

Cycling Policy and Practice in Mega-cities Rio de Janeiro and Cairo: A Case Study

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Abstract

This paper draws on current mobility patterns and planning policies in Rio de Janeiro/Brazil and Cairo/Egypt, two of the biggest metropolitan areas in the world. The objective is to show that, within certain social groups or regions, cycling is used in surprisingly high numbers as a form of transport, though this fact is being neglected or under-represented in traditional, car-oriented governmental city and transport planning. In order to gain further insight into the specific local context of the two mega cities, the paper addresses the different economic and climatic conditions, as well as social, cultural and gender norms that strongly determine cycling policies or day-to-day practices, and sometimes present clear limits to bicycle usage.

Two best-practices can give encouraging examples of how to preserve or expand high indices of cycling in similar places, by joining the potential and skills of both, civil society organizations and municipal governments. At the end, the papers concludes that the bicycle is a powerful instrument for enhancing socially and environmentally sustainable mobility, which can allow participation in social and economic life, help preserving natural assets, and promote gender empowerment at the same time.

Keywords: *Cycling, Brazil, Egypt, Sustainability, Civil Society*

1 Cycling and sustainable development

1.1 Introduction

Around the globe, countless mega-cities are afflicted by the systemic deficiency of their transportation systems. For decades, they have been funding

and licensing the rise of motorized mobility. As a result, their citizens are suffering from the effects of oil price shocks, congestions, poor environmental quality, limited mobility and deteriorating public spaces. In addition, motorized mobility and public transport are too expensive for large parts of their population, leading to social exclusion. However, Horton et al. (2007) show that in the context of post-colonial societies, bicycles “are being reworked into symbols of a post-modern resistance” and “a means of more efficient, egalitarian and sustainable urban mobility”, opposing the blindly adopted “ultra-modernity” which had shaped so clearly traffic and urban planning policies during the last decades. This paper will bring forward information on current cycling policies in Rio de Janeiro and Cairo and examine the actual bicycle usage and its potentials, focusing especially on the role of civil society movements.

1.2 Benefits of cycling

The bicycle offers a chance to improve the above mentioned situation, as the benefits of cycling are numerous (Xavier, 2009 and UCF, 2003). Benefits comprise health and environmental issues as well as transport and the economic improvement of private and public households. They can be located at both, the individual and the super-individual level.

Cycling has positive effects on the heart, muscles, bones, blood pressure, digestion, lung function and the reduction of cancer and diabetes risks (Friel, 1998). Reducing car emissions and noise levels by using bicycles limits environmental damages, cuts down the social costs of respiratory diseases, stress cases and other serious psychological problems (McDoom, 2004 and HEAL, 2009) and is an effective way how to ameliorate air quality, cut down CO₂-emissions and reduce energy consumption for mobility. Cycling is an effective way of prevention, as it reduces spending on health care and climate change mitigation or emission trading and is beneficial to society (Sælensminde, 2003).

One-tracked bicycles can weave through the traffic jam and park in any place. On distances up to 8 km within urban settings (Dekoster and Schollaert, 2000 give an example for the European context), bicycles easily compete with other means of transport, including cars, busses and trains. Choosing bicycles instead of cars lowers the number of large motorized vehicles on the streets, speeds up the traffic flow and consumes less land for roads or parking facilities. In addition, this allows the design of human-centered public spaces, essential for safe urban life and social interaction (Selle, n.d.). As cycling does not oppress the mobility and quality of life of others, contrary to motorized mobility, it is ultimately more democratic than other means of transport. Cyclists are not vulnerable to rising oil or ticket prices and spend much less on the purchase and maintenance of a bicycle than for motorized mobility. This enhances the socio-economic independence and mobility of each cyclist. Ultimately, building, enlarging and maintaining infrastructure for cyclists only requires a small percentage of what public funds spend on infrastructure for motorized traffic.

In short, it can be concluded that “cycling resonates with the themes of autonomy and self-sufficiency and with environmental, social and economic sustainability, that are the hallmarks of alternative development models”, as Horton et al. (2007) put it.

