A Response to: The Transit Metropolis, by Robert Cervero

With The Transit Metropolis, Robert Cervero offers a neatly researched and readable look at public transit in twelve cities on five continents. Through analysis of detailed case studies, he develops a list of fifteen best practices for making transit work in any city, regardless of spatial form. This is a cookbook for other relatively-affluent, free-market cities around the world to develop or enhance their own transit systems through technological ingenuity, public policy, adaptability and social innovation. Cervero’s descriptive approach belies a belief in the power of transit to make the world a better place. It’s a compelling and highly useful story. But, it is not perfect.

Cervero defines a Transit Metropolis as a city which has “successfully meshed its transit services and cityscape in a contemporary urban context” (p 5). It’s simply a place where transit and the city coexist. The author sorts the subject cities into four classes of transit metropolis (p 5). In adaptive cities – Stockholm, Copenhagen, Tokyo and Singapore – transit decisions have guided dense and defined urban growth patterns. Adaptive transit – in Karlsruhe, Adelaide and Mexico City – refers to cities which have developed transit systems to serve existing spread-out development patterns. Zurich and Melbourne are strong core cities which exemplify the successful mix of CBDs and streetcars. The remaining class of city is a hybrid between adaptive cities and adaptive transit; Munich, Ottawa and Curitiba are the examples given. The cases are almost all affluent cities of the Global North. The Asian and South American examples – Tokyo, Singapore and Curitiba – are fairly rich, too. Mexico City stands slightly apart from the group, both in terms of the prevalence of poverty and the structure of its transit system. But this is not a book about third-world transportation.

Unfortunately, it is also not a book with a strong critical compass. The author does not go far enough in defining the larger social goals of transit and showing how different transit cities match up in terms of achieving those goals. I’m especially worried that he gives a “pass” to sprawl by cheer-leading for adaptive transit cities. The book is clear-headed about the challenges facing the expansion of transit, the most significant of which are likely suburbanization and cars. Conversely, the ill effects of cars are given as the most compelling reason for expanding transit. But in taking an overly-pragmatic and descriptive approach, Cervero misses important opportunities to enhance the social importance of his argument.

In this essay, I will point out some of these missed opportunities, focusing on issues of adaptability, auto-equalization, technology and equity.
The Author's Findings

Let me start with a brief restatement of the author's distilled lessons, which are also stated along with “myths debunked” in Chapter 16. Although not perfectly coherent between points, these are his take-away messages about what is important to the development of a transit metropolis.

- “Visioning”, “visionaries” and “pro-active planning and urban management” (basically good planning and leadership) have been important, especially in adaptive cities (p 403).
- “Efficient institutions and governance” (especially at the regional scale) are required for effective planning and coordination (p 404).
- “Viable centers” (p 405)
- “Balanced development and traffic flows” (p 406)
- “Competition and an entrepreneurial ethos” (p 406)
- “Small is beautiful”: incremental steps towards a larger vision matter and “low cost doesn’t necessarily mean low service” (p407).
- “Urban design: cities for people and places”: pedestrian and bike friendly places fit well with transit (p 407).
- “Auto-equalizers” and “giving transit priority”: make cars expensive and make transit faster and more comfortable (p 408).
- “Hierarchical and integrated transit”: having multiple levels and types of service is good, and fare integration is important (p 409).
- “Flexibility”: bus transit systems are more affordable, can be developed in stages, can “easily adjust to shifting patterns of travel”, and can go wherever the streets go and also meet high speed point-to-point needs (p 409).
- “Necessity is the mother of invention”: real world needs are what drive innovation, not the other way around (p 410).
- “Serendipity”: some outcomes are lucky, not planned (p 410).

Adaptability

To Cervero, a central feature of a successful modern transit metropolis is adaptability. He places emphasis here because the current reality of auto-centric sprawl in many cities dictates a pragmatic short-run approach if transit is to have any chance. He demonstrates that with adaptive transit, public transportation can indeed work in a decentralized region. If the desired end is merely the expansion of transit as a mode, then I applaud these solutions, but something is missing. The book celebrates the potential for sprawling cities like Houston to increase their use of transit (pg 434), but also states clearly that expansion of paratransit has led to increased
decentralization in Mexico City. On the one hand he decries the negative impacts of sprawl; on the other hand he implies that an increase in transit in sprawling cities is an inherently positive outcome.

