Ideas for a critical transport planning: **a case studies from Rio de Janeiro.**

Ersilia Verlinghieri, ml10e2v@leeds.ac.uk
PhD student, Institute for Transport Studies, University of Leeds

For the reader: a disclaimer

I was meant to present my research that is focussed on Tools for Participation in Transport Planning, a deep analysis of current practices in participatory transport planning and of possible new insight on the importance of tools to make I happen. However, I started working on the elaboration of my fieldwork material and several ideas come into my mind. I apologize in advance for lacking in good referencing and maybe sounding like having discovered the warm water. I decided I should have studied geography too late in my life. This paper/thinking piece is thus a draft of ideas and reflection that I had as transport planner after confronting myself with the Brazilian social movements. I know its deep weaknesses in terms of formulation and argumentation and thus I welcome any suggestions on how to make them work better, with the idea to possibly make a paper out of it, more than a thesis chapter.

Introduction: A participatory planning theory for transport?

In the last decades sustainability has been one of the core concepts behind planning practices. This especially applies in the context of transportation, peculiarly concerned with environmental issues and emission reduction. Sustainability has become a desired outcome of the planning process and for new policies implementation (Minken et al., 2003), a parameter to measure the goodness of new technologies (Anastas & Zimmerman, 2003) and definitely a catchword (Gunder & Hillier, 2009).

For its nature of technical discipline transport studies have been mostly attached to the environment and economic pillar of sustainability (Elkington, 2001), where a typical positivist and scientific approach finds its most natural environment. Despite, indeed, transport studies often lack of an explicit reference to a clear planning theory stands [1], an 'ecologic planning' theory (Souza, 2001) it is clearly behind most of the current planning practices. This is based on the "binomial of modernization with ecological sustainability of the city" (ibid, 146), a deep belief on economic development as a winning choice and technocratic approach. According with Schwanen, Banister, & Anable (2011), this intrinsic positivist approach to planning in transport hesitates opening doors to new planning paradigms. Moreover, the spatial dimension of transport, that for its nature is cross-spatial and the believed technicality of the subject make it of course participatory planning practices of more difficult realization. However, participatory transport planning practices have started to emerge[2], even in still a minority position, as clear attempt to pay deeper attention to the social pillar of sustainability and to new planning theories. Together with that, a new consideration of behavioural change[3] is a fundamental step in recognising how the current social and environmental crises are always

1 few attempts to build an epistemology for transport studies are for example (Schwanen et al., 2011), (Banister, 2008))
2 Some examples are in ((Sagaris, 2013), (Jones, 2011))
3 Like for example in the projects Step Change (Isom, n.d.) and Disruption (Anon, n.d.)

connected (Bookchin, 1991). Despite that interesting turn, that however is far to be a 'communicative turn' for transport planning, a contamination with more critical planning theories of high relevance in urban planning[4], is lacking in transport. Nevertheless, transport represents a key area to understand the development of cities, the connection between environmental and social crisis, and the prevailing modern paradigm of mobility.

In this paper, some exploratory concepts are introduced, recognising how a step towards a more comprehensive transport planning theory should be taken. After the analysis of case studies from Rio de Janeiro, are highlighted possible starting concepts for grounding critical transport planning studies, that not only should aim at considering possible way forward current environmental and social crisis, but also pathways to better living conditions for all.

Elements of case studies

In this paragraph the case studies context will be introduced. The information have been collected during a 3 months fieldwork in Rio de Janeiro (June-July 2013, December 2013- January 2014), utilizing literature review, participant observation during public meetings and initiatives and semi-structured/open interviews to key members of the groups, activists, local planners and experts, administrators.

Context

Rio de Janeiro represents nowadays one of the most interesting cases in Latin America of coordinated globalized development and social inequalities. Trapped in a fast "tourism urbanization" (OBSERVATORIO DAS METROPOLES, 2013)(3) with a view to the 2014 FIFA world Cup and 2016 Olympics, the city is changing at an incredible speed, though without losing its exceptional levels of inequalities and injustice (Alencar, 2013). While, indeed, the western demand for easy investments is driving a huge amount of privatisations and renewal projects, the situation of people living in favelas, of Indios, of right to education and health system, or to better say to the city, are still far to ameliorate (UFRJ & IPPUR, 2012a; UFRJ & IPPUR, 2012b).

