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Three paradigms in parking policy and their relevance to Australian cities

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Abstract

An upsurge of innovation has been widening policy horizons at this intersection between urban and transport planning. This paper explores the relevance for Australian cities of recent key contributions to the debate internationally. It reviews parking policy literature in terms of three contrasting paradigms: the conventional supply-focused approach which employs parking requirements as its main tool; 'parking management' which involves an effort to balance multiple planning objectives in managing parking, especially in congested locations where the conventional approach is ill suited; and a market-oriented one which seeks to have market processes reveal and provide the 'right' amount of parking via efficient pricing of on-street parking and through supply deregulation for off-street parking. North American literature on parking has recently centred on two challenges to the status quo, which aim to either: 1) expand and extend the use of parking management or 2) introduce a market-oriented approach. The paper then assesses the status quo on parking in Australia, using the same three-way framework, assessing the relevance of international critiques of contemporary parking policy. Finally, it considers whether the two main challenges to status quo parking policy are as relevant for Australian metropolitan areas as their proponents argue they are for the United States.

Main subject area: parking policy

1. Introduction

Prompted by newly invigorated challenges to conventional parking policy in the international literature, especially in North America, this paper explores their relevance for Australian cities. The paper is arranged into six sections. Section 2 below draws on international parking policy literature for relevant context and elaborates on the motivation for this investigation. This involves a three-way framework for categorising parking policy approaches (Table 1). This framework is then used to identify two current challenges to the status quo for parking policy. In Section 3 the specific objectives of the paper are explained in more detail, together with the methods adopted and a few words on scope. Sections 4 and 5 present results and discussion which address the objectives of the paper. In particular, Section 4 evaluates the usefulness of interpreting Australian parking policy and practice in terms of the three-way framework. Section 5 assesses the relevance for Australian cities of the two challenges to the status quo. Finally, Section 6 discusses the implications of the findings and presents a conclusion.

2. Context and motivation: three approaches to parking policy and two challenges to the status quo

This section outlines the parking policy ideas and literature that have motivated the investigation and which provide the conceptual context for the analysis below of Australian parking policy. It presents a three-way framework that was developed with reference to the international literature on parking (Barter, in press).

This three-way framework involves firstly the familiar supply-focused ‘conventional’ approach with a focus on ensuring sufficient parking and avoiding ‘spillover’. Secondly, we have ‘parking management’, in which parking is used to serve multiple policy objectives (Litman, 2006). A third contrasting approach, popularised by Shoup (2005), is much more market-oriented than the others. The key assumptions in the three contrasting approaches (or ‘paradigms’) in parking policy are highlighted in Table 1.

The status quo for parking policy and practice in most Western countries seems to be dominated by the first two approaches in varying proportions. A common pattern is for parking management to be applied in denser urban environments, especially those established before mass motorisation (Litman, 2006). Conventional parking policy tends to apply to more automobile-oriented suburban environments. Market-oriented thinking is a persistent minority stream in the parking literature but with few implementation examples so far. Commercial parking industries in the city-centres of large cities provide a glimpse of market-based parking as envisaged under this approach. The most recent challenges to the status quo involve efforts to change the balance among these approaches and to introduce the third.

Table 1. Three broad approaches to parking policy

	Conventional	Parking Management	Market-based
Perspective on parking problem	Scarcity is a problem, both within a vicinity or on any site, because it causes spillover and conflict.	Problem if parking conditions mismatch with wider policy goals. Trade-offs required among conflicting objectives.	Underpriced on-street parking causes search externality and inhibits off-street market. Supply-side policy causes more problems than it solves.
View of spillover	Seen as a free-rider problem. To be avoided by ensuring each site handles its own parking.	A source of conflict, so minimise by management or defuse by planning for shared parking.	Pricing defuses spillover problem. It is welcome as a trigger for market pricing to emerge.
How quantity of parking should be determined	Require developers to supply enough to meet all expected demand on-site (often at a price of zero).	Plan and manage, using diverse policy tools, for parking quantity, location and usage patterns to match wider policy goals.	Facilitate efficient on-street pricing. Remove obstacles to private choices determining supply in local markets.
Perspective on shared parking (open to public)	Unusual since each site expected to provide for own parking.	A useful tool but needs careful management to avoid conflict.	Expected to be the norm. Restricted-access parking as exception not norm.

