that the 'ecological' and 'social' effects occupy spheres distinct from one another. Rather, the imperatives of racial capitalism, deep-seated structural inequalities, and the ecological and social impacts of the climate emergency are deeply interrelated. Malcom Ferdinand shows how colonialism has generated the conditions for the ecological crisis where 'both historical colonisation and contemporary structural racism are at the centre of destructive ways of inhabiting the Earth' (2022: 11). Moreover, places and peoples who have already experienced the violence of colonialism are disproportionately affected. For example, as Alice Mah and Thom Davies explain '[a]round the world today, ethnic minority and low-income communities continue to be disproportionately burdened by toxic pollution [as e]nvironmental injustice appears wherever social inequality and pollution collide' (2020: 2, references omitted). Likewise, Sharon L. Harlan et al. describe how:

> The Global South and people of colour, Indigenous communities, the poor, and women and children in all nations are precisely the populations that bear the brunt of climate disruption in terms of its ecological, economic, and health burdens (2015: 129).

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Susan Holmberg states in her report on inequality and climate change that not only do these communities 'experience the worst effects of climate change' but they 'have the least ability to cope with and adapt to it' (2017: 2). This global environmental discrimination is experienced at once ecologically and socially and is 'built on centuries of unequal social relations' (Mah and Davies, T. 2020: 5); a manifestation of intersecting forms of racism, classism, ableism, sexism, speciesism which emerges from structural inequalities, institutionalised racism, colonial histories of domination, 'post-colonial presents', and ongoing racist capitalist exploitation (Sealey-Huggins 2018: 101, 105; see also Alaimo 2008; Chen 2011; Davies, T. 2018, 2019; Hird 2013; Liboiron 2018; Nixon 2011; Pellow 2016; Tuana 2008; Westra and Lawson, B.E. 2001).

Ferdinand proposes that ships, their trajectories, and what they carry – [f]rom Christopher Colombus's *Niña* to container ships, from trawlers to warships, from whalers to oil tankers, from slave ships to migrant ships capsizing in the Mediterranean, through their functions, routes, and cargo' (2022: 22) – offer a productive way of considering how the ecological, the social, and forms of colonial violence are entwined. For, he continues, 'ships reveal the relationships of the world' (idem.). For instance, British colonial power and London's place as the capital of empire were in-part enabled and sustained by the country's maritime connections. The Thames, the Mersey, the Severn, the Tyne, the oceans these give into, and the ships that sailed from Britain's ports were/are key to the nation's global domination and dispossession and to the deep violence carried out to forge and maintain the British empire. Like Ferdinand (2022), in order to highlight ongoing colonial violence, Sharpe also turns to the oceans and foregrounds the routes plied by slave ships and the role of the seas in the enslavement and transportation of abducted Africans (2016: 25-26). 'In the wake' of the ships which carried people-as-cargo from the West African coast to the Caribbean and America, Sharpe describes how 'antiblackness as total climate' persists (ibid: 21, 106). A climate which is all-engulfing, texturing every part of life and death; and, discussing the African-American men and women who have been murdered by the police, she shows that this is a climate which is at times literally suffocating (ibid: 108-113).

Inescapable, 'antiblackness as total climate' (Sharpe 2016) percolates through the beauty industry in multifaceted ways with pernicious symbolic and deeply material bodily impacts. This has been much discussed in critical beauty studies with regards racist assessments of who can occupy the category of 'beautiful' and the ways this is wielded ideologically, politically, socially, and economically (see section 2.3). Resonating with Sharpe, this 'total climate' can also literally take breath away in who is most at risk from the toxic exposures in the salon (see Zota and Shamasunder 2017; see section 4.9); in who is most

at risk from the toxic exposures as its goods are transported across the city or as vehicular exhaust fumes are carried into the air and released into the sea impacting on a global scale in a climate-changing world. As I discuss in the next chapter, it is also manifest in whose neighbourhood the salons' waste is deposited, whose neighbourhood is discounted as the 'away' to where (it is imagined that) rubbish is thrown or to where the incinerator plume and the (potential) toxins it contains are carried on the prevailing winds.

Epitomised by the oceans' long-standing, violent, dispossessive, and asymmetrical binding together of places (Steinberg 2015: 40), the (perhaps intentionally) 'forgotten' space of the sea and its central role in racist capitalism drove and perpetuated and still drives and perpetuates socio-spatial inequalities and injustices. Following Sharpe (2016), these are embodied most palpably in the (in)ability to breathe and, as Ferdinand (2022) shows, most urgently in the climate emergency. This (in)ability to breathe – entwined with intersecting racialised and classed social structures, where profit is prioritised, subsumed to the violent logics of logistics, and oil-drenched – is inseparable from consumption practices and, in the case of the salon, from beauty work and the associated making of 'feminine' bodies.

5.8   Concluding remarks

Out-of-sight to (most of) the consuming public, taking place in purportedly 'invisible' or 'forgotten spaces' at the 'edges' of the city, it might seem as if the logistical work of getting goods to the salon just happens. Yet, through the lens of critical logistics studies this chapter has argued that as beauty products move through the different spaces of London's ports, trading estates, warehouses, and wholesalers' stores and along the roads and waterways which connect these, their circulation is active in shaping these places. Moreover, in the privileging of the 'flow' of goods and the accumulation of capital, all else is rendered subordinate to this movement. By focusing on the roads and the seemingly 'forgotten space' of the sea, this chapter has shown that not only are these spaces made to enable the purportedly 'smooth' trajectories of these goods but that these spatial productions are imbued by the accumulation-driven logics of global trade and threaded through with violence: 'the deadly life of logistics' (Cowen 2014). The spaces and the different bodies who live, work, and breathe there are literally permeated with petro-derived products as the goods' journeys to the consumer are largely diesel-driven. By centring the emplaced and embodied palpability of this movement, I have problematised the notions that these journeys are 'smooth', the workings of logistics 'invisible', or the landscapes 'forgotten'. Rather, these are the spaces of (somebody's/some bodies') everyday life. Thus, I have sought to show that the ability to not think much about different logistical infrastructures (Star 1999) is unevenly distributed and occludes significant injustices. Moreover, what is purportedly 'invisible' can be perceptible in more

insidious ways with black and minority-ethnic-in-the-UK, disadvantaged, and marginalised communities most vulnerable to the deeply bodily harms associated with beauty products' oil-fuelled circulation. Returning to the epigraph with which I opened, this chapter has demonstrated that the 'apparently "smooth"' (Birtchnell et al. 2015: 7) movement of goods is fraught with frictions, that the desired 'flow' is, in fact, a fiction.

'In the wake' (Sharpe 2016) of the container ships which continue to ply colonially-forged trade routes and circulating in the air that 'we' breathe, the human scale and the asymmetries of the workings of logistics are certainly palpable (Aguirre 2019). The impacts of the global trade of goods are felt both across the city and beyond, made increasing salient as the world's climate changes dramatically with inseparably ecological and social impacts (Ferdinand 20220). These spatial productions and the ways in which they seep into bodies are not only consequences of the supply chain, but they are fully implicated in animating the demand for goods. If, in the salon, beauty work and 'feminine' bodies it makes are never finished, an 'ongoing process', then this is in-part due to the non-stop journeys of the beauty products and the spaces which are shaped to enable this**.** As with the 'performance characteristics' of the wax and other products in the salon, by considering the logistical infrastructure which prompt the goods' circulation, the 'ongoing process' of beauty work is once again shown to be saturated with oil and co-extensive with (potentially) toxic spatial-bodily interchanges.

Chapter 6 Throwing 'away': To the incinerator and beyond

What the voracious city devours, it must eventually disgorge in rubbish and excrement (Ackroyd 2001: 336).

Fig. 28: Salon bin (photo: Louise Rondel, October 2019).

6.1   Introductory remarks

Once the beauty therapist has ripped out the unwanted hair, the used wax and now-sticky hairy fabric strips are thrown straight in the bin she keeps under her treatment bed (see fig. 28). Also discarded are the spent spatulas, cotton wool pads, paper bed roll, and empty plastic pots along with used nail files, old gel polish, tint and tinting brushes, eyelash glues, cotton buds, traces of cleansers, toners, and moisturisers, and the mostly plastic packaging these all come in. At the end of her shift, she empties the small pedal bin into the large rubbish sacks provided by the council for a monthly fee. Leaving them out on the street, they will later be collected by refuse workers and, after a short journey across the borough, will arrive at the municipal incinerator. At this facility, along with six thousand tonnes of rubbish from other homes and small businesses across London, the salon's waste is incinerated, (potentially) releasing CO_2, ammonia, forms of particulate matter, and NO_x into the air. The plume from the facility's chimney is blown eastwards for at least thirty miles, over the Port of Tilbury, and makes landfall somewhere over the Thames Estuary. Altogether this takes less than twenty-four hours and is repeated on the six days of the week that the salon is open.

(Fieldnotes, February 2018 – January 2020).

If, as Marie describes, body hair removal 'is quite an ongoing process', predicated on and enabled by a seemingly never-ending supply of goods (Chapter 5), then the waste it produces is equally interminable. Depilatory waxing and other beauty services are treatments which are ephemeral, require repetition and replacement, and largely consume single-use products; all disposable; all fill the salon's bin at the end of the day.

Following on from the previous chapter's focus on the trajectories taken by the wax and other beauty goods on their way to the salon, in this chapter I trace the journeys of the products once they have been used and inevitably thrown[143] 'away' – certainly a misnomer – for the products' activity certainly does not stop with their consumption. In doing so, I consider the co-dependent or, rather, co-constitutive relationship between consumption and throwing 'away' arguing that, dialogically, each animates the other. I examine how the ability to simply dispose of and replace the products once used is in-part prompted by the seemingly infinite provision of oil-derived ingredients: as more can always be produced[144], spent products can unthinkingly be thrown 'away' (and, of course, replaced). The ease with which used products are disposed of means that some people are able to maintain a (relatively) privileged

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[143] During the workday of hair and beauty salons, many of the products are also washed 'away' with equally (potentially) long-lasting, long-reaching, asymmetrical impacts (see fig. 30). Although water and water treatment plants are briefly referred to in the chapter, the main focus is the rubbish which is incinerated. Due to practical reasons, rubbish is physically easier to trace as I was able to follow the refuse lorries from the salon to the incinerator then the waste through the facility. I can also see the plume from the chimney and the direction in which it is blowing before it becomes too abstract to pursue.

[144] Or at least it seems as if more can always be produced; or so petroleum corporations have astutely promoted (Mah 2022; see footnote 92).

social, material, and spatial separation from the waste produced by consumption practices. As Hawkins explains, '[w]e need to get rid of things … [b]eyond biological necessity, we expel and discard in the interests of *ordering* the self, in the interests of maintaining a boundary between what is connected to the self and what isn't' (2001: 8, original emphasis). Throwing 'away' and so not having to come into contact with our waste serves to maintain this imagined notion of a bounded self. A sense of this idealised separation is heightened as London's rubbish is purportedly 'camouflaged', 'removed at night, at the time when the city is asleep, out of sight of people … under the cloak of darkness' (Wang, M. 2011: 348, 349-50). But, of course, far from separate from everywhere and everybody and certainly not the empty void implied by the word 'away', the process of throwing 'away' is in fact contingent on people to carry out the labour of waste removal and on an actual place. What is more, this place – the 'away' – also *enables* disposability (Liboiron 2021: 7-8). Like the purported 'invisibility' of the logistical infrastructures (see Chapter 5), the idea that we throw things 'away' is both a convenient fiction and works to occlude the uneven impacts of their disposal as waste is landfilled or incinerated in the more deprived areas of the city or sent elsewhere for recycling (see Mah 2022). Not 'camouflaged' for all, these are places with lives being lived there, where air is inhaled by bodies. And, given the ubiquity of oil's by-products in beauty products and their packaging (as in so many disposable consumer goods and plastic packets), what is emitted into the air 'we' breathe as these are incinerated is petroleum laden: not everywhere nor everybody/ every body is afforded the privilege of separation from (potentially) toxic[145] waste.

By following the beauty salons' rubbish to one of London's incinerators, the chapter thinks through the location/locat*ing* of this facility to underline the power geometries at play. Rubbish's disposal may be obscured for many people but it is far from imperceptible to all, with socio-economically disadvantaged, racialised, and marginalised groups more likely to have these (potentially) polluting facilities locat*ed* in their neighbourhoods (Mills 2001; Roy 2020). Additionally, by trying to trace the plume emitted from the chimney (see fig. 29), the chapter examines what is carried further afield as the spent beauty products and packaging are incinerated. Like the ships and their routes discussed in the previous chapter (section 5.7), as it is carried on the prevailing winds, the incinerator plume puts into relief the asymmetrical distribution of the starkest effects of the planetary climate crisis. Considering the trajectory of the plume

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[145] O'Neill reports that municipal solid waste – the 'waste collected and treated by or for municipalities' – 'may contain small quantities of hazardous wastes' (2019: 32). On the other hand, writing on landfill sites, Hird cites Wynne who contends that the moniker '"hazardous" waste should strictly include municipal, household waste, because *the toxicity of many domestic wastes* – batteries, cleaning, and polishing fluids, *cosmetics*, medicines, etc. – *is higher than some industrial wastes*' (1987: 46 in Hird 2013: 112, emphases added).

underlines that what happens 'here' affects what happens 'there' (Massey 2007: 7), again disproportionately inflicting harm upon marginalised communities on a global scale.

