

## **Suburban Destiny: Disrupting the Density Debate**

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## Chapter 10. Suburban Destiny: disrupting the density debate

**Matthew Burke & Jago Dodson**

*“There is widespread agreement that cities must become more sustainable, including shifting travel from the automobile to public transport, walking and cycling. Most commentators treat this challenge as synonymous with the policies that have come to be known as urban consolidation, or the compact city.” (Mees 2009, p. 59).*

### **Introduction**

Since the 1980s a ‘great debate’ has raged about the future of Australia’s cities and the question of their density (Searle, 2004; Forster, 2006). In reality this was a continuation of a much longer struggle over the form and structure of human settlements and is tied to similar struggles in North America and elsewhere. Paul Mees’ scholarly work (2000, 2010) on the independent role of transport policy in urban transport and land use patterns and its disruption to the debate is the focus of this chapter. We consider the higher order questions of whether increases in density are necessary for transition towards sustainability and resilience, and what policy settings and institutional arrangements might be needed to provide better intervention and regulation of urbanisation and transport systems, as part of a shift towards a Public City (see Chapter 1, this volume).

Mees’ research on transport and land use policies (2000, 2010) may be regarded as awkwardly positioned between two major groupings in past and present policy debates. On one side of this debate were researchers and policy makers who often took neo-liberal approaches to transport and land use policy. They accepted high levels of private car dependence and market-based land development patterns and viewed ongoing provision of road capacity to support such patterns as desirable (for example, see Gordon and Richardson 1989). For this group, individuals and households made choices about their travel destinations and satisfied them with the mode that they found to be most convenient. In most North American and Australasian cities this neoliberal set of transport and land use policies has meant low-density expansion of the urban fringe, modal dominance by private automobiles and a policy and investment preference for roads, principally freeways. The dominant pro-automobile group was contradicted by an opposing camp of researchers and policy commentators such as Newman and Kenworthy (1989, 1999) who were concerned with the social and environmental consequences of automobile dependence. Initially this concern revolved around dependence on insecure petroleum supplies but later included contribution of automobile CO<sub>2</sub> emissions to climate change. They sought to restrain laissez-faire urban development with planning interventions to promote urban densification and produce changes in public transport mode shares. The pro-density camp won much of the debate about Australian cities, with such policies common across the metropolitan strategies

of the major cities (for example Department of Infrastructure and Planning 2009; NSW Government 2005).

Mees (2000, p87) work disrupted this debate not long after it had been reignited by the publication of Peter Newman and Jeff Kenworthy's (1989) *Cities and Automobile Dependence*. This analysis of thirty-two world cities was used to posit a relationship between urban density (primarily urban residential density) and the clustering of employment in central city areas, with both car use and petroleum consumption of cities. Such resource and environmental concerns were accompanied by wider issues around the costs of automobile travel and negative impacts on cities, expanded in recent years to include human physical activity and health (Frank, Kavage & Litman 2006). Newman & Kenworthy's findings (1989) were used to justify planning policies promoting compact cities and transit oriented development. High densities of the sort found in European and compact Asian cities were advocated as necessary to achieve improvements to public transport, as well as more sustainable modes such as walking and cycling. In the absence of other systematic and methodologically grounded scholarly research investigating automobile patterns Newman & Kenworthy's work was readily recruited into debates about automobiles and cities, providing much of the intellectual and scientific basis for the environmental critique of automobile dominance. A polarity thus emerged between the pro-automobile group with their models, norms and data, and the environmental insurgents, with their counter-methods and data. Yet each group was potentially omitting other key factors from their analyses. And perhaps intervention in the market was needed – but not of the form advocated by the density-advocates.

Peter Newman was a notable 'activist academic' who had fought for the reintroduction of the Fremantle train line in Perth, Western Australia, and to the outsider must have seemed a very likely philosophical bedfellow for Mees. On the basis of his research, Newman advocated strongly for densification of cities, and for 'urban villages' in the form of clustered density at key public transport nodes throughout existing cities (expressed most clearly in Newman & Kenworthy 1999, pp184-189). He called for adoption of strong compact city policies and programs, to coerce residents into medium and higher density developments in inner and middle suburban locations, and to limit low-density greenfields development on the outskirts of cities. From the early 1990s planners across Australia began to adopt such policies, with compaction a leitmotif in metropolitan plans for all Australia's major capital cities. These policies have more recently been labelled *Smart Growth*, which Knox & McCarthy (2012, p252) suggest is a 'stealthy euphemism' for old-fashioned planning intervention 'in the context of a neoliberal political economy'. There were, however, many critics. As will be shown in this chapter, Paul Mees made very significant contributions to Australian urban studies by examining whether it is necessary for our large suburban heartlands to be retrofitted via sharp increases in residential density, or via more clustered transit-oriented developments around rail and bus nodes, along the lines advocated by Newman and Kenworthy, to achieve sustainable transport. Or whether the priorities for regulatory intervention should be more focused on public transport supply.

