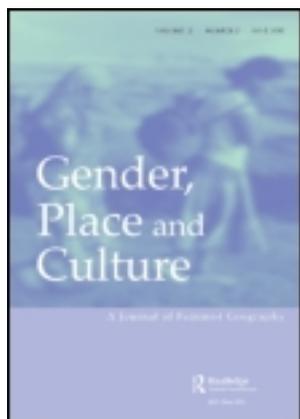


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### Who does the work in sustainable households? A time and gender analysis in New South Wales, Australia

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## Who does the work in sustainable households? A time and gender analysis in New South Wales, Australia

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Households in the affluent West have become an important target of government and NGO campaigns to encourage more environmentally sustainable behaviours, but there has been little research into the gender implications of such policies. This article investigates the role of gender and time in the sustainability practices of six heterosexual households with young children, committed participants in the Sustainable Illawarra *Super Challenge* programme in 2009. Women spent more total time on sustainable practices, and did so more often. Men's contributions related mostly to gardening and transport, in longer blocks of time. In these households, sustainability became a highly gendered practice because of the different roles in homemaking. Women resisted constructions of themselves as being closer to nature, and shouldered expectations of sustainability as part of their roles as mothers and household managers. They experienced time as overlapping and fragmented, with no distinction between work and leisure. Men contributed to sustainable practices mainly through activities understood as leisure, in longer blocks of time. Our temporality lens also illustrates the gendered ways that old practices become deroutinised and new practices reroutinised. While men were often responsible for the labour and upfront time required to start or research a project, the responsibility of everyday implementation and habit-changing commonly fell to women. These findings illustrate how gendered analyses help identify both opportunities for, and constraints against, change towards sustainability. Opportunities include the strong connections between both mothers' and fathers' understanding of good parenting and the importance they attach to household sustainability. Constraints include the temporal challenges faced by households, and how these interact with wider structural and labour roles.

**Keywords:** climate change; sustainability; domestic labour; temporality; New South Wales

### Introduction

Households in the Global North are estimated to contribute up to 50% of their nations' greenhouse gas emissions, both through direct energy use and indirectly through the external production of goods and services that are consumed in a household context (Australian Bureau of Statistics 2003; Druckman and Jackson 2009). Households have thus become an important target of government and NGO campaigns that attempt to change home-based behaviours and habits in light of their environmental impacts. There is no doubt that substantial change in such households will be necessary if we are to move towards more sustainable global outcomes, but the process for doing so is by no means straightforward. A number of studies have shown how households can resist or ignore, as well as embrace, a governmentality that positions them as environmental subjects, for a

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variety of reasons (Barr and Gilg 2007; Barnett et al. 2008; Bickerstaff, Simmons, and Pidgeon 2008; Dowling 2010; Waitt et al. 2012). In this article, we focus on an issue yet to be fully examined in this literature, the issue of gender. We aim to show that a gendered analysis can make a constructive contribution to sustainability debates by identifying both barriers to and potential pathways for change.

Our study focuses on one example of these government campaigns, 'Sustainable Illawarra', a collaboration of three local councils in the Illawarra, New South Wales, functioning under a vision that 'Sustainability Begins at Home' (Sustainable Illawarra 2008). Sustainable Illawarra initiated a *Super Challenge* programme in October 2008, encouraging households to become more environmentally sustainable by adopting one or more conventional pro-environmental practices, from refusing plastic bags to composting and catching public transport. Working within conventional ideas of household sustainability, the marketing materials of the *Super Challenge* vouched that:

No matter where you're at, [you can] take the challenge to see just how easy it is to take control of your ecological footprint. You'll be surprised at how little time it takes to make a difference... and how good it makes you feel! (*ibid.*).

But just how easy is it to change the domestic cultures of housework to more sustainable practices? Who does the housework involved in sustainability? What type of time is required to run a sustainable household? As part of a larger project exploring household sustainability in the Illawarra, this article addresses these questions, drawing on a sample of participant households in the *Super Challenge* programme.

By focusing on who does the work of sustainable domestic household practices, as well as the implications for domestic temporal experiences and rhythms, we seek to contribute to the literature on gendered environmentalism and environmental policy. Although the place-based domestic cultures of households are a key site of feminist research, the Western household as a focus for environmental analyses remains poorly appreciated in comparison to the enormous volume of literature which examines gendered environmentalisms in the Global South (Reed and Christie 2009). Reed and Mitchell (2003, 325) argue that research into households in the Global North presents an opportunity to 'link insights of feminist, urban and environmental scholarship that are as yet unexplored by environmental geographers'.

We argue that the relationships between gender, domestic work and temporal experience are not currently well realised or understood in sustainability debates. In these terms, by appreciating in more detail the part that gender plays in producing sustainable domestic work, this article diverges from and complements approaches to evaluating household sustainability that quantify the 'ecological footprint' (Hunter, Carmichael, and Pangbourne 2006; Sutcliffe, Hooper, and Howell 2007) or apply cost benefit analysis (Lund 1998; Noorman and Kamminga 1998). We do so by examining the time space family co-ordination of relatively affluent, tertiary educated heterosexual parents and homeowners. Shifting the focus from always measuring sustainability to the varieties of the way in which individuals respond to participating in a sustainability programme illustrates the importance of gender in understanding who does the work of household sustainability in the social reproduction of these families. Addressing the multiple practices and temporalities of household sustainability, our article follows up King's (1990, 217) assertion that some 'women are more likely than men to take on these issues precisely because the home has been defined and prescribed as a woman's domain'.