In all this context transportation plays a crucial role. Is it indeed not to be surprising that the social movement born in June 2013 claiming at a concrete right to the city, for a better health and education system, against privatizations and evictions, started with the increased bus ticket price, the 'straw that broke the camel's back'. Following that, a numerous series of protests going on still nowadays, merging together the decennial work of grassroots and activist in the city (Cava, 2013; Fernandes & De Freitas Roseno, 2013; Harvey et al., 2012; Nobre, 2013; Judensnaider et al., n.d.). In that context the claim for a better transport system is clear: while indeed the western myth of private car is dramatically shaping one of the world's famous traffic jams, the right to mobility is far to be guaranteed (Fonseca, 2012). This applies also to some of the recent investments for mobility, like the largely contested construction of cableways in favelas (see Figure 1: An allegoric vision for the cable-car to be built in the favela Rocinha) and the innumerable number of removals and evictions for building new infrastructures for the Olympics (IPPUR/UFRJ 2012b).

4 Among several others see (Sandercock & Lysiottis, 1998), (Brenner et al., 2011)

Public transport, privatised and focussed on road transport, is a service dramatically unable to support demand and is often substituted by informal transport modes. In that context the claims and request of the population, however, are not limited to a normalization of the situation: the current struggles for a better mobility date back to a long time before the 2013 movement, overlapping to the 'Movimento Passe Livre' (Harvey et al., 2012; Tarifa Zero, 2011) that probably in Latin America more than everywhere else has been able to propose an almost utopian approach to public transport.



Figure 1: An allegoric vision for the cable-car to be built in the favela Rocinha (Rio on Watch, 2013)

The case studies

One of the crucial claims of the current protests but also one of the major investments that the Council is undertaking in preparation for the Olympics, is the overall re-planning of the city mobility, implementing a new metro line (Line 4) together with several BRT lines: huge investments (50,37% of the investments for the world cup are devolved to urban mobility (UFRJ & IPPUR, 2012a)) that however does not seem to be able to answer to the crucial need of the population while taking more into account the mobility requirements of the Olympic family (Legroux, 2013). The existing Metro line already presents several problems of capacity and extension, related to the absence of a real network of lines and good investments (O metro que o Rio precisa, 2011).

In that context have been selected as a case studies the movements "O metro que o Rio Precisa" - MQRP ("The Tube that Rio needs") and "Quero Metro" - QM ("I want Metro"), the "Forum de Mobilidade" ("Mobility Forum") and the "Movimento Passe Livre" ("Movement for free fare") as more structured initiative among the several grassroots initiatives developed around the new Metro plan and mobility issues in the city.

The first group, MQRP, is a network of 30 Neighbourhood Associations of the areas to be served by the planned new Metro, supported by other groups, individuals and politicians. It developed a clear manifesto claiming that a new plan for the metro should look at the public interest, putting together the request of "1.5 million residents — increasingly concerned with the harmful legacy of a subway route that will serve principally the two or three weeks of the Olympic Games, but which will not serve the need for rapid and comfortable transport in the years after 2016" (O metro que o Rio precisa, 2011)(n.p.). It developed, with the support of technicians and experts a series of precise guidelines for a new metro line, the Line 4 taking inspiration from a never implemented public plan from the 90's. In 2010 the movement also took legal action

to promote this plan. Thanks to their political pressure, some modification on the new Metro line implementation have been introduced (the station Gavea has been built in 2 levels, allowing a future extension and the creation of the hoped whole line 4 -(Figure 2: The new metro plan (O metro que o Rio precisa, 2011))). Nowadays the movement continues to be intensely active in monitoring, organizing debates and supporting the protests, producing everyday new material to support requirements of the population. Their work has permitted high knowledge diffusion within the population and the correction of plans to be implemented.