1.3 Pre-requisites and the importance of the local context for cycling

As already shown, riding the bicycle has considerable benefits for both, the cyclists and the community, but it's everyday usage and future potentials can only be assessed and understood within the local context. Cycling occurs within a specific urban fabric, certain economic, environmental and climatic conditions and varying social, cultural and gender norms regarding exercise, body, health or the understanding of physical contact and safety. Thus, the pre-requisites for cycling comprise not only favorable infrastructures or climatic conditions, but also - for instance - safe streets and respectful behavior in public spaces in general. Taking these factors plus cycling policies and the role of key actors within the cycling scene into account, a realistic picture of cycling conditions can be made. Thus, the following case-studies will assess the mentioned qualities in the named order.

2 Cycling policy and practice in Rio de Janeiro

2.1 Overview

Rio de Janeiro, counting approximately 6,190,000 inhabitants (IBGE, 2009), is the second biggest city in Brazil. It occupies largely 1,200 km². As of 2007, the metropolitan Region of Rio de Janeiro consisted of 20 municipalities and was home to ca. 11,300,000 people (IBGE, 2007). The metropolitan region extends over an area of 5,600 km². Rio de Janeiro is the capital of the homonymous state and was capital of Brazil between 1763 and 1960.

2.2 Configuration and Urban Fabric

The city is located in the south-eastern part of the Atlantic coastline. From one edge to the other, the city measures ca. 50 km at the maximum, and 15 km at the minimum. The urban structure is widely defined by the city's location between the Atlantic Ocean, fresh-water lagoons, steep hills and dense woods. Most of the urban land - with the exception of some of the many Favelas - lies in predominately plain areas, only a little above sea level.

Streets are mostly one-way. Traditional city blocks are irregular and frequently contain cul-de-sacs, making long detours necessary. Recent developments, such as gated-communities in Barra da Tijuca, minimize the permeability of the urban structure even further, as their blocks run for more than 500 meters, with no public streets crossing them. Street diameters range from 80 meters in Avenida das Américas, again in Barra da Tijuca, to 15 meters in average streets or less than that, as for example in the historic old-town in Centro

and most of the Favelas. In many cases, sidewalks are reduced to a minimum (of 50 cm and less) or even inexistent. Lightning is provided throughout the city (PRJ, 2008a), but blackouts are common. Most of streets are paved; sanitation covers 97 % of the city (PRJ, 2008b). In case of heavy rainfalls, in many parts of the city streets tend to inundate.

2.3 Economic conditions

Right after São Paulo, Rio de Janeiro concentrates most wealth amongst Brazilian cities, with an annual GDP of 128 billion Reais (R\$) in 2006 (IBGE, 2008). Thus, the city held 5.4 % of the Brazilian GDP. The annual GDP per capita reached R\$20,851. On a Dollar-basis, the city ranked 30 amongst global economic centers in 2005, when its annual GDP reached 141 billion US-Dollars (City Mayors, 2007). Yet, income and wealth distribution is highly distorted and poverty is a widespread phenomenon. In 2006, around 3.2 % of the population of Rio de Janeiro lived with less than a fourth of a minimum wage, which at that time was about R\$350 per month (RCV, 2010). Another 10.7 % had to make its living from half of the minimum wage. One out of ten amongst the economically active population was unemployed (RCV, 2010).

Concerning per capita income, neighborhoods showing high bicycle incidences such as Realengo, Campo Grande and Bangu ranked between 19 and 22 amongst the 31 administrative regions of Rio de Janeiro in 2000 (PRJ, 2002). In absolute figures, their per capita income ranged from R\$340 to R\$290. Compared to the richest part of the city, such as Lagoa (R\$2,230 per capita) or Barra da Tijuca (R\$1,690 per capita), the discrepancy is evident. Yet, Santa Cruz - the neighborhood with the highest share of bicycle traffic in Rio de Janeiro - ranked 27, with the monthly per capita income reaching only R\$210 in 2000. Estimates show, that due to poverty, approximately 37 million Brazilians have been excluded from motorized mobility (be it individual or collective) in 2006 (FNE, 2009). Still, between 2002 and 2009, significant progress in poverty reduction was registered, as 1.4 million people stepped above the poverty level (half of a minimum wage) in Rio de Janeiro's metropolitan region (Agência Brasil, 2009). Yet, inequality persisted on a high level.

