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8 “Women don’t ride bicycle[s], only men ride bicycles”

Gender and justice in mobility transitions

Mary Greene and Anne Schiffer

Introduction

It is increasingly recognised that energy is a deeply social issue, reflected in the concept of “just transitions” that has emerged over the past decade (Agyeman, 2013; Shove and Walker, 2014). Yet, the intersection of gender and energy needs to be better understood, especially from a lived experience perspective (Anfinssen and Heidenreich, 2017; Greene, 2018b; Schiffer, 2020). Everyday mobility practices constitute a key domain of daily energy demand and are of central relevance to questions of sustainable development. However, debates on energy access have thus far been heavily focused on techno-centric and decontextualised accounts of electricity as a driving force of development. This emphasis is also enshrined in the United Nations Sustainable Development Goal 7, which envisions “access to affordable, reliable, sustainable and modern energy for all” (Wu and Wu, 2015). Here, the term modern energy is predominantly used to describe access to electricity and clean cooking fuels. However, a much wider range of daily activities, including everyday mobility practices such as car driving and cycling, are intertwined with energy access and resource use. As a consequence of the policy silos in which energy-related decision-making takes place, the nexus between access to modern energy and mobility in daily life has been largely overlooked (Schiffer, 2020; SEforAll, 2019). As Schiffer (2020: 4) highlights: electricity targets “are commonly set in isolation from transport strategies ... an issue that transcends both industrialised and developing world contexts. Yet in everyday life different dimensions of energy are all experienced as part of the same system”.

Recent advances in practice-centred energy research have sought to move beyond decontextualised approaches to highlight energy consumption as centrally implicated in people’s participation in a range of everyday social practices (cf. Giddens, 1984; Schatzki, 1996; Warde, 2005). In the context of connecting energy and mobility, practice approaches have revealed the ways in which energy-intensive mobility modes (e.g. car driving) and low-carbon modes (e.g. cycling) allow socially valued practices to be accomplished (Cass and Faulconbridge, 2016; Shove et al., 2015). Examples include performing domestic roles, getting to work and school, shopping, visiting friends and so on. Responding to the now-well-documented critiques of techno-centric approaches

to analysing energy systems and behaviour change (Warde, 2005; Corsini et al., 2019), practice-based approaches have highlighted how energy and mobility needs, expectations and practices evolve in tandem with broader normative, socio-technical, developmental and governance contexts (Shove et al., 2012; Greene and Rau, 2018; Greene and Fahy, 2020). With regard to everyday mobility, such work highlights variation in access to energy and mobility modes and the practices this enables. In doing so, it demonstrates the importance of considering the broader contexts in which increasingly energy-intensive mobility practices emerge (Cairns et al., 2014).

While practice-based research is making significant advances in understanding socio-technical dynamics of resource use, cross-cultural situated comparisons between industrialised and developing countries have been limited (Baruah, 2017; Greene, 2018b; Greene and Schiffer, 2018). Recent advances in social science energy research are progressing comparative energy research among largely developed, European contexts (e.g. Jensen et al., 2018 and www.energise-project.eu). This work is revealing the value of qualitative comparative investigations for understanding biographic, social, cultural and governing factors shaping variation in energy practices. However, to date, little work has engaged in international comparative analysis between industrialised and developing contexts to explore the evolution of energy practices over longer societal timescales from contextually situated, experiential perspectives. As a result, energy access related decision-making processes that take place at intergovernmental levels and span industrialised and developing countries have been largely removed from the lived experiences, challenges and opportunities people face in daily energy practice. Building on an emerging body of research advancing situated analysis of energy systems change, the research discussed in this chapter emerged as a response to recent calls for more cross-cultural energy research (Greene, 2018b; Greene and Schiffer, 2018). In doing so it seeks to move beyond European comparative work, to advance an international comparative approach that helps uncover insights into the lived experience of energy systems change in different development trajectories of industrialised and developing world contexts.

Perhaps as a consequence of the broader omission of comparative research between diverse contexts, the interaction between energy practices and social (in)equity has, as of yet, been relatively under-explored (Walker, 2013; Sayer, 2013; Greene, 2018a). Following this, little is known about how power, capability and already existing patterns of social differentiation across categories such as gender, socio-economic status and socio-historical context shape experiences of energy systems change (Walker, 2013; Greene, 2018b). As a consequence of this sidelining, equity within energy focused practice-based research has been a blind spot for socially differentiated experiences of individuals' everyday performances across diverse development contexts (Greene, 2018b; Greene and Rau, 2018). This includes the gendered ways in which energy consumption and demand are patterned and experienced (Greene, 2018a; Munro and Schiffer, 2019; Schiffer, 2020), as well as how socio-technical development pathways shape different opportunities to participate in daily social practices across contexts.

In order to address this gap, recent work has sought to develop practice theoretical approaches by placing issues of power and equity as central to understanding practice dynamics (Walker, 2013; Watson, 2016). From the limited available data on gender and consumption there are clear indications that gendered roles and relations of power in society transpose into gendered patterns and performances of energy, including mobility and other daily consumption-related practices, at home and in the workplace (cf. Heisserer and Rau, 2015; Rätty and Carlsson-Kanyama, 2010; Schiffer, 2020). For example, Greene (2017, 2018a) and Schiffer (2020) identify relationships between gendered roles, such as responsibility for domestic care, labour participation, and performance of everyday consumption practices, including those relating to food, mobility and laundry. Such work is revealing how everyday practices evolve in gendered ways and work to shape wider opportunities for participating in social life (see also Govindan and Murali, this volume).