Source: Barter (in press)

2.1. Conventional supply-focused parking policy

The widespread conventional approach is centred on the instrument of on-site parking requirements. It is the most commonly applied approach to parking policy in automobile-oriented suburban areas across much of the world. It emerged as a solution to on-street parking saturation in pre-World War II US inner city areas. It was popularised by Mogren and Smith (1952), among others, and by the 1960s was an almost universal element of planning across North America, reinforced by official transportation and planning guidelines (Ferguson, 2004; March, 2007). By the 1960s it was also commonly used in the UK (Roth, 1965) and many other countries.

The conventional approach involves framing parking as an ancillary service for every building. Private vehicles not accommodated on the site of their destination are viewed as resulting in spillover parking demand. On-street parking on residential streets tends to be viewed as a kind of club good in which residents' parking is expected but outsiders' parking is viewed as a source of disamenity. These mental frameworks make it seem natural to apply requirements that try to ensure 'enough' parking on every site.

Despite its inner city origins, the practice of setting parking requirements was best suited to green-field developments and quickly developed suburban assumptions, such as that on-site parking would generally be free to users. This becomes a self-fulfilling prophecy, with the result that parking across the suburbs is almost always ‘bundled’ with other services, housing or employment.

The following are clues that the parking policy regime for any particular vicinity is the full-blown conventional supply-focused approach:

- The stated objective of the parking section of the relevant planning document is to ensure that every development provides on-site parking for all of the demand generated on-site;
- The main parking policy tool is minimum requirements for parking supply to be provided (per unit of floor area, per room, per bedroom, or such like) with each real estate development, generally with no encouragement to seek variations depending on local context;
- Shared off-street parking is rare and the off-street parking on any particular development parcel is usually reserved for the tenants, customers, clients or employees of that development.

There have been many critiques of the conventional approach over the years (Buchanan, 1964; Shoup, 1980; Willson, 1995). Those with a parking management mindset on parking (see Section 2.2 below) have long criticised the conventional approach for inflexibility, for ignoring the scope for efficiencies (such as shared parking), and for their lack of attention to the potential for demand to be modified (see for example Litman 2006 for a summary).

Roth (1965) ridiculed parking regulations from a market perspective. Shoup (2005) argued that the idea of parking demand is meaningless without considering prices. Parking requirements are based on flimsy evidence and are an unfunded mandate which requires such an excess of parking that the price is driven to zero, forcing the bundling of parking, and shifting the cost of parking from its users to all of the customers or clients of the development. This creates huge distortions which lead to wasteful oversupply of parking, entrench automobile dependence and increase the cost of housing, thus harming low-income households. On the other hand, Ferguson (2004) suggests that conventional suburban ‘zoning for parking’ has been resilient despite attacks because it is simple to apply and is apparently free of serious conflict. It therefore remains popular with local governments in many countries.

2.2. *Parking management*

A wide range of policies are included in what Litman (2006) calls parking management. Variations on this approach have long been usual in dense or congested locations, especially those with their origins before the mass motorization of the 1950s where the conventional approach has not proved relevant. Such areas proved

ill-suited to rigidly applied parking requirements. For example, in many US towns, such requirements rendered uneconomic much renovation and re-use of old buildings (Shoup 2005, pp. 97-98).

Parking management is a ‘broad church’ and it might seem odd to group diverse policies under a single category. However, all have in common the balancing of multiple planning objectives, such as revenue, the urban regeneration of certain districts, and Travel Demand Management (TDM) (Marsden, 2006; McShane & Meyer, 1982). Much European parking practice involves ambitious versions of parking management (Booz Allen Hamilton, 2006). Its embrace of multiple objectives is in contrast to the single-minded focus on adequacy of supply in the conventional approach. However, this inevitably makes parking management prone to controversy.

Parking management approaches could be further sub-divided according to their emphases, with some jurisdictions making travel demand management a central focus of their parking policy, trumping various other objectives.

