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Imagining (Un)sustainable, Automated Transport Futures

Dag Balkmar and Jeff Hearn

INTRODUCTION

The Earth does not know national borders as most humans do. Yet the place of ecological and environmental concerns have not usually been at the centre of critical debates and studies on men, masculinities, and men's relations to global and transnational processes of power. This is even though certain men and certain masculinities have clearly played and continue to play key roles in the creation of environmental damage, as, for example, politicians, industrialists, extractors, developers, engineers, and high consumers and users of technologies that impact strongly on the environment and climate change.

Climate changes tend to affect women more than men, and poorer people more than richer people, for example, in increasing risks of hunger in developing countries, and the creation of climate refugees. Similarly, men's violence to women tends to increase in situations of crisis, as follow from climate change. Such patterns result from and constitute a variety of transnational centres, dispersals, and dispersed centres, that implicate both men collectively, structurally and institutionally, and individual men. These uneven intersectionally gendered environmental distributions, movements and flows have many further facets, around (over-)consumption, population growth, lifestyle, water, energy, land, travel, transport. A still relatively under-discussed aspect is the gendered structuring of food consumption, with widespread cultural associations of men, meat and violence: '... taking the energy value of the meat produced into consideration, the loss of calories by feeding the cereals to animals instead of using the cereals directly as human food represents the annual calorie need for more than 3.5 billion people' (UNEP 2009).

The relations of men, masculinities and equality are thus of central concern for environmental sustainability, justice, governance, and indeed democracy. In this perspective on

men and masculinities, seen transnationally, economic and political injustice cannot be easily separated from spatiality and from environmental injustice. This has long been made clear in the feminist research and policy literature on the gender/development/nature/sustainability nexus (for example, Mies 1986, 1998; Haraway 1989, 2008; Shiva 1989, 1997; Wichterich 2000; Agarwal 2010; Salleh 2017). Indeed feminist interventions have pioneered the analysis of the intersections of economic and distributive justice with environmental and non-human elements.

These urgent questions have clear and obvious geopolitical dynamics, for example, between the oil producing and oil consuming nations and regions, and their respective transport futures. Ecological and environmental politics, very much influenced by feminist(ic) activism, interlink closely with the politics of oil and energy, performed and controlled overwhelmingly by certain kinds of men. This is seen no more clearly than in the complex contemporary connections between the Middle East states and parastates, Russia and the USA, and their various political-economic-business-military leaderships. It is extremely doubtful if the Middle East would be such a contested and violent arena of conflict and region of geopolitical interest, involving the superpowers, local national states, and multiple political and religious factions, if there were to be no oil there.

At the more local level, cross-national research on environmentalism has revealed modest gender differences between men and women, with women overall tending to greater environmental concern and environmentally-oriented behavioural change (Zelezny et al. 2000; Hunter et al. 2004; Hawkins and Ojeda 2011). Moreover, detailed analysis of men's talk on the environment illustrates such tendencies (Dahl 2011). The misperception of less environmental risk by some more privileged men has been termed the 'white male effect' (Kahan et al. 2007). It is within this context that Raewyn Connell (1990, 1995: ch. 5; Ouzgane & Coleman 1998) has argued that men's involvement in environmentalism may be progressive for gender equality and feminist politics.

Accordingly, there is an urgent need for much more research, analysis and action on ecological, environmental and bio-physical questions, 'green' issues, sustainability, and climate change, and how these may link to men and masculinities. This chapter seeks to contribute to this broad field of research and action, with a specific focus on dispersed transnational centres in the field of transport, and possible, imagined and imaginable, (un)sustainable, automated,

gendered transport futures. Thus, here we focus on men, masculinities and ecological and environmental matters, as a major example of dispersed transnational centres of power. We have three main aims in this chapter. First, we seek to contribute to the critical examination of men and masculinities in relation to ecological and environmental matters. Second, we focus on the impact of (un)sustainable institutions of men, in particular, the dispersed transnational centres of power in the field of transportation, on environmental and other forms of (un)sustainability. Third we examine automobility, the structures, practices and ideology of privileging cars and car users, as an example of dispersed transnational centres of power, and possible, imagined and imaginable, (un)sustainable, automated, gendered transport futures, through the case of self-driving cars and other vehicles, along with other transport options.