However, as yet, little research has explored how these differentiated patterns of practice emerge over time and between diverse societies. As outlined, a key gap exists concerning comparative experience-centred research exploring gendered energy practices across different development contexts. As a result, little is known about how processes of modernisation and development have shaped the performance of everyday energy practices in uneven or similar ways in different developmental contexts (Greene, 2018b; Greene and Schiffer, 2018). This is despite the particular potential of such work for revealing insight into the role of governing structures and socio-technical development pathways in shaping dynamics of energy access, demand and practice. In the context of achieving just transitions, and in response to the relative neglect of themes of gender (in)equity, such work could usefully bring light to how disparity and diversity impact opportunities to participate in everyday energy systems and inform future transition policies and pathways.

In response to these gaps, this research advances a situated, historic comparative analysis of gendered mobility practices in Ireland and The Gambia to arrive at a better understanding of common and divergent experiences of energy systems and developmental change processes in the context of everyday mobility. The cases of Ireland and The Gambia represent distinct and contrasting development trajectories that offer a unique opportunity to explore the processes under investigation. Particular attention is paid to documenting the gendered experiences of modernising processes in the case contexts as they have evolved over the course of the past century. Building on this, the analysis seeks to progress understandings of how capability, equity and difference in participation in everyday mobility arise, focusing in particular on car driving and cycling.

Capability, equity and practice

Despite the overall sidelining of disparity, equity and justice in practice-based energy research, some advancements are emerging. Recent attempts to consider these issues have sought to apply normative judgement to processes of social

reproduction and change. For Walker (2013), bringing an equity lens to bear on practice analysis of social change entails paying attention to patterns of inequality, social differentiation and variety in situated practice dynamics. Combining Sen's capability approach with practice theory, Walker suggests that patterns of variability and difference can be analysed by studying social differentiation in individuals and their everyday practices. This approach to social analysis may involve exploring social differentiation in terms of people's capability to participate in and perform energy-related practices, such as those related to everyday mobility. Building on Shove et al.'s (2012) often utilised model of practice, the term capability used here refers to the culmination of meanings (dominant social meanings and norms guiding practices), materials (access to material stuff and technologies) and competences (skills, knowhow and techniques needed to perform a practices) in relation to a specific energy practice, such as car driving or cycling (cf. Shove et al., 2012; Walker, 2013).

In this chapter, we seek to advance Walker's theorisation to explore equity through the lens of capability-in-practice in the context of mobility practice careers (Greene and Rau, 2018). In the context of this study, capability-in-practice seeks to explore both gendered patterns of recruitment to practices as well as how mobility-related meanings, materials and competences evolve and are patterned differently along categories of social difference (in this case gender). Capability-in-practice can be analysed at different scales and temporalities, including within and between societies and across different periods of time. Studying cross-sectional differences in groups' or individuals' capability to perform practices along categories such as gender and socio-economic status is important for understanding and promoting equity within and between societies (Walker, 2013). Exploring the ways in which categories of social difference intersect (cf. Collins and Bilge, 2016) in shaping differential patterns of capability to participate in various energy-consuming practices is thus an important avenue of inquiry for informing just transitions (Greene, 2018b).

In addition to cross-sectional analysis of variation, analysis across different temporal scales, including that of individuals' lifecourses and biographies, are useful for uncovering differentiation in terms of how practices are taken up, maintained and changed over time (Warde, 2005; Hards, 2012; Greene, 2017). Central to this is a need to move away from a mere analysis of mobility meanings to also studying how practices are performed in relation to social contexts. To this, Greene and Rau (2018) have advanced the concept of "careers" as a means of exploring the ways in which people's practices develop over longer biographic time scales. A career lens involves exploring socially differentiated experiences of recruitment to, and defection from an everyday practice, as well as how capability to participate evolves in terms of meanings, materials and competences. It furthermore entails exploring how gendered social roles and lifecourse pathways intersect with and shape patterns of energy practice career development (Greene, 2018a). However, as of yet, there is a paucity of comparative historical energy research that considers how gendered patterns of capability and resource use develop over longer timescales and across distinct developmental contexts

(Greene and Rau, 2018; Schiffer, 2020). This research seeks to address this gap by exploring how gendered “careers of practice” emerge in relation to capability. To this, it focuses on uncovering the gendered and related socio-cultural ways in which opportunities to participate in various mobility practices enable or constrain participation in other everyday life practices.

In exploring how gendered mobility careers emerge, our framework also integrates sociological perspectives on gender and performance. Here it is recognised that gender is fundamental to how we are constructed and evolve, shaping how a person is treated as well as what are considered appropriate ways for them to act (Butler, 1990). In suggesting that people are only “culturally intelligible” as gendered beings, as a girl/boy, woman/man, cultural ideas about gender are crucial to how people’s practices are constructed, embodied and performed. The lived experience of everyday life is central to the binary masculine-feminine opposition. This is most notably illustrated by gendered structuring of social space, which is characterised by the traditional confinement of women to circumscribed private and domestic sites as opposed to the masculine locations of the public sphere (McNay, 1999; Greene, 2018a; Munro and Schiffer, 2019).