Signs that a vicinity has some kind of parking management include:

- Stated objectives that go beyond requiring that parking demand be met on-site to include other distinct objectives, such as managing peak traffic demand, encouraging a desired mode split, etc;
- Flexibility in parking requirements (e.g. lower rates near mass transit);
- Explicit efforts to increase the efficiency of parking use (e.g. with parking guidance systems; shared parking arrangements; etc)
- In-lieu payments are an option instead of required on-site parking;
- A shift to parking caps or maximums rather than, or as well as, minimums;
- Prioritising parking by specific groups (e.g. short-stay versus long-stay);
- Some explicit effort to manage parking demand.

2.3. *Market-oriented approaches to parking policy*

The market oriented approaches to parking policy discussed here seek to allow market processes to achieve efficient levels of supply and demand for parking. This implies optimising parking itself, without seeking to use it for other objectives.

Shoup (2005), as the key proponent of this approach, seeks to make ‘prices do the planning’ via the repeal of parking requirements. Simultaneously, he calls for efficient, ‘performance pricing’ in which on-street parking prices vary according to the time-of-day and location (and are regularly revised) so that each street section has enough parking vacancies to eliminate the need to ‘cruise for parking’ (Shoup 2005). These two policies are closely linked even though this may not be obvious at first glance. We cannot rely on private actors to provide the right amount of off-street parking if on-street parking is underpriced. Conversely, repealing off-street parking

requirements would raise the bogey of spillover unless defused by properly priced on-street parking. This approach envisages planners paying more attention to regulating the *quality* of parking rather than its *quantity* (Mukhija & Shoup, 2006).

Shoup's perspective is actually part of a long-running literature on market-oriented thinking on parking (Barter in press). Precursors include Miller McClintock's push in the 1920s to ban on-street parking so that motorists would need to rely on the priced, commercial off-street parking (McClintock, 1925, cited by Shoup, 2005, p. 492-493). Vickrey (1954) pioneered the idea of performance pricing for on-street parking. This should reduce search time, provide revenue that is less distorting than most others, and reduce the congestion exacerbated by those searching for parking (Arnott, 2006). Roth (1965) called for a similar on-street pricing approach and for only as much off-street parking as is justified by motorists' willingness to pay for it.

Performance-based pricing for on-street parking is clearly politically challenging so Shoup (2005) suggests an institutional innovation, parking benefit districts, akin to business improvement districts. These are intended to enable local management of revenue, to be spent on local improvements, which is hoped to give local stakeholders incentives to support parking pricing. An Australian reviewer of Shoup's book suggests the alternative of competitive bidding for street-by-street concessions to manage and price on-street parking (Seibert 2008).

Worries over the performance-pricing suggestions in the market-oriented approach sometimes raise the fear of prices pushing away customers. However, a poorly-understood benefit of performance-pricing to target 85% occupancy is that it should defuse such spatial competition argument against pricing. If many visitors really do avoid an area because of pricing then the price must drop until 85% of spaces are occupied (or drop to zero).

The reframing of assumptions implied by the market-oriented approach may be more profound than even Shoup has made explicit (Barter, in press). It probably means letting go of thinking of parking as 'infrastructure' (ancillary to every development, like plumbing). In a market-oriented framework, parking would be seen as more a real-estate-based service industry provided largely on a commercial basis and with its investments justified primarily by direct users' payments. Shoup portrays such a scenario in his chapter entitled, 'Let Prices Do the Planning':

'Since [on-street] prices will vary to maintain a few curb vacancies, spillover will no longer be a problem. Individual property owners and merchants can then choose how much on-site parking to provide based on business considerations, not zoning. Some may choose to provide their own off-street spaces, while others may offer to validate parking in nearby garages. Regardless of the strategy, all firms will be able to decide for themselves whether parking is worth its costs. Parking will increasingly become unbundled from other transactions, and professional operators will manage more of the parking supply.' (Shoup, 2005, p. 496).

Nevertheless, simple deregulation of parking supply is unlikely to be enough for market-based parking to work well. Shoup and Roth adopt a rather laissez-faire approach but parking markets, like other real-estate based markets, would almost certainly require regulation in order to prevent abuses of market power and other market failures (Barter, in press).

2.4. *Two challenges to the status quo*

The ‘two challenges’ to the status quo mentioned in the title of this section refer to: 1) a push to expand parking management beyond its heartland; and 2) calls to implement the market oriented approach in a variety of contexts.

