

Public Policy Options for the Problem of Public Transport as a Common Pool Resource

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Abstract

In Glover (2011) it was proposed that public transport constituted a particular type of economic resource, namely a common pool resource (CPR). This proposition was based on the case that public transport is broadly subject to rivalry between potential consumers and is also generally difficult to exclude potential users. As a CPR, public transport is prone to a set of market failures, including the problems of collective goods, capturing costs and benefits of various externalities, and the monopolistic abuses of market power (given that public transport has many features of a natural monopoly). Historically, such failures have seen state authorities intervene in public transport markets to reduce the incidence of failures. Such interventions can take many forms: state monopoly, public corporations, state coordination and oversight bodies, mixtures of public and private enterprises, private operators provide under state contracts and franchises, and public regulation of private operators. In locations with weak governance, public transport is provided through free markets; in its most extreme form this gives rise to unregulated para-transit. Elinor Ostrom stated that there are three institutional responses for protecting CPRs: government, private property, and common property ownership. This paper reviews these responses and considers the question of the dominance of solutions arranged along the continuum of state institutions (i.e., government) and free markets (i.e., private property) and reviews the potential for common property ownership. Current community transport in Australia is also examined in the context of these issues.

1. Introduction

Public policy debate over public transport is currently shaped by two broad and essentially separate themes; that of its role in the quest for urban mobility with low environmental and social costs, and that over where public transport should be situated along a continuum of public and private ownership. This paper is concerned primarily with the latter theme that is examined from the perspective of the type of service or good that characterizes public transport by arguing that it is a common pool resource (CPR). It follows that this defining characteristic has a considerable influence on the choice of management regimes suitable for public transport, a choice that has favoured state-based regimes in the modern era. But in recent decades there has been a significant shift towards the greater use of market-based regimes. This paper aims to review these issues and to consider the opportunities and implications for an alternative approach to state and market regime options, that of community ownership, in light of public transport constituting a CPR. For examples and discussion purposes, the paper draws on Australian experiences.

A number of scholars and government authorities in Australia, New Zealand, and around the world have promoted greater use of public transport as a means to reduce the environmental and social costs generated by transport systems with high levels of private vehicle use, such as occurs in Australia and New Zealand. High rates of public transport use are generally associated with lower levels of greenhouse gas emissions from the transport

sector and lower rates of road trauma compared with locations with high levels of private vehicle use. Other identified co-benefits of reducing private car use and increasing public transport use include reduced urban pollution, increased active transport in accessing public transport, reduced road congestion, greater mobility choice for the socio-economically disadvantaged, reduced public expenditure for investment in increasing road capacity, increasing resilience for the future problems of cost increases arising from declining global oil reserves and reduced energy security for oil-importing nations, and greater overall energy efficiency across the transport sector in personal mobility (Bannister, 2005; Low and Gleeson, 2003; Moriarty and Honnery, 2010; Schiller et al, 2010). Environmentally sustainable transport denotes urban transport systems with high levels of public transport use (Bannister, 2005; Moriarty and Honnery, 2010).

Neo-liberal political and economic theories have been widely adopted by OECD governments and by some nations in their transition from centrally planned economies to more capitalist economic forms over the past three decades or so. Many factors have been involved, including changes in ideologies, concern over high levels of public sector spending and debt, technological changes that made monopoly ownership obsolete, globalization of global financial markets, and economic change following major political change (OECD, 2003). Experts differ in their interpretations of the exact meaning of neo-liberalism, but there is much basic agreement about its key features. This neo-liberal activity has had both political and economic dimensions. Amongst the OECD members, it is the governments of the English-speaking nations that have responded most strongly to these changes in adopting neo-liberal practices, although arguably all have taken up neo-liberalism to some extent (Harvey, 2005). This change marked a transition from common models of government built around strongly centralized state authority, extensive public provision of services, and market regulation. Prominent features of these changes are such initiatives as the corporatization of public sector activities, privatizing state-owned enterprises, creating new property rights, and opening up monopolies to competition (McGuire, 1989).