Recent changes in Australia justify a review the density debate and related questions about transport in low-density suburban settings, especially in Australia. In 2013 there were major changes in Australian federal urban policy, including a return to a pro-roads funding regime after nearly five years of balanced Commonwealth road and rail investment, accompanied by the dismantling of the Major Cities Unit and a withdrawal from overt urban policy. But despite Australia's cities progressing under neo-liberal and automobile-centric regimes some fundamental shifts in travel behaviour and car ownership are underway. Younger people are not getting their licenses or driving cars at near the rate of their predecessors (Delbosc and Currie 2014). The amount of car travel that each Australian does is declining, not rising, albeit population growth is adding more cars on the road (Newman and Kenworthy 2011a). In some key cities line-haul public transport use is rising (Mees and Groenhart 2013). And bicycling is re-emerging as a force in the inner cities though there remains a massive gap between bicycle sales and use (Bauman, Merom and Rissel 2012). What insights might such shifts offer to the debate about density and how might planning benefit from improved understanding of their dynamics?

This chapter first explores urban density and its discontents, looking at recent household travel survey and census data across the major cities to see whether increasing residential densities, by and of itself, will deliver sufficient changes in travel behaviour and mode share. Second, a range of other options for changing public transport's provision, changing its technologies or using travel behaviour change programs (absent of any infrastructure or service improvements) in low-density environments are discussed, questioning whether some of Mees' positions on programs such as Travelsmart and cycling programs were justified. Third, we note the potential for public transport networking (see Stone and Beza, this volume) to improve public transport supply and make a difference. And we conclude by examining the problems the political realm has had in engaging with and attempt to achieve better transport and land use visions, with practical programs to implement changes within existing political and bureaucratic systems often proving problematic. Our intent is to highlight and extend on Mees' work, to identify directions for reform and improvement, and to use these to reflect on the insights these offer for achieving the public city.

## **The Density Debate**

The public debate over the role of urban density in shaping urban economic, social and behavioural patterns, as an independent variable, sits within a longer running policy trajectory around 'urban consolidation' and the nature of Australian suburban development and socio-economic conditions. Urban consolidation emerged as a broad policy strategy in the 1970s that sought to restrain outward urban spatial growth in response to a range of inefficiencies that emerged during the rapid suburbanisation following World War II (Dodson 2012). In that period land subdivision and residential development at the urban fringe had accelerated beyond the capacities of local and state governments to adequately service these growth areas with physical and social infrastructure (Troy 2012, pp126-127). New developments typically followed a low-density, dispersed urban form. Consequently many parts of Melbourne and

Sydney remained unsewered even in the 1970s, public transport expansion lagged road development and households were often remote from employment, education and wider social services.

The term 'locational disadvantage' was used by Maher (1994) to characterise the social effects of this model. A growing recognition of environmental problems brought to the fore questions of development intrusion into fragile peri-urban habitats. These anxieties were intensified by global concerns about the energy resource dependence and climate impacts of highly car dependent urban form. Debates about the efficiency of infrastructure and service provision to low-density detached and dispersed settlement forms accompanied by initial re-urbanisation of city centres, motivated planning to emphasise strategies that intensified existing land-uses rather than continue suburban expansion (McLoughlin 1991; Buxton 2000). The debate over the independent versus dependent role of urban density among other urban social, economic and cultural factors, became an important dimension of this policy change. Contributors to the debate often melded descriptive discussions reporting perceived deterministic relationships between density with normative claims about the nature of Australian national and suburban values (see Davison 2006, p208).