The structure of the article proceeds as follows. We begin with a brief review of the research that informs this study. This is followed by a discussion of quantitative and

qualitative methods that examine the temporal experience and rhythms of households. The next section outlines our findings, which are then discussed in terms of the most significant emergent themes. In the conclusion, we turn to consider the broader implications of our findings, and the contributions that gendered analyses can make to wider sustainability debates.

### **Gender, sustainability, time and domestic space**

Reed and Christie (2009, 248) lament a widespread false assumption amongst environmental geographers that neither gender nor domestic space matters. Notwithstanding the lack of literature that draws together gender, time and sustainable household consumption in the Global North, the separate strands have each received considerable attention from feminist scholars. We consider not only that the time is ripe to draw the threads together, but that the temporality lens we use in this article provides additional depth.

It is of course well established that homes and households are highly gendered places. For example, the work of Dyck et al. (1996) and Hanson and Pratt (1988) explores the way in which gender and other social relationships that comprise households shape, and are shaped, in and through home spaces. As Campkin and Cox (2008) argued, the invisibility of unpaid domestic labour (cleaning, cooking, caring, shopping and managing households) that women perform, its association with dirt and its status as unskilled, illustrates the tenacity of the interconnections between gender, class, race and home. In Australia, several studies have concluded that unpaid domestic housework remains highly gendered (McDowell 1999; Blunt 2003; Pocock 2003; Cox 2010). Women remain overrepresented in the unpaid work force, undertaking almost twice as much unpaid household work as men (2 h 52 min, compared with 1 h and 37 min per day on household work, excluding childcare) (Pocock 2003; Australian Bureau of Statistics 2006). These statistics resonate with Pocock's (2003, 40) argument that 'the wall between kitchen and workplace shows a kind of one way gendered porosity'. While men are doing more domestic labour than in previous decades and some women benefit from the ability to *choose* a home-based role (Sullivan 2000), the statistics suggest most women seem to only benefit through less labour-intensive, rather than less, domestic work (Donaldson 1996). Recognition of the multiplicity of deeply gendered, classed and ethnicised social relationships has pointed to the home as potential site of oppression and resistance (hooks 1991). Engaging with the notion of the home as a site of resistance, Pink (2004, 42) notes that women's role as manager of domestic labour can mean that she is the instigator of multiple changes in household practices. This body of work shows that the key role of women in the home provides both an opportunity to institute sustainable practices and the potential to overlay yet another burden on domestic labour.

Furthermore, attention to the everyday lives of women itself helps reframe clear boundaries around 'the environment'. For example, Leonard (2007) and Smith and Lourie (2009) point out how even everyday substances such as breast milk can become hazardous substances, when toxins penetrate the permeable membranes of the body. Buckingham-Hatfield (2000) argued that the decisions of women as consumers, bearing responsibility for the majority of work to establish and maintain domestic spaces – such as the work of domestic shopping – cannot be isolated from environmental issues such as genetic modification, chemical pesticides, toxic chemicals, artificial preservatives and excessive packaging. She went on to highlight that women are 'engaged in those jobs which whilst the most critical to human survival are the least valued in society and therefore more likely to be exposed to environmental hazards' (Buckingham-Hatfield 2000, 2). The porosity of

boundaries between domestic households and broader environments is explored in a different way by relational approaches. A relational approach understands household consumption, for example, as a practice that links and intersects the home within and between economy, environment and society (Blunt and Dowling 2006; Reid, Sutton, and Hunter 2009; Gibson et al. 2011). Rejecting the bounded notion of home as a separate sphere, this work offers important background for understanding how household consumption is shaped by, and shapes, sustainability responses in the context of climate change. As Buckingham and Kulcar argue, there is a need to consider the multiscale qualities of domestic spaces that ‘tie the household with various levels of governance, political decisions and business practice’ (Buckingham and Kulcar 2009, 664).

A connected area of research that informs our study explores conceptions of gendered time (Forman 1989, 1). McMahon and Olubas (2006) coined the term ‘feminist temporality’ to think differently about relations between gender and time. Time as linear and homogeneous is ‘grounded in gendered power relations and in a discourse of masculinity’ (Forman 1989; Davies 2001, 137). Forman (1989) and Adam (1995) demonstrate how not all time is equal. The time women spend on their various roles is often ‘undervalued and dehumanised’ and women’s experiences of time are more often ‘segmented, repetitive and constraining’ (Forman 1989, 3). Recognition of how gender unevenly shapes access to and experience of time resonates with the organisation of social reproduction, for example, through studies which examine how many women do not have access to time in the same way as men, because of unpaid domestic labour such as delivering children to school, preparing meals, shopping and caring (Odih 2003; McMahon and Olubas 2006). Theorising on household time has made important contributions not only in identifying temporal tensions between home and work, but also in identifying the coexistence of multiple kinds of temporalities within the home (Jarvis 2005; Nansen et al. 2009; Jarvis 2011). This work points to the importance of remaining alert to rhythmic, imagined, felt and socially constructed attributes of time. For instance, many women’s responsibility for coordinating domestic activities may become a source of time experienced as boring and constraining (Adam 1995). Cox (2006) explained that this is because of the attributes of housework as repetitive, routine, often unappreciated and constituted as less important than ‘corporate time’.

