

ORCA - Online Research @ Cardiff

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository:https://orca.cardiff.ac.uk/id/eprint/95830/

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Boyer, Kate, Mayes, Robyn and Pini, Barbara 2017. Narrations and practices of mobility and immobility in the maintenance of gender dualisms. Mobilities 12 (6), pp. 847-860. 10.1080/17450101.2017.1292027

Publishers page: http://dx.doi.org/10.1080/17450101.2017.1292027

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See http://orca.cf.ac.uk/policies.html for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



Narrations and Practices of Mobility and Immobility in the Maintenance of Gender Dualisms

Mobilities

Kate Boyer, Robyn Mayes and Barbara Pini

2 November 2016

Dr. Kate Boyer, **lead author, corresponding author**, Lecturer, Cardiff University School of Geography and Planning, Glamorgan Building, King Edward VII Avenue, Cardiff, Wales, UK CF10 3WA, +44 (0)29 208 75244 boyerk@cardiff.ac.uk

Dr. Robyn Mayes, Senior Research Fellow, School of Management, Queensland University of Technology, + 61 7 3138 1261, robyn.mayes@qut.edu.au

Dr. Barbara Pini, Professor, School of Humanities, Languages and Social Science, Nathan campus, Griffith University, 170 Kessels Road QLD 4111, Australia. + 07 373 57434, b.pini@griffith.edu.au

Abstract

This paper analyses the role of practices and representations of mobility in supporting particular kinds of gender orders. While scholarship has shown the various ways women are materially and symbolically 'fixed' in place, less attention has been paid to how discourses and practices of mobility interface with systems of gender differentiation more broadly. This work is based on a robust empirical base of 55 interviews, 90 hours of participant observation and an analysis of museum displays in Kalgoorile, Western Australia, an iconic frontier mining town selected for this investigation as a site of strongly bifurcated gender discourses. Analysing our field data through the lens of feminist theory which problematizes gender binaries (Braidotti 2002; Coole and Frost 2010; Haraway 1991), we argue that while some narrations of gender mobilities serve to reinforce gender binaries, lived practices of movement can also destabilise (idealised) notions of gendered movement. This paper extends conceptual work by advancing understanding about the role of mobility within systems of gender differentiation, showing how lived practices of mobility are just as likely to challenge idealised patterns of gendered movement as they are to reinforce these patterns.

Key words: mobility, sex-work, skin-work, gender binaries, mining, Kalgoorlie Australia

In 2010 Tim Cresswell issued a provocation to pay greater attention to the politics, social practices, and forms of representation that are bound up with mobility. He argued for the need to move beyond bifurcated notions of mobility and immobility, and called upon cultural geographers to approach mobility as a 'fragile entanglement of physical movement, representations and practice' (Cresswell 2010, 18). In particular, Cresswell highlighted the role mobility plays in the way gender relations are theorised as a potentially fruitful area of inquiry for cultural geography scholarship (Cresswell 2010, 21). Since that paper was published scholars across fields of cultural, social and feminist geography, planning, sociology and beyond have taken up Cresswell's call to engage the politics of mobility. This scholarship has produced a rich body of cross-disciplinary work on a range of themes relating to gender and movement. However, work bringing mobility into communication with gender-theorising itself is still relatively scarce. As Georgine Clarsen observed in 2013, scholarship on gender and mobility has made great strides in understanding how bodies and physical spaces are gendered; how gender and mobility are co-constructed (especially through Robyn Law's 1999 excellent work); together with women's and men's 'differential practices, experiences and representations of mobilities' (Clarsen 2013, 97). However she goes on to note that 'the ways and mechanisms through which mobility has ...come to organise our understandings of gender...still needs much teasing out' (Clarsen 2013, 100).

In this paper we seek to build on existing work by exploring how practices and representations of mobility become enlisted in supporting particular kinds of gender norms.

We argue that narrations of mobility and fixity are used to reinforce not only the normative striation of women's movement but gender binarisms themselves in which women are positioned as fixed and men as mobile. We make this argument through an analysis of how place, mobility and sexuality are narrated through one another in Kalgoorlie, Western Australia, an iconic 'last frontier' mining town (figure 1) (Pini and Mayes 2014). Kalgoorlie

has both a prominent workforce associated with the 'hyper-masculinity' of resource extraction, as well as (a closely interrelated) prominent and visible workforce and set of workplaces associated with sex- and skin-work (meaning work that involves the display of sexualised, partially-clothed, typically female, bodies). (Mayes et al. 2015; Pini et al. 2013). As such, Kalgoorlie provides a particularly 'high-wattage' case of gendered spatial relations. We are not arguing that the way mobility is woven into understandings of gender and sexuality in Kalgoorlie can be extrapolated to explain how this occurs in other contexts. Rather, we seek to demonstrate what a close reading of the normative classification of movement in a specific place can reveal about how narratives of mobility can work to reinforce gender dualisms, and in turn suggest that this intervention can serve to destabilise binary gendered ideals of movement and mobility.

Conceptually our work draws on a nexus of feminist theory which has worked to challenge gender binaries. This body of work ranges from the scholarship of Rosi Braidotti and Donna Haraway captured loosely under the rubric of post-humanism (Braidotti 2002; Haraway 1991); to more recent work that has built on this base to highlight the connections between representation, embodiment, materiality, and everyday practice (Alaimo and Hekman 2008; Barad 2008; Colebrook 2008; Coole and Frost 2010). Inspired by this literature, we seek to advance scholarship by drawing out the way representations and practices of mobility in Kalgoorlie interface with one another.

Our analysis rests on a robust empirical base of 90 hours of participation observation, 55 interviews, and an analysis of texts, images and displays at the Western Australian Museum Kalgoorlie-Boulder (WAM) all collected in 2011 in Kalgoorlie. The field site was selected for this investigation as site of arguably 'hyper-binary' discourses of gender and sexuality, in which male/female distinctions are drawn in unusually stark terms. Kalgoorlie is the site of one of the largest open-pit gold mining operations in the world, and, in-line with

other mining towns in Western Australia, has a substantive/significant historical and contemporary sex- and skin-work industry for a town of its size (Pini and Mayes 2012; Pini et al. 2013; Pini and Mayes 2014). Thus this field site was selected as a locale in which themes of movement, embodiment and sexuality were particularly evident both on the landscape and in the various place-representations we analysed. Data were collected by an international, interdisciplinary, multi-University team of three researchers. We employed a collaborative and iterative / recursive approach to designing the study, collecting data and shaping analysis (please see section two for more on methods).