Knowledge about gendered patterns of participation and capability, in terms of who carries out practices and to what end, is important for planning transitions to more just energy futures. Comparative research approaches provide an important means of studying the intersection of everyday practices with broader gendered norms and socio-technical development pathways (Bartlett and Vavrus, 2016). Supporting the conceptualising of energy as the outcome of participation in socially recognisable practices, comparative research enables exploration of the ways in which inequity and disparity in opportunities to participate arise and their relation to broader social change and development processes (Kumar, 2018). In exploring how gendered (in)equity issues relating to mobility practices emerge and evolve over time, the remainder of this chapter advances a cross-cultural comparative investigation between Ireland and The Gambia. The focus is on exploring how capability in everyday mobilities have evolved historically across the two distinct developmental contexts. In doing so, it reveals that, despite differences in terms of rates and paces of change, gendered norms and inequalities in everyday mobility practices transcend national contexts and levels of development.

Cross-cultural comparative analysis

The data discussed in this chapter forms part of a larger comparative investigation exploring the lived experience of energy systems change over time through a qualitative biographic-practice methodology. As previously stated, as of yet, situated research which compares the lived experiences of energy systems change between industrialised and developing contexts has been under-explored, especially over longer-term developmental trajectories (Greene, 2018b; Schiffer, 2020). While some innovative comparative work between industrialised and developing countries is emerging (see Sareen, this volume), key gaps in understanding remain, especially regarding how dynamics in everyday practices intersect with broader

social change processes that take place over longer time frames. To this, we argue that comparative biographic-practice research is well suited to advancing insights into the ways in which globalising development processes interact with spaces and practices of daily life across culturally distinct contexts.

In exploring everyday mobility dynamics and their intersection with broader social change processes, Ireland and The Gambia represent interesting contexts for analysis. While both countries have shared an overall trend of development towards increasingly resource-intensive socio-technical systems, this process has been characterised by different contexts and rates of change. As an industrialised European country, Ireland has experienced transformational socio-technical development over the course of the latter 20th and early 21st century, moving from a poor, primarily agrarian society to a wealthy, (post)industrial economy, currently ranked third out of 189 countries on the Human Development Index. In contrast, The Gambia, which ranks 174 on the Human Development Index, has experienced significant political and economic upheaval over the past several decades and has only recently begun to modernise and neoliberalise its economy. However, despite these differences, both countries have historically been characterised by patriarchal social structures that have played a crucial role in shaping the evolution of mobility practices. To this end, a comparative contextual analysis holds much potential for revealing commonalities and differences in how energy transitions are experienced in situated times and places including in relation to the gendering of everyday practices.

Focusing on everyday practices as a lens through which to understand socio-technical change processes, the comparative research employed a qualitative, biographic-practice methodology to understand and analyse the evolution of individuals' careers regarding everyday domestic practices across a number of domains, including food, mobility and other energy-consuming practices (e.g. laundry). The analysis presented in this chapter focuses on the case of mobility practices and more specifically car driving and cycling, to illustrate and discuss processes relating to equity and the evolution of gendered careers and practice-based capabilities.

In recent years, biographic-practice methodologies have received increased attention within sustainability and energy research as offering contextual, dynamic and human-centred approaches to researching consumption and demand (cf. Henwood et al., 2015; Schiffer, 2020), and practice careers (Hards, 2012; Greene and Rau, 2018; Greene and Schiffer, 2018). Biographic inquiry treats and studies individual lives as embedded within situated, temporal, spatial and social contexts (Elder and Giele, 1998; Blue et al., 2014; Schiffer, 2020). Providing “a sophisticated stock of interpretive procedures for relating the personal and the social” (Chamberlayne et al., 2000: 2), biographic-practice methods enable detailed contextualised understandings of social life to reveal how the past impacts upon the present (West and Merrill, 2009). Recent applications of biographic-practice methods in practice-based consumption research have highlighted their potential for exploring how lives, practices and contexts intersect in energy systems change (cf. Greene, 2018a). In addition, comparative analysis enables a deeper

appreciation of how these processes play out in the context of different developmental pathways (cf. Bartlett and Vavrus, 2016).

Across both Ireland and The Gambia a total of 31 semi-structured biographic interviews were conducted with middle and older-aged participants ranging from 50 to approximately 100 years of age (in The Gambia exact ages are not always known). As such the developmental period under investigation ranged from circa the 1930s to 2018. While this sample size is limited, sampling criteria nonetheless sought to capture diversity among dimensions of age, socio-economic status, education and geographical location within the community. It also constituted nearly equal gender representation, with 15 men and 16 women across both cases.