Fig. 29: The plume from the incinerator (photo: Louise Rondel, February 2019).

Fig. 30: Washing 'away' spray tan (photo: Louise Rondel, August 2016).

Fig. 31: Inside the wholesalers' store's wheelie bin (photo: Louise Rondel, October 2019).

6.2   Structure of the chapter

In the first section of this chapter, I reflect on the reciprocal relationship between consumption and disposal for one cannot happen without the other (6.3). This is a relationship in which petroleum products play a key role because goods which are 'easily' made are 'easily' disposed of as it appears that more can always be produced. Interconnected with this, in the next section I discuss how, through prompting disposability, oil also enables a (privileged) spatial, social, and material separation of the self from waste (6.4). I then consider the places to where the salons' refuse goes – equally an enabler of disposability (Liboiron 2021; Mah 2022) – problematising that there is an 'away' to where rubbish is thrown (6.5). Above all in this section, I draw on literature which has focused on the loca*ting* of waste facilities to highlight the power relations imbued in disposal practices and how forms of social and spatial stigmatisation are reciprocally entwined in the notion of 'away'. This puts into relief how the 'ideal' of rubbish is to make it 'invisible', to move it to the 'edges' both within the city (Wang, M. 2011) and on a global scale as, for example, materials and particularly plastics to be recycled are transported to countries in Southeast Asia or Africa (Mah 2022: 117)[146]. This literature also underscores that these 'edges' – this 'away' – are somewhere; somewhere where people live, work, and breathe, who (have to) inhale and metabolise the exhausts from refuse lorries, the emissions from the incinerator chimney, or the fumes released as plastics are broken down for recycling (Goldstein 2013; Hawkins 2013b; Minter 2013; Wang, J. 2016) on profoundly unequal terms. In the next section, I follow the used wax from the salon, making my way to some of London's municipal waste plants to explore what happens when these now-discarded products move into and interact with different spaces and lives in the city and the ways in which waste shapes landscapes in a deeply material, spatial, and bodily sense (6.6). Following on from this, I think more specifically about the planning process of the London incinerator to where the rubbish from the salons I visit is taken (6.7). This facility is far from the geographic 'edges' of the city and I argue that its relatively central location/loca*ting* exemplifies the asymmetrical power geometries at play in the throwing 'away' of the salons' ever-replenishing waste.

What is more, these municipal waste facilities are emphatically not the 'end' of the journey as the products' reach extends far beyond the rubbish's arrival at the incinerator, both temporally and spatially. As such, in a final section, I consider how the material effects of beauty work reach far outside the city (6.8). Watching the plume from the incinerator chimney as it is blown upwards and eastwards calls for us to stretch our imaginations a lot farther. Reflecting on Massey's 'lines that run out from' the city, I

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[146] See footnote 76 on the shifting geographies of recycling (Mah 2022; Minter 2013; O'Neill 2019).

consider the aerial currents which connect places and are imbued with the 'power relations of all sorts that run around the globe and that link the fate of other places to what is done in London' (2007: 7). These not-quite tangible lines which nonetheless leave material imprints, shape places and bodies in uneven ways. Through the incinerating or landfilling[147] of the salons' rubbish or the washing down the drain (see fig. 30) of the products used during treatments, these (potentially) toxic materials make 'lines' which enter into the air that 'we' breathe, the ground beneath 'us', or the hydrological cycle of which 'we' are all a part (see Neimanis 2017), literally incorporated into everybody/every body but on very different terms.

6.3   Consume-dispose-consume

At an online retailer's distribution centre in Tilbury, in ceaseless mechanised movement, shampoo bottles, washing-powder boxes, and other household items are picked by robots and placed on conveyor belts, ready to be packed into cardboard, labelled, and sent to the customer. I am instantly reminded of my visit to one of London's recycling centres a fortnight earlier where, wearing ear defenders to shield us from some of the noise of the machinery, there was also constant and dizzying mechanical motion. Inside the recycling facility, conveyor belts were running in all directions carrying discarded packaging. As in the distribution centre, these flashed past in constant movement. Only here the shampoo bottles, plastic water bottles, cardboard boxes, glass jam jars, drinks cans, washing-up liquid bottles were empty, thrown 'away'. Once separated into different material streams, this rubbish is compacted into massive bales to be sent onwards for further recycling. Throwing them 'away' has made space for new products to take their place on shelves in bathrooms and kitchens, perhaps arriving in cardboard boxes from the distribution centre in Tilbury.

(Fieldnotes, October 2019).

In his description of the rubbish produced by cities, Wang Min'an recounts how:

> Modern marketplaces are the supreme empire of things, and rubbish mountains are the reflections of this supreme empire. Super-stores and rubbish mountains are the two extreme ends of modern cities, calling out to one another across the borders of the city … To some extent, the rhythm of the city can be understood as the non-stop humming rhythm of commodities marching from one empire to the other (2011: 346).

The processes and places of consuming and disposing are entwined; as in my experience in my field visits, they seem to mirror one another. However, I want to argue that more than a 'reflection', consumption and disposal are interdependent or co-constitutive; each engenders the other in a reciprocal relationship. Or, as Hawkins describes, '[t]he capacity for serial replacement is also the capacity to throw away without concern' (2001: 9) (and vice versa). In the beauty salon, the processes of disposal would clearly not occur

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[147] Although landfilling is occasionally mentioned in the chapter, I predominantly focus on incineration as the majority of the non-recyclable rubbish from the salons I visited as part of my fieldwork is taken to one of London's incinerator facilities.

without a constant supply of goods being consumed. Simultaneously, the consumption of beauty products and the particular 'feminine' bodies this produces equally could not happen without the ability to throw 'away'.

Key to making disposal and so consumption and so disposal *ad nauseum* possible are oil and its by-products. Indeed, disposability and replenishment are predicated on or, even, *prompted* by petroleum (Hawkins 2013b) as this seemingly infinite resource means that apparently endless amounts of goods can be manufactured to replace those thrown 'away'. These goods and their packaging are, as Hawkins describes writing on PET bottles, 'made to be wasted' in which 'the calculability of [the material] has been predicated on how easy it is to waste – on its disposability' (ibid: 50; see also Mah 2022). For Hawkins, these disposable materials – the disposability of these materials – 'generate effects': economic, cultural, environmental (2013b: 52). Viewed in this way, not only do the products themselves generate effects[148], but so too does their disposability. For example, the fact that the used wax is thrown 'away' when it actually could be reused (see section 6.4) generates profits for the wax-blending company as they are able to continuously sell new products (as well as for petroleum and other corporations which supply the raw ingredients who are similarly able to profit from the phenomenon of single-use items [Herzig 2015: 144; Mah 2022]). The wax's disposability also effects the 'ongoing process' of removing hair and so of producing hairless 'feminine' bodies as the repetition of depilatory practices is enabled by the ready availability of the products which is, in turn, constitutively connected to the ability to dispose of them. And it certainly generates environmental effects as the spent products are thrown 'away', in fact, landfilled or incinerated. These environmental effects are deeply entangled with the 'feminising' work in the salon for the very petroleum products which provide the 'performance characteristics' and enable the disposability and replacement of the wax are those which are emitted as, from the incinerator chimney, a plume of smoke is released into the air that 'we' breathe.

6.4   *Throwing* 'away'

The wax used for removing unwanted hair has not always been immediately disposed of. On my guided tour of the wax manufacturing facility, the Managing Director explains that up until around 1980, used wax would be recycled by beauty therapists; it would be boiled up, filtered to remove the depilated hair, and then could be used again and again and again[149]. When I am next in the salon, I relay this information

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[148] See discussion in Chapter 4 where I demonstrated that the products effect the ability to remove 'unfeminine' hair, the 'enskilment' (Ingold 2000) of the beauty therapists, and the associated health implications.
[149] Interview with Mark, October 2019.

to the beauty therapist whilst she is performing a leg-waxing treatment and ask if she had heard about this:

Liz tells me that she had been told of something like that 'years ago at training'. At this point, I am visibly recoiling in disgust as I imagine the wax that has been used to depilate my beauty therapist's previous clients being used to remove hair from my legs, my bikini line, my upper lip! Noticing my reaction, Liz concurs: 'I know it's disgusting isn't it! A disgusting thought!'. We laugh about the idea of filtering the hair out of the wax and how this could have been part of her job:

> Liz: Can you imagine that! Imagine what you'd end up with! A mass of sticky hair at the end!

At this point in the appointment-interview, we are so laughing hard that Liz has to take a break from waxing to catch herself, so outlandish now is the idea of doing this.

<div align="right">(Fieldnotes and interview with Liz, October 2019).</div>

The disgust and mirth provoked at the thought of reusing wax suggest that this is now so far removed from the reality of using and disposing that it is hard to even imagine. Indeed, as the Managing Director of the wax manufacturers succinctly tells me, nowadays 'people would not even countenance having somebody else's hair in something that they use'[150]. Our mix of laughter and squeamishness is revealing of the distance we expect from our rubbish. Hawkins explains how 'rubbish practices based on expulsion, disposal, and elimination maintain the fantasy of separation and sovereignty' (2001: 15). Viewed in this way, throwing 'away' is necessary in order to maintain a ([relatively] privileged)[151] social, spatial, and material separation from waste and to preserve the notion of a bounded self. Reusing wax would involve intimate contact with the used product and thus would undo this notion (idem.). Our reactions are heightened by the corporeality of beauty practices; it is the thought of *other* people's unwanted body hair that is particularly troubling and means that neither the beauty therapist nor her customers (myself included) could 'even countenance' coming into contact with this material. And our laughter and disgust show that we don't have to. The seemingly inexhaustible supply of oil, its versatility, and the economic imperative to keep creating new markets for it (Mah 2022: 29-32) are important factors in making this separation possible: the products can be thrown 'away' as more can seemingly be easily manufactured

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[150] Interview with Mark, October 2019.

[151] Of course, as I have discussed, the beauty therapists are not able to be separate from much of what is emitted during beauty work and lingers in the salon. As shown in Chapter 4, this is not necessarily the end of Liz's relationship with the detritus from salon appointments, as the products and the services performed *may* continue to leave traces in her body in a multitude of ways.

and so the need to reuse is evaded. Oil enables or even *promotes* disposability, permitting us to avoid contact with waste whilst the 'ongoing process' of making 'feminine' bodies can continue apace.

And so, rather than boiling the wax and filtering out the hair, after a day of mostly waxing but also performing facials and manicures and tinting brows and lashes, the beauty therapist simply empties her bin into rubbish sacks which are left out on the street in front of the salon. From here, they are collected by refuse workers making their nightly rounds. I ask her how often this is done:

> Liz: [T]hey come every day, I'm pretty sure. *I never pay attention to it* but I know they do because we put rubbish out every night and it's never there in the morning.
>
> (Interview with Liz, October 2019, emphasis added).

Liz's relationship with her (our) daily rubbish production ends with emptying the small pedal bin into these bin bags and leaving them out in front of the salon. Beyond this: 'what they do it with, I think... I don't know. I imagine it's all landfill[152]' (idem.). Because it appears that more wax can always be produced and transported to the salon – both production and transportation enabled by a seemingly infinite supply of oil – then disposal comes easy and separation from the waste is made possible[153].

6.5   Throwing '*away*'

Reflecting the imperative of separation, Wang Min'an describes how rubbish is moved 'at the time when the city is asleep, out of sight of people … under the cloak of darkness' for, whilst 'modern cities endlessly produce rubbish, … they desperately cover it up' (2011: 347-348). He also draws attention to the spatiality of this 'invisibilising' process describing how 'the ideal of the city is to let all rubbish vanish' and, thus, how 'the astonishing mass of rubbish mountains is moved outside of the city, away from the view of the city dwellers' (ibid: 349-350). This is purportedly a 'secret industry' (Ackroyd 2001: 345), ideally 'camouflaged' (Wang, M. 2011: 348), 'out-of-sight and out-of-mind' (Zahara and Hird 2015: 169; see also Hird 2013; O'Neill 2019); 'away'.

This practice of disposing may be the end of the beauty therapist's/our contact with the salon's rubbish, but it is far from thrown 'away'. As for most people, for Liz and I, the used waxy, hairy, sticky strips are certainly out-of-sight and out-of-mind: 'I never pay attention to it'. Yet, as Hawkins describes:

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[152] In fact, this is an incorrect assumption, Liz's salon's rubbish is incinerated.

[153] This is not to suggest that Liz does not care about what happens to her rubbish. On the contrary she tells me that she worries that the cardboard boxes are not being recycled so will often take them home to put in her household recycling bin. Rather it speaks to the social, spatial, and material processes by which rubbish appears to 'vanish'.

[A]s anyone who has stood at the edge of a tip or started down a drain and felt the wave of horror and fascination would know, this ethos of disposability is a technical and spatial fantasy (2001: 10)[154].