This paper is divided into three sections. In section one we address the key conceptual and empirical literature that frames this study. In section two we introduce our field site and explain our methodology. In section three we outline the key discourses relating to gender and mobility which circulate in Kalgoorlie, which we reflect on through what we perceived as lived practices of mobility. We argue that discourses of mobility can play an important role in supporting a bifurcated and fundamentally hierarchal gender order, and, in turn, that such discourses can sometimes stand in sharp contrast to day-to-day embodied practice.

Section One: Background literature

In this section we will outline how this research builds on existing literature. We begin by briefly outlining the conceptual work on which we draw, and in turn trace out the three key empirical fields on which our research builds (these being: gender and mobility; gender and sexual identities in the rural context; and the 'place' of sex- and skin-work). Conceptually we engage with feminist theory which seeks to bring discursive and representational approaches to understanding the world and social life into communication with more practice and performance-based approaches (Alaimo and Hekman 2008; Coole

and Frost 2010; Dolphijn and van der Tuin 2012). For the purposes of this paper we utilise this body of work as a means of attending to the politics of embodied practice in order to draw forth an analysis of how embodied practice relates to textual and other forms of representation. Building on the conceptual work of Donna Haraway (1991) and the work of Gilles Deleuze and Felix Guatarri (1988) this body of theory seeks to critique and highlight the limits of dualistic systems of classification as a means of structuring social experience. Remaining concerned with the ways that multiple, intersectional identity-based power differentials continue to structure experience, social relations, institutions and opportunity, feminists (and others) argue that binary systems (including gender) are inextricably bound up with ways of conceptualising the world which are inescapably hierarchical in nature.

Flowing from this, we employ the concept of gender as a 'dualism machine' that functions to both define and contain difference (Deleuze and Guattari 1988, 232). In the case of gender, this includes socially and culturally mediated forms of difference (ranging from dress, forms of embodiment and comportment as well as understandings about 'natural' skillsets) which are then grafted onto 'sexualities' of male and female in ways that disadvantage women. As Robyn Law has noted, relational gender differences also profoundly structure mobility and the social meanings attached to movement (Law 1999, 575).

Historically this dualism machine has created a value system around gender expression that tends to disempower women. It has also generated strict limits on what gender itself can mean, stigmatising those who do not identify as either straight or cisgender. As Deleuzian feminist scholar Julia Coffey deftly notes: 'feminism has drawn attention to the ways that dualistic thought aids in the construction and maintenance of gender divisions and inequality, since Cartesian dualisms are implicitly hierarchical' (Coffey, 2013). Along similar lines Rosi Braidotti has commented that the ultimate goal of identity theory (including

critiquing gender binaries) is to bring forth a conceptual framework in which 'identity is not postulated in dialectal opposition to a necessary devalourized other' (2002, 27). Expanding on this theme in subsequent work, Braidotti advocates a monistic (rather than dualistic) ontology (2013, 188).

Following from this body of theory, we seek to attend to the ways gender becomes instantiated in social relations as a means to striate and territorialise bodies and spaces; (and, more importantly) to show the fissures within, or what escapes such territorialisations. We recognise the many ways in which the theorisation of identity has become complexified since the 1990s through concepts of intersectionality, difference, becoming and especially queer theory; and firmly believe in the importance of these innovations. In this light, we yet choose to focus on gender in recognition of the force this binary machine continues to wield as a means of structuring – and limiting—how social experience is ordered and understood. We were struck by the extent to which very 'blunt', binarised gender orders continues to hold sway in Kalgoorlie (and other places). Our choice in focusing on gender binarisms then is motivated by a drive to show how such –still powerful—systems of social and spatial ordering are both made (and *un*made) through practices and narrations of mobility.

Our conceptual framework also draws from non-representational approaches that have emerged in cultural geography in recent years as a means of theorising more-than-human agency in the context of the anthropocene (Anderson and Wylie 2009; Simpson 2013; Whatmore 2006; Yusoff 2013). We contribute to this scholarship by extending geography's engagement with the more explicitly feminist aspects of more than representational theory, which focuses on embodied practices, which have received somewhat less attention to date (but see Colls 2012 and Colls and Fannin 2013 for some fine exceptions to this). (Feminist) new materialist social theory dovetails nicely with new mobilities scholarship, concerned as it

is with the 'fragile entanglement of physical movement, representations, and practice' (Cresswell 2010, 18).

We are guided by Cresswell's observation cited in the introduction that both mobility and the forms of representation bound up with it are political, and particularly his assertion that understanding mobility can inform theorisations of gender (2010, 21). Responding to this call, we advance conceptual work by showing both how discourses of mobility can be used to support gender binaries, and at the same time how lived practices of mobility can challenge those same binaries. Through this intervention, we suggest that lived practices of mobility can serve as a means of destabilising received, binarised notions of gendered mobility. Having outlined the conceptual literature on which we draw let us now turn to the three key areas of empirical work on which we build: gender and mobility; gender and sexual identities in the rural context; and the 'place' of sex- and 'skin-work'. Due to space constraints coverage of each of these fields is necessarily brief, and will focus on tracing how our work builds on existing analyses.

As Law, Uteng and Cresswell observe, women's lives are just as filled with movement as men's (though the nature and scale of that movement may differ from that of men's, and will be further shaped by both cultural norms and individual circumstance and preferences) (Law 1999, 574; Uteng and Cresswell 2008, 5). Over the last two and a half decades scholarship in feminist geography and allied fields has richly highlighted this array of movement in its myriad forms, across different cultural contexts and historical frames. A comprehensive overview of this scholarship is beyond the scope of this paper (but see Clarsen in Adey et al 2013, Uteng and Cresswell 2008, and Law 1999). To provide a brief overview however, work in this vein has encompassed studies ranging from global and continental exploration (Blunt 1994; McEwan 2000; Meaney 2012); to international migration (Blunt 2005; King and Vullnetari 2012; Silvey 2004); to the day-to-day practices

of women's journeys- to-work and parenting (Dowling 2000; England 1993; Hanson and Pratt 1995; Luzia 2010); to women's myriad forms of engagement in and with urban space (Stansell 1987, Von Ankum 1997, Wilson 1991). This scholarship has examined mobility and movement as an empowering force for women, such as for 19th and early 20th century women travellers (Foster 1990, Robinson 2001) and as denizens of the urban realm, as working women and flaneures (Kern 2013, Parsons, 2000, Von Ankum, 1997, Wilson, 1992).