If Cervero weren't purely context-driven, then would he say that the ideal transit outcome is the transit adaptive city? From New Town development in Copenhagen, Tokyo, and Stockholm to Copenhagen’s master-planned region on a rail-served finger pattern and planned corridor growth in Ottawa and Curitiba driven by investment in rapid bus lines, transit can have significant impacts on regional land use patterns. These cities - where long-range land use visions are the primary drivers of transit decisions - are likely more environmentally sustainable from a transportation perspective. Yes, it will be harder for cities with sprawling land use patterns to shift towards becoming transit adaptive, but the role of planning should be to work out a far-reaching, long-range vision tied to a set of principles.

A future of declining energy consumption and associated economic turmoil is practically undeniable. This enhances the case and opportunities for public transit. Newman, Beatley and Boyer understand this much better than Cervero in their Resilient Cities book. Other research suggests that increased mix and density, along with correlated improvements in transit mode share may provide only very small reductions in VMT (Ewing). Cervero does not contest this, but seems to argue that the other benefits of decreased auto use still make it worthwhile to push transit. I think he's right, but again it probably depends on what kind of transit.

The bottom line is that transit in many cities other than Cervero's transit metropolises hasn’t done well at attracting riders. In the short run, people may prefer cars and suburban living, and transit agencies had better get used to it, hence the overriding need to adapt or cede further ground to the car. Cervero provides a valuable blueprint. Transit must provide a high quality of service, and even emulate the private automobile (p 346). The “dreaded transfer” must be limited, and instead point-to-point service should be a goal. Deregulation and privatization deserve further consideration. Hopefully, the adaptive transit approach will indeed lead to increased transit ridership in other spread-out communities. This may expand opportunities to focus more on the transit-land use connection in subsequent phases of planning and development, to move towards minimizing (or even reversing) sprawl.

**Car Equalization**

The allure of the car is a dominant social force, but as Cervero points out, cars carry heavy social costs - congestion, pollution, CO2 and climate change, energy consumption, sprawl-related environmental concerns, and degradation of neighborhoods and social cohesion. There is an important equity issue at stake as well. Traffic accidents alone suck away 2-4% of the GDP of wealthy countries (p 48). The case for the transit metropolis is built on a goal of reducing these costs by making transit more attractive and inducing a mode shift. But, as the cases demonstrate, “auto equalization” is at least as more important.
Singapore does more to restrain the use of cars than any other city in the world. The results are impressive: an incredibly low 3% growth in automobile ownership per year, even with rising incomes (p 171). What’s more impressive is that even with extremely aggressive cost disincentives - high fees for registration, subscriptions to a quota system, import taxes, fee zones, road pricing and high fuel taxes - car ownership is still growing. What does this say about the allure of the car and the chances for decreasing auto use in the United States? At the very least, it means an uphill battle given consumer preferences and the massive acreage of roads and suburbs. This book is a subtle call to battle.

Cervero leaves out a discussion about the potential impacts of improvements in car technology. In the future, will electric cars alleviate some of underlying social costs of cars, and thus diminish the transit imperative? I don't think so. Electric cars stand to improve just one of the costs discussed above – urban air pollution. While not insignificant, electric cars don't have an answer to the rest of the compelling reasons to support car alternatives. Unfortunately, by not treating this issue, the author leaves his argument open to attack from those who say that changes in automobile technology will solve the problems.

**Delights and Perils of a Transit Technology Focus**

It is fun to get wrapped up in the details of transit technologies. Cervero’s technophile side comes through clearly in his fascinating descriptions of bus rapid transit systems in Adelaide, Curitiba, and Ottawa; “travelators” in Singapore carrying pedestrians from transit stations to high-rise office buildings in a 21st-century CBD (p 172); and S-Bahn hybrid trains in Karlsruhe with capabilities of switching from 750 volt DC current on city tramways to 15,000 volt AC on heavy rail freight tracks (p 348).

In commenting on adaptive transit in Mexico City, Cervero is hopeful about the possibility for “smart paratransit” to provide improvements in service through “vehicle location systems, on-board navigational aids, and real-time scheduling-routing optimization software” (pg 395). Adelaide's innovative and affordable track-guided busway system with full fare integration and flexible, transfer-minimizing service is inspiring. Cervero is “perplexed” why it has not been implemented elsewhere, and suggests that it may be because of a second-class image for buses (pg 371).