2.4 Environmental and climatic conditions

The city of Rio de Janeiro lies within the tropical climate, which is characterized by constantly warm temperatures, with averages ranging from minimum 18 degrees in July to maximum 30 degrees in February. In the densely built-up areas, far from woods or the sea, heat islands occur frequently and maximum temperatures reach more than 40 degrees. Due to high humidity ranging from 85 to 70 %, temperatures are sometimes experienced higher. Average precipitation ranges from 50 mm in August to 170 mm in December. Rainfalls tend to be short and intense, occurring mostly at evening hours and during nighttimes. There are more than 100 rainy days per year. In most parts of

the city air quality is acceptable, even though some of the inland neighborhoods are suffering from pollution (RCV, 2010).

2.5 Social, cultural and gender norms

There is little research on what people in Rio de Janeiro think of bicycle traffic. If asked, what makes them abstain from riding a bicycle, safety issues and lack of parking facilities are frequent answers (PRJ, 2005). Cycling is considered healthy, thus it matches well with the widespread preoccupation with the body. In theory, there is no discrimination against gender in cycling. Though, surveys show that in reality, the portion of female cyclists is little (see also 2.7). On the streets, cyclists are often disrespected by the drivers of motorized vehicles, as it also occurs with pedestrians. On the other hand, it is equally common that cyclists ignore stop signs or red lights. Sometimes, cyclists suffer from stigmas such as being poor or inferior.

One of the results of the car- and petroleum-based approach adopted in transportation and urban planning is that not only planning authorities, but the cultural norm as a whole favors motorized vehicles and their drivers. This leads to a surprisingly uncontested distributional injustice in terms of mobility and its (positive and negative) social costs. Yet, due to the work of research institutions or activists, a largely favorable press, and influence from Europe and the US, cycling is again getting common and being referred to as something genuinely “carioca” - that means being part of Rio de Janeiro. Thereby, cycling is becoming actively integrated into the regional identity as an ecological, economic and democratic alternative to a highly deficient and unjust transportation system.

2.6 Urban Planning and Cycling Policies

Rio de Janeiro is recognized as being one of the most bicycle-friendly cities throughout Latin America. The municipality installed a local planning committee for bicycle-traffic planning in 1992. The group is named *Grupo de Trabalho de Ciclovias* and constituted by representatives of the Municipal Secretaries for the Environment, Transport, Parks, Urbanism, the Planning Department and the local NGO *Transporte Ativo*, amongst others.

Until 2004, ca. 140 km of bicycle infrastructure have been constructed. Most of the existing infrastructure dates back to the 1990ies. From 2004 to 2008, no further infrastructure was inaugurated. In 2009, traffic calming was introduced to some streets in Copacabana. This measure came along with the implementation of bicycle lanes running alongside those streets, connecting a nearby subway station to the beach. Besides, a public rent-scheme for bicycles - *Pedala Rio* - was inaugurated in 2009. Recently, it has been suspended for unknown time, as more than 50 bicycles have been robbed within two weeks. Till that moment, the scheme had reached some 450 users, offering 180 bicycles at 18 stations.

Considering the cities vast extension, the bicycle network is still small and runs mostly alongside the beaches, privileging richer neighborhoods in the Southern part of Rio. Some of the lanes, such as the one running from Botafogo to Jardim Botânico, are underused, as design and maintenance are unsatisfying.

The planning group is currently developing plans to create another 150 km of bicycle infrastructure in the next few years and considers its work as an extension of already successful periods in bicycle-inclusive planning in Rio de Janeiro. Apart from Copacabana, no infrastructure has been realized so far, even though some planning workshops have been realized with the support of local and international NGOs. Despite tremendous environmental, social and infrastructural costs, individual motorized mobility continues to receive high government consideration and spending.

2.7 Mobility and Cycling Practice

It is important to know, that in Rio de Janeiro public transport is privatized, but publicly regulated. Busses, trains, subway and boats are operated according to market rules, making considerable portions of the population pay a big share of their income for mobility. In extreme case of poverty, people are almost left immobile. In 2003, a global survey on mobility in the metropolitan region of Rio de Janeiro was conducted by the State of Rio de Janeiro (Governo do Estado do Rio de Janeiro, 2004). 34.000 household-based interviews have been made, studying the principal mode of transport used in each trip, which means that multi-modal transportation chains were not assessed. If someone walked 1 km to the train station, and then took the train for 5 km, the survey would only count the train.