Public transport and the public institutions involved in its operation, planning, management, regulation, ownership, and state oversight have undergone considerable changes in industrialized, democratic nations. These changes have taken several prominent forms: sale of state-owned public transport infrastructure and rolling stock to private enterprise, competitive private enterprise tendering for public transport services (OECD, 2003). Public transport is therefore being shaped in response to these two major policy debates, that of its major role in promoting sustainable transport (as driven largely by progressive political interests) and that neo-liberal institutional reform (driven largely by conservative political interests). It is notable that these debates have been essentially separate and there has not been much scholarly or institutional attention given to the relationship between these issues, such as to inquire into the sustainability implications of public transport privatization.

2. Common Pool Resources

CPRs, in economic theory, are those defined by two conditions; firstly, being subject to rivalry between actual or potential users and secondly, the difficulty or impossibility of restricting access by potential users. There are a great many CPRs and they are associated with a wide array of management regimes. CPRs can be natural resources (such as the atmosphere, water bodies, fisheries, animal herds, and the like) and social resources (such as irrigation systems, legal systems, and parks). Typically, local CPRs are complex resource systems linked to specific social institutions. Global CPRs, such as the global climate system, require international management institutions that are considerably more challenging to develop. CPRs without the protection of a management regime are 'open access resources' and subject to risks of over-use resulting in degradation of the resource.

Although in theory we might expect all CPRs to become degraded through unconstrained use, in practice, nearly all those local CPRs that have direct social value are subject to management regimes. There has been considerable scholarly and policy attention given to the design of institutions for managing CPRs, particularly following the work of Elinor Ostrom (1990).¹ Given the primary role of CPRs in furnishing the material necessities for human life in pre-industrial communities, it is unsurprising that a primary objective of social organization is the management of the resources on which communities and households depend. These management regimes typically aim to regulate resource use to protect the resource, in order to provide on-going benefits (sometimes known as ‘flows’) without degrading the common resource (sometimes known as the ‘stock’).

Ostrom (1990) identified three general approaches to respond to the problem of CPR management: government ownership, private ownership, and communal ownership. State ownership is typical of the responses within industrialized states, with governments carrying the major responsibilities for the CPRs through bureaucratic means on behalf of the wider social interest. Private ownership, with the assignment of property rights to corporate entities or individuals, relies on the protection of CPRs by the property owners (although the legal support for property rights is provided by the state in a modern setting). Communal regimes are the traditional means of managing CPRs and are associated with local cultural practices and local CPRs. Some of these have persisted over centuries or millennia and have been essential to protecting the ecosystems on which livelihoods are based. Such is the diversity of CPR that there can be no single and comprehensive set of laws to govern CPRs.

Most CPR scholarship has focused on managing natural resource CPRs, but more recently there has been growing attention given to social and technological CPRs, such as major infrastructure, with the Internet a subject of particular interest (e.g., Hess and Ostrom, 2003). Following this trend, transport systems have been categorised as a CPR (Frischmann, 2005; Künneke and Finger, 2009), including public transport (Glover, 2011). In the case of public transport, the resource in question is the public transport system within a particular jurisdiction, such as a city, and the flow of benefits is the mobility service provided. In the following sections, we examine the three contesting regimes for managing the public transport CPR.

3. Public Transport and State Intervention

Our basic motorized public transport technologies are well established and their initial global diffusion was through local manufacturing and importation from the industrial centres in Europe and North America largely in the latter 19th century. Public transport as a CPR arose from the capacities of motorized transport, whereby stored energy was applied to mass vehicular movement of people and freight. Local entrepreneurs were usually responsible for establishing the initial local and regional services, although in some instances, state enterprises acted in this role. It was not long, however, before state authorities moved to assume management over these public transport systems (Vuchic, 2005). Despite the wide array of differences between nations and cities, there proved to be a fairly common set of economic, social, and political motivations for cities to assume control of public transport management regimes.