From the themes that cross-cut this literature, we gained the understandings of gender, sustainability, time and domestic space that inform our study. A number of these studies come to the verge of dealing with gender and temporality in relation to the study of household sustainability. However, no work has yet pulled all these strands together in the context of Western households. For example, Jarvis (2005, 133) draws the ‘materially embedded infrastructure of everyday life’ into her work on household time. In particular, she shows how the different contexts of household time have implications for increased car use, such as when the primacy of school choice in decision-making results in two parents driving ‘in separate cars to work in the same street because they each drop off children attending different schools’ (147). In her study of domestic temporalities and the non-human, Power (2009) discusses seasonal time and its connections to climate control and building orientation, but the sustainability implications were not the focus of the article.

In this article, we argue that a feminist analysis of household temporalities has much to offer because it provides a less structured and established understanding of home, time and gender within which sustainability practices occur. Sustainable household practices are conceptualised as themselves creating time/space/gender, rather than as activities locked into a pre-existing space-time matrix and gender order. Our analysis also examines the nuanced way in which the home exists as a network of negotiations, both internally and

with the wider world, as sustainability is just one of the responsibilities being pushed more heavily onto individuals and households in the neoliberal context. This article seeks to insert itself into the gap identified and provide an initial empirical study that can be built on by future work.

## Methods

Wollongong, a coastal city of around 270,000 people, is located in the Illawarra, New South Wales, some 80 km south of Sydney. The choice of Wollongong was important for the larger project due to its location in a recognised IPCC (2007) 'hotspot', where projected effects of climate change, including sea-level rise, increased flooding and bush fires, will interact with population change to exacerbate vulnerability. The discussion presented here is based on fieldwork conducted during the winter of 2009 with six households participating in, and recruited through, Sustainable Illawarra's *Super Challenge* programme.

Like those 'committed environmentalists' identified in a survey returned by some 878 Wollongong residents in the larger project, the participants already embraced conventional pro-environmental behaviours as a matter of concern, priority and everyday practice. In this programme, each household set goals, rather than set criteria or practices being imposed. The selection of households for investigation was based on characteristics such as family composition and age, and a high-level of engagement in the *Super Challenge* programme. The study sample was standardised as much as possible by selecting similarly aged parents, all with children, and in a socio-economic position that could be described as middle class. As shown in Table 1, all were white, heterosexual couples (50 years and under) with young children (15 years and under). In each household the father was employed in full-time paid work outside the home and the mother combined home duties with a maximum of some part-time paid work. The women simultaneously consider themselves to be full-time unpaid working mothers. In the case of every family, this gendered division of paid versus unpaid roles was a conscious choice. All were owner-occupiers and lived in a detached house with garden, the dominant form of housing in Australia.

This household type provides a good example by which to interrogate the complexities of change. On the one hand, Australians are spending more money and time at home (Australian Bureau of Statistics 2006), with rising expectations of comfort, cleanliness and convenience (Shove 2003) that have potentially detrimental environmental consequences. On the other hand, the much-maligned large open-plan detached house popular among this household type affords environmental opportunities such as storage and recycling of furniture and other household goods (Dowling 2008; Dowling and Power 2011).

A mixed method approach implemented over a 3-week period included a combination of home tours, diaries, photography, video camera logs, time charts and in-depth interviews. This combination allowed participants to provide different perspectives on everyday routines. Following Kitchin and Tate (2000, 226), diaries offered the opportunity for participants to reflect on their understanding of sustainability and to comment on the more sporadic practices of the household (such as shopping at second-hand stores or the local tip, and visiting the library). Photograph and video logs were incorporated because, as noted by Pink (2001, 32), '[visual ethnographic research] creat[es] a participatory approach to the production of knowledge' (see also Nansen et al. 2009). Furthermore, video logs removed the presence of a researcher that potentially could have altered the behaviour or dispositions of those being observed (Kearns 2000). Moreover, this mix of methods enabled household members some flexibility in selecting their preferred recording medium, without too much imposition on busy family schedules.

Table 1. Profile of participants (job descriptions and workloads as described by participants to researcher).

Household	Household characteristics			Householder composition			Workload
	Location	Own/rent	Members	Age	Occupation	Occupation	
Family A	Kiama	Owners	Father – Darren Mother – Megan	37 36	Senior software engineer Chartered accountant	Senior software engineer Chartered accountant	Full time Part time (2 days) Full time
Family B	Keiraville	Owners	Three daughters Father – Brett Mother – Emma	7, 6, 4 49 35	High school music teacher Stay-at-home mum Volunteer	High school music teacher Stay-at-home mum Volunteer	– Full time Full time 3 h/week
Family C	Werri beach	Owners	Two sons, one daughter Father – Andy Mother – Maria	9, 7, 4 – –	Heart foundation Bakery assistant	Heart foundation Bakery assistant	– 90% Part time
Family D	Keiraville	Owners	One daughter, one son Father – Sol Mother – Rowena	15, 11 37 37	University lecturer PhD student Stay-at-home mum	University lecturer PhD student Stay-at-home mum	– Full time Part time Full time
Family E	Fig tree	Owners	Three sons Father – Scott Mother – Julie	7, 5, 3 43 38	Engineer Environmental education officer	Engineer Environmental education officer	– Full time Part time (80%)
Family F	Gerringong	Owners	Two daughters Father – David Mother – Michelle	9, 4 44 41	– Retirement home facility manager Clerical work Professional homemaker	– Retirement home facility manager Clerical work Professional homemaker	– Full time 30 h/month Full time
			Two sons, one daughter	14, 12, 8	–	–	–

The authors were mindful that time has both a 'quantitative and qualitative aspect' (Westenholz 2006, 38). Time charts covering the 2-week study period endeavoured to collect primarily the quantitative dimensions by measuring: what sustainable practices were undertaken; when sustainable practices occurred and how long they took (based on time interval categories: *A* = less than 5 min, *B* = 5–15 min, *C* = 15–30 min, *D* = 30–60 min, *E* = 60–90 min and *F* = 90–120 min); and who was doing the sustainable practices each time they were performed. Five of the six households completed time charts, the sixth being unable to do so because of changed circumstances.