In absolute numbers, more than 11 million trips occurred in Rio de Janeiro every day in 2003. 31 % of all journeys were made on foot in the city of Rio de Janeiro. Another two % of all trips (217,000 in total) were made mainly on bicycles. Thus, largely one third of all trips (3.65 million in total) were realized in non-motorized ways. For approximately 20 %, the private car was used as the primarily mode of transport. 47.5 % of all trips occurred mainly on motorized collective transport (bus, train, subway and ferryboats).

The administrative regions with highest shares of bicycle use are situated in the western part of Rio de Janeiro, where income generally tends to be lower than in the rest of the city (see 2.3). In Bangu, for example, the share of bicycles is about 4 % in all trips, with individual motorized mobility accounting for only 10 %. In Campo Grande and Realengo, bicycles account for 5 % and 6 %. Finally, in Santa Cruz 8 % of all trips are made by bicycle. There, bicycle traffic almost equals car traffic, which is used for 9% of all trips and reaches a level that is more common to average European or North-American cities. Germany, Austria or Switzerland, for example, show an average bicycle percentage around 9 to 11% (Fietsberaad, 2010). Nonetheless, it must be said that those numbers hardly can be compared and that little can be concluded from such comparison,

since the conditions under which cycling occurs are extremely different and measurement methods might differ significantly.

19.9 million trips were realized in the whole metropolitan area. There, the evidence shows even higher numbers for non-motorized mobility, accounting for 37 % of all trips. Bicycles were used for 3.2 % of all trips (645,000 trips in total) as the principal mode of transport. Individual motorized mobility dropped down to 16.5 % of all trips (3.29 million in total). Motorized collective transport accounted for 46 % or largely 9.2 million journeys.

Yet, it must be argued that altogether, the figures concerning bicycle traffic are too low. The bicycle is often used as a connector between home and mass transit hubs (train station, subway, regional busses), as large (informal) bicycle parking facilities at train stations (e.g. Santa Cruz) throughout the city and the metropolitan region prove. As the figures above presented only reflect the principal mode of transport for each journey, riding a bicycle or walking has not been counted effectively in cases where those means have been combined with long-distance transportation. In addition, two recent surveys conducted by *Transporte Ativo* at two different junctions in Copacabana counted approximately 780 cyclists and 1,420 respectively, coming across in 12 hours (Transporte Ativo, 2009a and b). In both cases, delivery boys showed a high percentage (50 and 37 %). Most of cyclists were male (95 and 93.6 %) and between 18 and 40 years old (74.5 and 75.1 %). These data shows, that to some extent the 2003 survey on mobility can not be valid any longer, as numbers for all of Copacabana (comprising 410ha) roughly showed some 1,590 cyclists.

Even though everyday user numbers might not suggest it, there exist approximately 4 million bicycles only within the city limits of Rio de Janeiro (ICE, 2009). Though, credit schemes and rising wealth allowed a significant growth of the car fleet, which grew from 1.57 millions to 2.25 millions between 2001 and 2009 (Detran, 2009). Moreover, an all-time high in car sales was reached in 2009 (ANFAVEA, 2010) and government considers the growing motorization a major advance for Brazilian society, something worth to be encouraged even further. In 2007, 983 deaths occurred in transit in the city of Rio de Janeiro (RCV, 2010). Another 17,072 people got injured in transit.

3 Cycling policy and practice in Cairo

3.1 Overview

Since long back in history Cairo has been the capital of Egypt and at the same time one of the most important political, cultural and economic centers in the Middle East. Although population figures tend to diverge very much, there is no doubt that Cairo is the largest city of Egypt, North Africa and the Middle East. According to the census 2006 7,786,640 people were living in Cairo (CAPMAS, 2006). The metropolitan agglomeration includes the governorates of Cairo, Giza, Qalubiya, 6th of October and Helwan and extends over an area of 4,367 km². Population estimates are ranging from 15 to over 20 million,

including daily commuters (GTZ, 2009). This makes the Greater Cairo Region the largest metropolitan area in Africa and the eleven-largest in the whole world (Demographia, 2009). Also the population growth rate is the highest in the country (SIS, 2009).