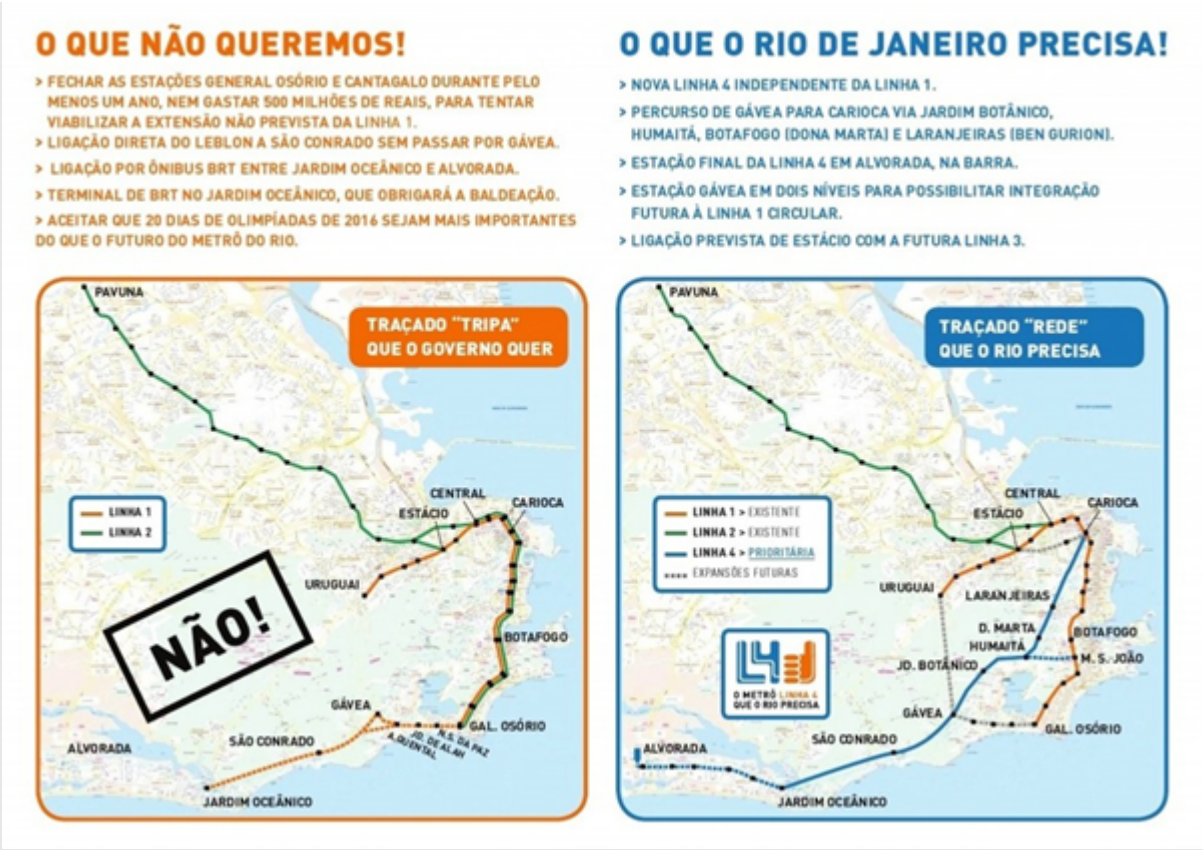


Figure 2: The new metro plan (O metro que o Rio precisa, 2011)

The second, QM, was also born as a work on the issues regarding the metro system: two university students started reflecting on possible solutions, highly supported by a blog. The project rapidly extended to include all means of public transport available and it is today a whole alternative mobility plan for the whole city, based on 12 metro lines, the rationalization and strengthening of the existing underdeveloped local train and strong cross-modal integration. The whole plan has been continuously debated with the population, using suggestions and data shared on the Internet and had a great repercussion on the local media and within the local authority.