Policy prescriptions arising from the presumption that density shapes urban behaviour have tended to emphasise high urban densities as a prerequisite for public transport provision and have become entrenched in much contemporary planning policy (for example Department of Infrastructure and Planning 2009). Such an approach also aligned neatly with Australian policies supporting 'urban consolidation' (elsewhere the 'compact city') according to which outward urban development at the fringe should be restrained in favour of increasing intensity of development in existing urban areas. That policy was motivated by a mix of concerns, including the costs of extensive infrastructure service and harms inflicted on peri-urban environments. But as a number of scholars have demonstrated, such as Rickwood, Glazebrook and Searle (2008) high density is not necessarily more environmentally benign than low density suburban forms, though this recognition has not yet well penetrated policy discussions.

Density protagonists Newman and Kenworthy and critics such as Pat Troy are but two facets of a much richer and multi-faceted debate than the media or some planning outlets have suggested over the years. Troy's (1996) *The Perils of Urban Consolidation* effectively raised three concerns about the compact city vision, namely that the alleged infrastructure savings from in-fill development are ephemeral, the alleged sustainability of high-rise development is mistaken, and that strong equity concerns apply to compact city policies. Troy was not arguing for a shift to even more neoliberal urban policy and laissez-faire greenfields development, but was instead asking planners to think again about the merits of blind consolidation policy. This debate is too broad for detailed treatment here, but it is possible to characterise the density question in the Australian transport and land use planning context around a few key questions. Principal among these is the question of whether achieving environmental sustainability in Australian cities and suburbs depends on increasing the density of their urban form. A subordinate question is whether reducing automobile dependence in suburban areas through improved public transport services and ridership

depends on increased density or whether other strategies, such as infrastructure and service improvements would be more effective.

### **Paul Mees' Disruptive Contribution**

Mees entered Australia's urban planning debate having studied law, arts and mathematics without receiving undergraduate training in planning. His interest in public transport and its role in cities stemmed from his childhood experiences growing up in the then fringe Melbourne suburb of Glen Waverley and he was a regular user of that suburb's train line. His frustrations and fascinations with public transport grew into activism (see Cervini, this volume) and saw him become a formal advocate for improved public transport via his Presidency of the Melbourne Public Transport Users' Association (1992-2001). Questions of density soon loomed large in his search for theoretical and conceptual means by which to better understand why public transport struggled to compete with automobiles for travel in dispersed suburban settings and the policy excuses proffered to defer service improvements. In the late-1980s and early-1990s, when his interest was developing an intellectual rigour (for example Mees 1995) the notion that density determined transport planning outcomes had taken root in much policy and practice, especially in Australia (see Troy 1996). But Mees was sceptical of density measures or other land use policies in their power to turn around automobility. He declared that even 'the very best urban planning will not force people to use public transport services that are plainly inadequate' (Mees 2010, p94). Did choices around urban form made decades earlier really determine contemporary mode shares, or was there more to this problem than had been recognised?

Mees' scholarly work initially focused more on urban structure (which describes the structural elements of urban systems and their configuration in relation to each other, especially via transport networks) than urban form (which describes more how mixed use, dense the city is). In his PhD research (Mees 1997) he grappled with debates about Melbourne's dispersed residential and employment patterns in contrast to comparable Toronto, Canada, which had managed to retain and improve a high quality metropolitan public transport network. Toronto, some had claimed (Anson & Evans 1991, cited in Mees 1997, p31) built higher density suburban nodes which underpinned high demand for public transport in the city; when compared with Toronto Melbourne had not created these high density nodes. Mees' pursuit of scholarship, however, did see him travel to Toronto to observe first-hand the scale of development around rail stations there. He travelled to every station on the Toronto network outside the CBD (see Mees 1997, p86 & Appendix 1) and took photographs of local urban form, repeating this exercise for Melbourne. Mees found that rather than an exemplar of high density urbanism, development around Toronto's suburban rail stations was mostly similar to Melbourne's. But, if Toronto and Melbourne shared a similar urban form and structure, yet differed vastly in suburban public transport demand, density could not be supported as a determining factor for the latter. Mees instead looked to differences in transport policy and operations on the suspicion that these played a much greater role in transport behaviour than previously assumed.

Once he focused on transport policy the questions of density seemed to reduce in significance. Transport planners in Toronto were able to provide high frequency inter-connected public transport networks among dispersed low density suburbs whereas their Melbourne counterparts struggled. Mees then identified a range of factors that contributed to this greater capability in Toronto. These included many of the factors discussed in Stone and Beza's chapter in this volume on public transport network planning. In essence the Toronto model demonstrated that public transport could compete with the car if routes were designed to be direct and support fast services and interconnections between routes were made convenient by coordination of regular timetables throughout the day.