A prominent rationale for state intervention stems from the character of public transport as an economic resource. Public transport systems are natural monopolies (as are many public utilities). This condition is characterized by markets subject to significant economies of scale, whereby the costs of providing goods and services declines significantly with scale. Although

¹ Prof. Elinor Ostrom, 1933—2012, awarded the 2009 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.

partly an issue of technology, economies of scale are often caused by the need to invest in large capital outlays—in this case, in the public transport infrastructure and rolling stock. High capital costs pose a major barrier to the entry of rival suppliers, so that often the first to become established in the market assumes a dominant position. Because natural monopolies have high fixed costs (and relatively low marginal costs), the monopoly supplier requires high levels of demand. Once a monopoly supplier is established, however, a potential market competitor is unable to achieve such low costs (as they are without the benefits of the economies of scale). Public transport conforms fairly broadly to these circumstances. Other providers of public mobility can potentially enter a monopolized market by having highly differentiated (i.e., specialized) services, seemingly countering the natural monopoly condition. But such rival services can only be competitive by offering specialized services within restricted markets, which leave the monopoly service largely unaffected (which is what we observe in practice).

Allowing corporations to have monopolistic positions in natural monopolies prompts state intervention to avoid the costs (interpreted broadly) rising from the abuse of market power. In free markets, abuses and other problems by firms in monopolistic positions include profiteering (through setting high prices), providing sub-standard or restricted services (to improve profitability), and a disinclination for innovation or improvement. A political concern for states is that corporate monopolies can exert significant influence over governments contrary to the greater public interest.

Associated with governments acting to protect the state's wider social and economic interests was the rationale of state ownership based on ensuring that the broader utility of public transport was optimized. Early public transport systems were characterized by financial and corporate instability of often multiple private operators within cities and towns, congestion on major routes, service interruptions, and bankruptcies being common. Partly this arose because of the aforementioned character of public transport and the economic benefits of achieving large-scale operations that are unavailable to smaller operators. Corporate failures also caused service failures, with costs to investors, households, and the wider economy. Over-servicing of popular routes and under-servicing of less popular routes created social inequities and further limited overall economic productivity. Harnessing the wider economic and social benefits of public transport meant recognizing that it could constitute a unitary system and be subject to organized development, as opposed to allowing it to function in free market conditions and be subject to the aforementioned market failures.

Finally, although it is an intangible factor, a recurrent theme in the activities of governments in the latter 19th and early 20th centuries is the use of contemporary technologies in the pursuit of progress (Mumford, 1961; Kumar, 1978). Although it does not directly concern us here, the acquisition by government of public utilities simultaneously marked the growth of the states' role, reach, and authority. Underpinning the arguments of governments assuming control of public transport is the belief that public transport could be conceived as comprising a single system and that such systems would be best able to deliver the impetus for economic growth and social development that constituted the then contemporary view of progress. In effect, governments were responding to an intersecting set of issues that arose because public transport systems constituted public goods. Governments had not only the unique capacity to finance the large-scale investments required, but also to incur the financial risks of such complex systems. Such a rationale was applied not only to public transport, but also to other utilities that also began as disaggregated, under-invested enterprises providing essential services to industrial societies. In summary, governments had a multiplicity of reasons for assuming control over public transport; we need to recognize this overall rationale as one founded in a particular historical context and that this was subject to future change, as described below.

4. Public Transport and the Turn to Markets

For a century or more, the impetus in industrialized nations was for state ownership of public transport and for creating state bureaucracies for managing these systems. This eventually gave way to a sea-change in the form of a turn to market-based approaches for providing public transport. Whether these changes have now reached their zenith is difficult to discern; some argue that this point has been passed (Docherty et al, 2004), whilst others see the process as continuing and evolving (Macário, et al, 2007). Although a complete account of the world's public transport management systems is not readily available, a number of reckonings underscore the wide variety of management systems in place, with great variety in the relationships between governments and firms. Further state-owned systems are being subject to neo-liberal reforms at the present time, but against this trend is also a smaller counter-movement of states reversing earlier market-based reforms and resuming control over public transport systems. As a result, the overall picture is one of great complexity and any claims that neo-liberal reform will eventually embrace all public transport systems would have to be regarded with considerable caution at this time. What may also occur is that new institutional forms will emerge that will defy ready identification as being neo-liberal or state-owned.

Such is the scale and intricacy of urban public transport systems, there are a multitude of ways in which private firms can be engaged. Even before the wider publicity given to the neo-liberal reforms in public transport, there had been a considerable degree of private sector activity in the form of contracted service operations. A number of urban systems regarded as providing best practice in terms of services offered have been using contracted private providers for operational services to state or city authorities.