Both these two groups are part of the Forum de Mobilidade, a forum of representatives of Residents' Associations and Federations, Professional Councils and Service Clubs, Unions, various institutions, NGOs and citizens that weekly discuss on mobility issues within the city. Here, in a weekly open space of discussion, technicians and not come together to discuss the current issues and the future of the city. Born

within the Engineering Club, one of its aims is to provide information and research instruments to community groups, social movements and in general disadvantaged groups in understanding mobility issues or in their fights for a better transport system (for example they collaborate with the inhabitants of the favela Rochinha in criticizing the new cableway construction – see Figure 1: An allegoric vision for the cable-car to be built in the favela Rocinha)

All the groups are clearly an attempt to interpret the role of the technician in an innovative and horizontal way, breaking some of the classical issues explored previously. Their work is highly relevant in reconfirming the necessity of an advocacy planner (Davidoff, 1965) able to support disadvantaged groups and of a methodology and language that could be horizontal and not segregated for an expertise public. Moreover, the ability of producing alternative plan as well as high detailed information material, the ability to engage lay people on highly technical debaters and the horizontality are an example of a planning practice distant from the usual, but highly focussed on making transport equity real.

Together with these groups in the city there is a variety of social movements directly involved in transport issues. They are mostly concerned with accessibility of public transport, central topic of their weekly assemblies and campaigning. Among the others in this study we consider the Movimento Passe Livre Rio de Janeiro that collaborates also with the Forum de Mobilidade. At the national level the 'movement for free fares' exists since 2005 and it is objective is a “really public transport service, free for the population and not privatized” (Tarifa Zero, 2011) (n.p.). In Rio de Janeiro it was born at the end of 2013, following the June protests. Differently from the previous groups, this is mostly a social movement, rooted in the streets and composed by young people. Despite that and the absence of technicians within the groups, it has been doing, in the years, an important work of theorization around the problem of accessibility and transport justice, recognising public transport as a fundamental right. In that context it has been able to produce important studies, based on case studies and best practices analysis, data collection and analysis and suggestions for new policies, among which it is crucial the idea of 'Tarifa Zero' (Free fare), a law project that is has been already enacted in same cities of Brazil.

Hypothesis for an analysis

The analysis of both the city context, the case studies and the wider social movement in Rio de Janeiro, opens a reflection on the role of transport planning and how it could be done differently, especially in the context of semi-periphery countries undergoing a deep development. Furthermore, given the general framework of transport studies highlighted in the introduction, it is believed that this analysis could give some food for thought also in the wider global context of transport planning practice.

In the practices and elaborations of the analysed groups the cross-spatial (or a-spatial) characterization of transport system is reinterpreted. In the following three sections, driving on the content explored in the case studies, three points will be made in that direction, specifically in the context of transport planning, using space as a cross metaphor.

Firstly transports are a place in movement and also temporary places of sociality, encounter and waiting: not limited to that, transports have an important social dimension that needs to be taken into account.

Secondly, as social movements in Brazil highlighted since June, they are also a political space, a space of inequality and of struggle (see for example the Ocupa Onibus experience). That is evident also considering the time and distance constraints and transport as a connector of spaces: the wider the time of connection, the more time spend on the transport-space, the lower level of wellbeing and social status. Thus the time of transportation has also become an important measure to understand the structure of the city and the internal relationships (see Figure 3: Visualization of favela removed in the last 5 years in Rio de Janeiro. Most of the evictions are connected to new transport infrastructures (Dodt, 2014))[5].

Thirdly the transport system itself shapes the physical space of the city, impacting on the lives of all citizens and binding the possible futures of the city itself: for these reasons it is crucially important to democratize the space of decisions about transport.