This scholarship has also shone light on the different kinds of cultural pressures that can limit women's mobility. A primary factor structuring this, of course, is the gendered division of labour and the attendant expectation that it is principally the job of mothers to raise children (and perform other kinds of unwaged carework), an ideology that is only gradually beginning to shift (Crompton 2006; Perrons et al. 2006). A related factor serving as background to this (particularly in commonwealth countries such as Australia) is the sometimes quiet, sometimes pronounced, reverberations of the 'cult of domesticity' – the middle-class Victorian gender ideology stating that women's 'rightful place' is in the home. This ideology functioned as a way to mark class divides, as it emerged at a time when working-class women routinely worked outside their own homes in industrial sites and the homes of others as domestic servants (Domosh and Seager 2001). Whilst appearing on the surface as outmoded in some ways, the gendered division of labour and the cult of domesticity nevertheless cast surprisingly long shadows as on-going templates structuring gender-dualisms around rights to space and norms relating to mobility and movement (Uteng and Cresswell 2008, 2). Reverberations of the cult of domesticity are evident in women's ongoing battles for the 'right' to be and do as they please in public space (such as through nurse-ins to challenge the stigma of breastfeeding in public, and 'slut'-walks to challenge the idea that women dressed in certain ways are asking for sexual harassment or assault), as well

as in mundane daily practice such as the way indoor and outdoor housework is typically divided.

The cult of domesticity has also led to powerful conceptualisations of women 'adrift' which have likewise proven remarkably durable. Women as out-of-place subjects are presented as either vulnerable or dangerous, depending on their social positions and, often, perceived level of respectability or sexual propriety (Meyerowitz 1988; Wilson 1991). Just as the cult of domesticity suggests a logic of enclosure from a supposedly dangerous world outside, so the figure of the adrift-woman suggests a sense of danger and femininity under threat. Both schema are underwritten by a patriarchal logic which bases women's value in their 'virtue' (i.e. virginity), and motivates action based on fear of loss of this status.

Across different cultural contexts and at different historical moments the figure of the at-risk 'woman adrift' has led to various kinds of paternalistic initiatives. Such initiatives have included provision of employer-run dwellings or transport (Boyer 1998; Patel 2006), and circumscriptions of women's movements at work (Cox and Narula 2003; Pratt 2004) or in public space (Fenster 1999). For women who have strayed too far from sexually prescribed roles, physical movement can been policed (Myers 1999, 1993) or restricted through the penal or juvenal justice systems, such as through the now-infamous Magdelene laundries in Ireland and Good Shepherd laundries in Australia. For most of the 20th Century these facilities incarcerated women whose sexual conduct fell outside strict patriarchal normative codes and was viewed to threaten (heterosex) institutions of marriage and the family.

The mobilities literature has highlighted how efforts to 'fix women in place' persist in various cultural contexts, such as in Mexico where male out-migration has been found to trigger an increase in the policing of women's behaviour and restrictions on women's

mobility (McEvoy et al. 2012), and in practices of limiting the mobility of domestic workers in Singapore (Yeoh and Huang 2010) and au pair workers in the UK (Cox and Narula 2003). To summarise, against the backdrop of lived experiences of mobility various kinds of cultural regimes have sought to discipline and limit women's movement. The impulse to constrain and contain women's movement is often underwritten by formulations that base women's worth in their 'virtue' or virginity, within social contexts that are tacitly understood as heterosexual (Boyer 1998; Meyerowitz 1988; Wilson 1991).

In a related vein, research shows that both compulsory heterosexuality and strongly traditional expectations around gendered self-presentation and life-choices also tend to characterise social norms relating to gender and sexual identity in the rural context (Bryant 2012; Bryant and Pini 2011; Gorman-Murray et al. 2008; Gorman-Murray et al. 2012; Little 2003, 2007). In a rural UK context Little (2003) has revealed the strength of traditional gender scripts around marriage through the lens of reality TV programmes, as Johnston and Longhurst (2010) have done in the case of New Zealand. This literature demonstrates how gender binarisms can be drawn particularly sharply in rural contexts, where traditional norms around marriage are strongly reinforced by the media. In an Australian context, the power of compulsory heterosexuality has been addressed by Gorman-Murray (2008) through his analysis of objections to flying the rainbow flag registered with the rural Australian press. Likewise, in their interviews with young married farming men Bryant and Pini (2011) have examined the ongoing power and influence of traditional gender divisions of labour in rural Australian settings. As Bryant (2012) further notes, when rural women do not conform to narrowly proscribed societal expectations around gender and labour (such as by using childcare), their actions are scrutinised and disciplined. This literature has detailed how traditional roles around gender, sexuality, marriage and heterosexuality can be interwoven

within forms of labour and understandings of small-town life that resonate particularly strongly in the rural context.

If scholarship on rural sexuality has emphasised the importance of marriage, heterosexuality and the appeal to 'moral purity', scholarship in social and cultural geography on sex work has emphasised themes of containment, surveillance and moral cleansing (Hubbard 2001; Hubbard and Sanders 2003, Howell et al. 2008; Tani 2002). ii In relation to the discussion of women 'adrift', Hubbard and Sanders (2003) argue that women prostitutes constitute a central figure in the social imagination as symbols of degeneracy, contagion/pollution and (aberrant) female sexuality (see also Walkowitz 1992). Recalling earlier discussion about different regimes designed to limit women's mobility, in the UK (among other places) the state has sought to contain sex work spatially within the urban landscape through the designation of red-light districts (Hubbard 2001, Hubbard and Sanders 2003). Though Hubbard and Sanders rightly position sex workers as agentic subjects with a role to play in the creation of urban space, they nevertheless highlight how the impulse to designate certain 'districts' in the urban realm for sex work rests on a formulation that posits prostitution and prostitutes' bodies as polluting and (morally) threatening. iii Extending the conceptual aspect of this analysis Hubbard and Sanders (2003) argue that red light districts are formed through recursive relations between everyday spatial practices of sex workers on the one hand, and the state and protest groups seeking to contain or remove or obscure them on the other; and that in some cities red light districts are subjected to periodic 'sweeps' in which sex workers are temporarily or permanently removed in bids to open space for gentrification (as well as exert symbolic control of these spaces).

