

## Bycycling social life: work, education and research bicyclists

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### Abstract

The purpose this article understand bicycling phenomenon from perspective bicyclists biker courier, educators and researchers. Phenomenological approach 4E Cognition of cognitive processes embodied, embedded, extended and enactive using the semi-structured interview technique to know experiences of six southamerican subjects: two bikers courier business owners, two educators and two academics investigating bicycling in the city having as inclusion criteria: a) cycling as a form daily mobility; b) experience professional with bicycle; c) participation cycle activist movement. The units of meaning emerged: “Work with bicycle”, “Sustainable active mobility education” and “Biculture promoting” generators the category “Bicycling social life”. Considering the establishment of institutional dialogic relations between public management and organized civil society, aim to structure strategic political actions human motricity bicycling for collective environmental health.

**Keywords:** *bicycling, active mobility, social life, education, public policy, ecological cognition, human motricity, environment health.*

### 1. Introduction

Phenomenon sustainable active mobility bicycling is contextualized letters of commitment from the United Nations (UN) Sustainable Development Goals (ODS) <sup>1</sup>, World Cities Report (Habitat-III) <sup>2</sup> and Report Secretary General Sustainable Transport <sup>3</sup>, of the World Health Organization (WHO) with Global Road Safety Status Report 2018 <sup>4</sup>, Global Action Plan for Physical Activity 2018-2030 <sup>5</sup> and Health and Environment Development <sup>6</sup>, in European Commission <sup>7</sup> and European Transport Safety Council <sup>8</sup>, in Brazilian legislation National Urban Mobility Policy <sup>9</sup>, Notebook for Urban Mobility Plans <sup>10</sup> and Bicycle Brazil Program <sup>11</sup>. On the other hand, we highlight cycloactivist civil organization with League of American Bicyclists (LAB) <sup>12</sup>, European Cyclists Federation (ECF) <sup>13</sup>, in Brazil with *Aliança Bike* <sup>14</sup>, besides international organizations articulation social actors for public policy formulation as Institute for Transportation and Development Policy <sup>15</sup>, World Resources Institute <sup>16</sup> and Slow Research <sup>17</sup>. Also this question have been object of study scientific publications highlighting relationships cycling and society <sup>18</sup>, cycling and sustainability <sup>19</sup>, cycling and city <sup>20</sup>, cycling and design built environment <sup>21, 22</sup> and cycling and economy <sup>23</sup>, studies an alternative automobile system <sup>24</sup> legitimizing a new urban mobility paradigm <sup>25</sup>.

In this sense, deeping understand various contextualized meanings bicycling in social life, whether promoting biculture in institutional policy <sup>26</sup> as well as urban cycling as a human right

active mobility <sup>27</sup>, the purpose this article understand bicycling phenomenon from perspective bicyclists bike courier, educators and researchers.

## 2. Methodology

Regarding participants, the research was structured conceptual categories “The transformative experience being bicycling” and “The right to ride in the city” based on developed field research of Human Motricity Pedagogy period 2015-2017 <sup>28</sup>, bicycling meet people who work, educate and investigate, the semi-structured interview technique was used to approach 50 interviewees having as selection criteria following existential aspects: a) being urban bicyclist; b) develop projects with education, research and work bicycling; c) being militant cycleactivist. The following study participants were selected:

1) Alexandre Nascimento, Journalist, PhD student in African Studies, University Institute of Lisboa, ISCTE-IUL, Portugal; 2) Thiago Neri, Architect, Master in Urban Engineering - Maringá State University (UEM) and PhD student in Civil Engineering, Londrina State University (UEL), Brazil; 3) Cristiano Rosa, teacher public school system city in the city of São José dos Pinhais, Brazil; 4) Tomás Di Tomaso, Taller Suipacha coordinator collaborative popular bicycle mechanics in the city of Cordoba, Argentina; 5) André Bondioli, cycle delivery Owner “Pronto SP” in the city of Sao Paulo, Brazil; 6) Emerson Violin, cycle delivery Owner “Bike Entrega” in the city of Sao Paulo, Brazil.

