

The Automobility System – mobility justice and freedom under sustainability

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Introduction

In this chapter we offer a critique of automobility, the hegemonic mobility system of the present, and suggest an alternative imaginary which we call ‘*automobility*’. This utopian future mobility system aims at reconciling mobility justice requirements, environmental restrictions on mobility, and distinctively, autonomy as the supervening value: a freedom of self-determination. Whilst acknowledging that previous distributive justice models address equity in spatial access to life opportunities, we feel that the automobility concept more clearly reconfigures mobility justice to acknowledge that freedom from compulsion (to stay or to move) is the ultimate value required to equitably ensure mobility justice under scarcity. We offer historical, scenario-based, fictional, and existing glimpses of automobility to suggest that it is a viable model of pegging the pursuit of individual flourishing within the constraints of environmental limits and distributional equity, using socialised and collectivised models of co-movement as a vision to animate an egalitarian society.

Automobility and its environmental, and justice problems

It is the “*system of automobility*” (Urry, 2004) that defines the main traits of personal transport and the ordering of mobility, space and society in the modern age. This system comprises the steel-and-petroleum-car itself, its production, fuel and infrastructure industries, the policies that create automobile landscapes that separate work, residence and other activities in space, as well as the discursive and cultural association of cars with freedom and autonomy (Paterson, 2007). Modern lifestyles that archetypally centre on one-family-houses in suburbia, shopping centres and leisure facilities on the edge of cities, represent the ideal of the ‘good life’ under automobility¹. The environmental crisis, ‘peak oil’ (Aftabuzzaman and Mazloumi, 2011) and potentially ‘peak car’ (Goodwin and Van Dender, 2013) constitute sound reasons to think beyond this mobility system based on the privately owned car (Urry, 2013), but critiques of automobility extend beyond environmentalism. Cars and their infrastructures demand huge amounts of space and cause large numbers of fatalities through accidents and air pollution (Zhang and Batterman, 2013). In addition to these environmental and safety concerns, there are severe social justice implications of this regime of mobility. As environmental justice (Havard et al., 2011; Mitchell and Dorling, 2003) and transport inequality studies (Lucas, 2004) show, the social groups most affected by traffic emissions and noise are the socially deprived: automobility compounds other injustices. Housing markets also force poorer households to live on peripheries, often poorly connected to the system of public transport, and necessitating car travel to access work, shops, and other social infrastructures, and to maintain social relations (Mullen and Marsden, 2018). Automobility as a system unjustly imposes environmental and exclusionary ‘bads’ on non-drivers, and compulsions to be mobile on drivers (Ureta, 2008).

To tackle these problems, sustainable transport policy debates suggest environmental impacts have primarily technological solutions: e.g. electrification, while others propose accidents will be tackled by a shift from human to technological agency in autonomous vehicles (Manderscheid, 2018). Such ‘technical’ solutions ignore systemic issues, the increasing compulsions to travel, social injustices and freedom constraints in the automobile-centred mobility system (Better Transport, 2017). Some distributional justice issues are addressed through discourses of e.g. car dependence (Mattioli et al., 2016), transport poverty (Simcock

and Mullen, 2016) and mobility-based social exclusion (Cass et al., 2003; Delbosc and Currie, 2011), however these still often equate (auto)mobility with social inclusion or opportunity unproblematically, replicating associations between moving, freedom, and justice in the sense of access to social ‘goods’.