Above all, Mees recognised, dedicated agencies were needed to plan and coordinate all modes and routes into a single coordinated system. If all this was achieved, a 'network effect' of increasing returns to scale could be realised in public transport planning that drew patronage to the system and which obviated the need for extensive suburban densification. This recognition in turn implied a strong role for a centralised state led agency, in contradistinction to the neoliberal trends present in much of the Anglophone world, principally the United Kingdom and Australia, of competition between modes and operators, with coordination limited to contract specification. Mees' work was lauded by respected commentators overseas (Hall 2001) and incorporated into the European Union's guidebook on planning public transport networks (Nielsen et al. 2005).

Much of Mees' subsequent work further investigated the network effect and the governance and planning arrangements needed to achieve it. He further undermined the proposition that 'density is destiny' in travel patterns through investigations into isolated and dispersed Swiss mountain villages, which through rigorous application of network planning principles achieved high public transport mode shares (Stone and Mees 2010). The Swiss could achieve higher public transport mode shares in remote dispersed villages than Australians could in mainstream suburbs. By inference perhaps the Australian policy makers' and planners' insistence that density determined mode shares and was essential to supply good quality public transport services was missing the point. Worse, such insistences could be a deliberate distraction from a more effective means of travel mode shift.

Mees' insights stirred considerable controversy in transport and urban planning debates. His revised knowledge of the role of density in urban development, particularly for dispersed suburban locations, was acknowledged as significant by a number of colleagues both in Australia (Dodson and Sipe 2007; Dodson and Sipe 2008) and elsewhere (Hall 2001). However, some of his work drew extraordinary reaction. In Mees (2009) he had argued that apparent differences in density between Australian, Canadian and US cities were less than assumed by most researchers, such that transportation policy thus played a more significant role relative to land-use policy, than had been previously held. Mees was subsequently characterised as using the tactics of climate sceptics and tobacco lobbyists (Newman and Kenworthy 2011b) for what he described as a 'density delusion' in much of planning policy. This 'delusion' implied that the pursuit of transport sustainability goals through densification was misguided. The methodological dimensions of that debate remained unsettled at the time of his passing, in part because Mees had not had time to respond to the critique of his work

that had been advanced. This iteration of the debate hinged on arcane but extraordinarily significant methodological aspects of comparative measurement of urban density, as described in Mees initial paper (2009), Newman and Kenworthy's robust response in (2011b) and further appraised by Townsend and McGurk's (2011).

If he did not necessarily concur with peers on the foundations of urban sustainability, certainly Mees' views on transport policy (1994, 2000, 2010) were diametrically opposed to the laissez-faire and pro-automobile scholars such as Gordon & Richardson (1989). His insights also, however, unsettled the foundations of the environmental critics of that group and moreover their alternative policy prescriptions. Mees thus faced the dual intellectual task of maintaining a critique of neoliberal urban development and automobile dependence while proposing markedly alternative means to resolving these problems than most of the other environmental critics. Only in the 2000s did his findings on transport policy and transport patterns gain much greater recognition among scholars, the Australian Research Council and policy observers (for example J. Walker 2012). Cities, for Mees, certainly needed to move away from ongoing support for automobile travel but they needed to do more than wait for urban development to densify before public transport could be provided at higher levels of service quality. The intellectual and personal effort to maintain robust critique of two dominant and opposing schools of thought in transport policy, from a minority position, was considerable.

## **Mees and Cycling**

Paul Mees ventured beyond the transport and urban density debate into other contested areas of transport policy, such as the role of cycling in cities. Another group of advocates who on face value are against automobile dependence and freeway development and who in many aspects are pro-density and improved urban design are the bicycle lobby (for example, the Australian Cycling Promotion Fund). Mees was often either apathetic or oppositional to these groups, particularly in his home town of Melbourne. Though cautious in his public comments, the authors of this chapter knew personally his troubled relationship with key bicycle advocates in Melbourne, notably Harry Barber, then CEO of Bicycle Victoria Inc. (later 'Bicycle Networks Victoria'). He was outspokenly disdainful of key cycling initiatives such as public bicycle hire schemes which he labelled 'a stunt' (Sexton 2009). His antipathy appeared to come not from being anti-cyclist or anti-bicycle per se; Mees was to be found riding a bicycle on occasion, especially during his year in Canberra at the Australian National University (1997). But he saw that much cycling investment was seemingly being done as part of large freeway projects (for example Melbourne's Eastern Freeway extension) and that Australian bicycle advocates did not always criticise such road projects. Moreover the overall direction of urban and transport development was contrary to cycling's interests. More gallingly, some advocacy groups drew sponsorship from pro-road organisations such as the Royal Automobile Club of Victoria or the Victorian Government's VicRoads agency. In his appraisal Mees saw a much greater role for local utilitarian cycling than for heroically long-distance, lycra-clad, journeys on hostile roads. Mees was proven right in many instances in