As is characteristic of qualitative research, the study aimed for theoretical rather than representative generalisability by providing rich insights into patterns and processes shaping dynamics as they play out in the context of individuals' lives. Theoretical sampling is common in qualitative approaches in which small sample sizes are employed to prioritise depth over breadth, focusing on detailed description and uncovering contextual processes over more statistically representative or generalisable findings. The exploratory and context-focused perspective of this research sought to uncover processes and mechanisms through a grounded, inductive and theoretically guided framework. Despite these findings not being generalisable in a statistically representative sense, it is maintained that theoretical insights into the operation of social processes and contexts can be revealed by exploring the realm of the experiential and performative. As Silverman contends, "since the basic structures of social orders can be found anywhere, it does not matter where we start our research" (2008: 134).

In Ireland, biographic interviewing involved constructing detailed accounts of individuals' wider biographic history and changing domestic energy practices over the course of their lives. Interviews were conducted with a diverse spectrum of 19 individuals spread across two case contexts, Galway and Dublin (cf. Greene, 2017 for further information). In The Gambia, interviews built on ongoing ethnographic energy research and repeated immersions in the coastal community of Kartong between 2010 and 2019 (cf. Schiffer, 2016; Munro and Schiffer, 2019; Schiffer, 2020). These formed part of a human-centred design methodology aiming to understand and influence long-term changes of socio-economic, socio-technical, environmental, political and cultural dimensions that shape local "energy metabolisms" (Schiffer, 2020). In order to facilitate cross-cultural and longer-term comparisons of the intersections of gender and justice in energy systems change, the authors collaborated and conducted biographic semi-structured interviews with 12 elders in Kartong in January 2018. To this, the biographic interview schedules developed for the Irish case were adapted for implementation with the Gambian sample.

For the purpose of this comparative investigation, the chapter limits discussion to a consideration of broad themes emerging in relation to gendered careers of mobility practices. Analysis of individuals' biographic experiences and careers of practice employed a combined practice theory and capability frame. This framework was applied in an analytical process to uncover insights into the intersections

of gendered lives and socio-technical contexts in shaping access to, and participation in, everyday mobility practices and the activities they enable.

Gender and mobility

This section provides a contextual overview of Ireland and The Gambia, followed by analysis through the lens of gendered mobility-related meanings, competences and materials. Ireland and The Gambia's development pathways have been characterised by different socio-political and infrastructural developments. These contexts have shaped differential mobility access and patterns of recruitment and participation. However, while the cases differ in terms of the rates and pace of change observed, regarding gendered mobilities, car driving and cycling emerged as empirically significant in both contexts. Furthermore, both of these mobility modes also commonly represent conflicting carbon-intensive and polluting (car driving) versus low-carbon and active (cycling) alternatives (e.g. Siiba, 2020; Okokon et al., 2018). Focusing on car driving and cycling, the analysis below presents and discusses the evolution of gendered practice careers across the two cases. In doing so it highlights shared and divergent experiences across the themes of "mobility meanings, socialisation and early recruitment" to practices, followed by the development of "gendered competences, material access and changing mobility practices".

Introducing contexts of car driving and cycling careers

As an industrialised context, Ireland's infrastructural development followed a car-centric pathway characteristic of the post-World War II era in industrialised world contexts (McDonald and Nix, 2005). Over the course of the 20th century, the proportion of Irish citizens obtaining driving licences increased, with associated car ownership and usage steadily rising. Furthermore, large-scale car-centric infrastructural developments oversaw a nation-wide building of motorways and roads to support increased car driving. This was supported by a range of car-centric national and employment-based policies that played a central role in recruitment of increasing numbers to driving and the expansion and normalisation of car driving in Ireland. These developments have positioned Ireland as one of the most car-dependent societies in Europe (European Commission, 2019).

In The Gambia, successive government changes since independence from the UK in 1965 have been associated with infrastructural developments (Schiffer, 2020). Following the 1994 coup d'état, in which Yahya Jammeh seized power of the country, road infrastructure started to drastically improve the physical connection of Kartong with other parts of The Gambia. In turn, this shaped increasing recruitment to motorised transportation, offering access to urban markets, new forms of employment as well as extraction of local resources such as fish and mineral sands (Schiffer, 2016, 2020). Nonetheless, everyday mobility within the community continued to be predominantly based on walking and cycling. Such

low-carbon modes were, however, slowly replaced with motorised transport for distance travel from the later 20th century onwards.

Gendered mobility meanings, socialisation and early recruitment

Despite the differences in broader socio-technical development contexts, both Ireland and The Gambia are historically characterised by patriarchal structures. Narratives of men and women in both contexts highlight gendered experiences of mobility socialisation. Socialisation here refers to “the ways in which individuals learn skills, knowledge, values, motives, and roles appropriate to their position in a group or society” (Bush and Simmons, 1981: 134). Early childhood experiences marked the initial commencement of men and women’s mobility careers, with differential and gendered patterns of performance continuing throughout the life-course. Across both cases, women’s mobility experiences in the past were largely based on less resource-intensive mobility modes, such as walking (Ireland and The Gambia) and public transport (Ireland). Women were less likely to develop capabilities in car driving (Ireland and The Gambia) or cycling (The Gambia) and generally experienced more restricted mobility careers over the course of their lives. In contrast, despite differences in terms of the rate and pace of transitions to motorised transport, across both cases, men had earlier access to car driving and subsequently became longer and more consistent car driving practitioners. Early socialisation provided contextual experiences that were crucial for setting individuals on mobility career trajectories and inculcating gendered mobility-related dispositions and images that acted as reference points for comparison in later life.