3.2 Configuration and Urban Fabric

The city of Cairo is located in the north-east of Egypt on the banks of the river Nile, just upstream of the Nile delta. While the older parts of the city are mostly flat and set alongside the river, over the last few decades the city has spread far out into the desert. The two main aspects of the urban development are still the establishment of exclusive new satellite cities with independent infrastructure and on the other hand predominant uncontrolled spreading of informal housing in shanty towns and popular neighborhoods all over the city (GTZ, 2009). The road network, including aspects like street diameter and road pavement, is very diverse, depending on different parts of the city. Both historical districts such as Islamic Cairo and Old Cairo, as well as some popular neighborhoods have mainly narrow, non paved streets without sidewalks. On the other hand, large boulevards with several lanes, roundabouts and sidewalks are running through the districts from the colonial area. Besides some bridges across the river Nile many highway bridges and flyovers, at times with several floors, have been built over the last decades. These connect the city center with the outer districts and all end into the Ring Road, a highway circle around the main part of the city.

Outside this highway ring many new gated-communities are spreading. Located at distances up to 60 km from the city center they are exclusively reachable by motorized traffic (Dziadosz, 2008). Inside the compounds parts with reduced traffic and greenery can be found. The general condition of the road network including lightning, pavement, lanes, sidewalks etc. ranges from very good in more elitist districts and areas of touristy relevance to very deficient in areas where informal housing is predominant and public investments in infrastructure are rare. Especially for short distance trips within neighborhoods, cycling on side streets allows to move fast and quite safely. The biggest risk cyclists face are most probably crashes in frequent potholes and other deficiencies in the road pavement if there is any, particularly in the dark. On larger transport axes in the city center cyclists can move at higher speed and weave through traffic jams. At times where traffic is moving fast, cyclists risk being involved in car accidents.

3.3 Economic conditions

Cairo is the focal point of the Egyptian economy, contributing nearly half of the national GDP. A lot of industry and business zones have been and are being established in the Greater Cairo Region (UN Habitat, 2003). As for many aspects of life in Egypt, big differences in economic conditions can be found from region to region all over the country, and from district to district within Greater Cairo,

although few districts have a homogenous population concerning their economic and social status (UN Habitat, 2003). Mobility patterns vary a lot between the poor, middle and upper class, but statistics and personal statements show clearly that the majority of those who can afford a car will buy one. In the context of a growing economy private car ownership is predicted to rise constantly in the future (Dziadosz, 2008, see also 3.5).

3.4 Environmental and climatic conditions

The city of Cairo is located on the banks the river Nile and is constantly growing and spreading into the slightly higher desert plateaus and the edges of the fertile Nile delta. The climate is characterized by hot summers and moderate winters. From June to August, temperatures can reach from 20 to far over 40 degrees, from December to March from 8 to 20 degrees. Although humidity levels especially in the morning are often above 60 %, there are very few rainy days with at maximum 5 mm average precipitation. According to statistics, Cairo has the highest air pollution of all cities worldwide (World Bank, 2007). Especially the city center suffers from constant smog, which is most obviously linked to traffic jams (Khoder, 2007). The air quality in the satellite cities on the surrounding desert plateaus is sensibly better, a major reason why many people choose to move there, adding to the individual motorized mobility because of long daily commuting distances. In terms of relevance for cycling, the nearly flat shape of the city and the dry and warm weather prove to be favorable, at least from October to April. During the hot summers, a main drawback would be that most Egyptians wish to remain in air-conditioned surroundings. The main negative aspect is probably the poor air quality, as a result of predominant motorized traffic.

3.5 Social, cultural and gender norms

While cycling is a common necessity for a considerable part of the Egyptian society and negative effects of motorized mobility are one of the most important conversation topics in Egypt, there is little or no conscience about the bicycle as a full-fledged mobility alternative. One of the reasons is the common, outspoken belief that cycling is for the poor (Dziadosz, 2008). This depreciative belief seems to apply at any time, no matter whether a cyclist rides a cheap or expensive bicycle. The car is a main status symbol and as social control is high, a considerable number of Egyptians – especially academics and students – seem to approve of bicycle traffic in theory but would not dare to switch to it, partly because of social stigma. While the general social stigma of choosing a bicycle seems to apply to both men and women, women are also confronted with conflicting gender norms. As projects in the field of sports and gender empowerment show, there are several factors that prevent women from doing sports including cycling: In general, girls are allowed less to play, second the female body being exposed by moving in public is often considered inappropriate, and third sexual harassment on the streets has reached a dramatic, intimidating level (Reinbacher, 2009a). In fact, many Egyptians – male and

female – are members of private sports clubs, but sports is generally banned from public space, which makes race cyclists and mountain bikers still a rare and strange view to many.