The rubbish produced by the beauty salon is incessant, filling binbag after binbag to be piled up outside the door at the end of the working day. This must obviously go somewhere. From the salon, it is taken to one of London's seven incinerators, one of the ninety facilities across the UK (with '50 more proposed or in development') (Roy 2020). Deposited from the back of the refuse lorry into the tipping hall, the salon's binbags muddle with rubbish from homes and other businesses to form an amorphous browny-red coloured mass, up to six thousand tonnes of waste. From this mound, massive crane grabs pick up five tonnes of waste at a time transferring them into the burner. Operating at 850 degrees, the rubbish is quickly reduced to ash by the fire as smoke is directed up the chimney, passing through bag filters designed to clean the emissions, and released from the stack in a plume (fieldnotes, January 2020; see fig. 29). An 'away' to where rubbish is thrown does not exist.

As much as oil effects an ability to throw 'away' so too does the power-laden fantasy of this 'away'. For instance, as Mah points out '[t]he continual production of disposable plastics is made possible by the ability of people to send their waste elsewhere … out of sight and smell' (2022: 118). Indeed, Max Liboiron explains how in the notion of throwing 'away' rubbish, there is an assumption of land to 'provide a sink, a place to store waste' which is both an effect and, more importantly, an *enabler* of disposability; a 'tactic to move goods *through*, rather than merely *into*, consumer households' (2021: 8, 1, original emphases). In other words, the notion of an 'away' to where the salon's rubbish is thrown is necessary for London's consumption whilst simultaneously belying that this is completely dependent upon on an actual place. Moreover, in this designation of an 'away', land is taken to be empty, a resource, merely a place to dispose of rubbish, and that people may be inhabiting the land is considered inconsequential, subordinate to the logic of disposability and replenishment (idem.)[155].

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[154] See also Cielemęcka and Åsberg (2019: 104), Hird (2012: 456, 2013), and Litvintseva (2019: 163-164) who also point to the impossibility of an 'away'.

[155] For Liboiron writing in the context of colonised Canada, '[t]his assumption is made easier when the Land has already been cleared of Indigenous peoples via genocide, moves to reserves, and ongoing disappearances …' (2021: 8).

It is important to take into account that not only is land assumed to be a 'sink', but that some places more than others are thought befitting of this. Describing the places (associated with) where rubbish goes, Wang Min'an explains how:

> We can determine the edges and centres of the city by the presence or absence of rubbish. We can say that there is least rubbish in the city centre; conversely, rubbish is most plentiful at the edge of the city (2011: 350).

It is this notion of the city's rubbish being removed to its 'edges' that is key and has been highlighted across many studies of urban waste and its disposal. For example, in her study of waste infrastructures in Dakar, Rosalind Fredericks draws on the work of Dipesh Chakrabarty (1991) to discuss the spatiality of rubbish describing how '[t]rash marks the boundary between inside and outside' (2018: 21). Where incinerators, recycling plants, landfills, and sewage works are located is telling of where the 'edges' or 'outside' of the city are (imagined). These are more than geographic, there is a socio-symbolic dynamic to these 'edges'. As Fredericks continues: 'the inside is constructed as protected and safe whereas the outside – which can be "rubbished" – is figured as potentially malevolent, disorderly, and dangerous' (idem; Chakrabarty 1991: 19-20 cited in idem; see also Chakrabarty 1992).

There is a mapping onto one another of sites of rubbish disposal – 'rubbished' places (Fredericks 2018) – and the 'rubbished' people who live there. For instance, writing on environmental racism and the siting of toxic waste dumps in the US, Charles W. Mills describes how '[t]he physical spaces of the surroundings and the personal space of the denizens spill over one another's boundaries, the wildness of one infecting the other in a reciprocal feedback' (2001: 84, 77). Mills continues that, in the intentional siting of toxic rubbish disposal facilities in predominantly African-American communities, '[i]n effect, then, these spaces can be written off because these people can be written off. The devalued space interacts with its devalued inhabitants': '*throwaways on a throwaway population*' (ibid: 88, 89, emphasis added). Thus, if, as Robin Nagle describes in her ethnography of the New York Sanitation Department, 'we understand this place [Waste Transfer Station] to be odious' (2013: 5) or that the places in which 'waste and dirt collect[s]' are considered 'discardable', (Fredericks 2018: 21), what does this say of the people and wildlife whose homes and lives neighbour these places, that they too are 'odious', 'despised' and 'loathe[d]' (Nagle 2013: 5), 'discardable'? That they are 'disposable citizens' (Jalais 2010: 11 cited in Nixon 2011: 17)? And as in the salon and along the A-roads, there are profound asymmetries in whose neighbourhood is thought of as an 'away'. This is a designation which follows and reproduces deep-seated structural inequalities as waste

facilities are disproportionately locat*ed* in areas where black and minority-ethnic-in-the-UK and other marginalised communities live (Roy 2020).

The ideals of separation from and camouflaging of rubbish, then, are clearly fantasies. Some places – incinerators, sewage works, recycling centres, landfill sites – and people – the refuse workers[156] and those who live adjacent to the waste facilities – are not afforded a separation from waste. The 'away' is in fact a place where some people live and breathe, an environment in constant interchange with bodies. Spaces and bodies both (potentially) become slowly and noxiously permeated by petroleum-tinged emissions on highly uneven terms as the waste products are incinerated or landfill sites leach into the ground.

6.6   Waste landscapes

Rubbish is emphatically not 'invisible', it must be moved by *someone* and go *somewhere* and it has very real (albeit, for many, very easily and deliberately ignorable) material effects. These processes and their effects are evident as I follow the salons' rubbish towards the incinerator. This facility is locat*ed* in a relatively central part of London (see section 6.7) adjacent to high-density housing and schools but, despite the populated feel of the neighbourhood, it is rubbish and its removal which palpably dominate the landscape. This is evident in the noise and the movement of the massive lorries which literally shake the ground and choke the air with diesel fumes as they transport rubbish from homes and businesses across the city, some of the six-hundred plus traffic movements which arrive at the incinerator and other nearby recycling and scrap metal plants daily. The detritus of the city's consumption is further apparent in the bits and pieces which fall from these trucks. littering the roadside; in the dust produced by processes of tipping and sorting the rubbish; in the noise of the shattering of glass, crunch of machinery, or screech of metal as the rubbish is deposited and sorted[157]; in the faint but nonetheless noticeable sweet smell which is released as the waste decomposes and penetrates the surrounding roads; or in residents' concerns about what is contained in the smoke plume from the incinerator (fieldnotes, September 2018 – January 2020). Rubbish's presence also stubbornly persists for those whose job it is to collect and transport the waste knowing that their essential and, at times, dangerous[158] work will 'receive scant notice

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[156] See Hughes, J. et al. (2016) and Slutskaya et al. (2016) on the ways in which the social and the material are entwined in the 'dirty work' of refuse collecting and street sweeping, at once and reciprocally stigmatising and dangerous.

[157] For short videos of the process of sorting the metal which has not been incinerated filmed during the tour of the facility, see: https://vimeo.com/510175699 and https://vimeo.com/510178079 (videos: Louise Rondel, January 2020).

[158] In 2017 reports, refuse collection was listed as the ninth most dangerous job in the UK ('the lowest income on our list') (Hancock, E. 2017) and O'Neill reports that 'sanitation work is classified by the US Bureau of Labor Statistics as the fifth most dangerous civilian job in the US' (2019: 57). This work is also relatively poorly paid, the National

and even less praise' (Nagle 2013: 4; see also Hughes, J. et al. 2016; Slutskaya et al. 2016). Or for those who stand for up to four hours at a conveyor belt in a deafingly noisy cabin in which rubbish whizzes past at a dizzying pace as they are tasked with picking out the pieces of recycling which have made it into the wrong stream; for, as we are told on our public tour of the recycling facility, even with all the technology designed to separate the distinct materials, 'nothing can replace hand-eye coordination' (fieldnotes, October 2019). Rubbish and it effects endure further in the 'significant hazards to humans and the environment' in the 'plastic villages' in Vietnam (amongst other places) where plastic recycling takes place and to where the empty plastic wax pots are (may be) transported (Hawkins 2013b: 64; on plastic recycling in China see Mah 2022; Minter 2013; Wang, J. 2016)[159].

There are also (potential) impacts which are beyond the scope of my immediate sensory range. For example, working with people who live adjacent to an incinerator, Citizen Sense (2017) discuss 'the by-products [of incineration which] include a range of gaseous species that include nitrogen oxides and ammonia, which are precursors to secondary particulate matter' alongside the other forms of particulate matter emanating from other waste-associated sources. In developing air monitoring tools, they underline the concerns of their participants about what is released into the air (idem.). In their study into chemicals in the environment, Chris van Dijk et al. report that the '[b]urning of municipal solid waste can result in the emission of potentially[160] toxic compounds including heavy metals and organics such as dioxins and polychlorinated aromatic hydrocarbons' (2015: 45). Although research is inconclusive on the direct harms to human health from incinerator emissions for those living in the areas surrounding the plants[161] (idem; see also Negri et al. 2020; Subiza-Pérez et al. 2020), there is some evidence from environmental science studies to show that there may be connections between waste incineration and adverse birth outcomes in populations who live adjacent to the facilities (see Ashworth et al. 2014 for a review). There are other sources of (potential) pollution associated with waste disposal which impact acutely on neighbouring lives some immediately sense-able, some more subtle[162]: the dust produced as the rubbish is transported and sorted or the NO$_x$ and particulate matter emitted by the diesel-powered

Careers Service reports that the average annual salary for a bin worker is between £15,000 (for a starter) and £25,000 for an experienced worker for a thirty-eight to forty-hour week (National Careers Service n.d.c; see also Slutskaya et al. 2016).

[159] For example, Minter describes Wen'an, where much of China's plastic recycling used to take place (see footnote 76), as 'the most polluted place I've ever visited' (2013: 153-155).

[160] The 'potentially' here is cited *verbatim* from the original article.

[161] In particular, as I walk around the neighbourhood adjacent to the incinerator, I notice a plethora of scrap metal yards (fieldnotes, September 2018 – January 2020).

[162] Of course, this subtlety is characteristic of such forms of 'slow violence', 'gradual … out-of-sight (sic.) … attritional … typically not viewed as violence at all' (Nixon 2011: 2).

heavy goods vehicles which carry the waste to the site. In addition, there is the noise, light, and olfactory pollution from the facilities themselves, their associated traffic movements, and the other related light-industrial businesses strategically located near to the plant. In addition to (potentially) harmful environmental and physiological effects, 'residential proximity to industrial hazards' can further '[lead] to … greater levels of psychological distress … impaired development and educational difficulties amongst children, perceptions of neighbourhood disorder, and the stagnation of housing values' (Pais et al. 2014: 1189). There can equally be adverse impacts on the plant-, bird-, and animal-life who also inhabit the neighbourhood (see van Dijk et al. 2015).

As with toxic exposures in the salon, it seems that the impacts of living adjacent to waste facilities prove difficult to conclusively research (see, for example, Pais et al. 2014 on the longitudinal limitations of previous research on residential exposures to industrial hazards). Reflecting on the lack of firm evidence on connections between waste incineration and negative health, psychological, and social impacts, it is worth noting once again that a central feature of this form of 'slow violence' (Nixon 2011), 'like in so many toxic geographies, [are] the *perceived yet contested* impacts on human health' (Davies, T. 2019: 8, emphasis added). These are effects which are 'ubiquitous yet unrecognised', seemingly complicated to measure or to prove, and thus it becomes difficult 'to epidemiologically and geographically locate blame' (Davies, T. 2018: 1538; see also Nixon 2011). This 'difficulty' to measure is, perhaps, indicative of an unwillingness to research (Davies, T. 2018, 2019; Nixon 2011). For example, in her work on air monitoring, Gabrys notes that the monitoring station located a short distance from a London incinerator is only registering PM_{10} and questions 'whether it would also be relevant to monitor $PM_{2.5}$ and NO_x in this site of heavy vehicle traffic and industrial activity' (2017: 153). If monitored, these emissions are likely to be prevalent in the air of the neighbourhoods surrounding the waste plant due to a high level of diesel fumes from municipal refuse lorries and from the HGVs pulling massive containers of recycling and scrap metals which pass through the area to the plants which are located adjacent to the incinerator. The particulate matter and nitrous oxide emitted from this traffic may be implicated in negative health effects as they circulate in the air breathed in by local communities. Gabrys' (idem.) question, then, is telling of which forms of measurement are prioritised (or not) as well as whose air is monitored and for what, as decisions about monitoring, recording, and measuring are not neutrally made. This (*lack of*) research is perhaps a factor of being designated an 'away' and is suggestive of whose experience matters; decisions about the locat*ing* and monitor*ing* of waste facilities which again follow and reproduce deeply-embedded structural inequalities made spatial and material.