Echoing the theme of prostitution as pollution or contagion, Dando (2009) has likewise called attention to the ways rural municipalities sometimes chose to downplay their histories of prostitution, drawing on research from Butte Montana in the American West. As

Dando's study of resistance to an initiative to commemorate sex workers in this rural, historic frontier town illustrates, even the historical traces of prostitution can threaten institutions of family and monogamy that underpin understandings of 'community' that rural towns typically seek to advance. Although there has been a moderate opening for the decriminalisation of sex-work in Australia over the last 30 years (Sullivan 2008) skin-workers in the contemporary Western Australian frontier are nevertheless viewed as threatening the ideology of monogamy, with various means deployed to neutralise the potential (moral) threat of this form of work (Pini et al. 2013). Herein we draw on and advance these respective literatures firstly by attending to the ways narrations of gendered mobility relate to practices thereof, and in turn by considering some of the different ways narrations and practices of mobility can both reinforce and sometimes challenge systems of gender

Section Two: Field site and Methodology

This paper is based on field data collected in 2011 by the three members of the research team in the rural Western Australian mining town of Kalgoorlie (population 30,000). Kalgoorlie was chosen as the study-site for this project due to the prominence of themes of movement, embodiment and sexuality in this place. Kalgoorlie is home to the largest openpit gold mine in the world (the Flimiston mine) –colloquially referred to as the 'Super Pit' – where mining takes place 24 hours a day 365 days a year (superpit tour). Kalgoorlie is iconic not only for its mining, but also for its highly visible sex and skin industries for a town its size. (Indeed in the *Lonely Planet* guide book, after mine-related attractions such as the Superpit tour and the National Mining Hall of Fame, Kalgoorlie's brothel tours are noted as an attraction not to miss). The most visible aspects of sex- and skin-work are to be found in the historical red-light district of Hay Street (where the two brothels which run tours to the public are located), and in a selection of bars on Kalgoorlie's main thoroughfare: Hannan

Street. However there are also (unmarked) brothels in the residential neighbourhoods, as well as 'back room' skin work of various kinds taking place in a range of bars as one-off and/or private events.^{iv}

Kalgoorlie is a challenging place in a number of ways. It is very much a town built by mining, which has had a number of (unevenly experienced) consequences. While mining produces riches for some, the town is also marked by high levels of poverty which visibly intersect with race, and many residents we interviewed spoke of problems with racism, especially towards the local Indigenous population. Further, there has been so much environmental damage from the Flimiston mine that the site itself is beyond rehabilitation due to levels of arsenic and sulphur (super pit tour). Perhaps living up to its 'wild west' reputation, the town is also known for violence and public unruliness. Kalgoorlie is further marked by an unusually visible police presence for a rural town; homes in both high and low income neighbourhoods had fences around them, and nearly all residents with whom we spoke said they did not go into town at night.

Our empirical base is comprised of 90 hours of participant observation and 55 interviews. Our participant observation focused on public spaces in the town, community events including an International Women's Day lunch attended by local women's rights activists, bars and cafes, tourist sites including the WAM, a day-long tour of the Super Pit (referred to in the text as 'Super Pit tour'), a visit to the National Mining Hall of Fame, and also a small local history archive, and two brothels which give tours and talks to the public. Through these methods we sought to deepen our understanding of public narratives about gender, sexuality, embodiment and mobility in this space, as relating to the town's history and present.

Our participant observation was supplemented with 55 interviews, including with women and men working in the mining industry, women employed as skimpys (i.e. employed to tend bar and serve drinks in lingerie), two brothel madams, residents not affiliated with either the mine or the sex/skin industry, residents working in the tourist/heritage industry, and tourists. While the whole of this dataset informs the arguments made here, the data on which this paper draws most heavily are the textual and material representations of gender at the WAM, representations and practices of mobility amongst sex-workers (prostitutes) and skin-workers or 'skimpys' (as defined above), and interviews with other residents. These data were chosen for this paper as they spoke to issues of gendered mobility most directly.

We undertook data collection collaboratively with three of us involved in each interview sharing out the work of asking questions, taking notes and anonymising names. We analysed textual, verbal and material representations, as well as practices and spaces. Data collection and analysis were a collective endeavour so we were able to test and refine our interpretations collaboratively.

Following Besio et al. (2008) we employed a thematic analysis, interpreting what we saw, heard and felt through key themes in the literature (which for this project included themes of embodiment, mobility, gender, sexuality and heteronormativity). Text-based data ranged from highly-scripted place narratives as found in the (local) history museum to the less-scripted remarks of study participants. However in addition to these (primarily text-based) methods we also adopted a more ethnographic approach consisting of spending time with study participants and trying to 'get inside' their worlds (Crang and Cook 2007). Being in Kalgoorlie as researchers (instead of workers, tourists or simply residents), we took an immersive approach to our fieldwork, sometimes spending time with skin-workers in their place of work from 6am when they went on shift, sometimes visiting in the evening until after midnight. Finally, we did not seek to distil everything we witnessed and experienced

into the realm of text or representation, but also allowed our own bodily experience and perceptions of the place and the activity we saw inform our analysis adopting a (post) phenomenological research orientation.

Section Three: discourses and practices of gender and mobility in Kalgoorlie

This section considers discourses and practices of gendered mobility in Kalgoorlie. We first trace some examples of the expression of normative formulations of gendered mobility in Kalgoorlies' past and present, then outline some of the ways lived practice do not conform to these formulations. Finally, we suggest that our critical intervention into these intertwined fields of discourse and practice might serve as a means to destabalise binarised formulations of gendered mobility.

Binarised tropes of gendered mobility circulate through discourses about Kalgoorlie's past and present in myriad ways. Within the Western Australian Museum (WAM) for example, depictions of 'mobile miners' and their 'home-bound wives' constitute the chief narrative through which visitors are invited to conceptualise social relations in Kalgoorlie's past. For example, as wall- placards in a re-created miner's cottage from the 1930s aver, 'at home the miners did outside jobs' and '(because) homes were not equipped with radios or telephones ... going to the pub to meet friends and catch up on the latest current affairs and sports results was a part of many men's lives.' Placards further outline the various sports popular with the male miners, also noting a reading library (for men) at the Mechanic's Institute. Yet while male miners had access a range of pursuits outside the home, miners wives (apparently) did not. The sole pursuits for a miner's wife (as depicted by the WAM) beyond the myriad forms of cleaning, cooking and sewing that filled-up her time was reading the magazine *Woman's Weekly* 'if she had time during the week', or perhaps going to the town pool on the one evening a week they were allowed (Tuesday).