3.6 Urban Planning and Cycling Policies

First off, there is definitely cycling practice, but nothing such as a cycling *policy* in Cairo, and so far the bicycle is still absent from the official discourse about mobility patterns. Currently, the main concerns in urban planning are investments in affordable housing near Cairo, and transport infrastructure in the Greater Cairo Region and the North of the country. In the fields of traffic, the authorities are struggling with the mitigation of traffic jams and the lack of parking facilities in the city center as well as the constantly growing individual commuting traffic. Although the construction of three more railway lines in the Greater Cairo Region (\$1.77 billion) as well as the long overdue extension of the Cairo metro system have been announced, the road system in and around Cairo is still the priority. With investment plans including \$5.3 billion for four new highways in Cairo and another \$335.6 million linking the satellite cities, the traditional traffic policy stays nearly unchanged: more highways for more cars (Serrano, 2009). In recent years, suggestions and initiatives concerning cycling policy and practice by members of the civil society, researchers, journalists and NGOs have appeared. Two interesting examples are an article claiming the introduction of bicycle lanes in Cairo (Al-Baaly, 2005) and the creation of the Cairo Cyclist's Club. But these examples have been and are still ignored by the authorities.

3.7 Mobility and Cycling Practice

In the same way as the bicycle is absent from transport policies, there is no statistical data about the effective number of trips it is used for in Cairo. Statistics show mainly that motorized traffic has been on the rise since several decades now. The number of privately owned cars in Cairo has reached about 2.5 million, an upward trend. People who cannot afford a car use other forms of motorized transportation: taxis, the metro (2.7 million passengers daily), private or public buses or private minibuses (Elyan, 2010). Trains and tram, in former days the backbone of urban transport are still operating but have lost of impact.

Besides the intense use of public transport, walking accounts for a third of daily trips in Cairo (Al-Baaly, 2005). One reason is of economic nature: A bus, tram and metro ride currently costs L.E.0.50 to L.E.1.50 (\$0.09 to \$0.28), which adds up for the poor. Another reason may be that users of double-track vehicles permanently risk to be stuck in traffic jams for hours. Although never taken into account in transport statistics or policies, the bicycle proves its efficiency in Cairo on a daily basis. As a cheap, flexible means of transport, independent from traffic jams and parking space, it is the best choice for a whole section of the economy, namely delivery services. A large number of goods, first of all bread, fruit and gas bottles are nearly exclusively transported by male cyclists, a main

reason why so many load carrying bicycles can be seen in the city (Al-Baaly, 2005). However, the tendency to switch to motorized mobility once the economic situation allows it (see 3.3) seems to be confirmed by the fact that many established food chains use scooters for delivery, thus also avoiding delays by traffic jams and lack of parking space. Besides forms of bicycle use that are closely linked to economic constraints, some examples of cycling as a result of a conscious choice can be stated. First of all, the bicycle is a popular and generally well accepted toy for children, especially for boys. There are shops in low and middle class neighborhoods that rent out children's bicycles and go-carts. Families who can afford it would buy BMX or mountain bikes cheaply imported from China. In general, in accordance to social norms, cycling as a leisure activity is limited to childhood and early youth (Reinbacher, 2009c). However, in recent years a new trend has appeared. Not only have many of the (Western) foreigners based in Cairo turned to cycling. Also a slowly growing number of Egyptians, mostly aged between 18 and 35, are renting or buying bicycles for leisure activities, and some even for everyday mobility. An outstanding example of this evolution is the Cairo Cyclers's Club, founded in May 2008 by several young Egyptian professionals. The club organizes one collective ride every Friday and tries to promote cycling as a sustainable means of transportation in Egypt.

4 Best practice Rio de Janeiro

For years, efforts have been undertaken to enhance bicycle traffic, develop bicycle-inclusive projects and monitor their outcomes. By doing so, a set of socially, economically and environmentally sustainable solutions for urban mobility has been developed. Still, many of the outlined projects have not been realized and transportation planning policies are still neglecting widely the needs of most of today's cyclists, as for instance those in western Rio de Janeiro's neighborhoods of Campo Grande or Santa Cruz. It can be argued that, although the local government concentrates a lot of technical expertise and understanding of the benefits of bicycle-inclusive planning, the pressure to realize such projects is still too weak within the administration itself. In such cases, civil society needs to act, in order to pressure politicians, claim improvements, provide solutions and even reconcile diverging interests.