This equation has made sense in the classic model of transport justice as a matter of distributional principles particularly linked with Karel Martens (2006; 2012; 2016) and colleagues (Golub and Martens, 2014). In this Walzerian model, distributive principles are seen to be relevant to a transport sphere in which a transport ‘good’ is to be equitably distributed primarily by the state. This transport ‘good’ as defined appears strangely abstract and non-relational, despite its deployment by sustainable mobility authors with a fully relational outlook (Pereira et al., 2017), and seems to flip between being ‘accessibility as a human capability [and...] accessibility to key destinations’ (ibid. 170). The human aspect of ‘accessibility’ is a potential to be mobile in order to access goods, services and opportunities, and site accessibility is their capability of being accessed. Arising from origins linked to (transport) planning, the model is a somewhat top-down, mechanistic model of mobility that assumes mobility and the potential to be mobile to emerge from transport access and distribution, which will occur from above, through investment, in fixed systems, based on areas, and responding to assumed long term ‘needs’ that are linked to social groups and geography rather than individuals. Daniel Newman (2017) recently frames the same issue in the terminology of rights, seeing the mobility required to access social and economic goods and services as conferring a right to affordable, environmental public transport, comparable to the right to adequate housing. Again, this takes the *need* for mobility as a fixed basic requirement of the good life without any questioning of the underlying (economic, social, cultural and geographical) compulsions to be (auto-)mobile (Urry, 2002).

Transport as a ‘good’ is similar to ‘travel demand’ in being primarily a derived demand, dependent on the social meaning and importance of the other goods and services to which it provides ‘access’. Socio-spatial in- or exclusion is not predictable *a priori*, being “an emergent property of the interaction between social practice and obligation, individual resources, and physical infrastructure” (Cass et al., 2003: 28). Our point of departure is thus the necessity to problematize compulsions to be mobile themselves in order to reconcile the connected environmental and justice dimensions of ‘sustainable’ mobility. We wish to establish that the current (auto-)mobility system is unsustainable, unjust, and curtails freedoms, then construct an anchoring vision of a freedom-focused, environmentally sustainable *and* socially just mobility regime, which we would like to call “*autonomobility*”, building on circulating scenarios of future mobility systems. Rather than taking access to mobility or certain sites as an end (as proposed in a distributive model of mobility justice), *autonomobility* entails both a right to move, and a right not to. In a final step we identify (pre-)existing seeds of the *autonomobility* system in history, fiction, as well as present mobility practices that prefigure possible ways ahead (Gordon, 2008), whilst acknowledging major obstacles and counter-forces for this vision. Such an approach is clearly moving beyond neutral academic analysis and discussion but should be understood as *transformative research* aiming to tackle the grand challenges of society (Schneidewind, 2015).

Automobility and its present economic and cultural foundations

Understanding *automobility* as a *system* helps explain its stability and persistence. For example the car industry plays a central role in capitalist accumulation even after Fordism (Aglietta, 2000) and there is a strong correlation between economic growth and the growth of motorised transport and traffic (OECD, 2000; Holden, 2016). Such capitalist accumulation regimes need to be complemented by modes of regulation: a sphere beyond the economy, involving social values, understandings of the good life and constructions of ‘normality’

(Aglietta, 2000; Harvey, 2001; Manderscheid, 2014). In the case of automobility, its discursive and cultural foundation draws on the promise of mobility as freedom, individuality and independence (Rajan, 2007). While in history, mobility was “associated with insecurity and danger..., in modernity, ...[it] gradually turned into a *common right* claimed among equals” (Rammler, 2008: 61). In a Whiggish version of history, continuous and linked increases in progress, freedom, welfare and also mobility remain the central promise of modernity. Nicolas Rose (1996; 1999), claims this modern conception of freedom and its strong link with mobility is arguably of a very specific, individualised form, which he understands in a Foucauldian sense as a disciplinary or governmental technology, placing responsibility for social and economic wellbeing increasingly onto the neo-liberal individual.

As a characteristic of labour markets, opportunities for well-being (distributed through employment) are not evenly distributed geographically. The modernist project seeks to smooth the disparities between employment opportunities and skills shortages with large-scale transport infrastructures but also with the increasing mobility of labour (Bonin et al., 2008; Harvey, 2001). Thus, the modern promise of mobility and freedom, on which the distributive models of mobility justice also rest, primarily means the mobility of economically productive labour forces. This becomes visible when looking at moral panics which have always centred on “bad movers” (Urry, 2007: 205): the ‘masterless men’ of 17th century England, gypsies across Europe for 500 years, more recently New Age Travellers, migrants and refugees. This capitalist labour-mobility regime shows itself also in the present strengthening of border controls across and around Europe to manage and filter labour mobility, variably requiring cheap construction labour or skills. Phrasing it drastically: only the economically useful, in set amounts, residing in predictable areas and at the command of capital, are supposed to move (Huxley, 2006; Peters, 2006).