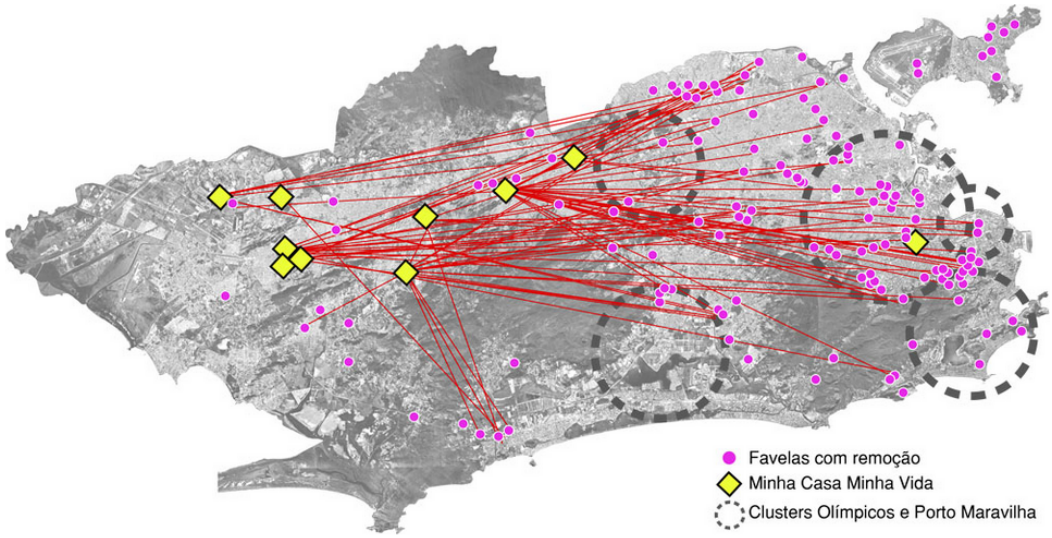


Figure 3: Visualization of favela removed in the last 5 years in Rio de Janeiro. Most of the evictions are connected to new transport infrastructures (Dodt, 2014)

The social dimension of transport: notes on methodology and multidisciplinarity

As stated in the introduction, sustainability has been playing a crucial role in setting the goals of transport planning in the last decades, driving especially on classical rational planning practices. Recognising that important role especially as grounding concept of the official plan for the city (Rio Prefeitura, 2013), all the analysed case studies highlighted the danger of a misuse of planning catchword. Moreover they developed a deep critique to the top-down approach undertaken within it into the city, in a context in which it is explicit the contradiction "between the romanticized discourse of social justice and environmental sustainability promoted by the authorities, and the hidden reality lived by citizens, one that is violent and segregating" (Labrie 2012, nd). This is specifically true in Brazil, but could be easily applied in the global context where-in the market competitiveness requirement among cities and technological fix strategies are not able to also

5 The phenomena of favelas is historically mostly connected with the reduction of the transportation time to the work-place.

comprehend a deep analysis of living conditions of all the population, often suffering consequences of gentrification (Slater, 2009; Smith, 1979). This fact confirms the importance of considering, together with the environmental protection duties and economic studies, the social side of sustainability, recognising the deep connection between social and environmental crisis and the potential role of transport itself.
All the groups analysed recognize indeed the crucial role of transport in shaping cities and its connection with equity issues. The MPL recognises how access to transport is the door to access to the right to the city (Harvey, 2008): it states that "the struggle for the Zero-Fare is fundamental to guarantee access to public transport for people. More than that, however, it is crucial because access to transport means better access to all other rights: to school, to hospital, to theatre. It unites therefore the set of social struggles "[6] (Tarifa Zero 2011).
Some scholars already started exploring in depth the social side of transport (Lucas, 2004), but most of these analysis lack to be included in the everyday transport choices and practices. The analysis of Schwanen et al., (2011) confirms that tendency and necessity specifically in the area of climate change mitigation studies in transport where, despite a high degree and social implication of the subject, a positivist epistemological framework, based mostly on "engineering, (neo-classical) economic and to a less degree psychology" (ibid, 1002). Mobility's studies and behavioural change are to a certain extend covering that gap, introducing new methods and epistemologies in transport studies, as well as Social Impact Assessment techniques (Vanclay & Bronstein, 1995), that constitute a potential answer to the classical Cost benefit Analysis. However, what often lacks is on a radical stand and a deeper idea of social change as a possible solution to crises, probably due the attempt to conserve the status of transport planners (Schwanen et al., 2011). In that direction a work has been initiated in order to understand the potentiality of participatory approaches to planning, with a particular attention to the use of different tools (from modelling to mapping and visualization), to understand to which extent changing the content of planning (participatory) and the epistemological approach to it (the tools) a more comprehensive outcome would be possible.