Debate over the virtues of the market-based reforms has been lively with many contested claims over much measures as the cost of services, reliability and punctuality, influence on passenger numbers, levels of services, operational safety, staffing levels, innovation, investment levels, and many others. Objective generalizations are difficult to formulate on the basis of the experience of single jurisdictions because of the singular character of each system that reflect local conditions. Comparative analyses between systems can overcome the limitations of individual system studies but necessarily reflect the selection of the case studies chosen and are often limited by differences in data collection in different jurisdictions.

Of interest here is the evolution in the reasoning offered by governments for adopting neo-liberal reforms to state management of public transport, rather than the debate of the relative merits of these initiatives. Given the case for state management was so comprehensive in the early days of mechanized public transport and that very little has changed in the basic technologies involved (fixed rail modes, on-road modes, and ferries), there needs to be a significant shift in how public transport systems are perceived and how the role of governments are perceived in managing public utilities.

Neo-liberal reforms to public transport have been, for the large part, a functional disaggregation of state management. There has been no change to the basic problems that necessitated state ownership dealing with natural monopolies, the need to capture the benefits from planning and coordination across the system, and the requirement to deal with the costs that would arise from free market service provision. Where there are functions and issues derived from these market failures, we find that states have retained the full measure of the authority and control over the system. Accordingly, state authorities in systems that have undergone significant market-based reform typically retain control over planning for

future growth, setting service requirements (such as over routes, stops and stations, frequency of service, and punctuality), providing safety standards, and have some kind of influence over access and equity issues.² Problems of monopoly supply have been addressed through such means as requiring competitive contracting bids, fixed-term contracts, performance-based contracts, performance monitoring, and performance enforcement and sanctions. States set rules to govern interaction between service providers and often establish (or require to be established by the operators) specialist institutions for such tasks as integrated ticketing between providers/ modes/ services, marketing and publicity, service coordination, and customer relations. Within this reform there has considerable internal evolution, with learning from early failures and missteps, and the sharing of experiences (e.g., Macário, et al, 2007). New institutions are created by these changes, so that neo-liberal reform has not been a return to the free market conditions of the 19th century, but rather the (re-)entry of private firms into a framework in which the state retains a strong and central oversight role.

5. Managing Common Pool Resources

Most of the scholarship into CPR management regimes has been based on case studies and these have predominantly been of indigenous management of natural resources or of systems to harvest natural resources (such as irrigation systems or fisheries). Because the origins of most of these regimes pre-date the modern era they are communal or community-based regimes, rather than those of the state or firm. These studies of CPR regimes have often focused on the types of institutions used for resource management, although in many cases the institution involved revolves around sets of rules. CPR scholarship has been particularly interested in these rules and with establishing broader or common principles.

Ostrom's (1990) *Governing the Commons* is a classic of CPR scholarship. Based on a number of case studies of CPR regimes, Ostrom developed a set of eight design principles for successful CPR management that have been widely quoted. Understanding success in CPR management is relatively straightforward, in principle, as it is based on continued protection of the CPR so that the flow of benefits continues to its beneficiaries. These principles, in summary form, are:

1. Clear boundary definition
2. Rules used for governing the use of collective goods are matched to local circumstances
3. Rules are designed, at least partly, by the local appropriators
4. Monitoring (by individuals) accountable to local appropriators
5. Graduated sanctions applied for appropriators who break the rules
6. Conflict-resolution mechanisms that are quick and cheap
7. Minimal recognition of rights to organize, and
8. There are nested enterprises, with large organizational units built from smaller units.

There is, however, a range of other views as to the features of successful CPR regimes. This may be a result of CPR studies being based on a broad variety of case studies, with different lessons are being drawn from different sets of CPR practices.