Also relevant to freedoms and compulsions, mobilities imply, rest on and create immobilities, e.g. those of: the housing estate bisected by a motorway; the service station worker; or the house-spouse doing house- and care work. But compulsions apply to the mobile as well as the immobilised as the result of power relations. Employers expect employees to move, backed up by the threat of replacement (Schor, 2014), and welfare policies require unemployed people to accept jobs involving significant commuting distancesⁱⁱ or to relocate for work, backed up by threats of welfare sanctions. The mobility of some - as well as the immobility of others - is a collective strategy or compulsion, embedded in economic and material structures (Graham and Marvin, 2001; Castells, 2002), shaped by political decisions and path dependencies, constituted and stabilised by corresponding discourses and the production of correlating subjectivities (Paterson, 2007; Peters, 2006; Manderscheid, 2014).

Against these ‘dark sides’ of automobility – its negative ecological impacts, social selectivity, injustices and compulsions, we now sketch a positive imaginary of a future mobility system. This system must address operating within environmental limits, the inequitable distribution of the life-chances to which mobility currently provides ‘access’, and unjust compulsions, either to move or to stay immobile. Such an imaginary of socially and ecologically sustainable transport could help negotiate how we want to live and move as a society in the future.

Automobility as part of an imaginary of future sustainability

Projecting a future alternative to automobility is not new. Political and social-scientific actors have imagined mobility futures ‘beyond the car’. Dennis and Urry (2009: 131-164), for example, outlined three potential scenarios for 2050. The first two raise serious problems for justice and freedom. Their *regional warlordism* scenario (2009: 151-155) is a dystopia in which mobility, energy and communication infrastructures collapse, and long-distance mobility is only available for the super-rich, who otherwise shelter in gated communities. Aspects of the decline or ‘splintering’ (Graham and Marvin, 2001) of infrastructures in

peripheries and the disconnection of unproductive communities from social resources, along with films such as *Children of Men* or *Mad Max*, hint at futures based on such extreme inequalities and injustices.

With *digital networks of control*, Dennis and Urry (2009: 155-160) imagine a high-tech, centrally coordinated surveillance traffic landscape of what would now be called Autonomous Vehicles; a more ‘smart’ but still cocooned system of individual mobility. The scenario limits the freedom to move ‘un-controlled’ by smart technologies, as well as retaining the environmental implications of embedded carbon in single-occupant vehicles and smart technologyⁱⁱⁱ (Gelenbe and Caseau, 2015; Wadud et al., 2016).

Both scenarios come with threats to and reductions in mobility, liberties and justice, based on inequitable distribution of scarce resources including violence or a panoptic mobility regime. They also assume the continuation in some form of existing socio-economic, political and mobility systems. Only Dennis and Urry’s third scenario of *local sustainability* (2009: 149-151) assumes a challenge to the capitalist foundation, involving economic downscaling, downsizing and de-growth (D’Alisa et al., 2014). David Harvey (2000: 270ff) and North (2010) similarly imagine transportation becoming free, slow and primarily local with decentralised production and local social networks. These scenarios are built on the premises of restructured and de-globalized economic activities, whether this is produced exogenously through scarcity and the breakdown of unsustainable global chains, or chosen adaptively to build social resilience to such threats. Yet these radical models of sustainability are seen either as wishful dreams (Harvey 2000) or as unrealistic environmentalist discourse, in which a ‘contraction’ of society would require “huge reversals of almost all the systems of the twentieth century, as well as ... massive restructuring of economic activities and the displacement of the global organisation of economy, finance and social life” (Dennis and Urry, 2009: 151).

Elements of automobility

Nevertheless, we wish to extend this future imaginary (ultimately only as unrealistic as the continuation of the status quo), by embedding values of equality, justice, and freedom into the mobility systems of radical environmental sustainability. This requires prioritising autonomy, sustainability and justice, localisation and its implications and collective mobility.