his critique of specific cycling initiatives. Most notably, the public bicycle hire schemes launched in both Brisbane and Melbourne have been abject failures, producing the lowest ridership of any such schemes globally (Fishman, Washington and Haworth 2013:154). This section seeks to reassess Mees' positions on cycling within Australian cities and the notional Public City but unpicking key aspects of his views and reflecting on available evidence.

It is true that cycling currently plays a very small role in transport supply in Australia. Bicycle mode shares across Australia's major cities remain at around the one percent mark, low by world standards (Pucher & Buehler 2008) dragged down by the outer suburbs where less than 1 in 200 trips are generally made by bicycle (South East Queensland Travel Survey Data – 2009, see The Urban Transport Institute 2009). Yet recent investments in modest bicycle infrastructure since 1986 have corresponded with a quadrupling or more of the mode share for cycling in inner-city areas (Dorney 2010). To Mees, however, the poor state of public transport in the inner-cities, highlighted best by the 'streetcar struggles' of Melbourne's inefficient and slow trams (Currie, Ahern and Delbosc 2011) have been key contributors to that cycling uptake. For Mees the growing use and emergence of a bicycle culture in inner-Melbourne (Bishop 2008:77) was more an indicator of that city's inner-city public transport supply than some endogenous reawakening of two-wheeled active mobility (see Mees and Groenhart 2014). His arguments may resonate in Melbourne, in the neighbourhoods he lived and worked in, but it is perhaps more difficult to suggest public transport's inadequacies are behind the rise of cycling in, say, inner-city Perth and Brisbane.

Can and should cycling play a greater role in Australian cities, including in the suburban heartlands? There is no disputing cycling's equity, environmental and physical activity credentials. But (at least in theory) urban density may play more of a role in influencing cycling's suitability for a city's transport, given the importance of trip distances when human effort is required to propel oneself. Curiously, density has rarely been proposed as a solution to low rates of bicycling in Australian cities despite the prima facie case that closer proximity of land-uses would favour short trips by bicycle. Australian cities have witnessed a cycling boom since 1986 (at least in absolute numbers) while bike sales outnumber automobile sales annually (Cycling Promotion Fund 2013). Yet no serious commentator has suggested this growth has been due to increased urban densities. Instead explanations for the cycling renaissance have emphasised infrastructure provision and strategic elevation of cycling within road allocation decisions, particularly within inner urban zones. These areas have seen greater urban density due to infill development in recent years, but that change in urban form is not generally reported as a major factor the cycling boom. Such an observation would appear to match Mees' contentions about the role of overall transport policy in shaping travel patterns rather than supporting the density thesis. Recent research by Burke & Bonham (2010) has suggested that cycling in Australia's middle- and outer-suburbs would never reach the participation rates achieved in flat, more dense Danish and Dutch cities, in part due to the distances between homes and key employment areas and universities. However, trips to local shops and services and to schools are often beyond walking distance from many homes in Australia's outer suburbs due to street network designs (for example, cul-de-sacs) and a lack of land use mixing that increase distances from homes to destinations. Yes, public transport

could be made to better service such trips (see Stone, this volume) but local shops and schools are invariably within easy cycling range (<2km) of most Australian dwellings. What may really stymie this potential is inadequate provision of cycling infrastructure, especially a lack of segregated and safe bicycle lanes and paths, as well as very high posted street speeds in Australia, which dissuade possible riders from participating in cycling.