A feature of CPR scholarship has been the growing recognition of CPRs in aspects of industrial societies, although studies of these modern CPR are far fewer than those applying to pre-modern CPR regimes. There is also an issue of the focus of these studies; because this scholarship has a strong anthropological component, the approach to institutions gives close attention to the rules of the CPR regime. As a consequence, the efforts to identify the

² Noting that the concept of equity is a difficult one, with varying interpretations in theory and practice, covering such aspects as offering equal opportunities, procedural equity in allocative decision-making, immediate equity and longer-term equity, and re-distribution to address existing inequities.

successful features of CPRs, such as Ostrom's aforementioned CPR design principles, have been largely based on pre-modern CPRs. While some of these success factors can be applied to the CPR in industrial societies, other factors seem not to be so well suited to this task. There are some immediate points of difference between pre-modern CPRs and CPRs in industrial societies. These differences include that pre-modern CPRs are essentially subject to local regimes, whereas contemporary CPRs range greatly in scale, up to the regional, national, and global. Pre-modern CPRs can be readily defined and it is possible to set clear boundaries, whereas contemporary many CPRs can be difficult to circumscribe. Pre-modern CPRs exhibit a close locational tie between a resource and a local community; in contemporary CPRs, there need not be any obvious geographical association between the CPR and those using it. From an institutional perspective, pre-modern societies employ rule sets within a closed social structure, whereas contemporary society has developed an array of complex institutions with such features as bureaucracies, systems of law, representative governments, and the like. Therefore, the task of identifying sets of success factors for CPR regimes that are common to pre-modern and contemporary times is extremely challenging.

6. Managing Public Transport as a Common Pool Resource

To return to the original aim of this paper, there are three CPR regime options: government, corporate, and community. In the overview of the development of public transport management, we described the general transition from a free market to state management. We offered that the motivation of governments was many-fold, but that from an economic perspective it was the CPR (and wider collective goods) aspects of public transport that required government intervention, including natural monopoly and positive and negative externalities. Under neo-liberalism, there was a turn to markets and public transport was re-shaped according to this agenda. For its advocates, neo-liberal reforms offered broader benefits to government (and therefore to the wider society) by providing cheaper and more efficient operations, better quality services, reduced industrial disputes. Critics of neo-liberalism have disputed these claims and arguing that the gain to corporations is essentially a loss to the wider community.

Given the problem of collective goods in public transport, how has it been possible to have the entry (and re-entry) of corporations into public transport? Knowing that governments intervened in public transport for specific reasons, the question arises as to how markets could now perform in ways that historically they were incapable of doing. There would seem to be two significant factors involved. Firstly, greater market intervention in public transport is justified because the state (generally) maintains its role for addressing the basic CPR problems after the re-entry of corporations into public transport; in other words, there is an accommodation reached between governments and firms in which the state continues to address the market failure problems. Secondly, the ways in which corporations are used is generally in those areas of activity within the public transport sector where there are not pressing market failure problems. Because of the complexity of public transport systems there are a great many activities and, although public transport as whole may be subject to system market failures, this does not preclude some activities as being capable of being efficiently and effectively supplied by governments or corporations. So, although neo-liberal reform involved a fundamental change in public transport, neither the character of market failure in public transport nor the role of government in addressing these market failures changed under neo-liberalism. In simple terms, privatization and corporatization was possible in areas where market-based approaches could be devised so as not to undermine the state role in protecting the broader community from market failures in public transport.

A popular interpretation of the interventions of the private sector into public transport is that these are based on the prospects for private sector profit, but this is a misleading formulation

as it confuses private sector rationales for those of the public sector. It also assumes that public transport is a free market; this is rarely the case in modern states and only really occurs in places where there is no effective government. Profit is certainly a major motivation for corporations, but it is not the explanation for neo-liberal reforms of public transport. As is argued here, the rationale for the intervention of the private sector into public transport is based on what markets can and cannot do, as interpreted by the broader public interest and as determined by governments (which evokes the role of political values). Neo-liberal reform is undertaken by governments and whose interests are not identical to corporations in this regard; rather, what neo-liberal reform makes apparent is a re-assessment of the respective roles for governments and corporations. Corporatisation, privatisation, and other neo-liberal initiatives are rationalized on grounds that assert the superiority of corporations over governments in specific tasks and are accepted by governments as constituting valid grounds for institutional reform.