Litman (2006) has been influential in broadening interest in parking management generally. However, the more radical theme at the heart of his book (see p. 24 for example) and through the recent work of a number of others, such as Forinash et al. (2003) and parking experts with Nelson\Nygaard Consulting (Siegman, 2006; Jeffrey Tumlin, 2005) is that parking management techniques can be expanded beyond their usual localities, where they are often applied only out of sheer necessity. For example, parking management is proposed as a tool to enable more transit-oriented development (TOD) and other infill that would otherwise be stymied by suburban parking requirements (Renne, 2008). Parking management advocates also call for suburban parking requirements to have more flexibility, achieving lower requirements where feasible, such as near quality public transport even in suburban environments. ‘Contingency-based’ parking planning tries to manage fears of resulting parking problems by combining variations on the standard requirements with a set of management efforts to reduce conflict (Litman 2006, p. 23).

The second challenge (and the third parking ‘paradigm’ here) is simply a push to apply to whole market-oriented approach popularised by Shoup (2005) which is also claimed to be applicable right across metropolitan areas, including car-oriented suburban centres. This could also be thought of as an effort to expand an approach beyond an existing heartland, of commercial parking in large Central Business Districts (CBDs). This challenge to the status quo is obviously very ambitious in seeking to utterly (albeit gradually) transform suburban parking practice.

3. Objectives, methods and scope

As mentioned at the outset, this paper explores the relevance for Australian cities of current streams in debate over parking policy in the international literature. These were explained in Section 2 above.

There are also several Australia-specific objectives, expressed as questions to address. First, how well does the characterisation of the status quo of parking policy, in terms

of the three paradigms, fit the Australian situation? Second, does the agenda of expanding and extending parking management, find any resonance or parallels in Australia? Third, is Shoup's push for a more market oriented approach to parking policy likely to find a receptive environment in Australia? In other words, these second and third objectives require an evaluation of the relevance for Australia of the current challenges to the status quo that were highlighted in Section 2.4 above.

The methods employed to meet these objectives were as follows. First, academic and professional policy-related literature on parking in Australia was sought and reviewed. Secondly, the analysis was enriched (cautiously) with anecdotes and perceptions revealed in news items on parking controversies in various locations over recent years (especially in the Adelaide and Sydney areas).

The third and most important method was an examination of planning and parking policy documents from a range of local and state governments around Australia. The sample used was somewhat opportunistic. It was not comprehensive but an effort was made to capture the range of major contexts (CBD, inner urban, suburban, and older secondary centres of previously independent towns). This effort included seeking out cases that seemed likely to be outliers (according to reports or reputation). Planning documents from many suburban councils were given a cursory look but little variation was found in the parking policies of thoroughly suburban councils. State-level planning guidance and policies were examined for New South Wales, South Australia, Victoria and Western Australia. The local governments whose planning and parking documents were analysed in most detail were: Adelaide, Holdfast Bay, Mitcham and Unley in South Australia; Brisbane and the Gold Coast in Queensland; Perth and Fremantle in Western Australia; and Sydney, Leichhardt, Parramatta, Waverly and Woollahra in NSW. Inner urban and older areas are over-represented. However, a number of those examined in detail included several contrasting urban environments, both older and newer.

The tendency in this paper to emphasise recent North American debates requires explanation perhaps. Certainly, cities worldwide have diverse and interesting parking policies that have been seen in Australia to be worthy of review (Booz Allen Hamilton, 2006). However, with so much else differing about the urban and transport environments, it is obviously difficult for many Australian policy-makers to evaluate policies from Europe or wealthy Asia, for example. The obvious and well-known similarities between American and Australia urban transport characteristics and the significant interaction between the relevant professions suggest that they are likely to find each other's parking experience to be of interest (without taking transferability for granted). For similar reasons, much of the discussion may perhaps be relevant in New Zealand, although it was not a focus of this study.

4. Approaches to parking policy and Australia’s status quo?

This section aims to address the question of how well does the characterisation of parking policy approaches in Section 2 fit the Australian situation? Recall that this involved two main approaches, the conventional supply-focused one and the parking management category, applied to different contexts, with the third, market-oriented, approach as a minority stream in thinking. This section therefore provides an overview of existing approaches to parking policy in Australia.

The ubiquitous use of the conventional approach, with its generous parking requirements clearly applies to Australian suburbs. So it would appear that Litman’s and Shoup’s critiques of this situation will also be relevant. Let’s look more closely.