POWER, DOMINATION AND EXPLOITATION

Despite our introductory remarks on the lack of attention to ecological and environmental questions in relation to men and masculinities, these questions of the gendered, ecological/environmental power, domination and exploitation of men and masculinities can be seen as part a long recognized, rather well established theme when placed within the frame of eco-feminism (Easlea 1983; Strange 1983; Raivio 2014; see Ahmed 2008 for a more general framing on biologism and anti-biologism). Eco-feminists have long maintained that the subjugation of Nature and oppression of women reflect a two sides of the same coin, a single exploitative ethics, on the part of men; this suggests that growing respect towards Nature is likely to lead to the end of patriarchy (Warren 1990). Feminist researchers have related global environmental damage explicitly to the global dominance of men and men's power. For example, Rosi Braidotti and colleagues (1994) have discussed environmental damage as consequential of the influence of masculine values in global politics. In her analysis of the Bush administration and its ignorance of environmental issues, Stacy Alaimo (2009) problematizes a specific form of stereotypical masculinity. A recent example is President Trump's announcement of USA's withdrawal in 2018 from the Paris climate agreement. Together these examples indicate what may happen when some forms of men and masculinity lose and others gain ground.

In their study of male climate sceptics in Sweden, Anshelm and Hultman (2014: 85) argue that the need for urgent changes in the organization of Western societies are met by counteractions by a small group that "consisted of elderly men with influential positions in academia

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or large private companies”. Another possible scenario following from climate change is that contemporary industrial masculinities that are strongly orientated to production and consumption may have to adapt to more ‘ecomodern’ forms of men and masculinities, where questions of sustainability, including sustainable mobility, are much more integrated into the concept of masculinity, mobility practices and modernity. In Sweden, studies on men, masculinities and transport have problematized masculinity in the context of transport and sustainability (Dahl 2014; Dahl et al. 2012). In addition, disasters and crisis management are growing and urgent contemporary themes in studies on men and masculinities (Hearn 2015; Enarson and Pease 2016; Ericson and Mellström 2016). Thus ecological and environmental power, domination and exploitation are in such ways obvious, yet still made invisible. The comparison with studies on men and militarism may be instructive here (cf. Hearn 2012; Poster this volume). These ecological, environmental, and specifically transport-focused and transport-related, issues can be located along with and result, at least partly, from the tendency of men and masculinities to focus on power, domination and exploitation over others and the planet. Such processes of power, domination and exploitation also entail tendencies to disregard the ecological consequences and effects of their actions – what in other contexts have been understood in terms of lack of responsibility and lack of care, so-called carefree masculinities (Hanlon 2012). The gendering of men and the gendered power of men are part of the gendered production of sustainability and its lack, its gendered effects, and gendered policy, policy development and policy-making, all typically dominated by men. Gendering occurs throughout current unsustainable social arrangements and processes of moving towards more sustainable social arrangements.

SUSTAINABILITY AND THE DISPERSED TRANSNATIONAL CENTRES OF TRANSPORT

Following these contextualizing discussions, we build on this work to address more particular debates on different men’s impacts on and relations to sustainability and the environment, through an emphasis on movement, transport, automobility, and transport futures. This turns the overall theme of the book, the *unsustainability* of institutions, back to how such institutions undermine *sustainability* in broader, especially environmental, as well as also in other forms and ways.

