Torches and the T: The effect hosting the Olympics would have on Boston’s public transit

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Hosting the Olympic Games is a massive undertaking that puts all of a cities infrastructure to the test. There are a multitude of problems to consider, but the aspect this paper will focus on overall is transportation. Arguably the most important factor, a city needs to be able to efficiently transport spectators, athletes, and officials from event to event. As the city of Boston is in the early phases of putting together a committee to assess whether or not Boston should put in a bid for the Olympics, I will attempt to determine whether or not Boston's transportation infrastructure is up to the task, as well as consider what improvements should be made.

This paper will utilize many newspaper articles, striving for more reputable sources whenever possible, as events such as the London Olympics happened very recently, and academic studies are not yet in. It will also reference many official city reports, as they provide raw, unbiased data for analysis.

When making these assessments, there are a myriad of metrics we must look at. For instance, Boston has 7,236 miles of roads. We can compare this to Salt Lake City which only boasts around 1,300 miles of road (Njord, 1). While this would seem to indicate that Boston is better suited to hosting the Olympics, more may not always be better. Enrique Peñalosa, in Gary Hustwit's documentary Urbanized, points out that more roads *aren't* necessarily better. If more, larger roads exist, people will use them. This, in turn, increases traffic jams, so in order to cut down on traffic, fewer roads are actually better. Furthermore, Boston's roughly 7,000 miles of roads are squeezed into an area of just 48 square miles, whereas Salt Lake City's 1,300 miles of roads are spread out over 111 square miles. This would suggest that Boston is considerably more congested a city than Salt Lake City, which might not make it a terrific candidate for the olympics.

There are other factors to consider, however, such as population. Boston has a population of 617,594, to Salt Lake City's 186,440, but London's 8.2 million. Clearly, there's more to hosting the olympics than the size and density of a city.[1]

From a qualitative perspective, we can look at how Boston's transit systems have functioned under stress in the past—riding the D line on the day of a Red Sox game is unpleasant, and riding the green or red lines on Saint Patrick's day is next to impossible. It would be in the planner's best interest, as well as Boston's, to attempt to distribute Olympic arenas between all four T lines, as well as the commuter rail, so as not to put uneven stress on any one part of the system. And of course, people will still work during the Olympics, and such an event should not impede residents' existing commutes.

When we take a look at how London distributed their Olympic events (*fig. 1-3*)[2], something exciting happens. We see that, while most Olympic events are clustered in London, a fair number are outside the city, as far away as Glasgow, Scotland. We see, in *fig. 2a*, that London has done a pretty respectable job of spreading the events throughout the city, but *fig. 3* shows something even more exciting. That Boston and London are roughly the same size! When we take the locations of the Olympic events in London and superimpose them over a map of Boston, we see that the arenas are spread over an area roughly the same size as Boston!

Size doesn't tell us everything we want to know, however. Let's look at ridership of public transportation, because the vast majority of tourists are going to be using public transit to get to and from events. According to the American Public Transit Association's 2013 Ridership report, the MBTA sees an average weekday ridership of 1,286,800. In 2012, Transport for London (TfL) reported that public transit ridership was at 3.23 million. So

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[1] Statistics (miles of road and population) from Wolfram Alpha.

[2] Refer to maps in appendix.

while it would seem Londoners don't use the T quite as much as us Bostonians (they have a population thirteen times the size of ours, but a public transit ridership only two and a half times ours), during the Olympics, ridership of the London Underground saw a record 4.5 million riders, TfL reported. Other systems such as the Docklands Light Railway and the London Overground saw significant increases in ridership, too (a 70% increase to 500,000 passengers and a 27% increase to 2.86 million passengers, respectively). The same TfL report estimated an increase in foot traffic of 120,000 for the Olympic Marathon alone.