The 'edges' or 'outsides' to where the rubbish is taken are reciprocally spatial and social. What is more, the effects of being labelled an 'edge' are perniciously more than symbolic as this designation has significant material and (potentially) long-lasting toxic impacts. Indeed, alongside those working in the refuse collection, 'the rejects of society' (Wang, M. 2011: 352), it is the largely marginalised communities who live adjacent to the waste plants – some of which operate twenty-four hours a day, six (and sometimes seven days) a week providing little respite from the material effects[163] – who most have to negotiate rubbish's (*material* as well as symbolic) 'refusal to go' (Hawkins 2001: 15). Who are, therefore, most denied a self separate from the city's rubbish (idem; see also Hird 2012: 455-456) and are most saddled with filth 'and its associated stigmas and dangers' (Fredericks 2018: 21). Attending to *where* rubbish goes puts into relief not only *where* but, reciprocally, *who* is viewed as marginal to the city. A marginality which, given the palpability of rubbish's 'removal', leaves these communities most vulnerable to the (potentially) toxic and under-researched effects of the city's waste which circulate in the air that *they* breathe.

6.7 Location/locat*ing*

Astrida Neimanis and Perdita Phillips contend that when thinking about the air 'we' breathe, we must pay 'attention to a politics of location – to the *differences* of breathing' (2019: 134, original emphasis). Location (dialogically geographical and social) matters – locat*ing* matters – to who inhales what. Keeping in mind the above discussion of socio-spatial stigmatisation and the material effects associated with throwing 'away' rubbish, I want to now consider the specific location of the incinerator and, in particular, the planning processes by which it was decided that it was to be built in this part of London. Note that here I am not only talking about its *location* but, as per the subheading, a process of locat*ing*. Reflecting the above discussion of the assumption of land as a sink and, reciprocally, the taking of the (potential) health impacts to the people and other species who live there as a form of collateral damage, it is crucial to recognise locat*ing* of this waste site as an active and non-neutral process of decision making.

Following the refuse lorry which collects the rubbish from outside of the beauty salon, I arrive at the incinerator where I am taken on a guided tour (January 2020). Only a short walk from here is one of the city's recycling facilities where a few months earlier I had been able to join a public tour (October 2019). What seems curious is that, from the almost-suburban salon, I have not moved to the outskirts of the city, to the physical 'edge'; rather, I have travelled closer towards the centre. Along the route I take (approximating the route taken by the refuse lorry on my bicycle), I move inwards from the suburban part

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[163] Fieldwork notes, January 2020.

of the city with its Victorian terraces and leafy green spaces. As I approach the incinerator, the roads and pavements become busier, there are more people waiting at the bus stops, more shops, less greenery, more lorries, the housing is denser, there are more high-rise blocks of flats. Given the usual siting of such facilities at the peripheries of cities, it initially seemed an anomaly that the waste plants which I visit are, in fact, *not* located at what might be viewed as the geographical 'edges' of the city. They are relatively central, a short walk from a busy train station, surrounded by other light-industrial plants and scrap metal yards but also housing, schools, and former warehouses and factories now converted into churches, art studios, and community centres (fieldnotes, September 2018 – January 2020). Considering the perhaps surprising siting of these particular facilities underlines how the 'edge' status is not so much a geographical location. Rather it is constituted by a process of locat*ing*, a confluence of social and spatial stigmatisation, and heavily tied in with race, class, migration patterns, (post)colonial formations; the vectors along which, as Massey identifies, spatialised power relations work (1993: 60-61). Looking closely at this initially-unexpected location further highlights that not only do the toxic conditions of living in proximity to the waste plants most heavily fall on already-marginalised and disadvantaged communities but that this is not incidental. These are power geometries (idem.) toxically and deliberately manifested.

In order to explore the interplay between social and spatial inequalities in relation to the locat*ing* of waste facilities, it is instructive to consider the planning stages of this London incinerator during the late 1980s and early 1990s and the (lack of) resistance to the siting of this facility in this ostensibly *central* and highly populated neighbourhood. Or, in other words, to examine how and why this neighbourhood was performatively thought of as an 'edge' socially if not geographically which has led to ongoing material (potentially) toxic consequences for those living there.

At the 'end' of the flip-flop trail, Knowles surveys the vast Addis Ababa rubbish dump which dominates the land- and smellscape of the area describing how 'the siting of dumps is a matter of fierce contention in urban planning' (2017: 290). Yet agreed upon in the mid-1980s and opened a decade later, the building of this incinerator in this London neighbourhood was not protested by members of the public on any great scale. As Cristina Elena Parau and Jerry Wittmeier Bains describe, 'when opposition [to the incinerator] emerged it was very weak': 'the Planning Department received only seven letters of complaint' and 'two petitions in opposition signed by twenty-five and fifty-seven residents respectively' (2008: 117). Christopher Rootes attributes this to the ways in which 'socially diverse and resource-rich communities such as rural villages and small towns have generally been better placed to resist than those in urban areas with high concentrations of ethnic minorities and that concentrate social deprivation and political

disadvantage' (2009: 875-6). Reporting that the population in this neighbourhood was, at the time, made up of 'poor, immigrant, and/or working class … residents [who] would probably [have] lack[ed] the human resources and economic power to mobilise effectively', Parau and Wittmeier Bains concur: 'the [neighbourhood's] public proved too weak to challenge the project significantly. They were largely ignorant of the right to hold governments accountable in the first place' (2008: 118, 117). Moreover,

> [T]he Waste Disposal Group and [borough] Planning Department are likely to have understood these elementary points when in [the 1980s] they decided, consulting nobody, where to site the incinerator. They settled on [this area] as a neighbourhood where resistance was least likely to arise, or was least likely to succeed if it emerged (idem.).

Here, the power geometries are stark: a state-generated connection between already-disenfranchised populations being made more marginal and the making of an 'edge', even at the centre; (stigmatised) spaces and (stigmatised) bodies as co-producing, as being entered into toxic environmental-bodily interchanges.

These asymmetrical and spatialised power relations manifest as geometries of toxicity. A common pattern which sees polluting facilities disproportionately and deliberately locat*ed* in the neighbourhoods of people with less socio-economic power and of communities of colour (O'Neill 2019; 3-4, 39; see also Brown et al. 2020; Harlan et al. 2015: 133-134; Mills 2001; Pais et al. 2014; Pellow 2016; Roy 2020). Indeed, as Mills highlights when discussing toxic waste sites in the US, '[t]he functioning of the state, the structure of space, the historic stigmatisation of blacks within the white political community, the resulting partitioned ethic, all need to be taken into account in understanding the distribution of pollution costs' (2001: 84). The well-informed and astute decision on where to locate the London incinerator likewise builds on histories of systemic racism and structural inequalities. And it further exacerbates these in its asymmetric spatial and bodily impacts as, for some, the 'ideal' of vanishing rubbish is achieved but for others – mainly impoverished and racialised city dwellers in this (still-)deprived[164] neighbourhood with a predominantly ethnic-minority-in-the-UK population (Nomis n.d.e)[165] – waste is ever symbolically, materially, and noxiously present. A form of 'slow violence' (Nixon 2011) as the remnants of the rubbish

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[164] In 2019, the areas immediately surrounding this incinerator fell into the 20%-30% most deprived neighbourhoods in the UK (*Indices of Deprivation* 2019).
[165] The local area reports from 2011 UK Census show that nearly 60% of residents in the neighbourhood surrounding the incinerator identified as mixed/multiple ethnic groups, Asian/Asian British, Black/African/Caribbean/Black British, Arab or as 'any other ethnic group [other than White]' (Nomis n.d.e).

from the city's beauty consumption penetrate homes and bodies, invisible to and/or ignored by many but certainly far from 'out-of-sight' (or 'out-of-perception') to everybody/every body.

6.8   Running out of the city[166]

Taking a break from the library, I cycle to the Town Hall where I have seen on social media that an environmental campaign group are organising an action to disrupt a meeting of the local Waste Authority Group. Outside the austere municipal building, about thirty people wrapped up in warm clothes and colourful scarves have gathered. The protesters are carrying placards and handing out flyers whilst a handful of police officers watch on. Attracting the attention of passersby is a percussion group; seven or eight people whose rhythmic drumming fills the soundscape[167]. The campaigners are here to protest the construction of a new incinerator in London; a newer version of the soon-to-be-defunct facility I had visited a month earlier. Once (if) built, it is planned that the general household and small business waste from several neighbouring boroughs will be taken here to be burnt. As I take a flyer from one of the protesters, he explains that, for him, it is insanity to be building a new incinerator at a political and social moment in which we are aiming to reduce non-recyclable rubbish. During a pause in the drum beats, a chant starts up: 'More pollution is not the solution'.

(Fieldnotes, December 2019).

As the protesters outside the Town Hall suggest, there is no 'away' to where the salon's rubbish disappears and nor is the incinerator the 'end' of these items as they are further broken down during processes of incineration (or landfilling [see Hird 2012, 2013], or recycling [see Hawkins 2013b; Minter 2013]). For rubbish is, as Fredericks describes, but 'a material in transition' (2018: 18) and has impacts which reach much further than the London neighbourhoods I visit. Burnt, its gaseous remnants emitted in the plume from the incinerator or baled up in recycling plants and transported onto the next facility[168], the ever-replenishing, ever-to-be-replenished sacks and sacks of rubbish produced by London's 7,266 beauty salons 'generate effects' (Hawkins 2013b: 52) beyond the sites of its disposal in the city.

Discussing the 'afterlife' (Hawkins 2013b) of a plastic ice cream container, Marriott and Minio-Paluello describe how, as the packaging is incinerated, 'Azeri lithosphere [floats] off into London air, carrying its carbon load into the atmosphere' (2013b: 180). The same could be said of the burning of the spent depilatory wax and strips, polypropylene pots, removed nail products, cotton wool pads, plastic bottles and packaging amongst the various paraphernalia used up in London's salons; all are ultimately incinerated and their contents turned into ash and smoke. The plume from the incinerator is carried for

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[166] Massey (2007: 7).

[167] A recording made of the protest outside of the Town Hall: https://soundcloud.com/user-10454219/town-hall

[168] From the recycling plant which I visit, the baled-up mixed plastic goes to a facility in East Angleford where it is further sorted; the bales of paper and cardboard are 'sold to whomever wants to buy, this varies over many buyers as the market fluctuates' (email correspondence with recycling plant, November 2019; see section 3.11 on 'uncertainties').

(at least) thirty miles out of the city on the prevailing westerly winds. And, although on our tour of the facility our guide emphatically explains how the emissions are cleaned and repeatedly assures us that they fall within the limits set by the Environment Agency[169], these do contain NO_x and forms of particulate matter. For, he admits when pushed, 'you will never get rid of them entirely' (fieldnotes, January 2020).

Attending to the air 'we' breathe and extending my enquiry out of the city, like the routes plied by ships discussed in the previous chapter (section 5.7), the incinerator's plume calls for us to envision the material and deeply asymmetric, if not violent, connections between places. As it is blown upwards and eastwards, the plume seems to embody the power-full lines running out of London described by Massey (2007: 7). As Massey asserts, these are lines which 'link the fate of other places to what is done [here]' (idem.). The plume as a 'line' is more than a metaphor, it is almost-material, palpable, if not entirely tangible. By studying meteorological currents, we can attempt to trace this line, following the compounds and the molecules (Casper 2003) carried in 'London's' air. For example, Liboiron explains:

> Every winter, a high-pressure air system sweeps from the east coast of North America across the Atlantic Ocean and into Greenland. At the same time, air originating in mainland Europe is pushed into the High Arctic: "In a matter of days or weeks, chemicals that originated in the cities of North America and Europe are contaminating the Arctic's air. When they reach the cold air, they condense and drop into the ocean or onto the frozen ground, where they are absorbed by plants, then animals [then people]" (Cone 2005: 165). This is one reason why indigenous Greenlanders are some of the most contaminated people on the planet (2013b: 144).

Or singly-used products are placed into landfill – another 'presumed end point' but in fact 'a particularly vigorous assemblage' – where they contribute to the leachate, yet another material line, which runs off 'dispers[ing] known, unknown, and unknowable entities' 'between geological strata … between space and time' (Hird 2013: 107, 113, 108). Still other products are washed 'away', still more 'lines' rinsed down drains, into sewers, through water treatment plants, and perhaps from there into rivers, estuaries, oceans, and into food chains and human blood and tissue (O'Neill 2019: 143; Neimanis 2017); perhaps joining the millions of tons of plastics (some originating from the packaging of goods) which have 'spilled into the

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[169]Although, as Liboiron argues, this notion that a certain amount of pollution is acceptable as it can be assimilated – the 'assimilative capacity' – rests on colonial entitlements to land and the associated assumption of land as a 'sink' (2021: 4-5, 7-8, emphasis omitted). They precisely highlight the power relations entangled with 'scientific' ways of measuring pollution: the ways in which 'technical acts are material acts, which means they are in fact, cultural' and how 'those technical measures are used by the state to allow regulated quantities of industrial pollution to occur, that allow industrial access to Indigenous land, and that safeguard industry's right to pollute' (Liboiron 2019).

oceans, where they persist for hundreds of years' (O'Neill 2019: 6; see also Davis, H. 2015; Ghosh 2019; Liboiron 2013a, 2013b, 2014).