The other contribution cycling may make is as a feeder mode for public transport, which has been under-provided for in Australian cities. Public transport must take on a larger share of longer distance travel in more dispersed cities (Burke and Bonham 2010:280) but the manner in which people access public transport helps determine its possible catchment and its environmental benefits. Most cycling cities in Asia and Europe have strong policies and provide safe storage of bicycles at public transport nodes (Pucher & Buehler 2008). And they design street and path networks to encourage safe and easy bicycle access to stations. As noted by Mees (2000, p209) studies have shown that the urban form surrounding stations can influence bicycle access mode share. What he did not remark on was that the bicycle often also plays a role in city centres distributing travellers in inner cities, not just via public bicycle hire schemes but also through riders storing 'second bikes' at central stations or near universities, as is common in the Netherlands, further complimenting line-haul public transport systems. There is also the option of bicycle carriage on-board public transport vehicles, however Mees was against this, and it is prohibited in most Dutch, Danish and German cities where cycling mode shares are strong (see Pucher & Buehler 2008, p63). Where improved bicycle networks and better storage at commuter rail stations are being introduced holistically, as in some parts of Moreland City (a municipality in greater Melbourne), increases in bicycle travel to stations are occurring. Paul Mees' views that cycling was rising in such locations in part because of public transport's failings neglect somewhat the positive symbiotic relationship being established between the modes in such station precincts.

### **Travel Behaviour Change Interventions**

Another set of transport protagonists emerged in Australia during the 1990s who, like Paul Mees, sought to change travel behaviour without changing either city densities, overall policy settings or the infrastructure and service mix. This group of government officials, academics, consultants and community advocates worked variously to promote and implement schemes targeting schools, workplaces and neighbourhoods to change their travel behaviour. Across Australia many of these schemes were branded under the term 'Travelsmart' (Taylor 2007). These behaviour change agents worked with students, commuters and entire households to modify behaviour, look to ways in which they might adopt walking, cycling and public transport, and sought to maintain this new behaviour over time.

Mees was mostly dismissive of such initiatives. His celebrated performance at the *Australasian Transport Research Forum* in 2005 while presenting his paper (see Morton and Mees 2005) and the related presentation all but described the Travelsmart approach as ineffective 'greenwash'<sup>Error! Bookmark not defined.</sup>. And he had a case: the Howard Federal Government (1996-2007) had at this time abandoned funding public transport, was

supporting freeway investments in Australian cities, and had seemingly found a policy ‘fig-leaf’ in the form of a fiscally tiny Travelsmart scheme in order to present itself as having sustainable transport credentials. The Commonwealth funding was provided through the Greenhouse Gas Abatement Program, which came about through negotiations with the Australian Democrat Party in the national Senate for their support of the Goods and Services Tax. Prime Minister Howard arguably had no interest in Travelsmart other than getting the GST through. More substantively, Mees criticised the form, method and outcomes of project evaluations for many of the neighbourhood behaviour change programs as implemented in Australia and overseas. Most relied on ‘individualised marketing’ techniques, previously trialled in Germany, and were particularly strong in the States of Western Australia and Queensland. But was Mees right to have been so oppositional? We provide two responses to this question.

Firstly, many of the programs that fit under the banner of the Travelsmart approach have now proven their efficacy, not just at program level, but at region-wide travel behaviour scale. The most impressive is probably the set of school travel initiatives of the type employed in Western Australia and Queensland. *South East Queensland Travel Survey* (SEQTS) data from 1992 to 2009 reveals a decline of around 13 per cent of all children being driven to school in greater Brisbane in the period 2007-2009, based on large survey samples and with very high statistical reliability (Department of Transport and Main Roads, 2011:103). What caused this shift? The location of schools and the density and form of surrounding neighbourhoods did not change in only two years. What did happen was a very large roll-out by both state and local governments of school programs, including the long running ‘Active School Travel’ program in Brisbane City Council’s area, which continues to the present. Though individual program results have all shown positive changes, discovering such large shifts in entirely separate household travel survey data suggests these programs are having very beneficial impacts.

Secondly, there is mixed data available at present on the efficacy of the Western Australian and Queensland neighbourhood Travelsmart programs, particularly those focused on households and using individualised marketing, with an unsuccessful roll-out of a large intervention in Southern Brisbane the end of all Queensland initiatives of this kind (Worley Parsons 2012). One of Mees’ (and Morton’s) key criticisms was that encouraging individuals to change their travel behaviour is unlikely to have great effect in the context of an overarching array of policy settings favouring automobile dependence. Such individualised marketing models assume that individual choice determines travel mode decisions rather than transport policy or service provision. The notion that spending \$70 per household involved on a travel behaviour program, and more than \$10 billion on road tunnel projects to expand road capacity in that city concurrently, will somehow achieve a measurable shift away from automobiles, as was envisaged in Brisbane, seemed to Mees and to this chapter’s authors as extraordinarily optimistic.