During the first visit, each household was provided with a 'starter kit' that guided the participants through the mix of methods to be deployed during the 2-week study period. The research began with the participants leading the senior author on a home tour. Walking and talking enabled participants to outline how they defined sustainability, and show how specific sustainability goals were materialised in their domestic spaces. It also established a rapport between the researcher and household members, and familiarised the participants with the project. The researcher also visited each household at least once during the 2-week period of data collation. In-depth interviews were conducted in participants' homes one week after the data collection had finished. Interviews drew on the time charts, diaries, videos and photographs to explore the practices, experiences and meanings of household sustainability. Discussion also explored who was responsible for implementing these practices, the temporal patterns associated with sustainability practices, and the experiences and meanings of time. All qualitative data from video diaries, written diaries, household tour notes and in-depth interviews were analysed using a coding system. Emerging themes were cross-referenced between sources using an index system.

### **Who does the work of household sustainability?**

Households identified nine categories of what they understood to be sustainable practices (see Table 2). The definition of sustainability itself is contested and needs problematising (Gibson et al. 2011). Tables 2 and 3 show that the households in this study combine sustainability practices that have become mainstream (turning off lights, recycling), with those that are only practised in the wider population by households with higher levels of environmental commitment (including conscious efforts to compost, growing fruit and vegetables, walking to the shops or buying fair-trade products) (Waitt et al. 2012). The households in this study also identify an extra set of practices that go further, e.g. making their own laundry detergent. The categories of sustainable practices for the five households who recorded data on their time chart are summarised in Table 3.

The majority of sustainable household practices for both men and women were reported as taking either less than 5 min, or between 5 and 15 min. However, our results suggest women in this study spent more time on, and were more frequently engaged in, sustainable practices. Our findings suggest that over the 2-week period the five women contributed to sustainable practices a total of 93 h, the five men a total of 66 h and the 16 children 13 h. In terms of frequency of participation, our completed time charts show that women undertook sustainable practices more often than men (334 separate occasions for women in this study compared to 208 for the men).

Our results suggest that women and men in this study are engaged to different degrees in highly gendered patterns of sustainable household routines and practices. For example, women are more frequently engaged in cleaning/laundry and cooking, with a frequency ratio for both of approximately 2.8:1 (women: men). Cooking was carried out by men only 13 times compared with women who spent time doing cooking-related activities 37

Table 2. Descriptions of sustainable practices.

Sustainable practice	Activities involved in practice
Cleaning/washing (five households)	House cleaning without chemicals, water-wise washing up, water and energy-efficient laundry practices, making own natural laundry detergent
Cooking (two households)	Cooking from scratch, preparing shopping list of non-preservative-based foods, cooking time
Energy/utilities (three households)	Turning off lights, turning off appliances at the power point, tracking consumption at energy meter, installing solar hot water, manual insulation (closing blinds/doors)
Compost/worm farm (five households)	Sorting and cutting up scraps, disposing of scraps in compost and/or worm farm, aerating compost, general care
Recycling (four households)	Sorting recycling, washing waste for recycling, shredding paper for recycling, taking out recycling bin
Vegetable garden (four households)	Planting seeds, watering, weeding, tending, expanding patch, picking produce, maintenance
Chickens (three households)	Feeding chickens, collecting eggs, cleaning out coop, coop maintenance
Transport (three households)	Cycling, skating or walking less than 5 km, electric bike less than 6 km, catching school bus
Other (three households)	Networking with community about sustainability – webpage or blogging, community sustainability meetings, sorting and dropping off clothes for second-hand use, collecting second-hand items from tip/markets, visiting library

Table 3. Sustainable practices recorded by each household.

Sustainable practice	Family A	Family B	Family C	Family D	Family E
Cleaning/washing	✓	✓	✓	✓	✓
Cooking		✓	✓		
Energy/utilities	✓			✓	✓
Compost/worm farm	✓	✓	✓	✓	✓
Recycling		✓	✓	✓	✓
Vegetable garden	✓	✓	✓	✓	✓
Chickens	✓			✓	✓
Transport			✓	✓	✓
Other	✓		✓		

times. Cooking accounts for the large gap in the amount of time spent between men and women – between 5 and 9 h for men and between 11 and 22 h for women. Women who participated in our project were also more frequently engaged than men in recycling, switching off lights and appliances, composting and using the compost and/or worm farm. This is again illustrated by the total amount of time spent on composting or worm

farming, with women spending between 2 and 8 h whereas men spent between less than 1 and 3 h.

In numerical terms, our findings suggest that most of the household sustainability work conducted by these men is in the realms of gardening and transport. Men who participated in our project were more frequently engaged in vegetable gardening and did so for longer periods than women. Men collectively also spent more time working with chickens and the chicken coop, although women collectively attended to the chickens twice as often as men. The number and duration of sustainable transport trips undertaken by men outweighed those of women.