These questions are fascinating, but there is a danger with becoming too wrapped up in questions of appropriate technology. It leads too easily to an assumption that there is a technological solution to every transit problem - that the task in improving service is just to find the right technological fit. What is missing from this focus? If you build it will they come? How does a community go about building the political and regional governance structures for these investments? These are the important questions. The book also shows that a number of technological solutions more or less exist already and where they don't, “necessity is the mother of all invention” (p 407). This is probably even more true today, twelve years after the date of publication. Political will, policy, funding and strategic planning are the important determinants.
The big take-away here is not the clearly stated one. Technology solutions are not the most important factor in becoming a transit metropolis, as appealing as they may be for aspiring planners to dream about.

**Equity**

In the “debunking myths” section, the author declares that it is not true that “only poor people ride transit” (p 411). OK, but so what? Cervero misses an opportunity to go further in helping the reader understand the relationship between transit and equity. There is no analysis of how transit in different forms might either mitigate or exacerbate problems related to differential incomes. Again, this is primarily a descriptive study which focuses on rich cities. But the lessons are suspect if we do not understand how the interests of poor people are served by different transit systems. To his credit, Cervero does describe how over-investment in an auto-centric transportation system has led to “spatial mismatch” problems (pg 49), but how does transit alleviate this, specifically?

Transit is the only option for many low-income people. The Mexico City case demonstrates this. But there are underlying causes which transit cannot address in the absence of broader income redistribution. In Mexico City, rural in-migrants can live on the extreme fringe in abject poverty, but still reach the core (pg 392). Could transit in some cases perpetuate poverty by making life on the margin of the city possible?

In debunking the myth about only poor people riding transit, Cervero suggest that “poor quality services attract poor people” (p 411). Does it follow that if high-quality transit services are provided, poor people will be priced out of using them? I don’t think so, but again we aren't given the information to make a proper evaluation. Many cities which have made recent transit investments - including my hometown of Portland, Oregon – have chosen LRT (light rail transit) over bus rapid transit systems, despite considerable service and cost advantages for buses. According to the author, bus-oriented systems have 30% less upfront capital costs and lower operating costs than light rail. Buses also have the added benefit of being more flexible. I worry that there is something fundamentally elitist about these choices.

Cervero praises the efficiency and amenity of systems in Germany and Northern Europe. I have ridden those trains. I’ve ridden the trains in Tokyo. They are gorgeous, but I don't recall seeing a lot of poor people. Does it matter if rich white cities have high rates of transit usage? It probably does in terms of decreasing the use of cars since the rates of car ownership are so much higher there than in 3rd world countries. But this doesn't support equity goals outright.

Here's something that is a much more relevant topic in the US now than when the book was written. How will the location and transportation choices of largely suburban-dwelling baby-boomers change as they retire and age? If communities wish to support aging-in-place, they may take up Cervero's call to support deregulation of paratransit. Could a growth of this
service stemming from serving the needs of suburban baby-boomers have positive spillover effects to low-income communities?

The likelihood of alleviating some of the social inequality caused by a car-centric transportation system probably outweighs the concerns raised here about elitist transit. In the US, cars and sprawl have greatly contributed to a society which is segmented into race and class (pg 75), exacerbating the loss of identity and social isolation of impoverished inner-city dwellers who cannot reach jobs. High quality transit, as long as it serves low-income areas, is affordable and is coupled with affordable housing initiatives, holds potential to enhance equality by making more of the city's opportunities reachable.

Conclusion

The Transit Metropolis could have gone further in creating a vision for what cities must do - not just what they might do. But in spite of its shortcomings, it is a useful tool for planners, activists and leaders contemplating public transportation improvements in their communities. Changes are underway in the United States which will allow us to imagine more aggressive investments in transit. Federal transportation policy is moving away from being mostly focused on moving cars towards a focus on moving people (Vestal), and individual attitudes about environmental issues are shifting. We are greener.

One of the most surprising things about *Transit Metropolis* is how much has happened since it was written. For example, in Portland since 1998: the Pearl District – a high-rent TOD success story – grew up in Old Town; one additional MAX light rail line is complete and another will come online next year; an aggressive bike plan which aims to have 25% of work-trips made by bicycle in the City by 2030 has been approved; and Washington County commuter rail is up and running. How much has happened in other communities in the last twelve years? Perhaps it is time to consider a 2nd edition which incorporates this new information. A new edition would be further strengthened by incorporating more information on issues of equity and transit and by taking a stronger normative position on the relative success of different types of transit-oriented cities in achieving well-articulated goals.
Sources