Observation of and participation in gendered mobility contexts and practices in early socialisation shaped the emergence of gendered mobility meanings and forms of competence. Individuals in both cases spoke about their childhood mobility experiences, reflecting on highly gendered mobility practices among adults. Regarding the Irish context, only one participant had a mother driving in childhood. For others, mothers generally used buses or walked to the shops for groceries with their daily mobility paths configured in the locality around the home. In contrast, most individuals noted that their fathers had a much greater mobility range and drove and owned cars. Narratives revealed that cars were initially used by fathers almost exclusively for activities in the public sphere, largely centred on employment. The car was attached to images of masculinity, as illustrated by Claire’s¹ account:

My mother never learned to drive, so she would walk us to school in the morning. Dad would be gone with the car and she didn’t drive ... It was always Dad’s car. You know it was that very old fashioned “it’s Dad’s car”. It was just very standard at the time. It was just the way it was.

It was later, from largely the 1980s onward, that car driving began to become linked with private sphere activities such as shopping, school runs and family outings. These changing meanings were associated with the increasing feminisation

in the context of women's growing recruitment to car driving in the last two decades of the 20th century.

In Kartong, car driving did not emerge as a significant mobility practice until road construction following the aforementioned 1994 coup d'état. Rather, during the mid and later parts of the 20th century, households typically relied on cycling and walking to travel within and beyond the settlement area. However, in contrast to Ireland, where cycling had been an established and accessible mobility mode since the late 1800s, it was only in the late 1950s that recruitment to cycling and the practice of cycling developed in Kartong.

Following gendered patterns of car expansion in Ireland, cycling emerged as an overwhelmingly male-oriented activity in Kartong. Men in the community were the first to own bicycles (materials) and learn to cycle and maintain bikes (competence). For many decades, cycling continued to be performed almost exclusively by boys and men and was associated with wider meanings concerning gendered roles and activities. Buba's comment resonates with other participants' reflections on cycling: "women don't ride bicycle[s], only men ride bicycles". Observations recorded over the period of repeated immersion reveal that it has only been possible to observe Gambian girls riding in the community this past decade (Schiffer, 2020).

In Kartong, the early male cycling recruits were afforded the benefits of expanded agency presented by their recruitment to this higher range mobility mode. Relative to the predominant mode of walking at the time, recruitment to cycling increased the possible range of their daily mobility practices, providing greater agency to participate in a wider range of social and economic activities outside the home. Men were more likely to travel greater distances outside the home, while women's day-to-day lives predominantly focused around domestic spheres (Schiffer, 2020). This was related to broader patterns of gendered patriarchal power relations. As Fatou recalls: "Normally men travelled more than women ... At that time women [were] controlled".

While all Irish participants were recruited to cycling at a young age, participants' narratives revealed gendered differences in terms of cycling practices and the activities these enabled during childhood and adolescence. The period of adolescence was characterised by gradually increasing agency, resulting in a corresponding broadening range of mobility as participants reported they were afforded more opportunities to go out by themselves. The bicycle was a crucial mode of transport for all individuals during this period. However, relative to boys, girls tended to experience more mobility restriction. While boys generally reported using their bicycles to travel greater distances from home to engage in socialising and sometimes employment-related activities, girls were more likely to report restrictions placed by their parents on their range of mobility. As Martha recalls: "My father would keep a tab on me, making sure I didn't go too far from home or to certain places ... and I had to be back every evening at 8 o'clock and much earlier during the winter". In contrast, these types of restrictions were notably absent from Irish male narratives of mobility experiences and speak to the gendered meanings of mobility socialisation and early recruitment.

Gendered competences, material access and changing mobility practices

In Kartong, gendered access to resources led to predominately male-oriented bicycle competences and ownership (materials). This was associated with recruitment of boys and men to new “sharing practices” (Schiffer, 2020), in which initially scarce bicycles were used communally amongst boys and men in the community. In this context, narratives also revealed new degrees of social dependency experienced by early male cyclists in Katrong, who were relied upon by the community to facilitate wider communication and consumption-related tasks. As Lamin recalls:

Few in the community ... had the opportunity to acquire bicycles. They [were] totally the source of means of communication. Like if ... somebody died and you wanted to communicate to the relatives in the other localities, you would go to that particular person with the bike and borrow it from him.

Thus, despite overall patterns highlighting the development of higher range mobility practices in favour of boys and men, a more nuanced analysis of lived experiences highlights a greater complexity to these developments. As the account above suggests, narratives reveal the increased social dependency placed on early male recruits cycling in The Gambia. Interestingly, this theme also emerged in relation to car driving. For example, a number of participants drew attention to the increased social pressure placed on the initial car drivers in the community who were depended on to support a range of activities and practices. Ousman reflects on this perceived negative aspect of increased social dependency experienced by early male car recruits in the community:

The dependency on you would be very high because if people have problems they would come to you ... There [was] a disadvantage because there could be relatives who could have [a] serious emergency and they would not be in possession of [a] car. Like somebody's [is in] labour, a serious accident happens, maybe a child fell from a tree, the leg got broken. You know, or any other related emergency ... they will come ... The dependency was too high because maybe [the] entire village of ... maybe 1,000 inhabitants, only [one] vehicle, one driver, you know, one car. The rest could not drive ... But now you are the owner of the car and are the only qualified driver, so the service is entirely on you. So, the dependency was super-high ... Yeah, the high dependency on you is that any time people needed you, there is no restriction and there is no privacy; they will knock at your door and you will [have to] get up and solve their problem.