For the most part, the arguments for neo-liberal reforms of the public sector concentrate on demonstrating how corporations can out-perform governments in providing certain goods and services. Notably, these rationales, rarely suggest that firms can address the basic market failures in public transport. Arguments advanced for neo-liberal interventions feature the following claims:

- Provision of services by private enterprise is of lower cost and greater economic efficiency than public provision, with potential benefits to consumers
- Reduced regulation of the sector will improve its performance (while retaining measures for safety, consumer welfare, environmental standards, and financial responsibility)
- Investment in the sector will be greater from the private sector than from the public sector (which has under-invested in public transport infrastructure and rolling stock)
- Public subsidies to the sector can be reduced when there is greater involvement of private enterprise
- Workplace and wage reform can be more readily achieved by private enterprise in dealing with unionized workforces than by governments
- Private sector providers will be more sensitive to consumer demands and preferences than public sector providers, and
- Key business decisions made by corporations in response to market signals will produce better economic outcomes than decisions by governments subject to political and other non-economic factors.

These reasons essentially consider public transport as being akin to a private good as, presumably, the continuing role of government in addressing public transport market failures is taken for granted.

Further, the story of neo-liberal reform cannot be understood entirely in terms of CPR-related issues, as neo-liberalism is a political philosophy and the decision to follow neo-liberal reform arises from a political contest of ideas. For example, the story of public transport privatization in Victoria, Australia is not only one of economic argument, but also of political interests, and in particular the differences between a conservative state government and the then highly-unionised public sector employees in the state-owned rail and tramways businesses (e.g., Stone, 2009).

Neo-liberalism has proved controversial and many of the claimed benefits of privatization have been criticized. Unless there are strong provisions to protect the existing workforce, privatization involves cost reductions and these invariably feature considerable reductions in the workforce. Sub-contracting is often common for activities such as cleaning vehicles and stations, vehicle maintenance, marketing, and public transport security, and often permanent positions become part-time and casual appointments. Loss of accountability to the broader public has been identified as a weakness of the transition from public to private ownership.

Breaking up public monopolies into smaller private corporations can produce inefficiencies and the erosion of system-wide services. Services with lesser profitability can be reduced and a corporation has incentives to reduce the costs associated with maintenance, cleaning, safety, environmental protection, and the like.

7. Community Transport in Australia

There are examples of community-owned transport in Australia within the group of services known as 'community transport'. Community transport, however, does not necessarily refer to community ownership, but is a generic description of a variety of local services separate from the public transport system and providing specialized services for target clients. Most of the services provided under this moniker are funded by state government to provide special mobility services for the aged and disabled as a necessary aspect of social welfare, as well as mobility for other disadvantaged groups, including indigenous peoples, ethnic minorities, and youth. At this time, there is no identification of community-owned public transport in Australia; indeed, there is no established definition on which to base such an inquiry. Based on available information of community transport, there are very few services that do not receive some form of government funding.

Many different institutions provide community transport under a variety of funding models, but the sector is dominated by clients supported by the national Health and Community Care program (HACC).³ These services have a variety of different forms; some provide basic mobility services, while others integrate mobility services with other types of community services. It is a sector with considerable volunteer support. Services are met by a variety of road-based vehicles, including taxis, dedicated services, and shuttle buses. A great variety exists in the types of organizations providing community public transport, such as not-for-profit groups and volunteer organizations. There is also quite a range in the scale of particular services, the number and extent of services offered, and the degree of professionalization. Cost structures and business models are also quite varied. Operations are typically defined by local government boundaries. As might be expected, the public policy support for community transport engages many policy areas and all three spheres of government; in addition to transport policy, those of health and aging (including women's health policy), education and training (youth policy), rural services, community safety, community building, infrastructure, and others, refer to community transport.

Consolidated data for these numerous local and state services is sparse, although the Australian Community Transport Association was formed in 2011 and there are state peak community organizations in Victoria, New South Wales (NSW), and Queensland. Community transport services focus on the needs of those with mobility disadvantages. State government programs appear to provide the bulk of support for community transport. In 2010/11, for example, the NSW state Department of Transport supported the HACC transport sub-program and Community Transport Program with \$51.4 million allocated to over 120 organizations (DoT, 2011). Since 2004, 580 projects have been supported by these funds (DoT, 2011). A further \$1.5 million was spent in 2010/11 on the Regional Transport Coordination program to support community transport (DoT, 2011). Each of the other states and territories administer community transport programs, albeit under a range of responsible agencies, amounting to a considerable national investment.