What we are left with is a rather grim portrait of starkly binarised vision of gendered mobility in which the home was cast as utterly feminised space. In contrast to men's hard physical work at the mine which was balanced against a range of social networks, intellectual pursuits, evening and weekend outings, women's hard physical labour in the form of housework was (seemingly) not balanced by any kind of life outside the home. This vision was reinforced by one of the museum interpreters (female, early 60s) who, when asked, observed that: 'historically women were not encouraged to do anything outside the home'.

The artefacts, written descriptions, and (especially) the embodied experience of moving through the cottage combine to endow this display with a sense of historical authenticity. While we may know nothing of the inner-lives or particular struggles of the family who lived here, moving through the dwelling under the same Western Australian heat they would have experienced, taking in the richly materialised domestic scenes such as a bedroom with a carefully-stitched quilt on the bed (**figure 2**), the worn but well-scrubbed patterned linoleum on the floor of the small living room, and jars of pantry staples in the kitchen, is to cleave to the view that these people's lives were real. Placards offering further rich detail on the daily rhythms of typical miners' cottage intensify the feeling that the depiction of deeply traditional gender mobilities (characterised by male mobility and female fixity) is more or less accurate.

In turn, these tropes of gendered mobility also circulated in *contemporary* Kalgoorlie. One of the prominent figures to emerge in our interviews was that of the (male) miner who spends months 'out in the bush', harking back to a (now long-gone) time when solo miners would have gone out prospecting. We suggest that depictions such as these strengthen the link between contemporary mining and romanticised ideas of mining (and masculinity) in an historical context as based in movement, adventure and taming wild landscapes. The figure of the 'rugged outback miner' was evoked by several interviewees in the context of justifying

Kalgoorlie's quantity of brothels, including the Madam of one of the Hay Street brothels who said (of miners): 'they've been outback for three months'. In turn, the figure of the (roaming) outback miner was contrasted with that of sex and workers and skin workers who were conceptualised as spatially fixed within the highly-visible, regulated, taxpaying brothels on Hay Street, or (in the case of skin-workers) in a set number of known bars. This echoes both traditional constructions of gendered mobility which contrasted male mobility and female fixity called forth in the WAM, as well as more widespread patterns of containment of sex work and skin work in Australia and elsewhere (Howell et al. 2008; Hubbard 2001; Sullivan 2008).

We have argued thus far that narrations of gendered mobility have striated understandings of bodily movement in Kalgoorlie's past and present, in ways that reinforce exactly the kinds of gender binarisms that are problematised by scholars like Braidotti and Coffey. Before concluding we now want to also problematise this story to show how the representations of gendered mobility we encountered did not always line up with lived practices of embodied movement we witnessed or were told about. Even as we were told variations of the formulation of 'female fixity and male mobility' by multiple study participants, we were struck by the many ways in which embodied practices of mobility occurring in Kalgoorlie challenged and destabilised such binary formulations. In an historical context for example, alongside the (dominant) narrative of women's fixity conveyed through the depiction of life in the miner's cottage at the WAM, it is also noted that one of the family's female children received education in Perth followed by nursing courses in two other parts of the state.

Meanwhile in the contemporary context a number of different practices we either witnessed or were described to us by study participants did not align with 'traditional' depictions of gender mobility (and immobility). In a first example, much mining work – the

archytpical 'male job' in Kalgoorlie—is in reality not particularly 'mobile' nor wholly 'male' either. Although women's participation in the Australian mining workforce is relatively low (overall, 12% of full-time workers in 2011), is concentrated in feminised lower-paid occupations (such as clerical work), and is far from 'the norm' (Mayes 2014) a variety of mining work is undertaken by both sexes. For example, in 2011 20% of truck-driving positions were held by women, just as women constituted 20% of geologists employed in the industry (Mayes 2014).

And, in contrast to romantic notions of miners 'out in the bush', in reality much mining work in Kalgoorlie is local and involves a short (suburban) drive to the Super Pit. For example, the town's major employer, Kalgoorlie Consolidated Gold Mines, the company that manages the Super Pit and related processing plants, employs a local-residential workforce. Not only is the extractive work of mining profoundly fixed in the sense that mines themselves are consummately unmoveable, even at a finer grain at the level of embodied work practices themselves, much mining work is sedentary and repetitive. This is clear in the case of driving trucks hauling ore from the pit to nearby processing sites which are kitted out with a myriad of 'smart drive' features to assist workers, and protected by a wide range of health and safety rules. vi Indeed concerns about sedentariness within the mining industry have been specifically identified by the Australian government as a public health concern. VII Overlain on top of these forms of embodied fixity marking much actual mine-work, study participants noted ways in which miners are fixed in other respects as well. The existence of partners ('wives and girlfriends') tying miners to places beyond Kalgoorlie and shaping/constraining mobility were noted by each of the skimpys we interviewed. One male resident in his late 30s who was formerly but no longer in the mining industry gave an even more global sense of miners as 'stuck' in place. To his view 'out of town guys.. who work here have nothing, no mobility, no footy boots, no ute. viii Just hard work.'

Further destabilising the binarism of mobile (male) miners and fixed female sex- and skin-workers, all of the women involved in sex- and skin-work with whom we spoke flew in and out of Kalgoorlie for work. ix In our interviews sex- and skin-workers all referenced home and sometimes family or seasonal residing in other parts of Australia or other countries (including Estonia, England, Sweden, Ireland, Bali and Thailand). Most also referenced travel, and typically portrayed their lives as highly mobile with stint/s in Kalgoorlie as either 'one-off' or periodic spatio-temporal stops within rich patterns of travel and movement. For many this included journeying around the country to different towns and cities for work (including Perth, Canberra and Sydney as well as other mining towns such as Karratha, Blackwater and Emerald, Leonora and Marble Bar). The work they were doing in Kalgoorlie was typically characterised as a short-term venture undertaken to subsidise projects and advance life goals elsewhere. For example skimpys told us how they were saving their earnings to pay for a house or car, pay down debt, or subsidise various business ventures. In a similar vein, a worker at the municipal archives told us how one sex-worker she knew used her earnings to pay tuition for her child who was in boarding school outside Kalgoorlie.