Transport as a space of struggle

As highlighted in the previous chapter and by (Schwanen et al., 2011), the disciplinary background of transport studies and the utilized tools tend to limit the variety of solution proposed to environmental crisis (and of course also to the social one). The analysis produced by the social movements in Rio de Janeiro of the transport social and environmental issues and inequalities gives a different outline, based on two core points: the recognition that transportation is a fundamental right to be guaranteed and it is a public good. For that reason, in contra-tendency with the western trend of privatizations, on the English model, transportation should not be under control of private companies. To support this point, several studies of the damaging effects of privatization on public transport have been produced by the groups and proposals for a different management[7]. If that particularly holds in a context of high corruption as the Brazilian case study, it is important to always question whether the privatization choice and the boost of private companies in

6 "A luta por Tarifa Zero é funda- mental para que as pessoas possam ter garantido seu acesso ao transporte público. Mais do que isso, porém, ela é fundamental porque o acesso ao transporte significa major acesso a todos os outros direitos: a escola, o hospital, o teatro. Ela une, portanto, o conjunto das lutas sociais "

7 See for example the material produced by MPL (Tarifa Zero, 2011)

transportation is the right departure point for a more equal transport system. To that it should be added the general critique produced within the case studies to development processes connected with new transport infrastructures building to processes of gentrification and violent evictions (UFRJ & IPPUR, 2012a; UFRJ & IPPUR, 2012b), and the critique to the capitalistic model of development assumed at the base of planning strategies for our cities. In that context, Paget-Seekins (2014) advances an interesting critiques to the new BRT tendency in Latin America and their connection with neoliberal model of development.

Transport and the space of decisions

If the current attempts of solving environmental and social issues remain often unable to deeply challenge the roots of problems, new pathways to utopia could maybe open new possibilities. Timms, Tight, & Watling, (2014) recognise the power that utopian thinking could have in framing new transport planning procedures: "if transport planning is considered to be an activity in which groups and individuals see themselves as having the potential for influencing the future, irrespective of whether they have 'top-down authorisation' to do so, then utopian thinking is likely to be highly potent" (ibid, 90). While that role has been in the past mostly covered by authoritarian construction of main trends of utopia, in a pure rationalist planning frame (exemplar is the conception of authority in Le Corbusier (Pinder, 2013)), it is important to recognise how the horizontal production of new utopias has an important discovery power. Analysing the case study it is clear how the various groups developed a highly utopian thinking, in the proposed solutions to current inequalities and production of visions for a better future city, confirming the crucial role of grassroots groups and movements in shaping futures for the city (Castells,1983). Exemplar are the alternative planning proposals for the city mobility and public transport policy analysed. In particular, the case of QM is a great example of horizontal planning outside any institutional authority but able to deeply take into account feasibility and consensus among the society. If on one hand it is theorized that only in front of a clear realizable objective participation make sense (Davis et al. 2013), on the other hand this case study demonstrated how sometimes the willingness for change makes people elaborating new proposals even in total absence of institutional spaces for participation and that lay people are often able to look at the complexity of transport planning issues in deep and meaningful way, building valid and accountable proposals. These are, to conclude, only some of the several example of 'grassroots planning' practices (de Souza, 2006) that cannot be ignored in the construction of a better city.

Conclusions

In this paper, trough the analysis of four interconnected case studies, it has been possible to introduce new crucial element that should dialogue with current transport planning practices, preparing the terrain of a more comprehensive critical transport planning theory. In particular it has been explored the crucial role of social science in analysing transport related issues and the importance of multidisciplinarity in doing so. The importance of a disconnection from business centred research it is important to build transport equity paths, analysing possibilities also outside the current economic and political domain. In that utopian thinking plays

a core role, opening also a deep reflection on the role and responsibility of transport planners and technicians, the instruments and tools that they use and the way the account for other actors in the society.