As dispersed transnational centres of power, the field of transport can be discussed as gendered in many interrelated respects. The mobility patterns associated with men and masculinity have historically often been taken as the benchmark for personal mobility, and as social value and material practice, mobility has been more available to men than to women (Hanson 2010). Furthermore, feminist scholars have long argued that it is primarily men have been associated with mobile activities such as the explorations of “new worlds”, such as warfare, pilgrimage and adventure (Clarsen 2014: 96). Men have also more often than women been engaged with technologies of movement and their infrastructures, such as automobiles, railways, steamships, airplanes and information systems (ibid.). The way people move and how they relate to technologies of movement are gendered issues that contribute to the production, reproduction and contestation of gender and power hierarchies (Uteng and Cresswell 2008: 2). This is clear with the environmental impact of aviation, particularly in the context of a rapidly growing low cost airline sector globally. In the modern era, movement and transportation have clearly become intimately bound to oil consumption, and energy consumption more generally.

There are two fundamental issues to be highlighted here in terms of oil and energy consumption: first, geopolitical power, and, second, gender and class power; both are subject to huge variations. To take the first question, by the mid-2000s the US and Canada, with only 5% of the world’s population, accounted for about 27% of oil consumption, and Europe, with around 10% of that population, accounted for slightly less, at 24%. Greenpeace (Biel and Muffett 2009: 4), drawing on the World Resources Institute data (World Resources Institute, Carbon Analysis Indicators Tool, <http://cait.wri.org/>), reported:

Per capita emissions in the U.S. have historically been far above most countries in the world as well. In 2005, the United States emitted 23.5 tons of global warming pollution for every man, woman and child in the country. Only Australia (26.9), ... Luxembourg (27.5), and small, oil-producing nations Qatar (55.5), U.A.E. (38.8), Kuwait (35.0) and Bahrain (25.4) had greater emissions per capita than the United States.

North America produces annually about 20 tons of carbon dioxide per person, Europe about eight, Africa one (World Bank 2007; for 2013 data see <http://data.worldbank.org/indicator/EN.ATM.CO2E.PC>), with the greatest environmental and

social impacts often where energy consumption is least. Greater wealth, greater gender inequality and more greenhouse gas emissions seem to go together: 'the USA produces nearly twice as much CO₂ than the EU and two and half times that of Sweden. Social democratic countries have lower emissions of carbon dioxide not only per person, but also for the production of a standardized amount of goods and services' (Walby 2009: 356–357; also see Wilkinson and Pickett 2009). These kinds of geopolitical variations and dispersions do not just concern individual choice; rather they are matters concerning structural 'meta-level emitters (governments, industries), who must ultimately mitigate greenhouse-gas emissions if the irreversible effects of climate change are to be avoided' (Moosa and Tuana 2014: 687). As noted, these institutions are dominated by men, that is, certain kinds and certain groupings of men.

Second, within these geopolitical variations there are further very large variations by gender and class:

Within any given income group ..., energy consumption differences between women and men are most pronounced in transportation. In the lowest income category, men expend 160% more energy on transport than women (21,372 MJ vs. 8,220 MJ). In the highest income category, men expend 48% more energy (75,624 MJ vs. 50,964 MJ). These differences shrink as income increases, but they do not disappear. They are significant because transportation is a major source of GHG emissions ... (Schiebinger 2013, drawing on Rätty and Carlsson-Kanyama 2009)

However, gender difference is less clear-cut when energy consumption is considered in total:

... In Germany, single men consume on average 147,000 MJ/year, 37% more than single women's 108,000 MJ/year ... The majority of this difference disappears when data are corrected for income. For example, in the lowest income category, single men consume only 1% more energy than single women (119,601 MJ vs. 118,368 MJ). In the highest income category, single men consume 2% more energy than single women (292,221 MJ vs. 285,234 MJ). Highest-income women consume 141% more energy than lowest-income women; for men, the figure is 144%. Income is therefore an important factor to analyse when looking at women's and men's energy consumption. (Schiebinger, 2013, drawing on Rätty and Carlsson-Kanyama 2009)