Skimpiing has many downsides: it is physically and emotionally tiring and requires a myriad of body-work to sustain. There can be threats or mistreatment by customers, and these can create worries about personal security or have an emotional impact. But the upside was the relatively high rate of pay. For many of the women thus employed with whom we spoke, this translated directly into a sense of spatial freedom, and many skimpys were saving money for travel or subsidising current travel. One interviewee told us she 'wants to do lots of travelling' with her saved money while another told us she was saving for a trip to Europe specifically. Another simply mused 'I could go anywhere in the world' with the money she had saved from working in Kalgoorlie. One interviewee was on a gap year from University

in the UK, and another (from Sweden) was taking a break from backpacking across the country. Coupled with the sense of freedom and mobility that the relatively high wage-rate of skimpying afforded was the freedom to leave the job at any time due to the short-term nature of the contracts. As one participant put it: 'with this job you can come and go as you like'.

Indeed in their mobility some participants even directly contrasted themselves to the men they encountered in Kalgoorlie. When asked to explain what the men they met here were like compared to those back home one participant reported that:

Their mannerisms are different. Everything is different. The way they speak, talk, dress. They are all on huge money here. Country people are way away from mainstream society – a bit slower, out of touch. If you want to talk to them about the news they don't know anything. In the city it's 'have you heard this new song, seen this new movie' out here they don't give a shit. They just have no interest in stuff like that.

In contrasting herself to the 'slower' and 'more out of touch' men she encountered in Kalgoorlie, we suggest this participant is tacitly placing *herself* within more cosmopolitan (and possibly superior) space beyond Kalgoorlie. That she is able to make this comparison is a direct result of her mobility (and implicitly, her wider view of the world).

In addition to the various ways the spatial practices of mine work and skin and sex work did not support traditional gender scripts relating to mobility, we were also told of instances of women occupying the space of skimpy bars in ways that could be seen to disrupt normative gender coding of these spaces. While several skimpys told us of sometimes being treated in an unpleasant manner by women customers, they also told of sometimes being appreciated by women customers. On a somewhat different note one study participant told a story of a time ten or twelve women came into the bar on a girls' night out from a station (ranch) and were stomp-dancing, which she described as 'very masculine. Blundstone boots, no makeup and jeans', thus subverting the normative (hetero) sexual coding and forms of

gendered embodiment in this space. Even though we suspect that events like this may not happen often, we suggest that they reveal how resistance or lines of flight from the normative gender coding of space and mobility in Kalgoorlie is possible. As one participant replied to a customer who told her she 'didn't belong' in a skimpy bar: 'You don't know where I belong'. Traditional formulations of gendered mobility can exert a powerful influence in shaping opportunity and experience, but these formulations are not totalising. Alternative narrations and challenges through daily practice are possible.

Through these examples we have demonstrated a field site in which, on the one hand, 'formal' cultural forms such as exhibits in the WAM and popular place-narratives reinforce traditional gendered tropes of mobility and fixity. In the WAM miners' wives are portrayed as literally and metaphorically fixed in the space of the home through vivid material recreations. And in conversations with study participants across different walks of life, figures of mobile miners and 'good' sex workers who stay on the historic red-light district of Hay Street were repeated to us on multiple occasions. Yet at the same time a range of different kinds of lived practices of mobility (which we either saw ourselves or were told about by participants) complicated these neat, dualistic categorisations.

Within the 'hyper masculinised' work of resource extraction in Kalgoorlie, gold miners are discursively linked with mobility. Yet to us the lived practice of mining appeared sedentary at a number of levels: both in the fixed nature of mines themselves and in the sedentary embodied experience of much residential mine work as exemplified by truck driving. Meanwhile, though sex workers were figuratively 'fixed' on the historic red-light district of Hay Street (as skin workers were figuratively fixed within the space of skimpy bars), evidence suggests that the lives of actual women working in these fields were rich in mobility, with journeys in and out of Kalgoorlie (and sometimes families based elsewhere) an important feature of their lives. We are **not** saying these examples simply 'reverse' gender

stereotypes about mobility and fixity, but rather that they confound, destabalise and complicate them.

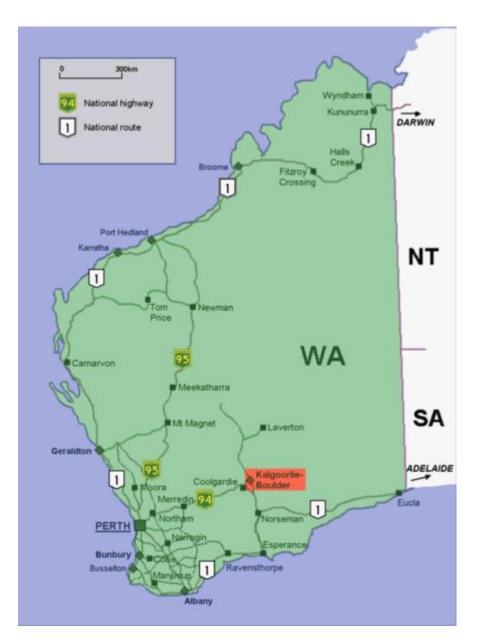
Conclusion

In this paper we advance conceptual work in mobilities scholarship by showing the role discourses of mobility can play in supporting certain kinds of gender orders. Through fieldwork in the Western Australian town of Kalgoorlie (which is marked by 'hyper' gender orders) we have shown how narratives of mobility support gender binarisms through the engendering of mobility and fixity. Narratives of female fixity and male mobility were rife in this field site. Yet our evidence about lived practices of mobility suggested a more complex picture. Instead of neat binaries we found a swirling together of both mobility and fixity for all. By approaching this issue through the lens of the two most 'hyper' engendered forms of employment in town (mining and sex/skin work), we found that women employed in sex and skin work in Kalgoorlie have never been truly 'fixed' in place, nor have miners been as truly mobile. Instead of neat binaries that capture and order gendered embodiment in predictable ways, what emerges instead is a richer and more complex picture in which the binarised gender order is are not simply inverted but rather destabilised, in which both miners and sex/skin workers are both fixed *and* mobile in different ways and at different times.

While we hope that this analysis has helped address Cresswell's call to conceptualise how discourses and practices of mobility relate to the theorisation of gender, it is by no means the last word on this set of issues. Finally, while we have shown how narratives of mobility can become bound up with gender orders in this particular time and place, we do not imagine that this occurs the same way everywhere. What we hope to see in coming years is a flourishing of work at the junction of feminist geography and mobilities scholarship in order to expand the richness and depth of our understanding of the myriad ways that understandings and

experiences of gender and sexuality relate to those of mobility at different scales and different
cultural contexts.