Autonomy, sustainability and justice

Until now we have refrained from a detailed discussion of justice and sustainability. Both have general and transport/mobility related meanings. Sustainability consists of an orientation towards the future and the imperative that practices, structures and modes of living must not reduce the opportunities and chances of future generations. Whereas the environmental ‘leg’ of sustainability (Newport et al., 2003) is typically defined through climate change research, *social* sustainability cannot be defined ‘from outside’. Rather, the acceptability of socially unequal chances and opportunities is a matter of intra-social debate (Mouffe, 2011). Both sustainability and social justice however can be said to rest on inter- and intragenerational justice issues – a relationality in time and space. Thus, when we speak of just or sustainable (mobility) systems, we refer to this *relationality* underlying both concepts. With this working definition, we want to highlight problems stemming from an understanding of transport justice in terms of accessibility and distribution, which rests on an individualistic distributive approach which obscures these present and future relationalities.

We assert *freedom* as a central value of an automobility system, with freedom understood not in ‘positive’ terms of mobility being individually unlimited (or rather: only limited by one’s economic power) but ‘negatively’ as *freedom from compulsion* (Berlin, 1969). Translated into common-sense terminologies of *rights*, there should be, as far as possible

(with the limits defined by present and future impacts), a right to move, and a correlative right to remain immobile if necessary/desired. Operating under conditions of scarcity, such rights would not be absolute, but relative, and judged in the contexts of social necessity and value, subject to social negotiation. However, they must also operate within the importance given to maximising individual flourishing (Nussbaum, 2001). In other words, a corresponding understanding of *autonomy* (rather than freedom) rests heavily on a philosophical switch from ideas of distributional justice based on utility, subjective welfare or access to certain resources, towards Sen's priorities of pursuing the accomplishment of functionings for all people in society equitably, by maximising their capabilities. The 'capability approach' has been operationalized in considering environmental justice (Ballet et al., 2013), and the concept of 'sustainability' itself (Sen, 2013), and in terms of mobility it can be understood as involving a re-focussing on 'what mobility is for'; the mode of travel used being less relevant than achieving functionings.

Localisation and its implications

In terms of planning an automobility regime would encompass known sustainability strategies including densification, de-centralisation and hub-centred urbanism (Wheeler and Beatley, 2014; Banister, 2005). This would also require radical localisation of the productive economy

In a situation of eco-localisation, the right to stay put in one's chosen spatial environment raises environmental justice rights to safe and healthy living space. From this follows the right to "be protected from uncontrolled investment and growth, pollution, land grabbing, speculation, disinvestment, and decay and abandonment" (Anguelovski, 2014: 60). This would likely require the de-privatisation and de-commodification of land, housing and associated infrastructures.

Decoupling from automobility's spatially distanced 'life chances' and social participation also involves tackling the totalising compulsion of wage labour relations to radically reduce multiple requirements to travel. The exogenous need to commute long distances or move for employment reasons would have to dissolve, and residence choices decouple from job opportunities, profit-centred housing markets or other economic compulsions. The unconditional basic living income is already an initial operationalisation of this de-growth agenda (Latouche, 2007; D'Alisa et al., 2014) to prioritise wellbeing over GDP, one which would also reduce the spatio-temporal pressures that make car-use so essential (Cass and Faulconbridge, 2016).

Given that some extended chains of socio-economic interactions and interdependences, functional differentiations, and spatial interrelations will persist and appear worth sustaining, some mobility will remain essential and socially desirable. This will be the case even if we take economic de-growth as a material and structural foundation. Environmentally, motorised transport would nevertheless have to be reduced to an essential, sustainable minimum^{iv}. This will likely make *individualised* transport (beyond active modes of walking and cycling) at first economically exclusive and beyond the means of most, and thereby inimical to distributional justice equity. Forms of low-impact, fast and convenient individualised transport such as electric velomobiles (20+ times more energy efficient than electric cars^v) might emerge as a transition mobility mode. At larger scales, speed and environmental impacts being linked, *slow forms of mobility* and transport would become "normal" (Schor, 2014: 229), which would help reverse the economically-induced acceleration of everyday lives (Rosa, 2003) and counter potential social injustice and/or mobility-warlordism.