Despite the small size of this sample for quantitative analysis, these results are consistent with other research that shows gendered patterns of temporalities within households (Davies 2001). Women, especially mothers, whose domestic work patterns are 'always on', tend to experience time as continuous, fragmented and interruptible. They more frequently bear responsibility for mediating the temporal regime within households, whereas men's domestic work has tended to be more project oriented (Friberg 1993; Daly 1996; Everingham 2002; Jarvis 2005). Hence, men typically ended up working on 'sustainability projects' that are readily associated with the masculine in the domestic space – and things that men may be assumed to know about, such as gardening and do-it-yourself tasks (Gregson and Rose 2000). Women concentrated their sustainability routines on practices which they were already doing and which tend to be associated with the feminine (cooking, cleaning and organising the household). The results suggest the reproduction, however unintentional, of highly dualistic conventions of gender through sustainable practices. In our case study, the space of the home and the practices of household sustainability which help bring it into being are caught up in normative conventions of heterosexuality. However, it is also important to explore the multiplicities of subject positions within the performance of household sustainability practices. The following sections discuss the main themes that emerged from the qualitative analysis.

### **Instituting and maintaining sustainable practices**

One adult was generally positioned as the driver of sustainable household practices, though this was not gender specific. In all households, the practice appeared to be then supported by both adults, but was unevenly actioned by women because of their greater responsibility for domestic labour. Andy's comment reflects this:

There'll always be someone in the house who's the key decision maker; who chooses that path [toward sustainability] in a sense. So because of the way she wants to live - in this house - Maria, because of her beliefs, tends to make a lot of those decisions ...

The inequity in this household is also clear in a video entry when Maria is aerating the compost. While explaining that compost needs to be oxygenated in order to decompose effectively, she adds that:

There's only one person that seems to get around to doing that ... that's me.

Maria highlights that in our study, women in each household invested more time into a range of sustainable practices. However, the practice of household sustainability was not attributed to the often stereotypical image of women as closer to nature. For example, when Maria was further questioned regarding her environmental beliefs she stated that:

I do feel passionately about being close to nature, but I don't think it's because I'm a woman.

Like Maria, Michelle rejects that idea that women are more inclined than men to think about sustainability and environmental issues. Instead, in the context of discussing why her husband David remains in the habit of cleaning with non-biodegradable chemicals, she highlights the importance of remaining alert to how the subject position of ‘the homemaker’ and their consumption practices is always open to future negotiations:

Researcher: Do you think it’s because you’re more naturally inclined to think about that type of thing [sustainability] and he’s not?

Michelle: I don’t know that . . . I think he is inclined to think about it but he hasn’t had to. Just the [lack of] opportunity. I think if the situation was reversed and he was here [in the home] I think he’d think about it. But you forget about where you pick up your information . . . so your thoughts change and the conclusion you have in your head; sometimes you don’t know where the process comes from.

Evident here is that the propensity to engage in sustainable practices is not attributed to a pre-existing gender order. Instead, Michelle demonstrated how sustainability may become a highly gendered practice because of the opportunities which are afforded to either gender, in and through the temporal and social relationships that comprise the spaces of home. In this case, Michelle, in her self-description as a ‘professional homemaker’ (Table 1), recognises that running the household is her ‘profession’ or full-time job, which grants her the opportunity to instigate sustainable changes in the household. As Michelle explains ‘if the situation was reversed’, then her husband would come to think about sustainability in the home. Though environmental consciousness is not in itself gendered, decision making with regard to sustainability in the home was clearly gendered, primarily due to the time–space rhythms of different labour-specific roles assumed by each parent.

How gender and parenting is negotiated in and through the social relations that comprise domestic and work spaces is crucial to explain who in a household bears the greater part of the sustainable workload. How the historical weight of the ideology of patriarchy informs who does sustainable work, and where, becomes evident when we take into consideration the decision making that establishes and maintains domestic spaces.

Michelle: When things are frantic and blow out, then you don’t [get things done]. But I have made a conscious choice to stay and be the focal point, [so that] everybody’s time is managed . . . I make all the cleaning and shopping decisions as I do 99% of the household shopping and 95% of the household cleaning.

Emma: Well the everyday decisions are mine with regard to shopping and cleaning. I decided on the [energy efficient] washing machine and the fridge too because I use those most . . .

Gender differences do matter here because participants stressed how women, as homemakers, implemented sustainable practice through making most of the decisions regarding household purchases and organising the household rhythms. Similarly, this is evident in one of Maria’s video clips, where she explained her shopping trip and how her decisions at the supermarket were integral to running a sustainable household. In these households, sustainable practices are gendered as a consequence of the labour roles and domestic time–space rhythms of home.

Researching products for extensive periods of time before purchasing a household item (fridge, washing machine and television set) added to existing heavy expectations on mothers. ‘Green washing’ was a major concern amongst all women in the study. Each expressed their frustration with flawed advertising which claimed that a product was environmentally friendlier than its competitors. All women involved in the study spent considerable time researching sustainable products in order to avoid green washing, as discussed by Julie.

It really is difficult as sometimes you think you are doing the right thing but it turns out you are not (e.g. bogus green labelling or additives in food). I use reviews from environmental magazines such as 'Renew' to find products or reinforce a decision made. I get really annoyed when there is an organic option but it is not packaged in recyclable packaging ... means that you end up with more waste for a 'green' product ... and the so-called 'green products' – how green are they really?

### **Rhythm, routine and 'head space'**

The task of researching whether or not 'green' labelling is authentic is a time-consuming task for an individual, to not only find 'environmental' products in the shop and try them in the home, but to research and deduce if they are the most suitable product on the market. Yet, most regarded the amount of time they invested to make 'everyday' decisions regarding household-related purchases as unremarkable.