Within this vein of argumentation Anna Kaijser and Annica Kronsell (2014: 5) write: “Disaggregated data on individual energy consumption ... or CO₂ emissions show that indeed the relations of production and class matter, but so does, for instance, gender and age.” Indeed, caution is needed with overly broad-brush approaches, so as not to reproduce patriarchal gendered assumptions in analysis and practice, such as the assumed relation of women to nature, and men to culture, or women as pure victims of nature, and men as pure aggressors against nature. Along these lines, Susan Hawthorne (2009: 98) elaborates: “To the extent that women belong to dominant white, European-derived, heterosexual, wealthy and mobile groupings, they too are drawn into modes of production, consumption, and theorization that reflect the model of economic man.” This kind of intersectional contextualization does not, however, change the overall argument that some clear social blocs of men and some masculinities, as ways of being, consuming, exploiting the Earth, are very dangerous indeed, for individuals, societies, and the planet, especially when coupled with affluence, resource accumulation, and high consumption. From this follows that a shift from cars to more sustainable mobility demands related shifts in men’s dispersed transnational centres of power, in the context of transportation more generally, and cars in particular.

AUTOMOBILITY

Gendered automobility, and gendered transport and travel generally, is a major aspect of climate change. This is not just a matter of people using private cars; it also entails the subordination of other forms of (lack of) mobility, and actively impedes the development of different mobilities, notably various public transportation systems and potentialities, limiting the mobility of certain groupings or categories of people, notably non-car owners, non-car users, pedestrians, and some women, black and minority ethnic people, young(er), old(er), and people with disabilities. It also has major effects and implications for land and land use, as roads and their associated spaces, and for the physical, organizational and occupational structures take priority over other possibilities. Automobility has much to do with certain men and certain masculinities of certain classes in certain locations. Even with different national transport regimes and regulatory frameworks, automobility is a more general, embedded and indeed diffuse and dispersed social phenomenon that crosses countries, world regions, and states of economic development, and is material-discursive in form and content, across bodies, land, energy and technologies.

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Many car-dominated societies across the globe recognize a political challenge in the need for more sustainable mobility, though less so the strong connection between men, masculinity, power, and automobility. The concept of *automobility* identifies one of the most important socio-technical institutions, namely the car as an ideological formation, and through which modernity is organized (Böhm et al. 2006), on a global and transnational scale. More specifically, John Urry (2004: 25, 26, following Sheller and Urry 2000) argued that a combination of six components generates and reproduces the ‘specific character of domination’ of automobility. Below follows short quotations on how Urry (2004: 25, 26) characterized automobility:

- I. “the quintessential *manufactured object* produced by leading industrial sectors and iconic firms of the 20th-century capitalism”;
- II. “the major item of *individual consumption* after housing which provides status to its owner/user through its sign-values (such as speed, security, safety, sexual desire, career success, freedom, family, masculinity)”;
- III. “an extraordinary powerful *complex* constituted through technical and social interlinkages with other industries, car parts, accessories; [...] urban design and planning; and various oil- rich nations”
- IV. “the predominant global form of ‘quasi-private’ *mobility* that subordinates other mobilities such as walking, cycling, traveling by rail and so on”;
- V. “the dominant *culture* that sustains major discourses of what constitutes the good life, what is necessary for an appropriate citizenship of mobility”;
- VI. “the single most important cause of *environmental resource-use*.”

These six components highlight the complexity of power and power resources in relation to technology and technical institutions more generally. Each of the above outlined components

relates to men, movements and transport power, in particular to the (re)production of its dominance as composed by multi layered and complex gendered institutions:

I and III) At the manufacturing level of transport, including policy levels, the gendered representation is clearly male-biased. Men and masculinity is still the norm in Swedish transport sector, as well as the EU (Kronsell et al. 2016; Transgen 2007). The auto-industry is historically male-dominated on the shop floor level, as well as management levels (Transgen 2007). The research literature suggests a gendered workspace dominated by “masculine values and practices” (Transgen 2007: 104). The political as well as research level of transport in EU are overwhelmingly male dominated (with Sweden as the exception) (Transgen 2007: 103). Even though some women now are in leading position within the auto-industry, men dominate and control its policy and decision-making (Transgen 2007).