From the NO_x and particulate matter released into the atmosphere and carried by aerial currents as the rubbish from London's salons is incinerated to the plastic sludge and polluted water which run off as PET bottles, polypropylene pots, and other plastic packaging is recycled (Hawkins 2013b: 62-65; Minter 2013; Wang, J. 2016); from the as-yet unknown effects of the leachate which seeps from landfill sites (Hird 2012, 2013) to the possible toxicity of the incinerator's bottom ash which is turned into aggregate for road-building (Dung 2017; Sivula et al. 2012)[170]; from the 'water footprint'[171] of beauty practices to the conditioning and moisturising creams which are washed 'away' down salon sinks and get caught in/form subterranean fatbergs[172], by following disposed beauty products as lines which run out of the city, the long-lasting, long-reaching traces of beauty work are put into relief. What is more, these 'lines which run out of the city' are far from neutral; rather, as Massey underlines, these are 'power relations ... which run around the globe' (2007: 7), producing and re-producing geometries of toxicity on a global scale in a climate-changing world.

Air, water, ground – the 'away' where the compounds, molecules, and atoms of rubbish 'end' up – may connect places and places and bodies, but the terms of these connections and the ways in which they are experienced are asymmetrical. Like the ships which, as Ferdinand argues, 'reveal the relationships of the world' (2022: 22), the plume from the incinerator, the grey water from salons, or the run off from landfill sites are at once ecological and social. The ways in which their effects persist in particular places and in particular bodies are inseparable from colonial violence and contemporary structures of discrimination

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[170] For example, discussing the relationship between multinational corporations, the uneven distribution of toxicity, and environmental racism, Gbadegesin reports that 'Kass Island, off Conakry, Guinea, was the dumpsite for 15,000 tonnes of garbage and incinerator ash from Philadelphia and Norway' (2001: 190).

[171] 'What is a water footprint?': 'Everything we use, wear, buy, sell, and eat takes water to make. The water footprint measures the amount of water used to produce each of the goods and services we use. It can be measured for a single process, such as growing rice, for a product, such as a pair of jeans, for the fuel we put in our car, or for an entire multi-national company' (Water Footprint Network n.d.).

[172] In 2013, a bus-sized 'fatberg' was found in the sewers under Kingston-Upon-Thames and then, in 2017, a fatberg longer than Tower Bridge and weighing an estimated 130 tonnes was discovered in Whitechapel's sewers. Visiting the *Fatberg* exhibition at the Museum of London, I learn that 53% of the fat in the fatberg (the largest proportion) was palmatic acid which is found in meat and butter but also in *conditioners and hydrating creams* (fieldnotes, March 2018). Sanderson writes on 'gendering a fatberg' where she notes the ways in which '[m]any of the so-called "objects of disgust" discovered in the fatberg are those products have been used to assist in counteracting [the] unavoidable processes [associated with bodies assigned with XX chromosome]' (2018: 9).

(idem.). Air, water, and ground may be shared but they also very different, marking, making, and re-making social distinctions and emplaced and embodied (dis)advantages.

Thus, the air inhaled by the white and predominantly middle-class Park Village salon customers[173] is distinct from those who work in the salons for eight hours a day, five, six, or even seven days a week. Living in an affluent neighbourhood[174], the air they breathe is different to those who live along the A-roads which pass through London's peri-urbs shaped to expediate the movement of goods. It is different again to those who live adjacent to the incineration facility and to those who live thirty miles eastwards where the plume (supposedly) makes landfall. And again to the Indigenous Greenlanders (Liboiron 2013b: 144). And to other communities who are experiencing the (somewhat) 'slow violence' (Nixon 2011) – a violence which is at once structural, bodily, and spatial and deeply embedded in colonial and dispossessive relations – of climate change as what is done 'here' affects how lives are lived 'there'.

6.9   Concluding remarks

The 'ongoing process[es]' of hair removal and other forms of beauty work involved in the making of 'feminine' bodies in the beauty salon are predicated upon an ability to consume a plethora of beauty goods and so also to throw 'away' the interminable rubbish produced in the salon. Standing in the distribution centre and the recycling plant, the constitutive interdependence of consumption and disposal is palpable as goods, packaging, and rubbish are put into constant, dizzying motion as they continuously march from one to the other (Wang, M. 2011: 346), not only reflecting but *effecting* one another. By following the rubbish from the salon to the incinerator and imagining the onwards journey of the plume that is emitted from the chimney, this chapter has shown that it is important to pay attention to what happens to things as they are disposed of as this is a key part of consumption and, in the salon, a central factor in beauty practices. Viewed in this way, the 'ongoing process[es]' of hair removal and other forms of beauty work are made possible precisely because salon goods can be disposed of and replaced and so more work can and so 'should' be done in order to maintain a suitably 'feminine' appearance (Black 2004; Widdows 2018).

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[173] Myself included.

[174] This is not to suggest that the Park Village air is clean but, rather, that it is cleaner. For example, the London Air Quality Network Map (2018) shows that the main road passing through the neighbourhood registers between 46-55ug/m^3 of NO_2. Although less than the 55-58ug/m^3 of NO_2 registered in the peri-urbs surrounding the wholesalers' stores, this still 'fails annual mean objective'. Park Village's more residential roads where interviewees (salon customers) tended to live register still less: 37-43ug/m^3 of NO_2 (idem.).

If consuming and throwing 'away' enable one another, then these are also contingent upon oil's by-products which make materials which are 'made to be wasted' (Hawkins 2013b) as more wax, packaging, fabric strips, cleansing and soothing creams, cotton-wool pads etc. can always be made from the seemingly infinite provision of petrochemicals. By effecting disposability thus, oil also enables a (relatively) privileged separation from our waste. Throwing the spent products straight into the bin, the beauty therapists and their customers (and I) do not have to come into contact with the used, hairy wax; something now so self-evident that the idea that we might have to reuse the wax provokes hilarity and disgust. Yet, this social, spatial, and material separation is not afforded to all; the ideal of having our rubbish 'camouflaged' (Wang, M. 2011: 348) is only extended to some. In problematising the notion that there is an 'away' to where rubbish can be thrown, I have highlighted that this 'away' is of course an actual place where actual people live their lives, actual bodies breathing the air. I have also discussed how being designated an 'away' is thoroughly entangled with spatialised power dynamics as some places more than others are thought befitting of rubbish. As with the (potentially) toxic exposures in the salon and surrounding the road networks and waterways along which the products journey, the social stigmatisation and the acute material effects associated with waste disposal fall most heavily on socio-economically disadvantaged and racialised groups, where symbolic and geographic marginalisation become manifest in (potential) spatial and bodily harms. Further telling of these power relations, many of the impacts of being designated an 'away' to where the beauty industry's waste goes remain unrecognised, in part due to a lack of conclusive research and purposive monitoring (Gabrys 2017). This, either unintentional or intentional, means that experiences of toxicity are unrecorded and unacknowledged further reproducing the structural disadvantages associated with being designated an 'away' or an 'edge'. With this 'edge' status in mind, by considering the planning process of the locat*ing* of the London incinerator, I have underlined that the decisions about where to locate the facility in a relatively central area were not incidental. The facility was knowingly locat*ed* where there would be little resistance, where the neighbouring population were already socially and politically marginalised and are now living with the ongoing noxious impacts of waste disposal foisted upon them.

What is more, the effects generated by beauty consumption run out of the city (Massey 2007: 7). Trying to trace the plume from the incinerator chimney as it is blown eastwards over the Thames Estuary and very likely onwards underlines that the 'direct harms' (Widdows 2017) (may) stretch further around the globe exacerbating the planetary climate emergency and again most starkly impacting on disadvantaged communities. This uneven distribution of toxicity and the ensuing harms are deeply entangled with the consumption practices which animate the making of 'feminine' bodies. Thrown 'away', the very by-

products of oil which enable beauty work to actually happen in the salon are those which are ultimately emitted into the air that 'we' breathe as the spent goods and their packaging are incinerated. Echoing the deep-seated and far-reaching colonial violence of shipping, once thrown 'away', the goods which effect the particular version of 'femininity' produced in the salon enter into asymmetrical toxic environmental-bodily interchanges on a global scale that needs to be urgently addressed.

Chapter 7 Conclusion

7.1   Introductory remarks

In the epigraph with which I opened the thesis, discussing women's cosmetic surgery practices, Davis instructs that 'feminist theory on beauty needs to be grounded' (1991: 33). Writing in the 1990s, Davis argues against the pervasive notions at the time which viewed women partaking in cosmetic surgery or other beauty practices as 'victim[s] of the prevailing beauty norms', oppressed, or experiencing "false consciousness" (ibid: 21-23). Instead, for Davis, 'theoretical explanations of feminine beauty practices need to be grounded in women's own explanations for why they engage in these practices' and recognise the complexity of their choices (ibid: 23).   In this thesis, I follow Davis' instruction more literally, attempting to *ground* feminist theory on beauty in another sense by examining the spaces and materials upon which body hair removal and other forms of beauty work are predicated. Or rather, as I contend, spaces and materials which serve to actively 'animate' (Watson 2015: 877) beauty work. As well as centring the spatial and material dynamics of how particular 'feminine'[175] bodies are made in the salon, this 'grounding' approach brings to the fore the 'direct harms' (Widdows 2017) of beauty work, at once material, spatial, and bodily. I have argued that these are thoroughly entangled with the making of this version of 'femininity'.   These harms are experienced in the salon (idem.) but also have a longer geographical and temporal reach (Herzig 2015: 189-190) as a multitude of places and the people who live there are enrolled into the realisation of beauty with unevenly experienced and (potentially) toxic impacts.

In this thesis, I have focused on beauty products (predominantly depilatory wax) and their packaging; examining what they are, so how they act, and so what they make possible. I have also explored the different spaces through which the products move as they 'journey' (Knowles 2014) to and through the salon, shaping places and lives as they move. These are places – ports, factories, trading estates, warehouses, wholesalers' stores, road networks, waterways, incinerators, recycling facilities, and their surrounding neighbourhoods – which I have argued work to 'prompt' (Hawkins 2009: 193) the 'ongoing process'[176] of beauty work as they enable increasing amounts of goods, at greater speed, and lower cost to arrive in the salon and to be thrown 'away' and replaced once used. I have further contended that, in

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[175] As discussed, it is not only 'feminine' bodies which are worked upon in the salon (see footnotes 1 and 39 and section 1.5), however this thesis has focused on a particular cis-gendered version of 'femininity' produced in London's beauty salons.

[176] Interview with Marie, March 2017.

turn, these places and the lives lived there are textured by the movement of the goods. In particular, these come to be permeated by petroleum for oil and its by-products are key ingredients in the products and their packaging as well as fuelling their journey to the city and enabling their disposability and replenishment. As such, the widespread (potential) toxicity which is entangled with beauty work is put into relief. As petro-emissions circulate in the air that 'we' breathe and so are imbricated in de/generative environmental-bodily interchanges (Gatens 1996: 110 cited in Alaimo 2008: 255), the (potentially) toxic harms impact both in the salon and beyond. Exemplifying Massey's (1993) 'geometries of power' where differently spatially- and socially-located people experience the active, material, embodied making of place (Grosz 1999; Massey 2005) very differently, in a common pattern of intersecting forms of structural (Galtung 1969), infrastructural (Boehmer and Davies, D. 2018; Rodgers and O'Neill 2012), and slow (Nixon 2011) violence, these harms are most heavily borne by already disadvantaged groups. Centring these forms of violence, I have demonstrated how 'geometries of power' are manifest as 'geometries of toxicity' as power differentials are felt materially, spatially, and bodily, in the salon, in the city and beyond.

Working across critical beauty studies and urban sociology, this thesis draws these distinct fields of study into conversation to make contributions to both. Firstly, I build on the predominantly socio-cultural focus of feminist research on beauty which has concentrated on the social impulses which propel women towards beauty work, the intra-personal labour of salon work, and the power relations therein. Extending this research, I additionally examine the material and spatial dynamics and (potential) toxicity of beauty practices, both within and crucially beyond the salon. Secondly, I contribute to urban sociology and in particular to studies of urban infrastructure by exploring the corporeality of city life. I do this by examining how bodies are enrolled in the journeys and application of beauty products considering 'bodies as infrastructure' (Yang 2017). Through the lens of beauty work and the imperative of getting goods to the salon, I also examine how bodies come to be shaped in a reciprocal relationship with their environment, a mutually constitutive relationship with can be replete with harms. This is a de/generative interchange whose asymmetries are epitomised in the air that 'we' breathe. Centring the undeniably corporeal processes of the production of 'femininity' in the beauty salon – an 'affair of women' largely overlooked in urban sociology (Watson 2015: 877-878) – this thesis has thus made an intervention into the a-corporeality of studies of city life and its infrastructure.