The picture that emerges from the qualitative material is that men undertook sustainable practices more frequently in longer blocks of time and normally outdoors. In our study, household sustainability practices were understood for men as primarily leisure activities and not housework, downtime away from the paid workplace. Men in the households of our study maintained a clear temporal and spatial border between professional subjectivities of work and familial subjectivities of home. One implication of this spatial and temporal distinction for sustainability practices was illustrated by Darren:

Darren: I do more ... experimenting with things. And Megan does more of the things in our routine – she does it all.

Researcher: Right. Is that because she doesn't have the time?

Darren: Yes, because at night time she'll be doing work. I'll have a couple of hours free so I'll experiment with some bread making or home brewed ginger beer or something like that while she's doing other stuff ... I don't take much work home ... (Discussion of Megan's work structure) ... So she has to fit it in whenever she can ... I do things that are totally experimental. They might fail and they might work. I'm just interested in trying to know how it's going to work.

Darren has a passion for sustainability, evident through his Green-Home website. Darren's quotation begins to hint at important gendered distinctions in temporal household rhythms. As mentioned in a video diary entry, Darren experiences blocks of leisure time in the evening, generally after 8:00 pm when his children are in bed. This gives him larger blocks of time in which he experiments, plans and constructs things with regard to sustainability, as a form of pastime. In contrast, Darren is aware that Megan's time is fragmented, balancing sustainability practices within a diversity of household responsibilities. In this household, it is the combination of Darren's experiences of block time, and Megan's experiences of fragmented time that facilitated putting sustainability into action. For example on the household tour, Darren showed the researcher the home-made laundry detergent that he creates using biodegradable ingredients bought in bulk. He later explained that:

[Megan] would shop for an 'eco' version of laundry detergent. I found that idea [of home-made natural laundry detergent] and she wasn't sure. I made the first batch and we tried it and it worked. It cleaned pretty well. So now she's taken over making it.

This suggests that the outcomes of Darren's time spent experimenting may be transferred into the household routine as it becomes habit, and consequently becomes Megan's responsibility. Without Darren's block time to experiment, Megan would only shop for a

'sustainable' alternative. In this case, the sustainable practice required an initial outlay of time spent researching, experimenting and producing before it was integrated into the shorter time frames of the daily routine.

Darren and Megan were not alone in stressing the importance of household temporal rhythms to sustainability practices. In discussing the temporal rhythms of domestic spaces, we want to emphasise how all women in this study were often continuously engaged in sustainable practices. For example, in a video clip, Rowena can be seen walking around the house switching off the lights in every room because it is 'one of those jobs that needs doing'. She states that she does it 'throughout the whole day – those lights just keep on coming back on' and that it 'drives her demented'. Following through on her family's unsustainable habits is clearly a repetitive and somewhat monotonous chore (as was suggested from the tone of Rowena's voice). The fact that this clip takes place at 10:45 pm also supports the finding that women's domestic work occurs at various times of the day, and is not dictated by the clock, but by need. The temporal and spatial rhythms of women in the households of our study do not sustain a neat border between work, caring and leisure time space and the subjectivities they constitute; instead they are constantly overlapping.

Michelle's experience emphasised how the pace of everyday household rhythms, and the role of mothers in connecting the spatially discrete places that sustain domestic spaces, operates against changing behaviours:

Michelle: It makes a difference how many kids you have and what kind of things they do and how stretched you are. So, if you worked full time and had kids you'd go to work and come home and have to think about (tape faltered) [sustainability] plus more things; sign notes, listen to a home reader and make sure the kids have got their homework done, because they can't do all that themselves. You can't change habits because you haven't got time to waste in shopping centres to look at labels or slow down or even think about if we're going to get it ...

I know for me, when I'm really, really busy and there are lots of things going on, just the process of having to think about something is too much. If someone asked you to do something you could fit it in, but you've got to have it in your head space.

Here, Michelle outlines the multiple roles and time frames which a mother experiences. Motherhood increasingly involves maintaining a domestic space across spatially fractured familial lives. Most significantly she addresses the importance of 'thinking time', which is invisible in the quantitative data collected, but is uncovered in the discussion of sustainable practices. Her point that thinking time is required to change habits can be related to the pace at which one lives. Ideas take time to formulate, to process and to accept; time which Michelle refers to here as 'head space'. Emma also reflected on the subject of how household rhythms that presently enable sustainable practices to be carried out would be undermined if she entered the labour force full time:

Emma: If I was working 9–5 I certainly wouldn't be able to do anything [related to sustainability]. I certainly don't think I'd be able to do the veggie garden, because I'd have to be doing everything else on the weekend that I would normally do during the week, like the shopping and the cleaning etc. I don't think I'd be able to do as much as I am now. I may be able to grow a few things ... [but] because of the time it'd take to actually set it up – and to just pop down there.

Emma illustrates the importance of household rhythms to the time-intensive nature of sustainable practices. She suggests that subsistence needs, such as food or motherhood, would take priority over sustainable household practices if she was working full time. Adam (1995), Pocock (2003) and Pink (2004) have all noted the incessant duties of motherhood. Hence, households comprised of single parents, or full-time working couples

may not have access to either the ‘head space’ required to begin to accept sustainability as an idea, or the time space rhythms to practice sustainable habits.