Over time, the use of motorised vehicles grew in the Kartong community. This process was supported with successive improvements in road infrastructure. However, the increasing recruitment to car driving and car ownership occurred in a socially differentiated and gendered manner. Men, and especially those of higher social positioning, had earlier access to car driving skills and technologies for private use. Ousman further reflects:

The first, you know, privileged families that had cars in their compounds and the first drivers, you know, in history ... [Then] previously only men [were seen] driving ... [It] used to be only men but now even my wife wants to drive. But [it is still] men with their private cars [that] take their wives out.

Thus, despite emerging changes, gendered patterns of exclusion continue to exist. Visible changes to women's car driving capabilities in Kartong have only started to emerge in the past several years with increasing numbers of women starting to learn to drive (Schiffer, 2020). However, despite women slowly taking up car driving, today the emphasis on male capabilities continues to be observed in relation to the increasing uptake of motorised mobility among men in Kartong (Schiffer, 2020). In this respect, car driving is largely centred on commercial activities where men are employed as drivers for taxis, bush taxis (large mini-vans) and trucks as well as related employment and business opportunities. Such opportunities provide an important context for framing male recruitment to car driving. Ousman recalls: "I was a manager in one of the community lodges ... And as a manager, I had a vehicle under me ... so I was forced to learn how to drive". More recently a "car wash" which operates an electric vacuum cleaner has been established in Kartong as an example of a male business venture (Schiffer, 2020). As such, historic exclusion also spills over into subsequently gendered employment opportunities directly or indirectly associated with mobility modes and capabilities.

In the Irish case, where motorised driving practices were established much earlier, men reported recruitment to car driving usually in their late teens or early twenties. However, like The Gambia, many men were recruited to car driving for work-related activities. Following their recruitment, most men reported being consistent car drivers for most of their lives. In contrast, most women were recruited to driving later in their lifecourse, during their 30s or even 40s. Women's mobility started to change near the end of the 20th century, most notably marked by wider socio-political changes providing room for women's increased participation in employment roles outside the home (cf. Greene, 2018a). In their earlier lifecourse, many older women had experienced mobility restriction and isolation prior to learning to drive, with many indicating they were essentially housebound during early years of childrearing as their husbands took the car to work. Many women reflected on the increasing range of opportunities developing car driving competences presented for them in their daily lives, as Claire's account illustrates: "It was fantastic! It really opened up a whole lot of things ... the independence and freedom...it just opened up a lot of new avenues that you couldn't do on a bike."

Mobility restriction experienced in their earlier lifecourses shaped women's attachment to car driving in later life, with interviewees stressing it as a fundamental symbol of their independence that they were unwilling to ever forfeit. For example, in recent years, Martha and her husband James had toyed with the idea of downsizing to one car. However, Martha's experience of isolation during her early motherhood years and hard-worked path towards achieving mobility independence as a woman led to a deep and complex emotional connection to her car:

having lived with no car to having two cars, we do consider two cars in the house ... a luxury, yes I do, but it's kind of that and then ... you know even though the conscience niggles at me from time to time, like since James has retired I was weighing up and toying with the insurance and petrol and everything else, you know, considering giving my car up ... But in the end I decided against it and you know it boils down to that I couldn't possibly face feeling that housebound again, that's something I just couldn't give up now ... it took me a long time to have the opportunity to learn to drive, and then to get a car. It was a huge thing. If I gave it up I think I would have felt I have sacrificed something, like a part of myself because it took me a long, long time to get it. It was a real mark, sense of ... I wouldn't say a goal but you know when you strive for something and you get it?

Martha's experience was typical of the experiences of older and middle-aged Irish women who were recruited to driving later in their lifecourse. The commonality of this theme across the women's accounts shows how what is a subjective experience is in fact historically structured, as similar patterns in meanings and attachments to practices are configured by shared gendered biographic experiences.

As a consequence of their later recruitment, women in the Irish case practiced multi-modality for longer in their lifecourses than men. Unlike Martha, for a number of women, practices of multi-modality, in which daily mobility practices combined walking, public transport and travelling as passengers in male-driven cars, persisted even after they had learned to drive. This was largely due to these women not having access to material resources needed for purchasing and maintaining a private car. Across age groups, women from lower socio-economic backgrounds tended to be recruited to car driving later and indicated longer periods in their lifecourse characterised by no car driving and multi-modality. In terms of private ownership of a car, relative to men, most women did not own a personal car until much later in their lifecourse. Savings obtained from part time jobs or employment taken up after child rearing were cited as important in these cases. Women from lower socio-economic groups in particular were more likely to car share using their husband's car. It was only around the period of the late 1980s and early 1990s that most driving women in the Irish sample reported full recruitment to driving. This mirrors broader patterns in the expansion of driving in Ireland, reflecting the growing participation of Irish women in the labour force in part- or full-time employment and associated rises in the number of cars and licences per capita. This has resulted in a dramatic feminisation of the Irish car driving landscape, with Irish women now driving significantly more than men. For example, the proportion of women driving to work in Ireland on a daily basis increased from 27% in 1985 to over 65% in 2016. Comparatively, the proportion of men driving to work rose from 43% in 1985 to 53% in 2016 (CSO, 2016).