7.2   Structure of the chapter

I begin this concluding chapter by revisiting the key ideas discussed in the introductory chapter which have underpinned the research, analysis, and arguments of the thesis (7.3). Considering what following

depilatory wax across London offered as a method, I then review how my fieldwork developed from a focus on women's engagement with beauty practices to how this beauty work actually happens and to the materials and spaces which enable or prompt the making of 'feminine' bodies (7.4). In the next section, I turn to the 'ground' of beauty work to summarise the findings and arguments of my empirical chapters: how the wax and its packaging act, the logistical landscapes through which the salon-bound goods journey, and the 'away' to where they are thrown once used (7.5). Finally, I detail the contributions that the thesis has made to both critical beauty studies and urban sociology before offering suggestions for possible future avenues of study (7.6)

7.3 Theoretical grounding

Central to the thesis is the idea of the 'hairlessness norm' (Tiggemann and Kenyon 1998) for women in the UK, the ever-entrenching social expectation that those who identify as women will be free of body hair and on ever-increasing parts of the body. Thus body hair comes to be not only 'a threat to femininity' (Toerien and Wilkinson 2004: 88) but even antithetic to a 'feminine' appearance. Not only ubiquitous, the removal of body hair (as with other forms of beauty work) is, as the participant Marie points out, 'quite an ongoing process'. Body hair grows back (tints and dyes fade, false lashes fall out, Botox wears off, nail polish chips, and spray tans fade), and so the treatments need repeating (/can be repeated) again and again and again in order to attain and maintain a suitably 'feminine' appearance. What is more, as Widdows (2018: 96-120) emphasises when discussing how treatments that were once thought of as 'exceptional' are now considered 'routine', the work to produce this version of 'femininity' is not only never-ending, it is also growing and intensifying. I argue that this is an 'ongoing' and expanding process which not only reflects shifting social and cultural expectations of how a 'feminine' body should look. It is further predicated on and enabled by a constant and replenishable supply of products moving to and through the salon, the ways in which these products perform, and the skills of the beauty therapists to use them.

This focus on the products of beauty work, the spaces through which they journey, and the bodies which are enlisted in and shaped by this movement is underpinned by Massey's conceptualisation of space and place as 'emerg[ing] through active material practices' (2005: 118) and interrelatedly by Grosz's (1999) notion of 'bodies-cities' where bodies and spaces co-produce in a mutually constitutive relationship. Things or materials are understood as active in this relationship, as 'prompt[ing] certain actions' (Hawkins 2009: 193) and 'generat[ing] effects' (Hawkins 2013b: 52), as lively or deadly (Bennett 2010). Drawing on Watson, I take a 'socio-material view' to consider how social life and materials are inextricably and

de/generatively entwined (2015: 877). Not only the things themselves but, guided by Knowles on the flip-flop trail (2014, 2015), I also consider the journeys they make as constitutive of the spaces through which they move and, reciprocally, the bodies with which they come into contact. This making of spaces and bodies is threaded through with what Massey (1993) terms 'power geometries', whereby differently-situated people experience these processes very differently as the trajectories of people and goods (amongst others) 'collide' (Massey 2005) causing bodily harms. In particular, focusing on infrastructure, more than as simply a conduit which facilitates the circulation of things through the city but as having a 'social force' (Amin 2014: 145) – making life and thoroughly imbued with power dynamics – has offered a productive way of investigating the de/generative entwining of the social, spatial, material, and (and often neglected in studies of urban infrastructure) the bodily.

Showing up in everything (Watts, M. 2012: 349 cited in Savitzky and Urry 2015: 181), oil and its by-products have come to the fore as thoroughly entangled with the making of 'feminine' bodies in the beauty salon for they enable the products' actions, journeys, disposability, and replenishment. Concomitantly, petroleum products are important participants in the power-full and harm-full interchanges between environments and bodies. Looking at how oil and its logics are imbricated in these processes has put into relief beauty work's (potentially) toxic harms both in the salon and beyond as petro-emissions permeate spaces and bodies at every stage of the wax's journey to and through the salon. Thus, building on Massey's (1993) concept of 'geometries of power', I have proposed that 'geometries of toxicity' offers a useful framing to consider both how toxicity is manifest in at once material, spatial, and bodily ways as well as to examine how this is unevenly distributed across spatial locations and social groups. In order to explore this asymmetry of (potentially) toxic harms, throughout the thesis I have attended to the air that 'we' breathe as it circulates in salons, in the city, and beyond, inhaled and metabolised by different bodies on starkly different terms (Górska 2016: 107).

7.4   Following wax

Initially I began my enquiry with an exploration of white, predominantly middle-class women's engagement with beauty practices by accompanying them to salon appointments and interviewing them about their experience and their beauty practices. As my fieldwork progressed, my focus turned to the beauty work itself, how it is performed, and eventually what it is performed with. As my attention was 'commanded' (Bennett 2010: 4) by the beauty products and how they behave, I also started to consider the journeys these make to and through the salon questioning where these come from and how they are

made, what they are made from, how they are distributed, what happens once they are used and thrown 'away', and where the incinerator's plume makes landfall.

Learning how to dialogue with a pot (Tilley 1994: 73), I cultivated an express attention to the wax and other beauty products and their packaging, to what they are (what they consist of) and so to what they do (how they act and prompt particular ways of working with, transporting, and disposing of them) and to the effects they generate as they move. Thus, having been *in situ* with salon customers during their appointments – 'going along' (Kusenbach 2003) with them – I expanded on this emplaced research to focus more specifically on the depilatory wax and its journey through different locations across London, setting out to follow it across the city as it moved to and through the salon. This following methodology precisely put into relief the social and spatial lives of things (Appadurai 1986; Mansvelt 2005), how they are implicated in everyday lives (Knowles 2014, 2015), the worlds they make (Coleman 2020), and the specific geometries of power with which they are entangled. To follow these things meant fostering a multi-sited and mobile approach, it meant stretching my muscles (Stoller 1997) and walking. By moving adjacent to the wax and other beauty products and being *in situ* not only in salons but in factories, on port approach roads, in trading estates, wholesalers' stores, and waste facilities allowed me to conduct close participant observation (Gertz 1973; Perec 2008). It also permitted me to carry out interviews where what we spoke about was prompted by what was happening around us (Kusenbach 2003; Moles 2008) bringing to the fore what was salient in that space for the research participants, and for us together. Mobile and materially-focused, as I walked and cycled to and through different fieldsites, my attention came to centre on the interchanges between spaces and bodies and how things were participating in these relationships. Moving through these different spaces and *being there*, I became increasingly attuned to the air that 'we' breathe and to the inequalities imbued in who is inhaling what.

7.5   Grounding beauty

Following the wax and other beauty products across London has meant that I have been able to examine how these behave in different sites. In addition to highlighting the actions of things, this approach has simultaneously put into relief the spatial dynamics of the making of 'feminine' bodies as well as how the materials are dynamically implicated in the de/generative relationships between spaces and bodies. Throughout, I have foregrounded the role of petroleum products in these processes and, inseparably, the petro-emissions released as the products journey. This focus on oil has highlighted the forms of (potential) harm which I have argued are co-extensive with the production of 'feminine' bodies in the beauty salon.

In Chapter 4 I started in the wax-blending factory with the Managing Director in whose account of the changing trends in waxing, the social expectations for 'feminine' hairlessness and the material and technological innovations in wax came to be thoroughly entwined. As the Managing Director (perhaps unintentionally) told it, there did not appear a linear relationship between demands for hairlessness (and on increasingly novel parts of the body) and developments in wax. Rather, they seemed to be synchronously and constitutively interwoven: the wax's 'performance characteristics'[177], extended 'feminine' hairlessness, and the associated socio-cultural expectations of a 'feminine' appearance co-emerging. Amongst the other key ingredients with which it is blended, I underlined how petroleum-derived compounds enable wax to perform as it does. Indeed, making wax malleable, dilatant, meltable, viscous, smell pleasant, colourful, what wax consists of (what it is) enables it to act as it does, ultimately enabling it to remove the 'unfeminine' and so unwanted hair. I also examined how the polypropylene pots in which wax is packaged are equally crucial to what the product is able to do. What these pots are (also oil-derived; *plastic*) is intimately related to how they behave (*plastically*) and how they also play an active role in enabling hair removal. Whilst 'observing'[178] the beauty therapists at work and asking them to narrate what they were doing, it was made clear that these things and how they perform are central to their embodied labour practices; indeed, as one beauty therapist told me whilst perform a waxing treatment, 'for me, it's all about how it acts'[179]. I have argued that these things serve to effect a deeply corporeal and materially-informed acquisition of skill as the knowledge of how the products and tools work in practice becomes incorporated into the beauty therapists' bodily repertoire (O'Connor 2007; Sennett 2009).

In addition to animating the possibilities for hairlessness and the embodied craft of beauty work, the materiality of the products prompts another set of effectuations, becoming incorporated in more pernicious ways. From aching joints and muscles caused by performing the physical and repetitive waxing and other treatments to the inhalation of the (potential) toxins, the materiality of the products comes to be ingrained into the beauty therapists' bodies as it penetrates permeable, viscously porous (Tuana 2008) bodily boundaries. Inseparable from how the products act, these de/generative environmental-bodily exchanges impact in highly uneven ways with the feminised, often minority-ethnic-

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[177] Email correspondence with Quality Assurance Manager from Eastern Waxes, November 2019.
[178] Although recalling Back's contention that we are doing much more than 'observing' whilst conducting research (2012a: 29; see footnote 13).
[179] Interview with Liz, October 2019.

in-the-UK. and largely disadvantaged salon workforce coming to 'shoulder' the toxic burden of performing this 'third shift' (Kang 2010a: 15, 2010b).

Following on from my focus on how oil's by-products enable the wax and other beauty products to act in the salon, Chapter 5 explored the logistical landscapes through which these goods incessantly pass and, reciprocally, which they shape as they make their journeys. These are landscapes which I have shown are equally permeated by petroleum, infusing spaces and bodies and, again, doing so on highly uneven terms. Drawing on literature from critical logistics studies, I have problematised the notion of a 'smooth' 'flow' of goods across spaces (Chua et al. 2018; Cowen 2014; Danyluk 2018). Instead, I have shown that this movement is, in Knowles' (2014: 7-8) sense, a *journey* where the trajectories of the beauty products are implicated in making the spaces through which they move, certainly 'com[ing] into collision' in the city (Massey 2005: 155-159) and leaving harm-full traces in environments and bodies; processes which are thoroughly threaded through with power dynamics. Thus, although given little thought and ostensibly obscure(d) from (most of) the consuming public, logistics and logistical landscapes are shown to be not simply a means of moving goods around the city, an invisible force through which stuff just arrives. Central for daily life but hidden or remote for many people, the spatialisation of logistics and its violence is far from imperceptible to everybody/every body. For example, I outlined how the shipping container (now a key feature in transporting goods) 'changed the world' (Donovan and Bonney 2006) quite literally, with tangible impacts on ports, docksides, dock communities, roads, and streets. It also played a role in making the city's 'edges' (Parker 2013: 379) such as the London peri-urbs which I visit, neighbourhoods shaped *by* and *for* the city centre's consumption practices with wide roads, motorised traffic-oriented layout, large trading estates, and boxy warehouses. These neighbourhoods, by dint of their shape, enable increased consumption as increased amounts of goods can journey through them, quicker and quicker, cheaper and cheaper. As such, I have argued that the journeys of beauty products are in a co-constitutive relationship with urban logistical landscapes as the transit of increasing quantities of goods to market is spatially facilitated whilst, at the same time, places and the lives lived there are textured by this movement, and in (potentially) toxic ways.

With this in mind, I concentrated on two particular examples of the de/generative entanglements of logistics, spaces, and lives: along road networks and in the sea. Firstly, journeying via road, I focused on how spaces such as the trading estates and their environs were designed by and for the priority of driving enabling the movement of bulk quantities of goods. Eventually delivering goods to the salon, this transportation is key for the 'ongoing process' of beauty work which is centred around ephemerality,

repetition, and replenishment. Inextricable from the diesel-fuelled movement of goods towards the market are the emissions of vehicles which linger along the roadsides; emissions of NO_x and forms of particulate matter which circulate in the air that 'we' breathe, disproportionately permeating neighbourhoods where economically-deprived groups and communities of colour live (Barnes et al. 2019; Dorling 2010; Fecht et al. 2015; Marquardt 2022; Mitchell and Dorling 2003). Secondly, as I took the ferry home from Tilbury, the ways in which the sea – another purportedly 'forgotten space' (Sekula and Burch 2010) – is also touched by the 'deadly life of logistics' (Cowen 2014) and the associated imperatives of capitalism were put into stark relief. The discovery of a dead whale in the Thames on the day I was crossing the river served as a palpable reminder of the often unseen but nonetheless material traces left by the global journeys of goods. Interrelatedly, it also brought to the fore the ways in which the ecological and social effects of the climate emergency are deeply entwined, threaded through with legacies of colonialism and ongoing structural racism (Ferdinand 2022). Not only marine wildlife, but 'in the wake' of the ships which carry these goods, the racialised and classed violence of colonialism and capitalism persists; 'antiblackness as total climate', epitomised, as Sharpe (2016) describes, in an inability to breathe. For Sharpe, this is most acutely manifest as police violence against black and brown bodies. By following wax to and through the beauty salon, I have examined how this percolates through the city and beyond in more prosaic ways, in the air that 'we' breathe, the contents of which 'we' metabolise.