### **Intersections and multiple subject positions – the role of class**

Our results illustrate the ways in which gender intersects with other dimensions of social life, in this case class. In the middle-class households that constitute our study, home-owning families that are able to make the choice for the mothers to work part time, and who have control over structural decisions made about their house and garden, sustainability actions embody a certain sort of household identity. For these mothers, the time invested in sustainability practices reinforces their identity as ‘good’ household managers. It helps justify their choice to work less than full time, for example, when Emma and Michelle discuss the difficulty of finding the necessary ‘head space’ if they were working full time. For both mothers and fathers, running a sustainable household is consistent with their idea of good parenting, setting an example for their children and involving them in some tasks from an early age. Practices carried out by these households, such as composting/worm farming, operating a vegetable garden and keeping chickens are there at least partly to bring up children who understand where their food is sourced and where the subsequent waste goes. For example, two households explained:

Sol: Our kids are brought up with it [sustainable practices]; [they] have a vege garden and chooks, so that they understand where things come from.

Rowena: That was one of our challenges [in the *Super Challenge* program]: to educate the kids. And you can’t unless you bring them up in that sort of environment.

Darren: If you’re going to teach your kids to look after nature and the environment it’s like that; you set the example so they can see it’s not just me talking about it.

In other household and family structures, pressures to undertake sustainability practices may well go against the grain of the temporalities of contemporary life, for example, in single-parent households or those with two parents working full time. However, this should be considered an open empirical question rather than assumed. The idea that sustainability is solely a middle-class preoccupation is not borne out by current research. In the wider study to which the present work connects, statistically higher levels of reported sustainability action were apparent among less affluent households, households living in detached dwellings and households organised by women (Waite et al. 2012).

### **Masculinity, home and sustainability**

It is also relevant to consider our findings about men in the context of debates on masculinity, confirming Gorman-Murray’s (2008, 368) contention that home is a ‘key site for masculine identity work’ and a place to construct alternative masculinities. That each of the men in this study spent considerable time in sustainability practices attests to the value of home and how they regard themselves as ‘good’ fathers, what Gorman-Murray (2008) refers to as ‘hetero-masculine domesticity’. While these men continue to leave the household manager role to their partners, sustainability activities they undertake with their children (building chicken coops, digging vegetable gardens and cycling) ‘have challenged the home as a site of femininity only, creating masculine models of domesticity related to spiritual and moral well-being, shared domestic labour and fathering’ (Gorman-Murray 2008, 372). Though the gendered division of labour between outdoor ‘male’ tasks and indoor ‘female’ tasks was still present in some form, men did note that they were

becoming more engaged in tasks previously left to the women. Two households discussed this:

Rowena: Sol washes the dishes when I cook and he cooks two nights per week now.

Julie: We define it by inside is my responsibility and outdoors is Scott's job.

Scott: But I do cooking as well . . . Mostly I get the fresh stuff, and I get the groceries. I do the majority of the cooking . . .

So, the work of men in these households should not be eclipsed. While men did less of the work of sustainability, they often facilitated sustainable practices through a range of complementary labour that was usually undertaken in longer blocks of time during the initial stages of implementing sustainable practices in the home. This initial investment of time by fathers was often vital to the success of implementing sustainable practices as compared to general domestic practices, due to the infrastructure or systems needed to change lifestyle (e.g. setting up a vegetable garden or chicken coop).

### Conclusions

In the context of responses to climate change, sustainability is increasingly being conceptualised by governments of the Global North as starting at home. Calls to think and act sustainably have functioned as a catalyst for Australian households to change domestic practices, including composting, recycling, reusing items, and reducing energy and water consumption. Australian households are increasingly being expected to embrace the norms of 'green consumption', created through a mix of policies, practices and products advocated by government authorities, non-government organisations and corporations. At the same time, the latest figures from the Australian Bureau of Statistics suggest that women do more domestic work than men. Our aim was to examine the distribution of labour expended on sustainability within six committed households in the Illawarra region.

Gender matters here for household sustainability in the ways sustainable practices become incorporated into the different temporal experiences, rhythms and spatial contexts of households. In the nuclear families that comprised our study, where women have decided to couple part-time paid work with staying at home with children, our findings suggest that women have taken on board the responsibility for implementing many sustainable practices. These women resist constructions of women as being closer to nature, and shoulder expectations of sustainability as part of their roles as mothers, homemakers and household managers. These findings echo those of Nightingale (2006), who noted the key role many women adopt in instigating environmental change through their domestic labour.

Gendered sustainability practices were expressed through the multiple roles of motherhood which are intimately tied to the 24-h routines and constellation of practices that constitute domestic spaces. In our study, women experienced work time, care time and leisure time as overlapping, reflecting the multiplicity of their subjectivities within domestic space. Similarly, gender came to be expressed through the ways in which men in this study had to negotiate sustainable practices with fatherhood and paid working identities. These men retained the idea of work and leisure time as temporally and spatially discrete. For them, sustainability was commonly understood as a leisure practice, a downtime after work. While men were often responsible for the labour and upfront time required to start, or research a sustainable household project, commonly the responsibility fell to women on an everyday basis to change habits, maintain or run a household project. Women, therefore, over time became more inclined to carry the load of sustainable practices.

Such gendered analyses have important contributions to make to sustainability debates, by helping identify both opportunities for change and constraints against it. The opportunities include the strong connection in both discourse and practice between people's understanding of good parenting and their attention to household sustainability. This applies albeit in different ways to both mothers and fathers. It intersects with other research demonstrating the importance of childhood as a time when environmental habits become embedded (Measham 2006; Moy 2012). Far from being confined by gender norms, multiple subject positions imply the possibilities for subversion and disruption of dominant discourses through sustainable household practices.