The question now, it seems, is whether or not Boston's infrastructure would be able to handle various increases of 25-50%. Andrew Zimbalist, in an article for the Atlantic, suggested that there is "is little evidence that tourism increases during the Games. Rather, Olympic tourists replace normal tourists who want to stay away to avoid the congestion and greater expense during the Games." While there may be some truth to this, there's no ignoring the increases that the Tube and other transit systems have seen during the Olympics. Atlanta's public transit system, MARTA, saw an average of 1.5 million riders[3], up from 489,000 during the 1996 Games (APTA, 1996). Oxford Economics predicted 881,000 visitors to London for at least one night of the Olympics, but also suggested that these visitors would be neutralized by 771,000 "regular" tourists who wouldn't come to London because of the Olympics (Wells, 2013). Perhaps there's some truth to Zimbalist's article, in which case it seems that the impact on the T may not actually be that drastic. If indeed the increase in tourism is minimal for the olympics, then it stands to reason that neither Logan Airport, nor the roads should see any unmanageable increases in traffic. Oxford Economics also predicted 268,000 fewer visitors to retail, theatres, and attractions because those visitors would instead be at Olympic events. Martine Ainsworth Wells points out in her article for The Guardian, however, that "[London] does not yet have data to verify if this transpired."

[3] According to MARTA's 2001 fact sheet. MARTA was also the first system to be designated as the "Official Provider of Transportation" for the Olympic Games. Not that there was another option.

While hosting the olympic games can generate $5-6 billion in revenue, nearly half that goes to the International Olympics Committee, and in 2012, the Olympics Games in London cost $20 billion (Zimbalist). Supposing the cost of hosting them in Boston came close to that (which I think, given my earlier analysis of city size, is a valid assumption), we would need to ensure that money spent on hosting the Olympics went to good use. Beijing spent $40 billion on hosting the Olympic Games, but a year afterwards, iconic structures such as the Bird's Nest are hardly used. A striking photograph from the New York Times shows an eerily vacant Olympic Boulevard (*fig. 4*) just a year after the Games. The same article in the Times points out, however, that "fiscal worries on the diminutive scale of Athens hardly register on Beijing's blotter" and that overbuilding is almost an economic strategy in Beijing. Boston, however, cannot afford such an expense if Olympic structures won't see long-term use. A solution I think would be of the most benefit to Boston is to utilize the plethora of auditoriums already built at the city's 53 colleges and universities. Obviously, the city would want to construct some number of structures such that we could have a proper Olympic Villiage and a stadium to host the opening and closing ceremonies, as well as the more popular Olympic events, but I think the city's money would be much better spent renovating existing college stadiums. There are many benefits to this strategy; the city saves money over constructing new stadiums, universities stand to profit from the use of their stadiums, and it shows off to the world just what makes Boston, Boston: an absurd number of higher education institutions per capita.

Back to the question at hand, though: what effect would all this have on Boston's transit systems? I think it's distinctly possible that the necessary improvements are well within our reach. Government Center station is set to close in September for a $90 million renovation sponsored largely by federal funding (the upgrades are to bring the station up to code so that it complies with the Americans with Disabilities act).

I think it's possible that a variety of subtle changes could make the MBTA considerably more efficient, not only for the purposes of hosting the Olympics, but for daily usability as well. Front door entrance/exit only on the Green Line is *not* a sustainable practice. Suppose passengers paid for their ride on the platform (this would mean the installation of ticket machines at all Green Line stops) and tickets would then be enforced on the T[4]. This strategy has proven effective on other public transit systems, such as Dublin's Luas[5]. Another strategy to consider is one Atlanta tried for the 1996 Olympics: Olympic Games ticket holders rode for free (Gillam and Crabb). Then again, Atlanta boasts one of the only public transit systems in the country with consistently falling ridership. Furthermore, for the duration of the Olympics, all Green Line trains would need to be at least two cars, and ideally three. The D line runs 3 car trains during rush hour, but we'd need all lines doing this, all the time. This would probably require purchasing new trains, something we're long overdue for. Hyundai Rotem recently delivered 75 new commuter rail trains, but the Green Line hasn't seen new trains since 1984 and the oldest trains on the T were made as long ago as 1969 (Rocheleau). Even prior to the olympics, London had a $30 billion plan in place for improvements to their transportation systems, which included various line extensions and capacity increases, including the Jubilee Line which would be the main line serving Olympics facilities.

London made a series of "behind the scenes" improvements, including a revved up bus system with hybrid busses to transport spectators. Improvements to bus systems are, generally speaking, substantially cheaper than improvements to rail systems for an obvious reason: busses run on roads that are already there. Improvements that could be made to

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[4] I know fining tourists isn't exactly an ideal business model for the Olympics either, but the Green Line really does need to be more efficient.

[5] Source: I lived in Dublin.