II) As items of individual consumption, car manufacturers “build into” the car design and style to express gendered consumer dreams, desires and aspirations that clearly links with men and masculinity (Wajcman 1991: 134). Cars have historically been closely related to men and masculinity in practice as well as through associations with power, speed, driving pleasure and technical precision (Balkmar 2012; Mellström 2004; Scharff 1992). Popular culture offers many examples that illustrate this point, not least how cars may be constructed as responsive and seductive, suggesting a ‘natural’ relationship between man and machine bodies (Landström 2006). Cars, car driving and gendered identity-formation through cars are closely tied to power, embodiment, movement, space, risk-taking, and control across the globe (Uteng and Cresswell 2008; Letherby and Reynolds 2009).

IV) Automobility produces subordinated, as well as privileged, positions in the automobilitic system. Drivers are often positioned as ‘insiders’ while pedestrians and cyclists remain on the ‘outside’ of such a system (McCarthy 2011). This insider/outsider division is gendered, more often positioning men on the inside and women on the outside. As noted, men’s mobility is more car dependent compared to women’s (Transgen 2007). In addition,

‘Men consistently travel further than women, ... and women’s trips tend to be more local. Explanations for these differences are linked to unequal gendered

relations in the household and labour market and urban structures as well as gender socialisation. This means that men and women make different uses of a shared system of transport.’ (Transgen 2007: 5).

V) In addition, car cultures produce many forms of men and masculinities, ranging from so-called combustion masculinity (Redshaw 2008), modifier masculinity (Balkmar 2012), to ecomodern masculinity (Hultman 2013) and constructions of careless men (Joelsson 2013). Furthermore, many mobility scholars have argued for the need to understand the automotive passions and pleasures entangled in automobility, including its many layers of gendered identity, status and risk taking (Sheller 2004; Redshaw 2008). For instance, in the history of automobility and the wide repertoire of feelings connected to car use, passion, desire, sexuality and eroticism have long been constitutive ingredients in car cultures – not least in the context of men, masculinities and risk taking (Balkmar and Joelsson 2012).

VI) Men are more likely than women to drive bigger, more gas guzzling cars (Transgen 2007). It is probable that such vehicles have more negative impacts on the environment both in terms of resource use and safety for unprotected road users. As Hearn has argued elsewhere (Hearn 2015: 158), in the automobilitic system “violence is implicated, condoned, and naturalized, with mainly men causing accidents, injuries, deaths of other men, women, children, animals and damage to the Earth, and nature, as a form of very largely men’s violences.”

To critically consider how automobility, including its dispersed centres of power, is gendered, reproduced and changing, is important today when more energy-efficient forms of mobility are needed. While the automobile and automobility changed the world, self-driving cars and related automations are imagined as the next major transportation technology revolution. In the following section, we consider some of the possible implications automation may have for men, masculinities, and gendered transport futures. Sustainable mobility would need major shifts from car dependency to more sustainable modes of travel (walking, cycling, hire, temporary, or collective ownership or use, and especially various forms of public transport).

THE CASE OF SELF-DRIVING CARS

Autonomous vehicles can challenge the foundations of current automobility regimes, including its associations and formation around masculinity, speed, pleasure, and embodiment. It has been argued that self-driving vehicles produce scenarios of “re-gendering and re-segregation” (see Balkmar and Mellström 2018) and may even serve as “game changer” for men and masculinities (Berscheid 2016: 1). Berscheid (2016: 7) suggests that self-driving cars will change not only how cars may be symbolically gendered masculine, but also car driving as a typical masculine practice. Alongside this, there is the complementary option of not driving cars or driving less, developing using public transport more, and using bicycles or walking, as preferred.

In the following sections we will focus on the ways that self-driving cars are imagined to change transport futures in those parts of the world where such technology is likely to be implemented (this discussion is based on Balkmar and Mellström 2018). Taking Urry’s dimensions of domination as a backdrop for our continuous speculations, we foreground three aspects and implications of automobility as an example of how dispersed transnational centres of power may change, namely those related to; agency and risk taking; professional drivers and employment; ownership and consumption.