Australian suburban parking requirement practice is similar to the US case, although possibly not quite as extreme. The conventional approach is applied across most of suburban Australia, supported by guidance such as the Austroads *Guide to Traffic Management - Part 11: Parking* (AGTM11/08) and its precursors and by planning guidance from each state government. Parking requirement regulations are complex and difficult to compare but offices and residences offer scope for a quick comparison. Shoup (2005, p.81) cites US requirements for suburban offices averaging between 3.7 and 4 spaces per 1000 square feet (between 4 and 4.3 per 100 square metres) of office space based on several regional surveys. Australian office requirements seem to be just slightly lower. For example the Victoria Planning Provisions clause on car parking specifies 3.5 spaces per 100 square metres (Victoria Department of Planning and Community Development, 2008). South Australia’s guidance on parking for suburban metropolitan Adelaide suggests 4 parking spaces per 100 sq. m. for offices (Planning SA, 2001). The suburban plans examined for this study were in this range. In both countries residential developments seem typically to be required to have roughly one space per bedroom, with small variations.

Australia’s conventional parking codes are similar to American ones. So most of Shoup’s and others’ critiques of conventional parking policy would seem to apply with nearly the same force, as Seibert (2008) has indeed argued. Glazebrook (2009) provides an estimate of the amount of parking and its total costs in the Sydney metropolitan area in 2005, finding a total of about 3.9 million parking spaces occupying almost 100 square kilometres of land. The vast majority of these were unpaid (meaning their cost is bundled with something else). He conservatively estimates the total costs of parking in the metropolitan area as equivalent to about 10 cents per vehicle km of which only one cent is paid for by motorists. By comparison, motorists’ petrol costs were only 18 cents per vehicle km.

Variations on parking management are also a widespread approach in Australia, being applied in various ways in all CBDs, in most older non-central sub-centres such as Parramatta, Fremantle or Glenelg, and in many inner suburban locations.

Australian state government planning guidance documents make room for parking management by allowing for variations on the standard parking requirements in appropriate circumstances. For example, the Victoria Planning Provisions specify parking requirements but allow local governments to choose different standards if they adopt a ‘parking precinct plan’. New South Wales actually imposes a parking restraint approach on all of the major sub-centres of the Sydney region that is in strong contrast to the guidance on suburban parking (SGS Economics and Planning, 2007). Western Australia enables variations in parking required, with the aim of facilitating transit-oriented development (TOD) (Renne, 2008). Australian suburban areas may also be slightly more able than American ones to adopt such variations due to the difference between American-style statutory zoning and Australian discretionary development control approach. Inner suburban examples of such variations are mentioned below but it is not clear if any thoroughly suburban local governments have yet taken up the offer.

As in other countries, there are variations in the relative importance of TDM within parking management policies. For example, the Sydney, Perth and Melbourne CBDs all have a strong TDM emphasis in their parking policies with strict parking caps and parking levies. At the opposite extreme are smaller inner-suburban centres of activity, for example the modest-scale, formerly tram-based, shopping street of the Parade in Norwood in Adelaide’s inner eastern suburbs, which does not constrain parking supply. The only priced parking here is in a shopping centre which offers validation for customers. Such locations typically retain suburban-style parking requirements but allow waivers in return for in-lieu payments, encourage shared parking and create a ‘park-once’ environment, in part by providing council-owned parking. Such localities also usually feel the need to manage spillover of parking through on-street time restrictions and sometimes through residential permit arrangements. Leichhardt in Sydney’s inner west, falls between the extremes with a parking code that imposes both minimums and maximums, with employee-related parking levels set with TDM objectives in mind, and urging developers to justify their proposed parking levels in terms of the objectives stated in the provision (Leichhardt Town Plan, 2000).

Does Shoup’s market-oriented approach apply yet to any real-world situations in Australia? The answer is mostly no, at least in the sense that no jurisdictions consciously follow such a policy paradigm. As mentioned above, Australian CBDs are subject to parking management policies, with a strong demand management emphasis. Nevertheless, something akin to market-based parking does also operate in these contexts. Most off-street parking in CBDs is already a commercial service. A high proportion of CBD parking spaces are already open to the general public or shared. Very little city-centre parking is bundled. Few buildings have enough on-site parking to handle their ‘own’ demand and on-site handling of parking demand is generally not expected. Although there is some debate about this, Australian CBD parking markets have been judged to be reasonably competitive (Stockwell & Nowak

1999; ACCC 2004). A market-based parking agenda would seek to have more parking everywhere (not just in CBDs) provided on a commercial basis in local competitive markets akin to what we already see in Australian CBDs (although with lower prices, reflecting cheaper land and larger parking supply).