A 2010 survey of community transport in Victoria found a highly varied set of providers, services, and structures covering urban and rural areas (Ipsos-Eureka, 2011). Most are not

³ Home and Community Care (HACC) is a major joint Commonwealth and state/ territory government program that provides support for the aged and disabled to continue living in the community under a number of supported services, including transport, nursing, meals assistance, and domestic care. Funding from the governments in 2010/11 exceeded \$2b.

primarily transport providers, but transport is one of their functions; of 88 survey respondents providing community transport, 40 described themselves as health care providers. Annual expenditures varied greatly; most were between \$100,000 and \$500,000, with an average of around \$161,000. Staffing levels are low; 87% have between no staff and three staff; volunteer staff make a significant contribution as 80% of community transport providers used volunteer drivers, with higher volunteer contributions in rural areas. Cars make up most of the vehicle fleet, followed by small buses (up to 12 seats) and a smaller number of larger buses (up to 22 seats). Journey types vary greatly, with medical appointments, social outings, shopping, and leisure heading the list.

From a transport perspective, community transport suffers from a number of deficiencies as identified in the VicHealth study “Transport Link or Missing Link?” (VicHealth, 2003). Community transport has quite limited hours of operation, with services particularly sparse in the evenings and on weekends; the service territories are also often relatively small. Highest priorities are given to medical trips and social trip needs often go unmet. Vehicle fleets, as owned by government, community groups, schools, churches and others, are underutilized and there are few institutions to coordinate or optimize use of these resources. Additionally, the vehicles are underutilized in terms of often not fully using their carrying capacity. Providers of these services have focused on purchasing and operating vehicles and not on providing transport services, so that opportunities for using existing vehicle fleets have been lost. Information on available community transport is often not widely distributed amongst the potential service users and this is a major barrier to potential users. Promotion of greater community-based transport, as discussed below, must contend with these problems in order to maximize its contribution to the transport system.

8. Roles for Community-Owned Transport

Government and corporate ownership of public transport have proven their respective capacities to provide particular services. If community-owned public transport were to play a significant future role, what might that role be and what sorts of reasons might be used to build a case that this form of ownership should be considered? A rationale for community ownership could cite the following:

- A burgeoning of local services could significantly increase the capacity of public transport by concentrating on providing services in locations and times that currently have poor levels of service under conventional models of provision
- Increased local services could increase the efficacy of the public transport system by extending the effective service network, with further advantages gained by integrating and coordinating local and routine services (and reaping the benefits of greater service frequency and connectivity and potentially improving journey times and system reliability)
- Local communities can organize services to suit local circumstances and respond to the preferences of local consumers
- Voluntary staff are used extensively in community transport and which can offset other costs of operating community-owned services, and
- Community-owned systems would most likely operate under the same conditions of state government oversight that is used for current community transport, thereby ensuring that standards for safe operation, legal obligations, and the like, are satisfied.

Overall, greater use of public transport has a range of recognized social and environmental benefits as outlined above. In addition, two other potential advantages of community ownership are worth considering. Firstly, in the nearly seven decades since WWII, there has been only modest expansion of the fixed rail passenger services in the larger Australian cities and certainly urban planning and growth has been premised on mobility using private

motor cars. Under the prevailing economic and political circumstances, increasing public transport use in the immediate future can only be feasibly based on increasing bus services. Community-owned public transport offers an approach to significantly increase the provision of bus services in Australian settlements.

Secondly, community-owned services offer greater opportunities for innovation in institutional design, financing, and service provision than are available under government and corporate regimes. Such innovation is likely to give rise to an increased diversity of mobility services. These could take the form of cooperatives, trusts, collectives, and many other forms of collective organization. There could be forms of community group that are engaged in market activity. One example comes from Daniels and Mulley (2010) who considered several models for furthering community transport in NSW, including using a social enterprise model. A social enterprise is generally understood as being a community-based enterprise (but may be owned by employees or users of the service) that undertakes market-based activities and invests its profits into social and environmental causes. Accordingly, social enterprises include cooperatives, not-for-profit businesses, credit unions, community- or employee-owned businesses, charity businesses, and micro-finance institutions. Social enterprises have been the subject of considerable interest in recent years (see, e.g., Talbot et al, 2002).