In Ireland, women's increasing recruitment to car driving was related to gradually changing norms regarding what the car should be used for. Over time, the car became linked with a growing array of practices and activities constitutive of everyday life. While the car was initially considered an exclusive activity

reserved only for men and male work-related activities, with women's increasing recruitment, the car became linked to new practices such as food shopping, bringing children to school and an increasing range of recreational activities. In addition, wider contextual processes associated with changing labour participation of women and broader planning and infrastructural developments were noted as key dynamics leading to the eventual normalisation of car use among both men and women. Examples include the supermarketisation of food provisioning and associated processes of spatial distancing between sites and services (cf. Greene, 2018b). Further and ongoing research is needed to document to what extent developmental dynamics will lead to similar processes regarding the convergence of men and women's car driving rates in The Gambia.

Reflections on gendered mobility careers

As this snapshot into the historic comparative analysis of development of everyday mobility reveals, gendered forms of practice-based capability and exclusion have emerged across both cases. These insights point to the highly important role of gender in structuring capability-in-practice across contrasting development contexts. Despite differences in the exact development pathways that historically framed the evolution of mobility careers in Ireland and The Gambia, similar processes of gendered disparity emerged in both cases.

While there were variances between both Ireland and The Gambia in terms of the rate and pace of change towards higher range mobility modes, similar processes concerning gendered socialisation and the development of gendered mobility meanings, materials and competences were evident. For example, across both cases, women have historically experienced more mobility restriction and have been presented with fewer opportunities to develop capability in higher range mobility modes. Instead of focusing on differences regarding levels of development, these insights reflect shared patriarchal orderings and norms governing everyday life. Here, car driving (Ireland and The Gambia) and cycling (The Gambia) have historically been understood as predominantly male practices (meanings), with skills being largely learnt by male practitioners (competences) who were also more likely to have access to resources and vehicle ownership (materials). These gender disparities in mobility capability have also been reflected in different opportunities to participate in mobility-related economies and employment opportunities.

The comparative analysis has thus revealed power-laden and gendered forms of exclusion regarding the development of mobility-related capabilities. It has also highlighted gendered differences in terms of the temporal rhythms and goal orientations of daily mobility patterns. In Ireland, women's mobility careers were much more likely to reflect multi-modal transport forms, including mixing walking, public transport and travelling in cars as passengers. Women's everyday mobility patterns have historically been more confined in distance whilst involving relatively more varied and complicated transport routes. Women's mobility careers have been primarily oriented towards fulfilment of family

activities and caring responsibilities, such as dropping children to school and shopping for family or attending to other family-based errands and activities. This contrasted with men's typical daily commutes which often involved longer but more direct journeys and routes to places of work. Similarly, in Kartong, women's daily journeys were more likely to be locally based and related to domestic and seasonal food growing activities. In contrast to Irish women, who reported multi-modality and greater use of public transport systems, the everyday mobility of women in the Gambian case were not long ago almost entirely based on walking.

These differences in mobility modes reflect varying socio-economic, spatial and infrastructural landscapes in the two contexts. Nonetheless, across both cases, shared findings highlight similar processes concerning the intersection of energy use with gendered power dynamics. Gendered patterns of mobility disparity have been revealed through men's access to higher range mobility practices and women's experiences as historically associated with local, less resource-intensive travel related to domestic roles. However, despite findings highlighting patterns of higher range mobility development in favour of men, a more nuanced analysis of lived experiences adds a greater complexity to these dynamics. For example, narratives highlighting the increased social dependency placed on early male recruits to both cycling and car driving in The Gambia reveals complex responsibilities for the wider community faced by men. Furthermore, across both the Irish and Gambian cases, recruitment experiences of men to driving were sometimes fraught by personal strains associated with meeting employment-based demands and were not always experienced as choice. Such accounts highlight the importance of situated analysis for revealing variations and complexity in lived experiences of energy systems change as well as variability of experiences both within and across gender categories.

This is significant because mobility and other forms of energy continue to be predominantly considered through techno-centric policy approaches. This includes visions of technological "leapfrogging" that will allow developing countries to bypass polluting fossil fuel based energy systems of industrialised nations (Nikolaeva et al., 2018). Yet, analysis of Irish and Gambian mobility careers reveals that development trajectories in both contexts are both shaped by and shape gendered norms and social roles, embodied and performed in private and public space (cf. Butler, 1990). In other words, achieving sustainable mobility development is not simply a question of technological access but the outcome of participation in socially recognisable and gendered practices. In the urgency to deliver low-carbon technological pathways, there is therefore a danger that within a techno-centric approach, mobility (in)equity between men and women is overlooked. A more socially informed perspective reveals the importance of considering the ways in which gendered mobility norms and forms of capability co-evolve with wider contexts and opportunities for participating in daily economic and social life. Importantly, this can support the development of gender-sensitive policy interventions to enable more equitable approaches in the context of sustainable mobility practice transitions.