5. Challenges to the status quo and Australia's cities?

We have seen above that, like in North America, Australian metropolitan areas are divided into parking management and conventional parking policy territories. There are also parking markets in the hearts of the CBDs but they exist in a context of parking management policy. American critiques of their own status quo thus appear to be relevant in Australia too. So the next questions to consider are whether the two main challenges to this state of affairs (discussed in Section 3) are as relevant for Australia as their proponents argue they are for the United States. Recall that the two challenges are: 1) to strengthen parking management and extend it to a wider range of locations; and 2) market-oriented approaches for both older and automobile dependent locations.

5.1. Ambitious and geographically extended parking management in Australia?

We have seen that parking management is a well-accepted philosophy for inner city parking policy in both Australia and North America. However, parking management can be seen as radical in car-dependent suburban contexts.

Parking management is already being extended incrementally in Australian cities. This appears to be happening out of necessity, arising from growing parking pressures and not because of any policy push. For example, on-street parking pricing is gradually spreading. In Sydney the councils that had some priced on-street parking by late 2005 were Sydney, North Sydney, Waverley, Woollahra, Willoughby, Leichhardt and Parramatta (Glazebrook, 2009). Similarly, a shift from conventional parking policy towards parking management is a common response to emerging parking stress in localities with rapid growth. Parts of the Gold Coast provide examples of dense but new development requiring parking management (Eppell Olsen & Partners 2004).

The pricing of off-street parking outside the major CBDs is relatively new but also appears to be spreading. Thus is unsurprising for such major, mixed-use centres as Bondi Junction. However, similar parking pricing with validation has appeared at many inner urban shopping centres, such as in Randwick in eastern Sydney and on the Parade in the inner east of Adelaide, as mentioned earlier. This may be a sign of maturing 'park-once' vicinities. When parking spillover cannot be prevented, parking management becomes necessary to manage the spillover and reduce conflict.

Recently there have even been suburban examples. For example, there have been media reports that Westfield shopping centres in suburban West Lakes in Adelaide

and Kotara in the suburbs of Newcastle plan to impose priced parking after a 3 or 4 hour grace period, with the aim of deterring park-and-ride and employee long-stay parking from adjacent developments. This is prompting anxiety from nearby residential streets. Here we see spillover prompting pricing as a management strategy, which in turn will likely prompt regulation of parking in the vicinity. Parking management appears to be heading to at least some suburban centres of activity, even without a concerted push by policy thinkers.

However, there seems to be little or no suburban council interest in being flexible about parking requirements. Deviations from standard parking requirements tend to be viewed as risky and subjected to a high burden of proof. This tendency is probably heightened by the obvious degree of conflict over parking policy in inner city areas, as readers of inner city local newspapers in Australia will attest. The conventional approach has considerable embedded institutional strength, especially in its heartland where it is perceived to serve well. Parking restraint in Sydney's outer sub-centres has been imposed from above from State level, which may be a sign of things to come.

5.2. *Interest in and prospects for market-oriented parking reform in Australia?*

Is a market-oriented approach to parking policy, as in Shoup's (2005) proposals, relevant in Australia and is it likely to find a receptive environment? Interest in Shoup's parking ideas is building in Australia and, as elsewhere, it has an intriguing political complexion, attracting both economic liberals and greens, among others. Seibert (2008a; 2008b) has written approvingly of market-based proposals for the conservative/neoliberal magazine, *Policy* and in *The Australian*, as well as in a submission to the Garnault Report. From a slightly more centrist position perhaps, environmental economist Harry Clarke, has also engaged, taking positions similar to Shoup and critical of the inefficiencies of CBD parking management in Sydney and Melbourne (Clarke, 2009a, 2009b). Interest has also been shown by public transport supporters, such as Melbourne's Public Transport Users Association. A light-hearted item on Shoup's ideas appeared recently in the Sydney Morning Herald (Pryor, 2009).