Figure 1 Map showing Kalgoorlie, Western Australia



Source:

https://commons.wikimedia.org/wiki/File:Kalgoorlie_location_map_in_Western_Australia.PNG

Figure 2 Photograph of Miner's Cottage, Western Australian Museum (photo taken by author)



References

Adey, P., Bissell, D., Hannam, K., Merriman, P. and Sheller, M. 2014. *The Routledge handbook of mobilities*. Routledge.

Alaimo, S., and S. Hekman, eds. 2008. *Material Feminisms*. Bloomington, Indiana: Indiana University Press.

Anderson, B., and J. Wylie. 2009. "On Geography and Materiality." *Environment and Planning A* 41: 318–335.

Barad, K. 2008. "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter." In *Material Feminisms*, edited by S. Alaimo and S. Hekman, 120–156. Bloomington, Indiana: Indiana University Press.

Besio, K., L. Johnston, and R. Longhurst. 2008. "Sexy Beasts and Devoted Mums: Narrating Nature through Dolphin Tourism." *Environment and Planning A* 40 (5) 1219–1234.

Blunt, A. 1994. *Travel, Gender and Imperialism: Mary Kingsley and West Africa*. New York: Guilford.

Blunt, A. 2005. Domicile and Diaspora: Anglo-Indian Women and the Spatial Politics of Home. Oxford: Blackwell.

Boyer, K. 1998. "Place and the Politics of Virtue: Clerical Work, Corporate Anxiety, and Changing Meanings of Public Womanhood in Early Twentieth-Century Montreal." *Gender, Place and Culture* 5 (3): 261–276.

Braidotti, R. 2002. *Metamorphoses: Towards a Materialist Theory of Becoming*. Cambridge, UK: Polity Press.

Braidotti, R. 2013. The Posthuman. Cambridge: Polity Press.

Bryant, L., and B. Pini. 2011. Gender and Rurality. New York: Routledge.

Bryant, L. 2012. "Heterosexual Marriage, Intimacy and Farming." In *Geographies of Ruralities and Sexualities*, edited by A. Gorman-Murray, B. Pini, and L. Bryant, 51–63. Lanham, Maryland: Lexington.

Cabezas, A. 2004. "Between Love and Money: Sex, Tourism, and Citizenship in Cuba and the Dominican Republic." *Signs* 29 (4): 987–1014.

Coffey, J. 2013. "Bodies, bodywork and gender: exploring a Deluezian approach." *Journal of Gender Studies* 22 (1) 1-15.

Colebrook, C. 2008. "On Not Becoming Man: The Materialist Politics of Unactualized Potential." In *Material Feminisms*, edited by S. Alaimo, and S. Hekman, 52–84. Bloomington, IN: Indiana University Press.

Colls, R. 2012. "Feminism, Bodily Difference and Non-representational Geographies." *Transactions of the Institute of British Geographers* 37: 430–445.

Colls, R., and M. Fannin. 2013. "Placental Surfaces and the Geographies of Bodily Interiors." *Environment and Planning A* 45 (5): 1087–1104.

Coole, D., and S. Frost. 2010. *New Materialisms: Ontology, Agency and Politics*. Durham: Duke University Press.

Cox, R., and R. Narula. 2003. "Playing Happy Families: Rules and Regulations in Au Pair Employing Households in London, England." *Gender Place & Culture* 10: 333–344.

Crang, M., and I. Cook. 2007. *Doing Ethnographies*. Sage University Press.

Cresswell, T. 2010. "Towards a Politics of Mobility." *Environment and Planning D: Society and Space* 28: 17–31.

Crompton, R. 2006. Employment and the Family. Cambridge, UK: Cambridge University Press.

Dando, C. E. 2009. "Whore-friendly People': Heritage Tourism, the Media and the Place of Sex Work in Butte, Montana." *Gender, Place and Culture* 16: 587–607.

Deleuze, G., and F. Guatarri. 1988. *A Thousand Plateaus, Capitalism and Schizophrenia*. London: The Athlone Press.

Dolphijn, and van der Tuin. 2012. *New Materialism: Interviews and Cartographies*. Ann Arbor: Open Humanities Press.

Domosh, M., and J. Seager. 2001. Putting Women in Place. Guilford, UK: Guilford Press.

Dowling, R. 2000. "Cultures of Mothering and Car Use in Suburban Sydney: A Preliminary Investigation." *Geoforum* 31: 345–353.

England, K. 1993. "Suburban Pink Collar Ghettos: The Spatial Entrapment of Women?" *Annals of the Association of American Geographers* 83(2): 225–242.

Fenster, T. 1999. Gender, Planning and Human Rights. London & New York: Routledge.

Foster, S., 1990. Across New Worlds: Nineteenth-Century Women Travellers and Their Writings. Harvester/Wheatsheaf.

Gorman- Murray, A., B. Pini, and L. Bryant, eds. 2012. *Geographies of Ruralities and Sexualities*, 51–63. Lanham, Maryland: Lexington.

Gorman-Murray, A., G. Waitt, and C. Gibson. 2008. "A Queer Country? A Case Study of the Politics of Gay/Lesbian Belonging in an Australian Country Town." *Australian Geographer* 39: 171–191.

Haraway, D. 1991. Simians, Cyborgs and Women: The Reinvention of Nature. New York: Routledge.

Howell, P., D. Beckingham, and F. Moore. 2008. "Managed Zones for Sex Workers in Liverpool: Contemporary Proposals, Victorian Parallels." *Transactions* 33: 233–250.

Hubbard, P. 2001. "Sex Zones: Intimacy, Citizenship and Public Space." *Sexualities* 4: 51–71.

Hubbard, P., and T. Sanders. 2003. "Making Space for Sex Work: Female Street Prostitution and the Production of Urban Space." *International Journal of Urban and Regional Research* 27: 75–89.

Johnston, L., and R. Longhurst. 2010. *Space, Place, and Sex: Geographies of Sexualities*. Lanham, MD: Rowman and Littlefield.

Kern, L. 2013. "All aboard? Women working the spaces of gentrification in Toronto's Junction." *Gender, Place & Culture*, 20(4): 510-527.

King, R., and J. Vullnetari. 2012. "A Population on the Move: Migration and Gender Relations in Albania." *Cambridge Journal of Regions, Economy & Society* 5 (2): 207–220.

Law, R. 1999. "Beyond 'women and transport': towards new geographies of gender and daily mobility". *Progress in Human Geography*, 23(4): 567-588.