One of the key players in Rio de Janeiro's cycling advocacy is *Transporte Ativo* (TA), a non-governmental and non-profit-oriented organization, which is strongly connected with local planning boards. Its founder, Mr. José Lobo made his first steps in cycling activism in the early 90ies, a period in which ecological and social concerns were increasingly gaining attention in Rio de Janeiro, as the 1992 UN summit proved. It was at that time that the first bicycle-lanes were installed alongside the coastline, from Copacabana till Recreio. After having worked with the municipality during the elaboration of a cyclists-manual for Rio de Janeiro, Mr. José Lobo was encouraged by the municipal planning office *Instituto Pereira Passos* (IPP) to found a non-governmental organization in order to be heard and served in a more effective way and to reinforce the local

planning committee for bicycle-traffic planning *Grupo de Trabalho de Ciclovias*. Consequently, the NGO was created in 2003.

The organization is working without own premises, utilizing home-offices and workspace at an allied NGO in Rio de Janeiro. The board is formed by three members and some other five collaborators work on a permanent basis for TA. Funds and knowledge come from international bicycle-related organizations, such as the *Institute for Transportation & Development Policy* (ITDP) in New York or the Dutch *Interface for Cycling Experience* (I-CE) in Utrecht. Today, *Transporte Ativo* is not only co-working with the local planning board, but also collecting and producing data, available for both, the municipality and the general public, translating technical literature to Portuguese, organizing study trips for planning professionals, holding seminars across the country for cyclists or technicians, giving guest-lectures at universities, introducing children to cycling in schools and collaborating with international research groups. What distinguishes the organization is its cooperative character. Unlike others, the NGO and the local municipality are working closely together.

An outstanding example of collaboration is a series of introductory lectures to bicycle-inclusive planning, held to more than 500 technicians in the states of Rio de Janeiro and São Paulo. Local authorities successfully encouraged their staff to participate in these events in their time off, without being paid for this extra effort. Proving high motivation, those technicians supposedly will not only act as multipliers in their daily practice, but also give continuity to bicycle-related projects in case the administration should change after elections. *Transporte Ativo* is also seeking to mediate between the local population and the authorities, in order to strengthen the voice of the former and enhance a dialogue between all parts. TA organizes community meetings in neighborhoods with high incidence of bicycle-usage such as Santa Cruz, where cyclers learn about their rights, hear about the importance of ecologically sustainable transport such as cycling and are shown how to articulate and safeguard their interests towards the local administration. The case of Rio de Janeiro shows the importance of strong links and trustful cooperation between civil society and local planning authorities, and is a vivid example of the achievements of Brazil's well advanced democratization process.

5 Best-practice Cairo

Without casting doubt on the major role of the numerous deliverers using bicycles they will not figure as an example for best-practice in Cairo, mainly because it is unclear if and how many of them do not use motorized mobility simply because they cannot afford to do so. Instead, we will present the Cairo Cyclers' Club as an example of best-practice based on a conscious, informed choice relying on other than economic reasons, and integrates visionary aspects.

In May 2008 the club was founded by a small group of young Egyptian professionals, amongst them Mr. Ahmed El Dorghamy and Ms. Inji El Abd, both

active in environmentalist and development organizations respectively. As Ms. El Abd puts it, their main goals were to promote a greener, more practical life style, and convince other Cairenes of the bicycle as a way out of the drastic pollution and traffic problems (Reinbacher, 2009b).

The club's activities include the organization and realization of at least one weekly ride, promotion of all kinds of bicycle related events and issues in Egypt, support and counseling concerning bicycle purchase, rental, repair and security issues especially in Cairo city traffic. Since the early days, the club has been organized via Facebook, the main tool of social networking in Egypt. Meanwhile the Facebook group has more than 3,000 registered members, amongst them 300 to 500 active members, many of whom lead lively discussions, proudly post photos and videos of the cycling events on the platform and try to spread their interest for cycling. According to one of the organizers the weekly collective rides attract 50 to 80 riders, with an average of 40 % women and girls. The group in itself is heterogenic and open to anyone, something held very important. There are not only environmentalists and athletes, but also students, dentists, journalists, university lecturers, programmers. Some of the participating women are veiled, others not. Many participants are unmarried, but there are also mothers of children. The age of the members can be estimated between 18 and 35 (Reinbacher, 2009b). The weekly rides are traditionally set on Friday morning before Friday prayer, when people are off work and traffic is low. Sometimes the club organizes trips to satellite cities with greenery or a protected canyon south of Cairo, but one main goal of the club is to ride in the city in order to be seen in public and slowly make something controversial acceptable. The public reactions are diverging. Especially in the beginning, the female riders experienced verbal harassment but they receive more and more support and encouraging comments. In general, a rise of self-confidence when in public can be stated among the female participants. Incidents of car drivers insulting or putting in danger the riders are rare. It seems obvious that being together in a group creates a protective environment for many insecure riders who would not dare to cycle on their own because they fear accidents or social sanctions.