Just as neo-liberalism has given rise to a range of new arrangements involving corporate ownership in public transport, the entry of community ownership regimes on a substantial scale would most likely resemble community transport and assume a wide variety of forms. Taking community transport as a template, a number of different models of current practice have been identified (VicHealth, 2003: 22—26):

- Traditional: Specialised transport services; Single use transport
- Emerging: Specialised transport services with public transport support; Brokerage and transport coordination; Brokerage and transport development
- Non-HACC: Youth bus service; Youth transport brokerage service; Car share; Event-focused transport; Door-to-door public transport service; Supported public transport use; Feeding into the public transport service
- Informal: Meeting point coordination; Special occasion bus hire; Car sharing; Hitchhiking
- Innovative: Bicycle/ moped provision; Pedal taxis.

No doubt a wider survey would yield more models for community transport. Not all these options would be necessarily compatible with community-ownership, but they give an indication of the opportunities of the ways to supplement the existing public transport services and address some of the service failings of these arrangements for those facing mobility disadvantages. Alternative models need not be restricted to welfare functions but could be applied to a range of niche markets and local opportunities.

9. Conclusions

If Docherty et al (2004) are correct and the phase of open-ended neo-liberal reform has largely come to a close, with many governments having moved into a reengagement of the state thereby giving rise to new forms of governance (which may be identified as the third way of governance), then new opportunities have arisen. And if we also accept that transport governance is fundamentally a response to the issues of CPR management, then logically there are opportunities for community ownership of public transport services or systems. In this way, the argument that supported neo-liberal reforms and the limits of state ownership can also support the case for assuming some of the activities of the state could also be replaced by community ownership. Examining Australia, it would appear that there has been comparatively limited community ownership of transport services and considerably less so if those services funded by state and local government are excluded.

As Ostom (1990) stated, the alternative to state and corporate ownership of CPRs is community ownership. Noticeably, a feature of public transport systems around the world is the relatively minor role played by community ownership of public transport; the contemporary institutional debate over transport has been a tug-of-war between state- and market-based regimes. There has been very little scholarship into this subject, so that explanations into this phenomenon offered here are speculative. Using Ockham's razor⁴, the simplest explanation for the absence of community-based public transport systems is that the high cost of public transport systems is beyond the means any self-organising group, especially when in competition with corporations and/or governments.⁵ Therefore, we would not expect to encounter community ownership of fixed rail systems, but in the case of small, local, motor vehicle systems on public roads, the relatively low costs of vehicles allows for community ownership (in the same ways it provides opportunities for privately-owned para-transit). Given the CPR problem and the intervention of governments resulting in the creation of single institutions to manage public transport systems, governments did not recognize the need for rival community-based institutions. In other words, once states assumed control of the public transport system, there was no obvious need from that perspective (i.e., of governments and bureaucracies) to search for other regime management approaches until the era of neo-liberal reform arrived. Through this period of reform, it appears that government ownership/ control was maintained over the core CPR issues.

Yet a form of community-based transport has also emerged, but not from the transport sector, per se, but from the health and social welfare sector. Contemporary community transport comprises largely a multitude of small government-supported transport services, but ones mixed with some community ownership and considerable voluntary labour. These activities have not undermined the role of the state nor is there any record that they have taken significant business away from established public transport corporations. Given the extent of unmet mobility needs and the case for mode-switching from private cars to public transport, there are both opportunities and an accepted public policy rationale for increased public transport use. In considering the challenges of sustainable transport, community ownership may offer a model for addressing a range of social and environmental issues for which current state and corporate models are struggling to resolve.

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⁴ A term used in the history and philosophy of science, meaning that the most likely explanation is that which is the most simple (and has the fewest assumptions); also known as 'the principle of parsimony'. Here, it is not suggested this approach offers the most likely explanation, but it is offered as one possible factor where it is recognized that many factors are involved.

⁵ Understanding the general absence of community collective institutions in Australia is a broad challenge beyond the scope of this paper; a proper evaluation would entail a comprehensive historical analysis dealing with cultural, legal, economic, and political factors, as clearly such an inquiry would need to address the complicated subject of civil society institutions in Australian society.

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