Collective mobility

The decoupling of mobility and the dominant economic paradigm, and replacing the liberal myth of individual freedoms as expressed through automobility, while still promoting and

extending autonomy and equity in relational networks is far from simple! The end of the ‘economic growth of production’ regime could however open new options for more sustainable collectivised mobility regimes. A collective and socialised automobility system would move beyond public transport *provision* to encompass demand-responsive transport organised organically from the bottom-up, involving norms of expected sharing and rights of piggy-backing on those transport mobilities that would remain as social necessities. These ideas will be further explored in the section on ‘seeds of the future’ below.

Glimpses and visions of automobility

In summary, the automobility system is admittedly utopian and idealised. It is an egalitarian cultural model (Thompson et al., 1990) which encompasses the social relations and ethics required to organise society based on equality, justice and freedom under conditions of scarcity of resources but abundance of individual time. There are historical and fictional accounts of mobility systems representing our idea of autonomy. Documented *historical* precursors include the transitory arrangements of Civil War Barcelona, where *all* social practices and norms, including mobility, were re-organised on radically communalised and egalitarian principles. Private transport was largely confiscated and turned to the war effort, and the existing public transport system was transformed such that in days, “700 tramcars, instead of the usual 600 ... were operating on the streets of Barcelona. With the profit motive gone, safety became more important and the number of accidents was reduced. Fares were lowered and services improved.” (Conlon and MacSimóin, 1986: 6)

An elaborated *fictional* account of automobility is *The Dispossessed* by Ursula Le Guin (1978), in which the moon Anarres is settled by colonists with an ideology of egalitarianism adapted to a hostile environment of scarcity. Travel is mostly between communalised accommodation in settlements for work and variety is by hopping on trains transporting goods, or on electric trams in urban areas. The society’s founder Odo’s vision, paraphrased, is that communities’ size be limited by their capacity to produce food and power from the immediate area, and that communication and transport networks connect all communities for easy administration, the mobility of people and ideas, and to include all communities in change and interchange (1978: 85). We are not the first to highlight the inspiration the novel offers for sustainability theory and practical aspects of eco-localisation, carbon footprinting, radical decentralisation and so forth (Armstrong, 2007), but it also highlights the requisite shift in values required from a pursuit of individualistic freedom, a freedom from ownership and competition leading to a desire to do the necessary along with an ability to find joy in doing it. Le Guin’s characters call this the deepest source of sociality.

Prefigurative seeds of the future automobility

To anchor our imaginary of automobility, based on combining autonomy, justice, and strong sustainability, in the present, we wish to highlight some promising seeds of practice and policy. We do so by drawing on examples of prefiguration (Boggs, 1977; Graeber, 2004), where actions in the present can build a new society in the shell of the old. We focus on active, collectivised and socialised mobility modalities, including piggy-backing and ‘free-riding’, drawing on historical as well as global examples, to identify that aspects of automobility have always existed.

Active and transitional mobilities

In reconfigured automobility landscapes, distances to economic and social goods and services should be reduced such that active modes including walking and cycling are sufficient to access them. Schools in the UK have trialled “walking buses”; a collective pedestrian commute by children, supervised by staff and parents. Bike-buddy schemes have encourages cycle commuting where it is practicable, and offer immediate support and

sociality. Here collectivisation acts to re-socialise alternative forms of mobility that have become threatened and perceived as risky through the atomisation of individuals undertaking them within the restraints of automobility outlined above. Electric bikes (Behrendt, 2017) and velomobiles show signs of providing a transitional mode of transport that bridges between the car and the cycle, the latter being able to reach similar speeds, climb hills, keep people dry and carry luggage, whilst providing privacy and autonomy: “electric velomobiles have a speed and range...comparable to that of electric cars, they are up to 80 times more efficient...a quarter of the existent wind turbines would suffice to power as many electric velomobiles as there are people” (De Decker, 2012). Autonomobility focuses mobility policy on the materials and meanings of active mobility as social practices (Shove et al., 2012; Watson, 2013) – an area in which mobilities studies are already advanced. For example, the ‘cargo function’ of cars (Matteoli and Anable, 2015) must be supplanted by improving the carrying capacities of people and cycles, clothing and punctuality norms, and physical street architecture adjusted to fit an actively mobile population.