Shoup's ideas also seem to be garnering interest in local government, although mainly from the inner cities. They have been discussed at various forums, including one in 2007 for NSW local governments organised by Marickville Council (in Sydney's inner west) and SGS Economics and Planning consultants. The background paper by SGSEP reflects market-oriented thinking on parking and highlights the spatial dilemmas thrown up by imposing TDM-heavy parking management on the major, older sub-centres but not on more suburban ones (SGS Economics and Planning, 2007). Melbourne's parking strategy for the CBD and Docklands explicitly considers performance-pricing for on-street parking in a first for an Australian local planning document (City of Melbourne, 2008). Although it damns the idea with faint praise it nevertheless recommends a review (City of Melbourne, 2008).

Interest from the City of Melbourne is interesting. For most CBDs in Australia, Shoup's approach to parking would represent a relatively modest change. As mentioned above, CBD parking already works on more-or-less a market-basis. Furthermore, even though Shoup-style market-oriented policy is not explicitly applied to these areas, TDM-oriented parking management can incrementally contribute to the emergence of market processes. An example can be seen in the City of Melbourne, which imposes parking maximums. Developers of much of the recent residential development have made a market judgement to provide less parking than these maximums. With residential parking demand slightly higher than the supply within the residential sites, unbundling has been occurring and a market for leased parking in other buildings has emerged (City of Melbourne, 2008). This resembles processes anticipated from market-oriented parking policy.

Shoup argues that the politics of performance-based pricing depends on the promise of local management and spending of the revenues via parking benefit districts. Australia has less of a tradition of forming ad hoc local democratic institutions to handle specific tasks, compared with the US. This might make Australian cities less fertile ground for parking benefit districts, although presumably locally-appropriate institutional vehicles could be devised.

It is early days for Shoup's proposals in Australia. So it is relevant to also consider how they are faring in the United States. It is a mixed story. Several cities, including San Francisco, Washington, DC and New York City, are about to join the earlier smaller pioneers (such as the Old Pasadena sub-centre) in trying performance pricing for on-street parking. However, most such interest has been in pre-automobile built environments. The agenda is intended to apply to the suburbs but has so far gained little traction there. Reviewers of Shoup (2005) have debated the relevance of his reforms for suburban landscapes (Levinson, 2005; Gordon, 2006). Suburban parking reform seems unlikely without a push from a higher level of government, since it tends not to be perceived locally as an acute local problem but rather as a distant environmental issue. As Shoup himself argues, the costs of suburban parking excess, although huge, are dispersed and hidden.

6. Conclusion

An invigorated policy discussion of parking appears to be building in Australia, stimulated especially (but not only) by a rising tide of debate in North America. For example, March (2007) writing within a parking management framework and as a planner, is highly critical of the Australian parking status quo, highlighting problems with both the conventional approach and with ad hoc, non-strategic efforts at parking management. Whether this leads to policy change in Australian cities remains to be seen. This paper has established that the status quo on parking in Australia is similar

to that which has been attacked rather persuasively by authors such as Litman and Shoup.

Both an expansion of parking management and Shoup's market-oriented reforms speak to issues that are important for the Australian urban fabric and are garnering interest, especially in the inner and older parts of Australian cities. However, the impetus for change in suburban contexts so far seems meagre, especially at the local level. The extension of parking management to more suburban locations is an ongoing trend but is one that cannot easily be pushed very far or very quickly. A successful high-profile trial of Shoup's agenda that succeeds in defusing inner-city conflict over parking may perhaps generate wider interest. For now, the conventional approach seems deeply entrenched and easing its grip will probably require action from the State and/or Federal levels of government. This may be somewhat more likely in Australia than in the US, where the 'home rule' tradition is stronger.

Potential spinoffs from parking reform of the kinds discussed here would appear to be highly consistent with various stated Australian urban priorities. These include housing affordability, the need for more infill and transit-oriented development, greenhouse gas reductions, and several others (Litman, 2006; Shoup, 2005). However, for now, Australian urban planners have 'largely ignored the potential for parking to be one of urban and regional planning's fundamental control mechanisms' (March, 2007, p.1). Australian parking policy debate is likely to heat up further. It will be interesting to follow and will require well-informed contributions from the transport research community.

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