References

Alencar, C. 2013. *A rua, a nação e o sonho : uma reflexão para as novas gerações.* Rio de Janeiro: Mardeideias.

Anastas, P.T. and Zimmerman, J.B. 2003. Through the 12 principles of green engineering. *Environmental Science and Technology*. (March 1).

Anon Disruption Project | Unlocking low carbon travel. Available from: http://www.disruptionproject.net/ [Accessed March 19, 2014].

Banister, D. 2008. The sustainable mobility paradigm. *Transport Policy* [online]. **15**(2),pp.73–80. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0967070X07000820 [Accessed January 23, 2014].

Bookchin, M. 1991. The ecology of freedom: The emergence and dissolution of hierarchy (Rev. ed.). *Montreal: Black Rose*.

Brenner, N. et al. 2011. *Cities for people, not for profit: critical urban theory and the right to the city*. Routledge.

Castells, M. 1983. *The city and the grassroots: a cross-cultural theory of urban social movements*. Univ of California Press.

Cava, B. 2013. *A multidão foi ao deserto: as manifestações no Brasil em 2013 (jun-out).* Pinheiros: Annabluma Editora.

Davidoff, P. 1965. Advocacy and Pluralism in Planning. *Journal of the American Institute of Planners* [online]. **31**(4),pp.331–338. Available from: http://www.tandfonline.com/doi/abs/10.1080/01944366508978187 [Accessed March 19, 2014].

Davis, D., Meyer, J., Wright, M. & and Zykofsky, P. 2013. Participation Tools For Better Community Planning [online]. [Accessed 15 Feb 2014]. Available from: http://www.lgc.org/participation_tools

Dodt, S. 2014. Remoções: Ética ou cosmética? *contaRiocontaRio* [online]. Available from: http://contario.net/remocoes-etica-ou-cosmetica/ [Accessed March 19, 2014].

Elkington, J. 2001. The triple bottom line for 21st century business. *The Earthscan Reader in Business and Sustainable Development, London, Sterling*,pp.20–43.

Fernandes, E. and De Freitas Roseno, R. 2013. *Protesta Brasil*. São Paulo: Prata Editora.

Fonseca, A. 2012. *Mobilidade Urbana RJ.* [online]. Available from: http://www.youtube.com/watch?feature=player_embedded&v=8y0IrNuApRI.

Gunder, M. and Hillier, J. 2009. *Planning in ten words or less: A Lacanian entanglement with spatial planning*. Ashgate Publishing, Ltd.

Harvey, D. et al. 2012. *Occupy: movimento de protesto que tomaram as ruas.* São Paulo: Boitempo Editorial.

Harvey, D. 2008. THE RIGHT TO THE CITY. ,pp.1–16.

Isom, H. A step-change in sustainable urban transport. Available from: http://www.leeds.ac.uk/news/article/1272/a_stepchange_in_sustainable_urban_transport [Accessed March 19, 2014].

Jones, P. 2011. Developing and applying interactive visual tools to enhance stakeholder engagement in accessibility planning for mobility disadvantaged groups. *Research in Transportation Business & Management* [online]. **2**,pp.29–41. Available from: http://linkinghub.elsevier.com/retrieve/pii/S2210539511000320 [Accessed March 19, 2014].

Judensnaider, E. et al. *Vinte Centavos : a Luta Contra o Aumento.* São Paulo: Veneta.

Legroux, J. 2013. Mega-events in Rio de Janeiro…And the winners are? Perceptions of the impacts of transport policies on socio-spatial justice to reveal mega-events contradictions. *In*: 13th WCTR, July 2013, Rio de Janeiro.

Lucas, K. 2004. *Running on empty: transport, social exclusion and environmental justice*. The Policy Press.

Minken, H. et al. 2003. *Prospects: A Methodological Guidebook*. Wien.

Nobre, M. 2013. *Choque de democracia: Razões da revolta.* São Paulo: Companhia das Letras.