Collectivised and socialised mobilities

Our utopian examples of autonomobility systems relied heavily on the pre-existence of collectivisation^{vi} and the understanding that socialised mobility is part of an all-encompassing social drive. Orwell (1952) highlights how individual movement in the Spanish Civil War ‘piggy-backed’ on essential transports of goods, munitions or fighters, and therefore was considered a legitimate use of existing mobilities as a public good. Such ‘free-riding’ is delegitimised under neo-liberal capitalism, but is valorised in autonomobility. It thus fits motility to transport-as-a-social-good distributions, rather than *vice versa* under distributive models. Hitch-hiking is the most well-known and widespread mode along with fare-dodging, train-jumping, and riding freight trains; the previous preserve of hobos and tramps (Cresswell, 1999). Such practices could be relegitimised and valorised, not only through provision of suitable facilities (signposted and/or weatherproof ‘stops’ as provided in some European countries) but also through initially legislated norms of lift-giving. ‘Single Occupancy Vehicles’ are anathema to automobile society. The preferential treatment of professional driving ‘red plates’ and ‘tachograph’ hitchhikers in the UK, and soldiers, carpenters and tradespeople in other countries, demonstrates that norms of rewarding contributions to society with a right to expect help with travel already seem to be latent in society. Hitch-hiking in the UK as well as in most other Western societies was primarily ‘killed’ by a combination of circulating discourses of danger but crucially also profit-seeking: haulage companies avoiding insurance costs for competition. Such factors could be reversed. Beyond the often-cited lift-sharing, car-sharing, and car-pooling initiatives (Baptista et al., 2014), multiple examples of intrinsically more sustainable formal or informal, bottom-up and demand responsive shared mobility exist or have existed. Employers at all scales, churches or mosques, political groups and campaigners, sports fans, schools and state authorities have all organised the collection and ferrying of groups in minibuses, vans, coaches, taxis, or trains. This is the normal experience of the commute in many parts of the world, particularly for flexible labour, but also as a semi-formal system e.g. for many in Hong Kong (Cullinane and Cullinane, 2003). Depending on the method of calculation, the cost per individual of such systems can be cheaper than public transport and more time-efficient. Demand-responsive public transport is a mode used by local authorities to plug the gaps in provision created by profit-driven public transport (Cass et al., 2003). These systems explicitly acknowledge a link between mobility and social inclusion or equality of life-chances, and provide it as a right for non-automobile groups (Cass et al., 2005).

In addition, collectivisation of service industries via incentivisation, tax-breaks and so forth could move away from a dominant model of one-person, one-van businesses to something more resembling a ‘dial-a-service’, where locality and proximity are prioritised from a

register of available skills. Structural and economic changes may force these developments exogenously. The rise of the ‘platform’ economy has already demonstrated something of the sort – in pursuit of private profit^{vii}. They might either represent, or develop from, a transition towards local sustainability or intentional eco-localisation, in which such skills would be more valued and also more diffused through communities. They would require a transition from intensely individualistic competition for trade to collectivisation, contracted out coordination, and trust and increased sociality between former competitors. The operation of fleets of vehicles for reasons of efficiency and economies of scale, with mechanics employed to maintain the fleet and ensure that variegated and flexible mobility needs can be satisfied at short notice, would be essential to a transition to an automobility system. Also required are changes to insurance and ownership restrictions and the individualisation of responsibility for (not only, but importantly) work-related travel. Much of this could be initially addressed by encouraging and permitting communal ownership and maintenance of vehicles, and making trip purposes and the social role they play the subject of insurance, coordination and facilitation or remuneration, rather than individual vehicles.