Agency and risk taking: The question of autonomous vehicles is a major future challenge for the automotive industry as well as the complete system of automobility. In a not too distant future, networked technologies are believed to repudiate drivers’ control over their vehicles and reassign it to the car designers, computers and engineers (Laurier and Dant 2012). Self-driving cars are often imagined to solve many problems associated with the current automobility system, such as congestions, pollution and ‘man-made’ problems such as risk-taking (Alessandrini et al. 2015). In Sweden as well as across the globe, men do the majority of the driving, but are also more often than women the prosecuted for traffic violations (Redshaw 2008). Partly this can be explained by the fact that men tend to spend more time in traffic compared to women, partly, this overrepresentation in traffic injury statistics also mirrors investment of masculinity in risky driving practices (Redshaw 2008: 94). Self-driving cars, in a system where cars and other vehicles are fully automated, are likely to change the very premises of such male bravado. Eric Laurier and Tim Dant (2012: 239, 223) argue that “[t]he possibility of personal expression through driving would disappear” and that “(t)he emotional

satisfaction of mastery and control of the vehicle, along with the ‘quest for excitement’ are pleasures of driving that would be lost.” Hence, with cars programmed to follow traffic regulations, many of the core values related to how masculinity, risk, power and control performed by single car users are at stake as cars become more autonomous. In the context of transport, the balance between power enforcements by state bodies, the auto-industry and power enactments by individual men – including professional drivers – are therefore likely to change (Balkmar and Mellström 2018).

Professional drivers and employment: The other side of the coin relates to employment and the potential loss of skilled jobs in the taxi, bus and lorry businesses. Considering the current economic realities of freight transport and taxi, the increased competition and hard economic constraints, with the advent of self-driving vehicles, the economic and social impacts on the transport sector may be substantial. Autonomous vehicles are anticipated to be able to operate without dedicated drivers, and do this all hours with less cost and less risk (Laurier and Dant 2012). As traditionally male-dominated jobs, one may anticipate that some forms of men’s power will lose ground and others will become more foregrounded in the transport sector, for example, men working as technical specialists who design, engineer and govern the same systems that makes working class men, and women, unemployed (cf. Wajcman 1991: 141).

Ownership and consumption: As mentioned, to ‘drive’ the self-driving car will mean that future drivers have to hand over their embodied control over vehicles to the engineers’ and cars’ networked computers (Laurier and Dant 2012). Such cars will thereby transform drivers into passengers. With such redistribution of agency, self-driving cars are also imagined to shift men’s relationships with cars, from individual car ownership to a view on the car as a service and a means to an end (Buckerridge 2015). However, car ownership is already changing in some parts of the world. For example, having interviewed Swedish-born men about their views on cars and sustainable travel, Emmy Dahl notes that some men adopted what she referred to as “new” masculine car-free subject positions (Dahl 2014: 352). Younger generations living in urban areas may be less prone to own their own car, or even get a driver’s license, emphasizing the importance of car-sharing for the sake of the environment (Dahl 2014).

Against this background, self-driving cars are not only anticipated, by some at least, to change individual car consumption, but may also change one of the core foundations of a gendered car culture. The automated car makes the (male) driver redundant, as a driver, while also revalorizing the position of being passenger(s), a position that in the current automobility system are associated with a passive and feminized position. At the same time, more autonomous cars are imagined to bring mobility to, for example, people with disabilities or people of old(er) age, who in the current transport system may be facing different forms of exclusions (Alessandrini et al. 2015). Hence, with more autonomous car futures, 'driving' may become a less clearly gendered practice and possibly include groups excluded in the current automobilic system. Having said this, the freedom, empowerment and individual mobility so often imagined as being 'solved' with the advent of autonomous cars, also mirrors the failure of the current system of mobility to realize these values.

CONCLUSION: (UN)SUSTAINABLE, AUTOMATED TRANSPORT FUTURES?