Concerning investigation procedures, phenomenological qualitative <sup>29, 30</sup> approach was employed “4 Ecological Cognition” of cognitive processes incorporated, embedded, extended and enactive <sup>31</sup>, related existential description “*Pedaling for Citizenship*” <sup>32</sup>. The analysis phenomenon situated composed of ideographic analysis seeks make visible intentionality subject through phenomenological reduction to formation discursive convergences and nomothetic matrix constituted by the units of meaning organized according comparative sense individual analysis, giving rise to general categorical <sup>33</sup>. The subjects signed Informed Consent Form (ICF) agreeing with research procedures breaking anonymity with project registered in Plataforma Brasil, voucher 029413/2015, CAAE registration: 43889115.1.0000.5465, Research Ethics Committee Rio Claro Biosciences Institute, Paulista State University “Júlio de Mesquita Filho” (IBRC-UNESP) <sup>34</sup>.

## 3. Results

In the process of situated discourse analysis, the phenomenological reduction generated 45 discursive convergences with formation following units of meaning a) Work with bicycle; b) Sustainable active mobility education and c) “Biculture promoting”. These units of meaning support the general analytical-methodological category “Bicycling social life”, exposed at the end, analytical scheme of conceptual interpretation.

## 4. Discussion

### a) *Work with bicycle*

In this unit of meaning, the work developed with bicycles by the interviewees will be discussed. For Alexandre Nascimento, his work as a journalist in the main circulation newspaper eighth largest Brazilian metropolis, collaborated to communicate society discussion about the public policy bicycling infrastructure:

I worked as a reporter *Gazeta do Povo* newspaper of Curitiba and by witnessing the difficulties of pedaling, I started to make journalistic guidelines about urban mobility creating a blog to narrate the experiences, which helped shape the public debate. It is interesting to highlight the consolidation process of the bicycling thematic, the first stage is in counter-culture social pressure with bike rides, the second stage is the universities investigating cycle activist social movement together with the press that work to make public information and the third stage, the bicycle lanes infrastructure policy policy with the phenomenon being realized in works and budgets. Here was created the Association Bicyclists of Alto Iguacu (CICLOIGUAÇU) to establish formal dialogue with municipal management, because there was unity around common interest, the former mayor who did bad deeds promised hear opinion of cyclists and overnight, painted a bicycling lane on one of the main downtown streets on the left, we put 300 cyclists ignoring pedaling on the right side as a protest and in another case the bicycling lane has been shortened to create parking lots, that is, we criticized one who gave space and the current mayor who takes possession of the bike and says he is committed, but has no money for projects, leaders were also placed in public administration in commissioned positions, so a split was created between cycleactivists who lose their freedom by being public power, no problem, since the positioning favorable logic of supports and alliances, but in the end, thing centers on movement people co-opted to carry bicycling flag. Curitiba is the most motorized city in Brazil, the number of cars per inhabitant close to 1, I believe it is a cultural issue of underdevelopment, has no manager with the capacity to create cycleway infrastructure because it gives more vote to build a cableway viaduct of 100 million reais, imagine with this amount of financial resources, what could be done for bicycling path infrastructure?

For Tomás Di Tomaso, his work as coordinator of a collaborative bicycle mechanics taller, helped to promote biciculture among the local community with a critical-pedagogical approach that values the integration between adults and children in collective spaces with the potential to transform the mentality of bicycling:

We do activities that include children and adults all the time mixed, we molded an idea for children to participate, as an example, bicycling passages, we begin to change dynamics urban bicyclist model with parameters such as lights, helmet, track, if an activity cannot go to a child, it is not a completely community activity, when 70% children go in a class, doing an activity that leaves a child out like a party until midnight is not an activity for children, then you have to reverse, we do an activity every two months with a bicycling of projections, documentaries and artistic cartoons, short street bikes with games, we have done cutting bike polo street, carnival celebrations like la rioja, they are two groups that face in a flour war entering with bicycle as fast as they can to the street of the workshop that is cut for traffic with things to throw, we do treasure searches, two

groups go with bicycles revealing tracks, the photo of the bicycle dealer or the typical image of the neighborhood of an abandoned bridge, kids know what bridge is but the adult who comes from the center does not know. The normal activity is from open workshop regularly on Wednesdays and Saturdays and there are two most important events of the year, the birthday of the Suipacha Workshop on May 29 and in November with the Pedal Encounter invented to counterculture inviting groups from other places that make cartographies, games, appropriate gender technologies, philosophy activities, are open workshops in that regard.