In the same way that the making of hairless 'feminine' bodies has been shown to be predicated upon the arrival of an interminable stream of goods in the salon and so on the logistical landscapes which enable or, as I argue, *prompt* this, it is also contingent upon the ability to dispose of these products once used (and, of course, to replace them). Thus, in Chapter 6 I examined how this 'easy'[180] disposability is effected by the seemingly infinite supply of oil as it appears that more can always be made to replace that which is discarded. I further considered how this is equally enabled by the (fictive) notion of an 'away' to where rubbish is thrown.   On a tour of a recycling plant, the mutually constitutive relationship between consumption and disposal is underscored as I felt as if I were standing in the photographic negative of the distribution centre I had visited a fortnight earlier; not just mirroring (Wang, M. 2011: 346) but rendering one another possible. In particular, I again considered the role of oil in disposability and so in the social, material, and spatial separation which is expected from our rubbish (Hawkins 2001): as it appears that more goods can be manufactured, the need is reuse is elided and separation is achieved. This was exemplified in mine and the beauty therapist Liz's reactions at the thought of recycling used depilatory

[180] Of course, as I have shown in reality this is anything but 'easy'.

wax by filtering the removed body hair from it, something now so remote that even thinking about it was met with hilarity and disgust. Yet, this separation from waste is (relatively) privileged and I have problematised the notion of an 'away' to where rubbish is thrown for this is, of course, some place, where some people – not afforded separation – live, work, and breathe. Highlighting the spatialised inequalities bound up in waste disposal, Liboiron shows that not only is the idea of an 'away' an enabler of disposability but they also underscore the significant power relations at play in being designated an 'away' (2021: 1, 8). Indeed, in a common pattern of environmental racism and injustice, incinerators and other waste disposal facilities are predominantly locat*ed* in the neighbourhoods of black and ethnic-minority-in-the-UK groups and disadvantaged communities (Mills 2001; Roy 2020). This is an at once social and spatial stigmatisation with material manifestations: increased heavy-goods traffic, noise and light pollution, the stray bits of litter along the roadside, and the pollutants (potentially) released into the air as the used products are incinerated. Considering the location/locat*ing* of the London incinerator which I visit – in a busy neighbourhood in a relatively central part of the city – underlines that decisions about where to site these facilities are far neutrally made as a place was chosen where it was (correctly) anticipated that there would be little contestation due to the demographic of the area and their lack of social and political capital (Parau and Wittmeier Bains 2008: 117-118).

In addition, I envisioned the material effects of the disposal-consume relationship as 'lines [which run] out of the city' – embodied in the plume from the incinerator chimney – power-laden, and with palpable impacts on other places (Massey 2007: 7). Trying to trace the trajectory of this plume as it is blown eastwards over the Thames Estuary and beyond precisely puts into relief this constitutive relationship between what happens in London and the fates of elsewhere (idem.). And, echoing the historic and ongoing social and ecological violence of the colonially-forged routes plied by ships (Ferdinand 2022; Sharpe 2016), those who 'carry a disproportionate toxic load' as the remnants of the West's seemingly unending consumption are emitted in the air that 'we' breathe are 'lower-class peoples, Indigenous peoples, and people of colour' (Alaimo and Hekman 2008: 9) on a global scale.

Taken together – the materials of beauty work, the wax, other beauty products and their packaging, the salons, the logistical landscapes of the ports and trading estates, the road networks, and waterways, and the recycling plants and incineration facilities, and the different forms of embodied labour in these sites – form the 'ground' of beauty work. This ground, I argue, serves to animate the production of 'feminine' bodies in the salon by enabling beauty work to actually happen and in ever-expansive ways, animating the 'ongoing process' and entrenching what is expected for a 'feminine' appearance. Simultaneously, the

places through which the goods journey and, reciprocally, the bodies with which they come into contact are shaped by the movement of the beauty products to and through the salon. Most saliently, the wax and other products, how they move, and what is emitted as they journey enter into (potentially) toxic de/generative environmental-bodily interchanges where vulnerability to the harms of beauty work is patterned by intersecting structural dynamics in the salon, in the city, and globally. Circulating in and out of these places and in and out of bodies, the air that 'we' breathe has been a connective thread throughout the thesis epitomising these interchanges (literally, places and bodies in gaseous exchange) and as a useful means of underlining the uneven distribution of the toxic harms which co-emerge with the production of 'femininity' in the beauty salon.

7.6   Contributions

Putting work from critical beauty studies and urban sociology into conversation, this thesis has made contributions to both. Firstly, building on the socio-cultural focus of feminist research on beauty which has largely examined the reasons why women engage in beauty practices, the associated social expectations of a 'feminine' appearance, and the gendered, racialised, and classed power relations imbued in definitions of 'beautiful', this thesis has argued that there are also significant material and spatial dynamics which underpin and animate this 'feminising' work. My focus has also allowed me to contribute to studies which have looked at the working conditions in salons, predominantly on forms of emotional, aesthetic, and sexual labour and the intra-personal and power-laden relations between workers and their clients. In conversation with this research and centralising the products with which the beauty therapists work, my contribution sits within a smaller body of feminist literature which has explored beauty work as a materially-informed craft. Considering the corporeality of this labour and the ways in which materials, spaces, and bodies de/generatively interact, I bring to the fore the literal incorporation of skill and the concomitant bodily harms associated with performing this work. What is more, where research in critical beauty studies has largely looked at the harms to consumers of the beauty industry and, to a lesser extent, the harms to workers, my thesis builds on this to emphasise that the (potential) toxicity threaded through the making of 'feminine' bodies reaches much further than the space of the salon. In this way, this thesis expands the material and spatial purview of critical beauty studies in terms of both what effects the production of 'femininity' in the salon and the (potentially) toxic harms which are co-extensive with this process.

This thesis also makes a contribution to urban sociology and, in particular, to studies of urban infrastructure by centring the bodily dynamics of life in the city: the bodies of those whose labour enables

beauty work, the corporeal and harm-full interchanges with environments, and the production of 'femininity' in the salon, an undeniably bodily process. Such visceral topics and especially the making of 'feminine' bodies in salons and the associated beauty work have largely been overlooked in studies of the city which have, nonetheless, recognised the 'social force' (Amin 2014: 145) of urban spaces and infrastructure but in a strangely a-corporeal manner. Guided by Watson (2015: 877-878) who argues that certain matters (laundry in her study, beauty in mine) are irrevocably associated with women and so dismissed as domestic or trivial in studies of the city, I seek to counter this omission demonstrating that this particular version of 'femininity' is produced in a reciprocal relationship with "serious" urban spaces. That is to say, the process of making 'feminine' bodies in the salon, the spaces upon which this is predicated, and the people whose lives are (directly or indirectly) enrolled in the journey of the products are co-constitutively interconnected. A significant way in which beauty practices impact is in the different forms of environmental and corporeal harm experienced along the routes of the products' journeys. As the trajectories of these things 'come into collision' (Massey 2005: 155) with people (and other species), a focus on the air that 'we' breathe has highlighted not only the deeply bodily way in which these harms are experienced but also how these are asymmetrically distributed. I have built on Massey's (1993) notion of 'geometries of power' to consider how these power relations are manifest toxically, forms of (potential) toxicity which are experienced differently by differently-situated groups; corporeal experiences which I have shown are threaded through with 'geometries of toxicity'.

Building on these contributions, possible future avenues for study might include a closer investigation of how petroleum plays an active role in other intimate practices in order to more clearly understand how it indeed shows up in everything (Watts, M. 2012: 349 cited in Savitzky and Urry 2015: 181): in goods and their journeys, in places and bodies, and so in fully socio-material life. Similarly, another productive avenue would include a study of palm oil in 'feminising' products as this is another key ingredient in cosmetics and comes with its own set of environmental and bodily implications – '"upstream" production and "downstream" effects' (Herzig 2015: 189) – which stretch far beyond the salon (see Haiven 2022). Finally, extending my study into the air that 'we' breathe, other future directions might include further explorations of how the social, political, bodily, and material dynamics of urban life are entangled both in the air and also in the water that courses through the city (see Watson 2019), as both of these have a social and material force, circulating through spaces and bodies in ways that make lives.

7.7   Concluding remarks

Following depilatory wax and other beauty products to and through the salon, viewing these and the places through which they journey as having an active role in animating beauty practices, considering these spaces and the lives lived there as mutually produced, and increasingly attuning to the air that 'we' breathe, this thesis centres the material and spatial dynamics of the making of 'feminine' bodies and the (potential) toxicity which is co-extensive with this process. Drawing on well-established concepts across both critical beauty studies and urban sociology to underpin the research, I have considered how the ubiquity of hairlessness for 'femininity' and the power-laden de/generative relationship between bodies and spaces are constitutively interlinked. Given the omnipresence of oil in every stage of the wax's journey, the active role of petroleum is underscored; indeed, in the beauty salon, oil is gendered and genders in a very literal way as the version of 'femininity' produced here is shown to be animated by oil in multifaceted ways. Inseparable from this is a suite of unevenly distributed toxic harms for the very oil-derived products which enable beauty goods to perform as they do, which fuels their journeys to the salon, and which prompts their disposability and replenishment are those which come to infuse spaces and bodies in de/generative interchanges. This is most notable in gaseous exchanges as 'we' inhale and metabolise what circulates in the air that 'we' breathe. In a commonly occurring pattern of environmental racism and injustice, in the salon, along the roadsides, adjacent to the incinerator, in London and beyond, these (potentially) toxic effects come to bear most heavily on minority-ethnic-in-the-UK, socially-disadvantaged, and marginalised communities. Bringing together the distinct fields of critical beauty studies and urban sociology, this thesis has made a contribution to both by expanding the material and spatial remit of feminist work on beauty and by centring the corporeality and, in particular, the making of the 'feminine' body in urban life. The particular version of 'femininity' produced in London's beauty salons is shown to be animated by materials, constitutively entangled with different spaces, (potentially) harmfully impacting on environments and bodies within and beyond the salon, and, seeping through all of these, thoroughly saturated with petroleum.

Appendices

Appendix 1   Information sheet for participants (customers)

Information Sheet for Participants

Project title: An exploration of London's neighbourhoods through their hair and beauty salons.

Researcher: Louise Rondel

Contact: l.rondel@gold.ac.uk

What is the purpose of the research?

This research is being carried out as part of my PhD dissertation. I am interested in what takes place in hair and beauty salons in different neighbourhoods in London. I want to accompany customers to their salon appointments and/or conduct interviews in order to better understand the different beauty work that takes place across London.

What will happen if I do take part?

I will accompany you to your hair or beauty salon appointment. Whilst there, I can either sit with you and talk or, if you prefer, I can wait in the waiting area. This will be followed by an interview in a nearby convenient location (usually lasting between 30 minutes and an hour and a half) during which I will ask you about your experiences of salons. For example, why you might choose particular salons and particular treatments, how your hair and beauty treatments have changed and what happens in the salons. If you agree, the interview will be tape-recorded.

What are the benefits of taking part?

There are no direct benefits to taking part. However through my research I will examine the very different and creative beauty practices that are important in many of our daily lives and the work that goes into them, an area often overlooked in academia. Your contribution will be valuable to me as I explore different experiences. Thank you in advance.

Appendix 2   Information sheet for participants (salon workers)

Information Sheet for Participants

Project title: An exploration of London's neighbourhoods through their hair and beauty salons.

Researcher: Louise Rondel

Contact: l.rondel@gold.ac.uk

What is the purpose of the research?

This research is being carried out as part of my PhD dissertation. I am interested in what takes place in hair and beauty salons in different neighbourhoods in London. I believe that this often gets overlooked or is trivialised and so I want to interview those who work in salons in order to better understand the work that goes on.

Why have I been invited to participate?

I am interested in interviewing people who work in hair and beauty salons about daily life in the salon. I am interested in finding out about the skills and creativity that you use in the salon, the treatments that you offer and about your customer base.

What will happen if I do take part?

I will arrange a good time for me to come to the salon for an interview. The interviews normally last for about an hour. I will ask questions about your work in the salon and the daily life in the salon and if you want to show me any materials or tools, you are most definitely welcome to. If you agree, the interview will be tape-recorded.

What are the benefits of taking part?

There are no direct benefits to taking part. However through my research I will examine the very different, creative and skilled beauty practices that are important in many of our daily lives and the work that goes into them, an area often overlooked in academia. Your contribution will be valuable to me as I explore different experiences. Thank you in advance.

Appendix 3   Consent form

Consent Form for Participants

An exploration of London's neighbourhoods through their hair and beauty salons.

The Department of Sociology, Goldsmiths College, University of London attach high priority to the ethical conduct of research. **Alongside this form, you should read the Information Sheet and/or listen to the explanation about the research provided by the person organising the research**. If you have any questions regarding the research or use of the data collected through the study, please do not hesitate to ask the researcher. We therefore ask you to consider the following points before agreeing to take part in this research:

This research is being undertaken for the purposes of a PhD dissertation.
The research will be conducted by Louise Rondel.
The interview will be recorded.
All data will be treated as personal under the 1998 Data Protection Act, and will be stored securely.
Copies of transcripts and other data collected through the research will be provided to you, free of charge, upon request.
Anonymity will be maintained and it will not be possible to identify you from the resulting dissertation
If you decide at any time during the research that you no longer wish to participate in this project, you can withdraw immediately without giving any reason.
You will be given a copy of this consent form to keep and refer to at any time.
By signing this form you assign copyright of your contribution to the researcher.