Little, J. 2003. "Riding the Rural Love Train': Heterosexuality and the Rural Community." *Sociologia Ruralis* 43: 401–417.

Little, J. 2007. "Constructing Nature in the Performance of Rural Heterosexualities." *Environment and Planning D: Society and Space* 25: 851–866.

Luzia, K. 2010. "Travelling in Your Backyard: The Unfamiliar Places of Parenting." *Social and Cultural Geography* 11 (4): 359–375.

Mayes, R. 2014. "Gendered Dimensions of Resource Extraction: The Place of Women." In *Resource Curse or Cure? On the sustainability of development in Western Australia*, edited by M. Brueckner, A. Durey, R. Mayes, and C. Pforr, 121–133. Heidelberg: Springer.

Mayes, R., B. Pini, and K. Boyer. 2015. "Becoming Kalgoorlie: Gold Mining, Brothels, and 'Skimpy' Bars." *Griffith Review* 47, Special Edition: Looking West, J. Schultz, and A. Haebich, eds.

McEvoy, J., P. Petrzelka, C. Radel, and B. Schmook. 2012. "Gendered Mobility and Morality in a South-Eastern Mexican Community: Impacts of Male Labour Migration on the Women Left Behind." *Mobilities* 7 (3): 369–388.

McEwan, C. 2000. *Gender, Geography and Empire: Victorian Women Travellers in West Africa*. Aldershot and Burlington, VT: Ashgate.

Meaney, S. 2012. "Gendered Journeys: North American Women Travellers in the Twentieth Century and Beyond." *Women's Studies* 41 (4): 356–371.

Meyerowitz, J. 1988. Women Adrift: Independent Wage-Earners in Chicago. University of Chicago Press.

Myers, T. 1993. "Women Policing Women: A Patrol Woman in Montreal in the 1910s." *Journal of the Canadian Historical Association*: 229–245.

Myers, T. 1999. "The Voluntary Delinquent: Parents, Daughters, and the Montreal Juvenile Delinquents' Court in 1918." *Canadian Historical Review* 80 (2): 242–269.

Parsons, D. 2000. Streetwalking the Metropolis: Women, the City and Modernity: Women, the City and Modernity. Oxford University Press, Oxford.

Patel, R. 2006. "Working the Night Shift: Gender and the Global Economy." *ACME: An International E-Journal for Critical Geographies* 5 (1): 9–27.

Perrons, D., C. Fagan, L. McDowell, K. Ray, and K. Ward. 2006. *Gender Divisions and Working Time in the New Economy*. Cheltenham, UK and Northampton, MA: Edward Elgar.

Pini, B., R. Mayes, and K. Boyer. 2013. "Scary' Heterosexualities in a Rural Australian Mining Town." *Journal of Rural Studies* (32): 168–176.

Pini, B and Mayes R 2012 'Gender, sexuality and rurality in the mining industry' in *Sexuality, Rurality and Geography* Eds Gorman-Murray A, Pini B and Bryant L Lexington, Lantham.

Pini, B. & Mayes, R. 2014 ."Performing Rural Masculinities: A case study of Diggers and Dealers" in *Masculinities and Place* Eds. Andrew Gorman-Murray and Peter Hopkins, Ashgate.

Pratt, G. 2004. Working Feminism. Edinburgh: Edinburgh University Press.

Robinson, J. Ed. 2001. *Unsuitable for ladies: An anthology of women travellers*. Oxford University Press, Oxford.

Silvey, R. 2004. "Power, Difference and Mobility: Feminist Advances in Migration Studies." *Progress in Human Geography* 28 (4): 490.

Simpson, P. 2013. "Ecologies of Experience: Materiality, Sociality, and the Embodied Experience of (Street) Performing." *Environment and Planning A* 45: 180–196.

Stansell, C. 1987. *City of women: Sex and class in New York, 1789-1860.* University of Illinois Press.

Sullivan, B. 2008. "Working in the Sex Industry in Australia: The Reorganization of Sex Work in Queensland in the Wake of Law Reform." *Labour & Industry* 18 (3): 73–92.

Tani, S. 2002. "Whose Place is This Space? Life in the Street Prostitution Area of Helsinki, Finland." *International Journal of Urban and Regional Research* 26: 343–359.

Uteng, T. and Cresswell, T. Eds, 2008. Gendered Mobilities. Ashgate: Aldershot.

Von Ankum, K. 1997. Women in the Metropolis: Gender and Modernity in Weimar Culture University of California Press.

Walkowitz, J. 1992. City of Dreadful Delight. University of Chicago Press: Chicago, USA.

Whatmore, S. 2006. "Materialist Returns: Practicing Cultural Geography in and for a Morethan-human World." *Cultural Geographies* 16 (4): 600–609.

Wilson, E. 1991. *The Sphinx in the City: Urban Life, the Control of Disorder, and Women.* University of California Press: Berkeley.

Yeoh, B. and Huang. 2010. "Transnational Domestic Workers and the Negotiation of Mobility and Work Practices in Singapore's Home-spaces." *Mobilities* 5 (2): 219–236.

Yusoff, K. 2013. "Insensible Worlds: Postrelational Ethics, Indeterminacy and the (K)nots of Relating." *Environment and Planning D* 31: 208–226.

Endnotes

.....

ⁱ We further note that gender binarisms limit understandings of gender identities in ways that are both heteronormative and ignore trans-gender identities.

ii After Cabezas, A. (2004) we recognise that 'sex worker' is a fluid boundary and 'sex work' a fluid category.

iii Though since the ascendance of the internet, personal computing devices and mobile phones many aspects of the sex-trade are now, arguably, 'everywhere and anywhere' (Hubbard)

iv This information was gleaned through our interviews with skin workers.

^v We also found discussion of 'private', unmarked brothels off Hay Street which were problematized.

vi Mining work was also supported by a rigorous system of compensation in case of illness or accident that had no equivalent in sex and skin work, especially the 'less visible' brothels which were not linked-in to local health services as were Hay Street Brothels. In contrast to the image of mining as particularly dangerous work we all perceived sex and skin work as potentially much more dangerous than mine work.

http://eprints.qut.edu.au/1039/1/Fitness_for_Work_in_Mining.pdf This report identifying truck drivers in the mining industry as segment of the workforce that is particularly vulnerable to a range of health problems due to 'prolonged exposure' to 'occupational sitting'.

A 'ute' is Australian slang for a low-riding pick-up truck

^{ix} We were not able to find any male sex or skin workers in Kalgoorlie (though we did ask participants about this).