On the other hand, the constraints were underestimated. Drawing on the geographies of home, we would argue that the ideological importance of the home as a haven from the outside world (Blunt and Dowling 2006) plays a major role in working against changing household behaviours. Understandings of home as a place where one has the right to be oneself may constitute a barrier to joining programmes like the *Super Challenge*. As Hinchliffe (1996) noted, this may exacerbate the distancing of global concerns from sustainable household sustainable actions. Cultural meanings that detach home and its social relationships from socio-environmental responsibilities provide policy challenges. Even for those households already committed to sustainability, there are considerable challenges including the initial investment of time required to initiate change, conflicting understanding within households of the labour of sustainability as leisure or work, and the subsequent maintenance of sustainable practices of these households being normally dependent on women's domestic labour, invested by choice within the domestic sphere rather than in the paid workforce.

The temporality lens we have used here contributes to sustainability debates by digging more deeply into the way that change occurs – the ways that old practices become deroutinised and new practices reroutinised. Block time has been shown to be crucial to the research and implementation phases. This is when households reflect on their practices, decide to change, research their options and incorporate them. This block time is particularly necessary when there are major infrastructural changes to be undertaken, such as the construction of a vegetable patch. Habitual time – repetitive activities incorporated into everyday routines – is crucial to the ongoing success of any changes instituted.

This is just one example of the ways feminist geographers can contribute more to sustainability debates. We have examined 'environmentally committed' nuclear households in the Illawarra, Australia, but the meanings, time and labour of sustainability work could also be examined in relationship to other household structures. In short, this article contributes to a research agenda that not only challenges the comfortable contemporary environmental discourse that it is 'easy to be green', but also illustrates constructive ways forward.

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## ABSTRACT TRANSLATIONS

### ¿Quién hace el trabajo en los hogares sustentables? Un análisis de tiempo y género en la Nueva Gales del Sur, Australia

Los hogares en el oeste adinerado se han vuelto un blanco importante para las campañas del gobierno y las ONG por alentar comportamientos más sostenibles desde el punto de vista del medioambiente, pero ha habido poca investigación sobre las implicaciones de género de tales políticas. Este artículo investiga el rol del género y del tiempo en las prácticas de sustentabilidad de seis hogares heterosexuales con niños pequeños, participantes comprometidos del programa 'Super Challenge Illawarra Sostenible' de 2009. Las mujeres pasaron más tiempo total desarrollando prácticas sostenibles, y lo hicieron con más frecuencia. Las contribuciones de los hombres estuvieron mayormente relacionadas con el cultivo y el transporte, en bloques de tiempo más prolongados. En estos hogares, la sustentabilidad se volvió una práctica altamente generizada debido a los diferentes roles en el mantenimiento del hogar. Las mujeres se resistieron a construcciones que las ubicaban más cerca de la naturaleza, y cargaron sobre sí mismas las expectativas de la sustentabilidad como parte de su rol de madres y administradoras del hogar. Experimentaron al tiempo como superpuesto y fragmentado, sin distinción entre el trabajo y el ocio. Los hombres aportaron a las prácticas sostenibles principalmente a través de actividades entendidas como de ocio, en bloques de tiempo más largos. Nuestra óptica temporal también ilustra las formas generizadas en las que viejas prácticas se tornan no rutinarias y las nuevas se vuelven rutinarias nuevamente. Mientras los hombres a menudo eran responsables del trabajo y el tiempo previo requerido para comenzar o investigar un proyecto, la responsabilidad de la implementación cotidiana y los cambios de hábitos recayó habitualmente sobre las mujeres. Estos resultados ilustran cómo los análisis de género ayudan a identificar oportunidades y limitaciones para los cambios hacia la sustentabilidad. Las oportunidades incluyen conexiones fuertes entre la forma de entender, tanto por parte de madres como de padres, lo que significa la buena maternidad y paternidad y la importancia que le otorgan a la

sustentabilidad del hogar. Las limitaciones incluyen los desafíos temporales enfrentados por los hogares, y cómo éstos interactúan con roles estructurales y laborales más amplios.

**Palabras claves:** cambio climático; sustentabilidad; trabajo doméstico; temporalidad; Nueva Gales del Sur

### 可持续（环保）家户中是谁从事家务劳动？澳大利亚新南韦尔斯的时间与性别分析

经济富裕的欧美家庭经常成为政府与非政府组织倡导可持续环保行为的重要对象，但仍鲜少有研究探讨这些政策中的性别意涵。本研究探讨六个育有幼儿的异性恋家户志愿参加‘挑战2009：永续爱尔瓦拉’活动的环保实作中，性别与时间所扮演的角色。女性总共花费更多的时间进行环保实践，且次数较为频繁。男性则大多数从事园艺与交通，且久久才从事一次。在这些家户中，因为性别角色的差异，环保成了高度性别化的实践。女性排斥将她们建构为更贴近自然、以及视可持续性的展望为她们身为母亲与家务管理者的一部分。她们经历的时间是重迭且破碎的，没有所谓的工作与休闲之别。男性对于环保的贡献则主要透过一般认为的休闲活动，并且从事频率较低。我们的时间性视角亦描绘出旧有的实践瓦解、新兴的实践再结构的性别化过程。虽然男性经常担负计划起草与研究所需的劳动与时间，但每日生活实践与改变惯习的责任则经常落在女性身上。这些研究发现说明了性别化的分析如何协助指认改善环保的机会与限制。机会方面，包含父母理解何谓好的亲职教养，及其与家户环保重要性之间的强烈连结；限制方面则包含这些家户所面临的时间挑战，及其与更广泛的结构与劳动角色的互动方式。

**关键词：**气候变迁；可持续性；家务劳动；时间性；新南韦尔斯