If you have any concerns about the conduct of the research, please contact the department's ethics officer Professor Marsha Rosengarten (m.rosengarten@gold.ac.uk).

I confirm that I have freely agreed to participate in the 'An exploration of London's neighbourhoods through their hair and beauty salons' research project. I have been briefed on what this involves and I agree to the use of the findings as described above. I understand that the material is protected by a code of professional ethics.

Participant Signature:

Name: Date:

I confirm that I agree to keep the undertakings in this contract.

Researcher Signature:

Name: Date:

Appendix 4   Interview schedule

Hair history

Could you give me a history of your life through your hair…

And now?

How often do you go to the salon?

The hair salon

Do you have a regular salon / hairdresser?

Describe the salon where you go

Why do you choose this salon / hairdresser

People who work there – and their presentation

Music

Coffee

Conversation

Other customers – including interaction with

Other salons you have been to?

Other beauty treatments

Any other beauty treatments?

Choice of salons and why

People who work there

Other customers – including interaction with

Other salons you've been to

Outside the salon

Dress for work

Getting dressed up - Special occasions
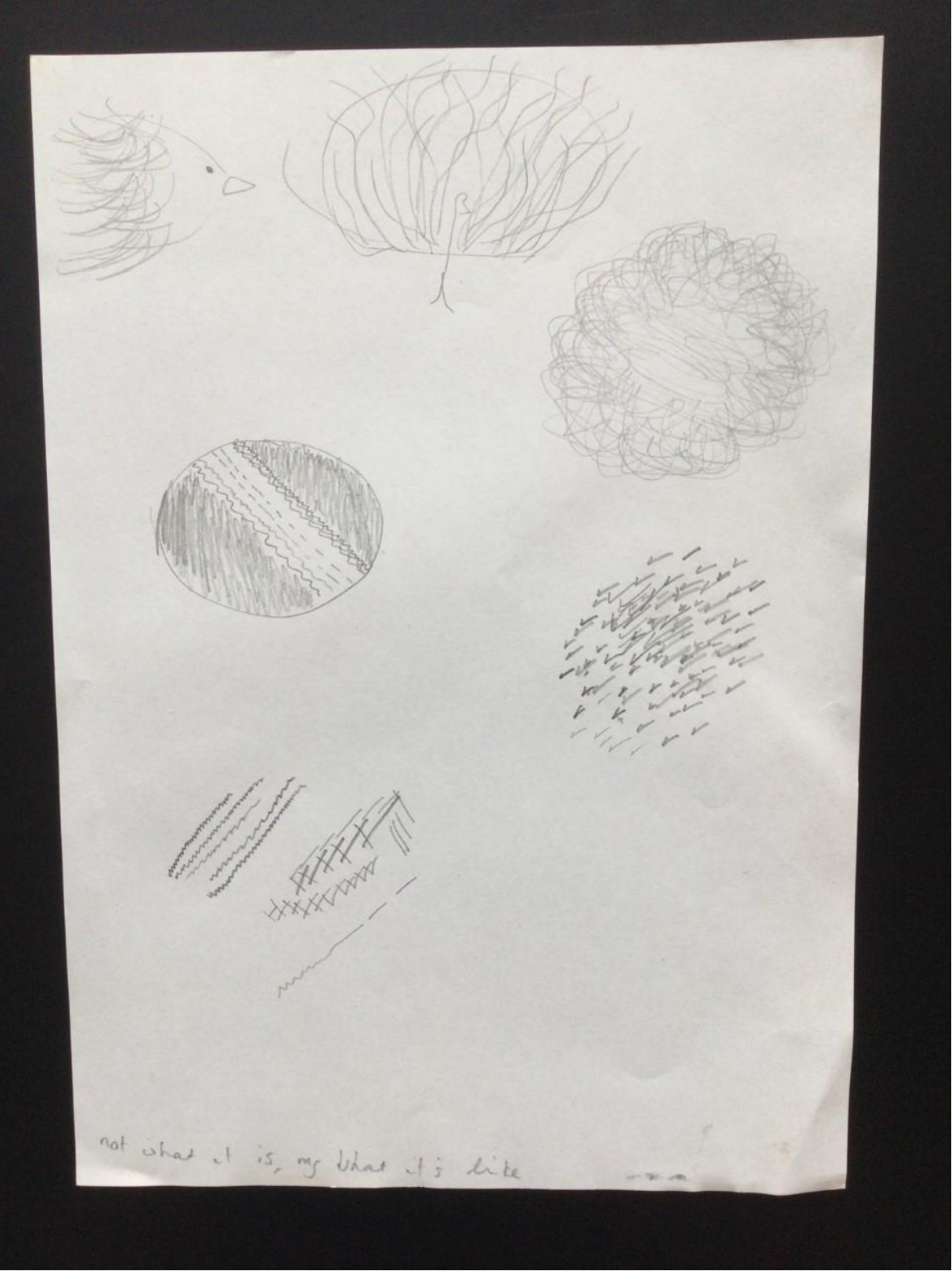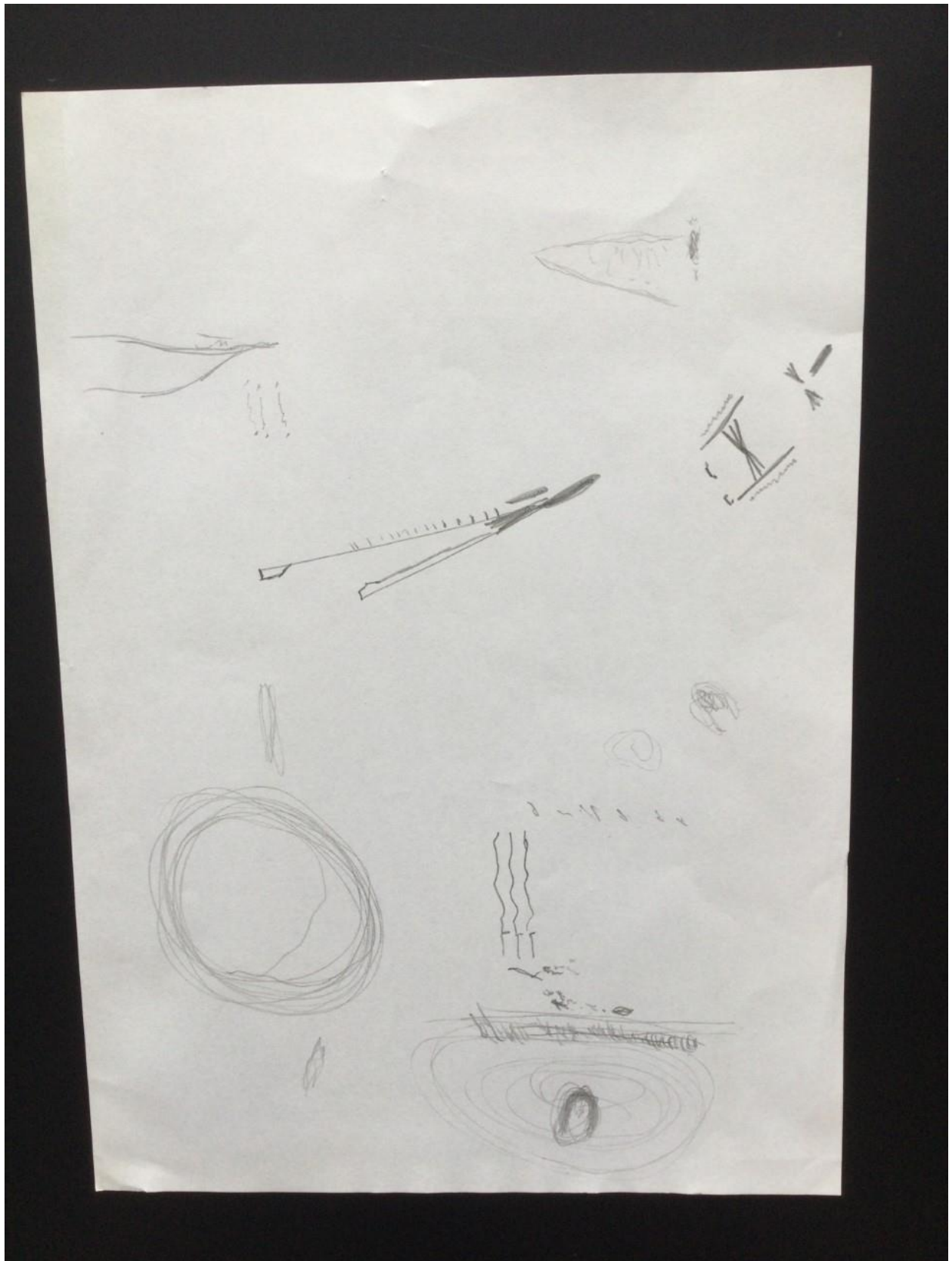
Make-up

Other

Anything ever go wrong?

Anything you would like to try?

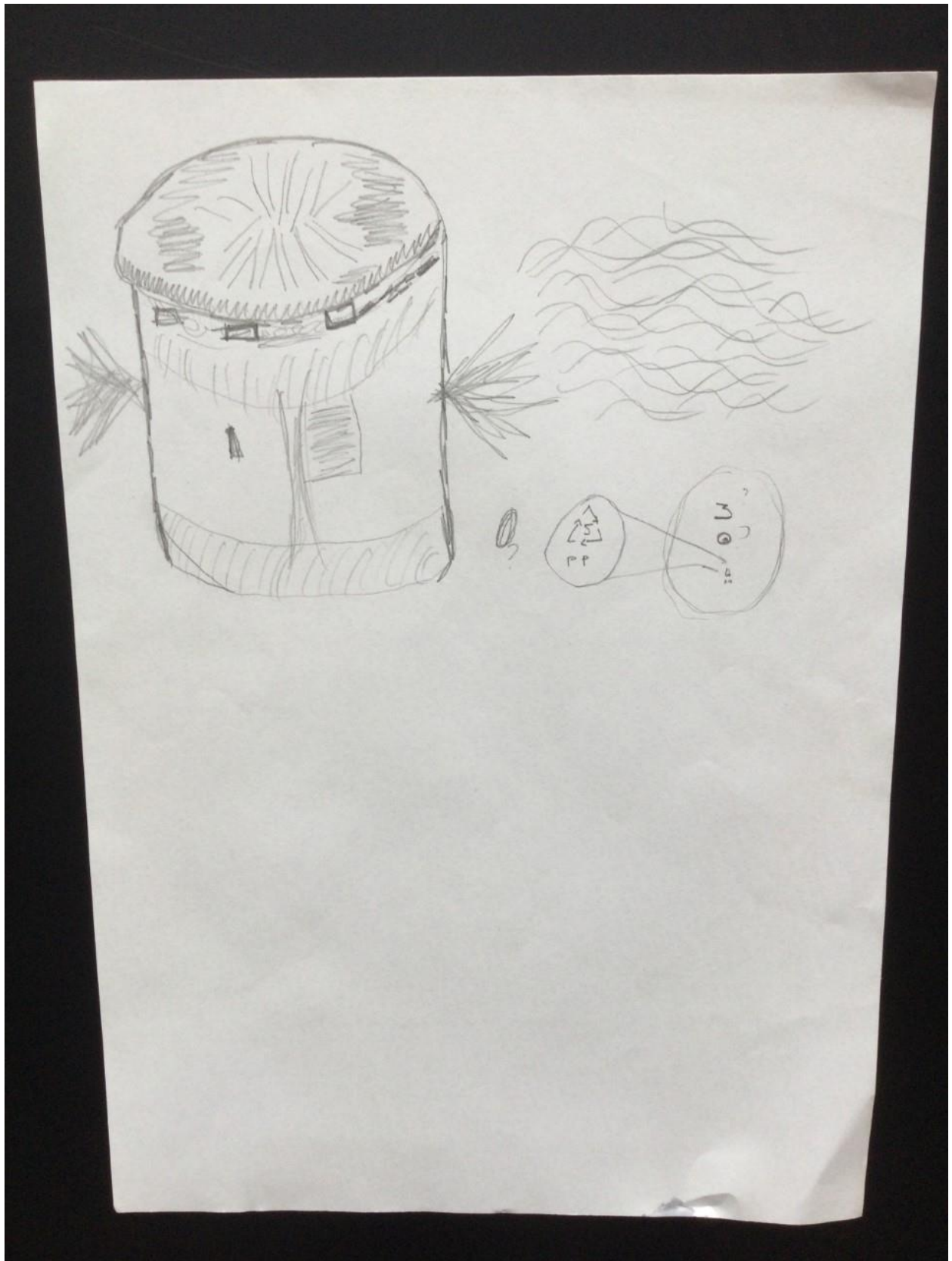Anything you would never have done?

In general, do you think that women in this area spend much time in salons?

Appendix 5   'Not what it is, but what it's like': Drawings from the Materials Library workshop

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