Although measured in total numbers, the bicycle trips organized by the Cyclers' Club seem vanishingly little compared to the frequency of motorized traffic, the structures and goals of the club seem to be well adapted to the Egyptian context. According to the Ms. Iman Bibers, the regional director of the social entrepreneurship organization Ashoka who works amongst others in the field of sports and gender equality, successful initiatives for social change in Egypt have to be non-confrontational, incremental, not outspokenly political and – most importantly – coming from Egyptians (Reinbacher, 2009a).

Against the background of this strategic information, the Cairo Cyclers' Club's initiative seems to be a very promising, durable attempt to raise sustainable mobility. The organizers have chosen a good strategic mix, including fun and event aspects, environmentalist and socially motivated theory, setting up a regular weekly action day and using the internet for efficient communication, acquisition of new members and allowing any motivated members to take over

part of the organization. A very important aspect of the club's achievements and plans is to focus on changing traditional social and gender norms, which seem to be among the main obstacles to large-scale bicycle use in Egypt.

6 Conclusions

Cycling is an ecologically, socially and economically sustainable solution for urban mobility, social justice and gender equity. Cycling is fast at short distances, healthy and emission-free, it helps preserving natural assets and does not oppress the mobility or quality of life of others. Cycling favors the urban poor since it requires little money, ensures participation in social and economic life and does not create negative social costs. It is ultimately more democratic and just than today's carbon-based mobility.

Even though reliable research and data is scarce, the two case studies of Rio de Janeiro and Cairo show that cycling is a common practice in both mega-cities. In some of the least favored areas (e.g. Santa Cruz/Rio de Janeiro), cycling even occurs in equally high numbers as in certain European regions, albeit most cyclists ride their bikes due to economic constraints. Consequently, cyclists are often stigmatized as being poor and inferior in both Rio de Janeiro and Cairo. Norms concerning the exposure of the body and exercise in public – especially for women – are more favorable to cycling in Brazil. Still, the portion of women cyclists is also rather small in Rio de Janeiro and cycling has enormous potential for gender equity in both cities.

The Brazilian best practice shows how the introduction of cycling policies based on cooperation between the municipality and NGOs as well as media coverage have led to the creation of bicycle infrastructures, raised awareness among planners, politicians and the general public in Rio de Janeiro and strengthened civil society within the ongoing democratization process. Unfortunately, bicycle related issues are still entirely absent from traffic and city planning or the media in Cairo. But even without official backup, a local pro-bicycle NGO could also succeed in giving a vivid, critical and genuinely Egyptian approach to the many pressing needs stemming from a drastic, unguided modernization.

Though Rio de Janeiro might be some steps ahead, it must be made clear that in both cities cycling still plays an almost negligible, minor role within the total traffic spending. Thus, the abandonment of a predominantly car-oriented transport planning and the recognition of the bicycle as an equal part of traffic still remain the full responsibility of the governments. In this regard, the already practicing cyclists need special attention, as they are likely to substitute their bicycle with motorized vehicles as soon as they can afford doing so. Cycling policies need to intervene when traffic conditions (e.g. speed, violence) or climatic conditions (heat islands) are hostile, aiming both the creation of human-centered public spaces suitable for cycling and the dissemination of a pro-cycling

mentality. This would also allow tapping a bigger portion of the potential, which remains to a large extent unexplored.

The best practice examples prove that civil society can and must play a major role in the process of changing. Social movements can pressure politicians, claim improvements, provide solutions and even reconcile diverging interests. Cycling will only grow in numbers and acceptance, if grassroots movements actively and successfully advocate cycling and local governments seek the collaboration with them.

7 References

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