## **Conclusions: Servicing suburbia**

Beyond density and the individual, Paul Mees' extraordinary body of work has compelled a necessary revision of much transport and urban planning orthodoxy. His critical dismantling of the 'density is destiny' thesis and work on the role of transport policy in shaping transport patterns will remain as a vital resource that animates ongoing research programs and policy debates. As this collection demonstrates, many scholars and practitioners have been touched by Mees' personal and scholarly insights and this influence will be perpetuated as it permeates transport and urban policy debates.

This chapter explored three important dimensions of Mees' scholarly contributions, focusing on the question of how urban density shapes travel patterns; the significance of individualised non-motorised modes, principally cycling; as well as individualised attempts to 'market' sustainable travel modes to individuals. A key conclusion for this chapter can be drawn from review of Mees' efforts. First, he demonstrated convincingly that density is *not* destiny in transport planning. The presumption that overall travel behaviour and mode choice can be shaped through manipulation of urban form, and more critically, that this is the primary determinant of such travel patterns has been irretrievably undermined by Mees' work. Density does have an effect, but so do other, potentially more significant, factors, such as strategic policy choices of modal preference and the allocation of fiscal resourcing to them, or the meso- and micro-level fiscal, network and operational decisions made by transport network designers and planners. Any sustainable transport policy that focuses solely on urban densification will fail to meet its objectives if it does not also address network design, integration and operational issues. This problem is most acute in dispersed suburban areas where public transport can be effectively provided but which remain un- or under-served when made to wait until their density increases.

Likewise Mees' observations about the role of cycling in Australian cities further highlights the problems of seeing individualised modes or their growth as always inherently good. Cycling has benefits and should be supported, but growth in bicycle participation may not always be a sign of optimal transport sustainability, which may be better achieved by or in combination with collective modes of public transport. This can be extended to Mees' emphasis on the need to recognise the influence of strategic and collective policy in shaping individual modal choices. Mees was surely right in his observation that the cycling boom in Melbourne in the 2000s was as much a consequence of failings in other parts of the sustainable transport diagram, principally among the trams, than necessarily an eschewal of automobile dominance by grassroots individuals expressing their modal freedom. In the sustainable transport imagination cycling holds a particularly hallowed status, in contrast to pedestrianism, but the case of Melbourne shows that its growth might on occasion be indicative of failings in wider operational arrangements. Celebrating a cycling boom should not be used to greenwash over failures in public transport delivery. Similar considerations apply with the Travelsmart schemes. Although the school-related programs appear to have gained good behavioural traction these are very specific trip types that involve highly localised trips to singular destinations. Travel behaviour modification for adults and at the strategic scale, as Mees (Mees and Morton 2005) pointed out, seems much more shaped by

the convenience of multi-directional, multi-destination travel. Aggregate, collective, strategic transport policy and investment is required to service these demands.

We conclude our review of how Mees' work addressed questions of density and individual behaviour by reiterating a constant theme in his scholarship and which also animates the present text. For us, if there is one single theme in Mees' work, it is that collective institutions are the solution to collective problems in transport and in the public creation of equitable and sustainable cities. Focusing solely on urban density as a means of shaping individual behaviour is likely to prove misguided, in part for its assumption that individual behaviour can be shaped by the physical form of the built environment. Although greater urban density, founded on multi-unit accommodation, appears to be a version of collective organisation, it is a lifeless form, cast statically in bricks and concrete (see Randolph & Easthope this volume).

Mees' work shows that it is animated human institutions dedicated to the urban public good, such as public transport authorities, and the human arrangements they design and manage, which are of critical significance to sustainable urbanism. The bricks and the concrete, the tracks and the trains do not organise themselves. They receive their greatest impetus to improve urban life from collective effort. Although Mees rarely mentioned or wrote of neoliberalism his great interest in the collective production of the city and the enabling of equitable and sustainable movement through it, was clearly counterposed against theories and schemes which assumed that individual behaviour should be the target of policy. Instead the public, albeit acting through often flawed institutions, should be the body through which urban collective action should occur. The path to the public city, and to the good suburb, is surely one for collective travel, and not the myriad trails of individual effort.

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