As car-dominated societies across the globe move into an era in need of or likely to involve sustainable mobility, one of the core concerns to be addressed is the strong connection between men, masculinity, power and transport. Central actors are to an overwhelmingly degree men of power; it is men that dominate and control its interlinked institutional centres, such as the automobile, oil and road industries. With the next major transportation technology revolution, men's relationships with cars may be changing, along with challenging the foundations of gendered car culture. Even though the automobilic system may be thought of as connecting many transnational centres of power, while also distributing power to individual men as car users, this 'new' technology is, in part, about repudiating the power of vehicles and the (male) human/car interface. At the same time, in so doing, gender relations would appear to be reassigning power to designers, engineers, and computer and robotics specialists, still overwhelmingly male.

Seen in historical perspective, what may be happening is a shift from the dialectics between the mega-corporate (male) geopolitics of the oil and automobile industries, *and* the dispersed, individualized, 'free' (male) driver to a different dialectics between the technocratic, centrally controlled, (male) power of the automobile and IT industries, their (male) designers,

engineers and IT specialists, *and* the dispersed, disembodied, driverless car, moving ‘free’, apparently ‘genderless’, even aestheticized, humans, still located in transnational patriarchies.

However, even though the possible, imagined and imaginable, (un)sustainable, automated transport futures discussed here suggest many promising dimensions, such as less city gridlocks, increased safety, and more effective use of environmental recourses, these futures involve new gender relations, struggles and conflicts, not least related to its imagined users. Promotion videos for automated cars such as Mercedes’ “Luxury in Motion” (<https://www.youtube.com/watch?v=ryRQtKLpAGQ>) and Google car’s “A First Drive” (<https://www.youtube.com/watch?v=CqSDWoAhvLU>) offer illustrative examples of how such futures are being imagined. While Mercedes offers businessmen (and to some extent also businesswomen) a high-tech luxurious and connected design, the car remains an item of individual consumption with similar sign-values associated with the current motorcar (such as status, class, power and masculinity). The Google car, on the other hand, is presented as a car for those who cannot drive – a ‘feminine’ small car that empowers the currently less mobile. While the two cars are very different, they are imagined to bring exclusive freedom to (male) individuals, not particularly to wider publics. In this context, it remains important to consider how automated transport futures relate to what Mimi Sheller (cited in Boggs 2015: 65) refers to as ‘mobility justice’, namely a “[w]ay to highlight the power differentials that come into play in any form of mobility and the different affordances that different people are able to make use of or appropriate in becoming mobile or not.”

In this chapter, we have critically examined the relations of men, masculinities and ecological and environmental matters, as examples of unsustainable institutions of men, both environmentally and socially. Our focus has been on the dispersed transnational centres of power in transportation, specifically automobility, and possible, imagined and imaginable, (un)sustainable, automated, gendered transport futures, through the case of self-driving vehicles. Above all, the critical consideration of men, automobility, movement and (im)mobility remains a central issue in achieving more sustainable and more equal transport futures and changing the unsustainable institutions of men.

NOTES

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1. See Tilley (2017) for a recent non-gendered discussion of extraction and extractive or piratic methods.

2. Wynes and Nicholas (2017: 1) “recommend four widely applicable high-impact (i.e. low emissions) actions with the potential to contribute to systemic change and substantially reduce annual personal emissions: having one fewer child (an average for developed countries of 58.6 tonnes CO₂-equivalent (tCO₂e) emission reductions per year), living car-free (2.4 tCO₂e saved per year), avoiding airplane travel (1.6 tCO₂e saved per roundtrip transatlantic flight) and eating a plant-based diet (0.8 tCO₂e saved per year).”

3. Reflecting on this, Chris Cuomo (2002: 2) has written:

Mary Daly’s *Gyn/Ecology: The Metaethics of Radical Feminism* (1978) was arguably the first work in contemporary academic philosophy to engage ecofeminism ... But Daly’s emphasis was on the plight of females in patriarchal social environments. Karen Warren and Australian philosopher Val Plumwood brought full focus to the *eco* in ecofeminism, applying feminist philosophy (and especially feminist ethics) to our relations with the more than human world, and in turn articulating a broader theory of oppression and liberation. Their analytic approaches resulted in philosophy that synthesizes as it clarifies, taking seriously the value of nature, the history of philosophy, the power of culture, and the insights of good science.

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