Counter-forces to automobility

Of course, there are manifold barriers to our vision of automobility futures. Whole literatures are devoted to identifying the conditions under which ‘transitions’ to more sustainable socio-technical systems take place (Geels, 2005). These usually rely on exogenous changes to ‘landscape’ factors to enable niche developments to displace incumbent ‘regimes’, and there are arguably incipient signs of such changes: the environmental crises but also the decline of coal, disinvestment from fossil fuels, post-carbon manifestos from fossil fuel companies, investment in EVs and energy storage. Many of these were unthinkable a matter of years ago. Without doubt the fossil fuel industries remain as major incumbents, but are investing in renewables. In transition, car manufacturers are banking on EVs, but could turn to producing light-weight, exponentially more efficient velomobiles for individual travel. The ‘co-evolution’ of needs along with technologies that not only satisfy, but create them, has produced the inefficiency of the heavy, smart, automobile that is no more fuel efficient than its 1950s equivalent, despite huge increases in engine efficiency (Shove, 2017). EVs would pursue the same trajectory, but automobility requires that such needs and expectations drop along with the material demands of vehicular solutions. In such ways, unsustainable path dependencies can be escaped. At root, the main roadblock is that all social systems are currently organised to satisfy shareholders, not mobility requirements or other understandings of social need, including those of a distributional model of mobility justice.

Conclusions

We have outlined an imaginary of a future mobility system which would reconcile the severe demands of environmental, social and economic sustainability. We have outlined that such a system would be inextricably linked to much beyond mobility or transport *per se*, involving a rethinking of growth, production, livelihoods, income/welfare, land-use, urbanism, and much more, *and* the ethical, conceptual and normative changes that would support such a social systems. This underlines that mobility is a derived need, and transport merely the mode of its satisfaction. Mobility satisfies needs, but is not a good in itself. For this reason we think that conceptions of mobility justice that focus on redistributing mobility (usually *qua* transport) on abstracted geographical, gender, racial, or social class bases miss the point of the ‘good(s)’ being addressed. (Re)distribution of access to goods and services and opportunities that have been distanced by automobile capitalism, whether via addressing human mobility or sites’ accessibility, is still to link mobility with a neoliberal nexus of freedom, choice, and the pursuit of happiness through material acquisition. Rather, we suggest that positive and negative conceptions of liberty (from compulsions, to pursue ends) should be enhanced along

with a capabilities approach to individual flourishing, and society reconfigured to maximise these possibilities. The increasing restrictions implied by a movement away from (particularly individualised) motorised transport will necessitate rethinking social values attached to ownership, occupations and livelihoods. Collectivity and sociality in mobility as in other spheres of life will be mainstreamed. We have demonstrated that there are examples of *quotidian* collective and/or socialised mobility practices that were side-lined under automobility that could re-emerge. We expect that mobility in future will increasingly take place in a 'state of exception', and the rationalities behind these practices could increasingly overcome the individualising, competitive drivers we have identified in automobility. *The Dispossessed*, where all practical aspects of the organisation of society are tied to an ethical balancing of justice and freedom, under conditions of scarcity, is one available parable for the post-oil future.

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ⁱ Although automobile spatial orderings are more pronounced in the United States or Australia than in most parts of Europe, spatial and urban planning strategies and housing developments worldwide reflect the automobile imperative, that is: the car as the normal mode of transport even as it passes its zenith of acceptability.

ⁱⁱ Job-seekers in the UK are expected to consider jobs that require up to 3 hours' travel a day to access.

ⁱⁱⁱ <https://www.theglobeandmail.com/globe-investor/investment-ideas/cobalt-the-heart-of-darkness-in-the-shiny-electric-vehicle-story/article37109931/>

^{iv} The debate as to what constitutes "essential" mobility is intrinsically political and likely to become increasingly contested.

^v <http://www.lowtechmagazine.com/2010/09/the-velomobile-high-tech-bike-or-low-tech-car.html#more>

^{vi} Conlon notes that 6,500 of the 7,000 tram workers were members of the anarcho-communist CNT union and quotes Bollothen's (1961) observation that amongst 3,000 collectivised enterprises were railways, trains, buses, taxis and shipping, as well as car factories.

^{vii} In addition, the spreading of local repair workshops, visions of open source technologies as well as the shift on long lasting high quality products will contribute to reducing the mobility of goods.