Boston's oft-overlooked busses are a clearer system of route numbers, more obvious bus stops, and a redesigned T map that integrates bus lines more so than the existing one does.

Insofar as a finding a central location for an Olympic park is concerned, London[6] solved this by choosing an industrial neighborhood, Stratford, as the location, and upon winning the bid, set about cleansing the soil and waterways, and instituting a "green" makeover on a larger, more visible scale (Cheap). I think Boston has two options for the location of an Olympic park. We could pick an out of the way neighborhood, like London did, such as East Boston, where construction would likely be cheaper, and renovate it beyond recognition (in a good way). We'd then have to re-route transit a little bit to make it easy for tourists and Bostonians alike to get there. Alternatively, we could revamp an area of central Boston, such as the Downtown Crossing district, which seems a more logical choice in that all four T lines go there, and tourist hotspots such as Boston Common, Government Center, and City Plaza are all within a mile of it. This would come at a far greater expense to the city, however, and likely result in a substantial displacement of business owners, none of whom would be too pleased at the prospect of being kicked out for the Olympics.

More subtle changes that ought to be considered in light of the Olympics are modified Commuter Rail schedules. If, like London, Olympic events took place outside Boston proper, we'd need to ensure spectators have ample time to reach the events, and that trains run at convenient times. This would likely require running more commuter trains on the weekend, as well as more seriously enforced "quiet cars" on weekdays so that commuters can continue their commutes uninterrupted as much as possible.

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[6] If it seems like I'm using London as the basis for what Boston should do, I am, because as noted, London is roughly the same size as Boston, and for practical purposes, has done a lot of innovating along the lines of what Boston needs to do. It also doesn't hurt that it's the most recent Olympic city, and is therefore freshest in the Internet's mind.

Conclusions

When I set out to write this paper, I thought there was no chance Boston would be able to host the Olympic Games. It sounded like a venture that, no matter how you go about it, costs a city billions that they won't make up any time soon. As we've seen, however, by examining a myriad of Olympic Games over the past 20 years, there's really no minimum (or, as proven by Beijing, maximum) amount of spending a city *must* put forth into hosting the Olympics. I thought our transportation infrastructure was dilapidated beyond the point of hosting the Olympics. It's certainly dilapidated, but cities like Atlanta have proven that cleverness and ingenuity go a lot further than one might think.

That's certainly not to say that all a city needs to host the Olympics is a smile and a can-do attitude. Hosting the Olympics *is* expensive. Cities lose money doing it. We might not get overwhelming infrastructural improvements; in fact, we probably won't.

From a purely quantitative perspective, Boston has the capacity to be an Olympic caliber city, but not as it is today. A lot of changes need to be made, and they aren't all obvious. It would require a team of skilled, innovative city planners and a planning committee dedicated to making decisions that are in the best interests of the city of Boston and not, as Zimbalist wrote often happens, committees "motivated and run by private business interests which individually stand to gain from the massive construction associated with the events."

Maybe I'm overly optimistic, but after my initial research, I'm convinced that Boston could pull off hosting the Olympic Games. Hosting the Olympics would pose a monumental challenge, but especially since the Marathon bombing, Boston has told itself repeatedly that it's a city that can overcome anything. Perhaps an Olympic bid is just what we need to prove that to the world.

Works Cited

The 2012 Olympic Games and Transport. London, UK: City of London Print.

Annear, Steve. "The Future of the Boston Olympics Heads to Beacon Hill." *Boston Magazine*, sec. Boston Daily: April 9 2013. Print.

Bronson, Terry L. *Public Transportation Ridership Report*. First Quarter 2013 ed. Washington, DC: American Public Transportation Association, 1996. Print.

Cheap, Jack. "An Engineer's Perspective: London's Preparation for the 2012 Olympic Games." *Illumin* XIV.II (2013) Print.

Dickens, Matthew. *Public Transportation Ridership Report*. First Quarter 2013 ed. Washington, DC: American Public Transportation Association, 2013. Print.

Everitt, Vernon. *Annual Report and Statement of Accounts*. London, UK: Transport for London, 2013. Print.
Fei-Yue Wang, et al. "Toward Intelligent Transportation Systems for the 2008 Olympics." *Intelligent Systems, IEEE* 18.6 (2003): 8-11. Print.