O metro que o Rio precisa 2011. Manifesto pelo melhor traçado da Linha 4 do Metrô Rio. Available from: http://www.metrolinha4queorioprecisa.com.br/o-movimento/ [Accessed March 19, 2014].

OBSERVATORIO DAS METROPOLES 2013. Projeto. Available from: http://web.observatoriodasmetropoles.net/projetomegaeventos/index.php?option=com_content&view=article&id=101&Itemid=332 [Accessed March 19, 2014].

Paget-Seekins, L. 2014. Social and political implication of BRT as a Neoliberal contradiction.

Pinder, D. 2013. *Visions of the City: Utopianism, Power and Politics in Twentieth Century Urbanism* [online]. Taylor & Francis. Available from: http://books.google.co.uk/books?id=EFcVAgAAQBAJ.

Rio on Watch 2013. Rocinha Says No to Cable Car. Available from: http://rioonwatch.org/?p=10652 [Accessed March 19, 2014].

Rio Prefeitura 2013. *Plano Estrategico da Prefeitura do Rio de Janeiro 2013-2016* [online]. Available from: http://www.rio.rj.gov.br/dlstatic/10112/2116763/4104304/planejamento_estrategico_1316.pdf.

Sagaris, L. 2013. Citizens , Complexity and the City Lessons from citizen participation in urban (transport) planning in Santiago Chile , 1997-2012. . (June).

Sandercock, L. and Lysiottis, P. 1998. Towards cosmopolis: Planning for multicultural cities.

Schwanen, T. et al. 2011. Scientific research about climate change mitigation in transport: A critical review. *Transportation Research Part A: Policy and Practice* [online]. **45**(10),pp.993–1006. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0965856411001388 [Accessed February 19, 2014].

Slater, T. 2009. Missing Marcuse: On gentrification and displacement. *City* [online]. **13**(2-3),pp.292–311. Available from: http://www.tandfonline.com/doi/abs/10.1080/13604810902982250 [Accessed March 19, 2014].

Smith, N. 1979. Toward a Theory of Gentrification A Back to the City Movement by Capital, not People. *Journal of the American Planning Association* [online]. **45**(4),pp.538–548. Available from: http://www.tandfonline.com/doi/abs/10.1080/01944367908977002 [Accessed March 19, 2014].

Souza, M.J.L. 2001. *Mudar a cidade: uma introdução crítica ao planejamento e à gestão urbanos*. Bertrand Brasil.

De Souza, M.L. 2006. Social movements as "critical urban planning" agents. *City* [online]. **10**(3),pp.327–342. Available from: http://www.tandfonline.com/doi/abs/10.1080/13604810600982347 [Accessed March 19, 2014].

Tarifa Zero 2011. Sao Paulo sem catracas. Cartilha da campanha tarifa Zero. Available from: http://www.tarifazerosp.net/2011/08/24/cartilha-da-campanha/ [Accessed March 19, 2014].

Timms, P. et al. 2014. Imagineering mobility: constructing utopias for future urban transport. *Environment and Planning A* [online]. **46**(1),pp.78–93. Available from: http://www.envplan.com/abstract.cgi?id=a45669 [Accessed March 14, 2014].

UFRJ and IPPUR 2012a. *Projeto Metropoliza çã o e Megaeventos : os impactos da Copa do Mundo 2014 e das Olimp í adas 2016 Relat ó rio Parcial Nacional – Abril de 2012* [online]. Rio de Janeiro. Available from: http://www.observatoriodasmetropoles.net/download/Relat_Nacional2012.pdf.

UFRJ and IPPUR 2012b. *Projeto Metropoliza çã o e Megaeventos : os impactos da Copa do Mundo 2014 e das Olimp í adas 2016 Relat ó rio Parcial Rio de Janeiro – Abril de 2012 Introdu çã o* [online]. Rio de Janeiro. Available from: http://www.observatoriodasmetropoles.net/download/Relat_RJ 2012.pdf.

Vanclay, F. and Bronstein, D.A. 1995. *Environmental and social impact assessment.* John Wiley & Sons.