Conclusion

Recent advances in practice-based approaches to energy demand have highlighted energy as a deeply social issue reflecting and shaping the socio-economic and infrastructural contexts of societies. However, little work has explored questions of gender, justice and equity in energy systems change through a cross-cultural comparative practice-based frame. With a focus on gender and mobility, this chapter has sought to highlight the potential of, and call for greater focus on, cross-cultural comparative work on energy practices to advance understanding of the interrelation between lives, practices and contexts in socio-technical change.

Using car and cycling mobility careers as a vehicle for analysis, the comparative investigation across the Irish and Gambian cases reveals the importance of situated insights for uncovering gendered experiences and their relation to wider questions of (in)equity in everyday consumption practices. Although differences between the two cases were observed in terms of the specific rates and pace of mobility development, across both contexts, higher range mobility practices have evolved in gendered ways, dominated in their performance by men. Higher range mobility practices (car driving and cycling) have been gendered in terms of the development of capability across the elements of meanings, materials and competences. Car driving and cycling practices evolved as male-dominated activities, with men having greater access to mobility resources and developing necessary competencies to operate and maintain mobility-related technologies. Gendered inequities in mobility capabilities have historically developed across a range of modality modes but were most notable in relation to dominant car driving in Ireland and the use of motorised transport as well as bicycles in The Gambia. However, the analysis presented here also demonstrates that over-simplistic views of “men reaping all the benefits” don’t hold sway and that more nuance is essential in understanding social pressure and inequity as experienced by both women and men.

Conclusions from this study suggest that the qualitative insights emerging from comparative biographic approaches are of immense policy relevance in the context of designing just transition pathways. As the analysis here illustrates, understanding gendered consumption practices and how these are intertwined with broader socio-economic and socio-cultural factors is important for improving understanding of social dynamics of energy systems change as well as enhancing mitigation and adaptation efforts. Comparison across different contexts of development as is the case here has highlighted gender as a much broader and more significant factor in shaping mobility practices. Such insight can help shed light on current lived experiences and has the potential for informing policy to achieve more sustainable mobility futures. Findings relating to persistent patterns of gendered mobility exclusion, suggest that gender-sensitive policies are needed to address disparities in energy practices and performances. Such accounts illustrate the need for policy to enable equitable access to energy, including energy demand associated with everyday mobility. However, achieving gender equity, for example in relation to women’s car driving capabilities in terms of developing

driving skills (competences), enabling private car ownership and associated fossil fuel dependence (materials), may come into conflict with urgent climate action needed. Furthermore, without considering gendered practices and inequities in the urgency to decarbonise mobility, policy makers might prioritise some mobility practices (e.g. employment) over others (e.g. bringing children to school), thereby unwittingly increasing gender inequalities.

A more useful way of framing mobility equity is therefore in relation to mobility range and ease of access to participate in daily activities that mobility-related energy consumption enables. For example, multi-modality in Ireland was a symptom of lower socio-economic status and therefore did not stem from personal choice or agency. To achieve equitable levels of higher range mobility for women, whilst promoting low-carbon modes of transport, gender-sensitive policies should explore how desirable alternatives to private car ownership can be made accessible in a way that accounts for the interaction of gendered life experiences with broader socio-technical systems.

More contextual and experience-centred comparative work in this area can help address gaps concerning differentiation in gendered experiences and processes in energy systems change. To this end, expanding the scope of analysis to consider other contexts and domains of energy systems dynamics can offer valuable insights into social dimensions of energy. The comparative biographic-practice approach to exploring the evolution of gendered differentiation in capabilities has applicability beyond the study of mobility to a wider range of energy-related experiences and practices. Such an approach can fruitfully add to the growing body of work focused on addressing knowledge gaps concerning gendered patterns of power and (in)equity in energy practices including progress towards “affordable, reliable, sustainable and modern energy for all”. For example, Govindan and Murali’s (this volume) analysis unpacks the intersection between transitions to clean cooking fuels and changing social positions of women in India. Similarly, Abdullahi (2017: 46) argues that women in Nigeria are both energy consumers and producers and that without considering their voices in energy transitions renewable interventions “risk being inappropriate or failing”. Comparative biographic-practice approaches to analysing a spectrum of energy-related capabilities can advance understanding of the evolution of gendered energy performances within the context of socio-historical and wider developmental change processes.

In summary, delivering the urgent climate action needed, while ensuring equitable energy and mobility access, necessitates an inclusion and recognition of the different capabilities of people within a society including men and women. With its emphasis on understanding disparities in daily life experiences and their intersection with broader social-technical change processes, a biographic-practice approach offers a useful framework for exploring how differences in capability and subsequent participation in energy practices arise. Research exploring energy practice related meanings, materials and competences advances understanding of the intersection of power, (in)equity and the gendered development of capabilities as the basis for designing just energy transitions.

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Note

- 1 Please note that names related to direct quotes from research in Ireland and The Gambia have been changed.

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