Gillam, Carey, and Cheryl Crabb. "MARTA Shifts to Olympic Task." *Atlanta Business Chronicle* June 24 1996. Print.

Urbanized. Dir. Hustwit, Gary. Prod. Gary Hustwit. Perf. Anonymous Swiss Dots, 2011.

Mayor Announces another Day of Record Ridership on Tube and DLR as Olympic Success Bring Crowds into the City. London, UK: Transport for London, 2012. Print.

Njord, John R. "An Olympic Event: Handling Transportation during the Olympics.(Brief Article)." *Public Roads* 65.4 (0101): 10. Print.

Rocheleau, Matt. "MBTA Takes Red Line Train Out of Service After Video shows it was Moving with Doors Open." *boston.com* April 3 2013. Print.

---. "MBTA: Government Center Station to Close for 2 Years Starting in Sept. 2013 for $90 Million Overhaul." *Boston Globe* November 29 2012. Print.

Salsberg, Bob. "Debt from Big Dig Hampers Mass. Transportation." *Boston Globe* April 12 2012. Print.

Simonds-Malamud, Jacob. "Cultural Influences on the Design of Public Transportation in Atlanta." (2013) Print.

Wells, Martine A. "London 2012 Olympics: What is London's Tourism Legacy? ." *The Telegraph* November 15 2012. Web. <http://www.telegraph.co.uk/travel/ultratravel/9680322/London-2012-Olympics-what-is-Londons-tourism-legacy.html>.

Wines, Michael. "After Summer Olympics, Empty Shells in Beijing ." *The New York Times* February 6 2010. Web.

Zhou, Yu, et al. "The Impact of Transportation Control Measures on Emission Reductions during the 2008 Olympic Games in Beijing, China." *Atmospheric Environment* 44.3 (2010): 285-93. Print.

Zimbalist, Andrew. "Why Hosting the Olympics is Bad for Cities." *The Atlantic*, sec. Cities: July 24 2012. Web. June 15, 2013 <http://www.theatlanticcities.com/politics/2012/07/why-hosting-olympics-bad-cities/2689/>.

Appendix: Maps

Fig. 1: Map showing the distribution of Olympic events throughout the United Kingdom[7]

[7] The map I created, compiled from the official London 2012 list of venues (http://www.london2012.com/spectators/venues/), can be viewed here: http://bit.ly/11Z1esw

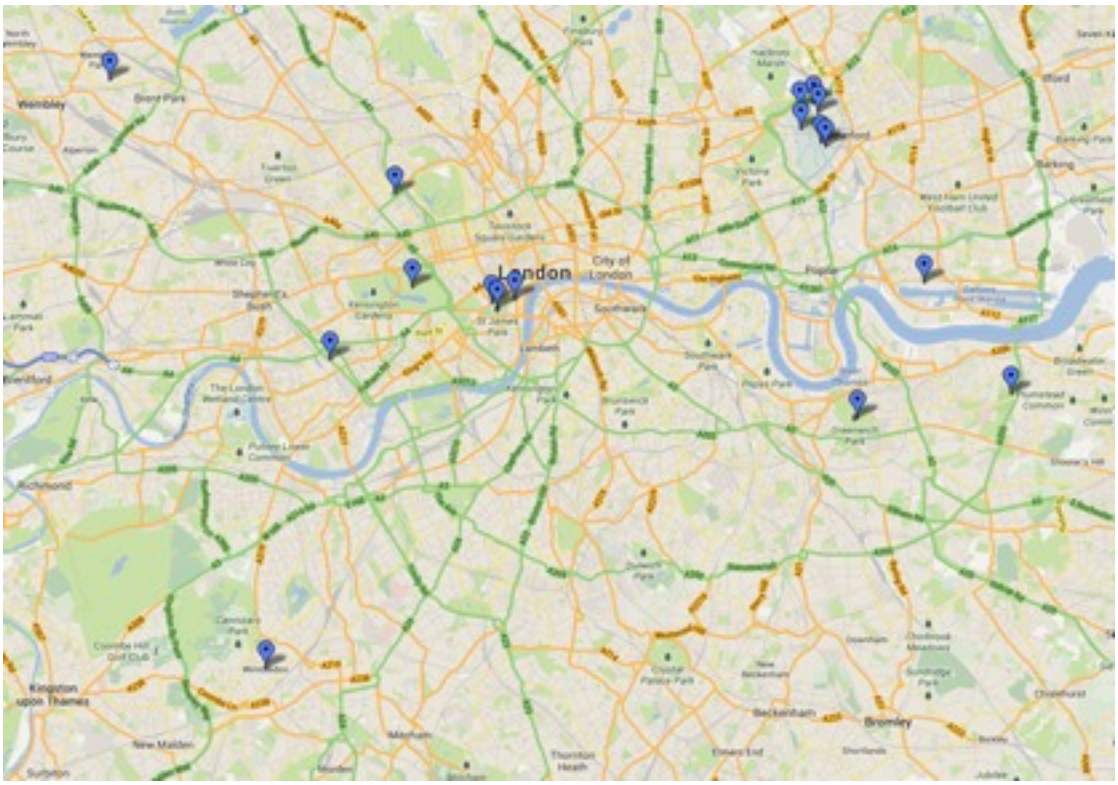

Fig. 2: Map showing the distribution of Olympic Events throughout London

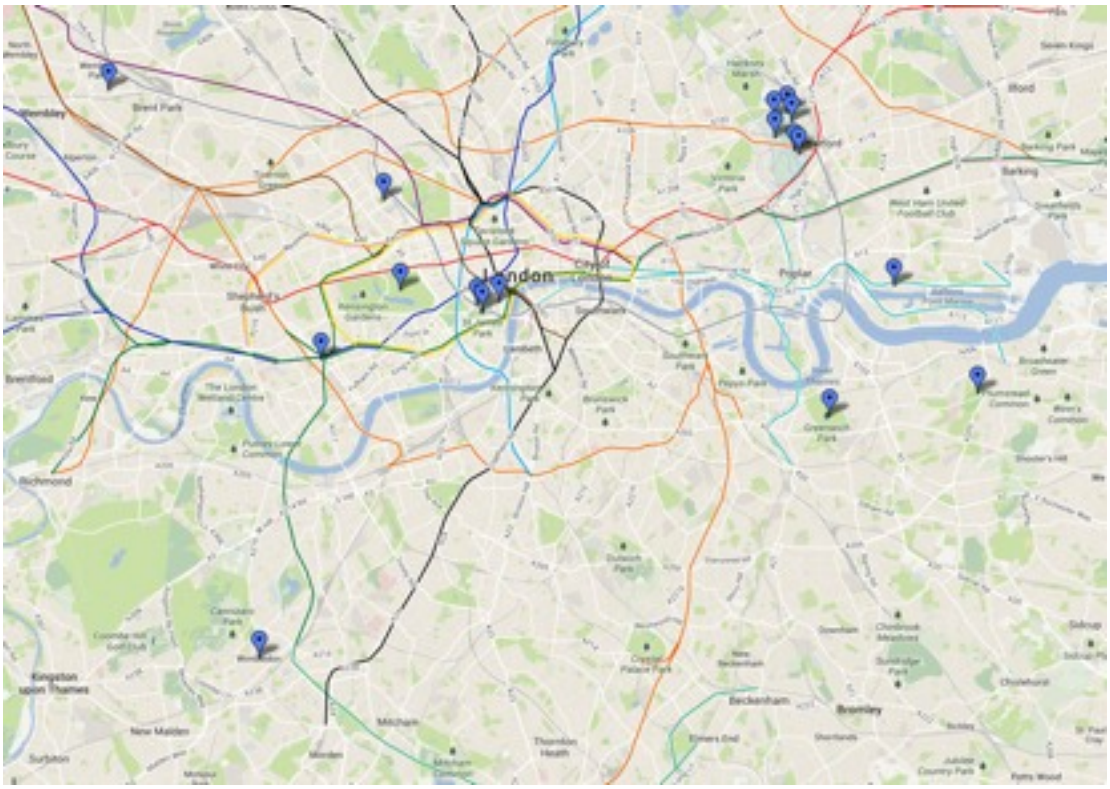

Fig. 2a: Map showing the distribution of Olympic Events throughout London, with transit overlaid

Fig. 3: Locations of Olympic Events in London, rotated 90° and superimposed on a map of Boston.

Appendix: Images

Fig. 4: "On Olympic Boulevard, a year after it was thronged with tourists, a lone guard patrolled last July." – ***New York Times***