For Emerson Violin, his work as a manager of bike courier company has helped broaden the field of professional cycling work due to the need for the bureaucratic and financial information flow needed by the largest Latin American metropolis:

It is living the whole process of logistic behavior bike courier on the street, I pass the information to collect something somewhere, how it processes information, how to reach the customer when receiving the order, where should I go and talk to who? The work is complex, there is no preparation course, I was one of the first bike courier in São Paulo, suffered a lot at first, people didn't accept it had many confusions of not being able to enter building for being in shorts or for bicycling, will lock the bike and the security has it removed, society still resists in some cases, despite being a sustainable alternative, does the convergent client think they'll get sweaty in your office? I believe it is not clothes that determine service provided, shorts are necessary for the comfort bicyclist to perform service, if wearing a suit and tie, I will suffocate, as an example, once went to the public forum to deliver an official order and had no authorization to get in, I had get a beggar's pants to get in. In the case of the workday, there is a freedom for decision making, life bicycling bike courier usually ranges from one and a half to two years in view of the enormous physical effort daily driving an average of 70 kilometers, some ride 2000 kilometers a month, including home-business travel. For effort control, I always perform relay, are difficult regions ride like west and downtown lot inclination, rotating and always talking to understand causing physical or mental discomfort, pedaling on the street is pressure, perception of effort is linked to health with food and climate change, that's why we provide protection, have to be careful in exposing the rider because they depend on the body to work.

For André Bondioli, his existential reflection risk bicycling in road sharing and exploration of capital at work as a bike courier are perceived his experience negative ethical aspects arising hegemony motorized transport system organization world-life:

ProntoSp company is small and is attached to a co-working space, I often go out and feel on my skin the effort to make a distant delivery and come back with 15 *reais*, don't feel like doing it, it's a matter of valuing work, few wake up and decide to be a bike courier, everybody needs money, we seek establishing a work environment diminish the boss-employee hierarchical

relationship, because we don't have an initial investment, our steps are slow, if last month was profitable, we save for marketing. The criterion bike courier is to stand pedaling with a pizza bag in the back, so there is a big turnover, selection is slow to fit the work methodology. Bicycling in the middle street seeking to establish my space, if you are in the right corner, rarely do drivers respect the lateral limit, they honk, if you want to run me over, I do not encourage violence, in my teens kicked a rearview mirror, there are cases of the driver parking bike path or drive the car towards the bike, I now convert understanding situation ironically, so they are ashamed, think that bicyclist should only ride the bike path, the demand for this space is saturated, a sense of civility is lacking among all traffic the bus stops at the bike lane and the passenger gets off talking on the phone, are near misses every day, however, there are cases of drivers waiting for bicyclists to cross, this is due presence of bicycle path infrastructure. I remember an accident where a car hit behind my bike at a speed 50 km / h in the tunnel corridor of *Rebouças* Avenue, I was ejected falling into the windshield from another automobile breaking the glass, nothing serious happened to me physically, I excused myself to remove it, everyone involved started to argue, realizing that they wanted to accuse me, I rode the bike and walked, I have to pay attention all the time.

From the speeches analyzed, I affirm that the practical difficulties faced in the activities developed by the collaborators indicate the little institutional support directed to create better conditions of social life, from a careful training to the new drivers seeking to respect the traffic norms regarding conduct of employees. urban cyclists, the support of companies to educational spaces that value humanistic formation of pedaling streets and the mass media start communicate strategically bicycling as a symbol sustainability.

### *b) Sustainable active mobility education*

In this unit of meaning, sustainable active mobility education by cicloactivists situated in the community local. Thiago Neri relates how his research on a methodology for the implementation of bicycle path infrastructure in a medium-sized city, generated promotion educational processes among public power, mass media and the universities, strengthened the cycle activist discourse in the institutional policy urban planning:

The methodological proposal resulting from Master thesis in Transport Engineering sought to develop a method for observing the potential cycle path of a medium-sized city. The study was divided into three parts: in the first stage, broad issues such as center-periphery distance, flat relief and climate were addressed. In the second stage, were selected 95 kilometers of roads based on the selection criteria, land use and occupation regarding origin-destination of education centers, industries, service centers and populous neighborhoods taking into account road hierarchy of important roads for interconnection between different neighborhoods to reach 24 axes analyzed according to bicycle viability criteria related to the permitted speed according to the average driver-cyclist difference, the traffic count linked to

the percentage of heavy vehicles, road geometry, leading role of the road in linking important roads in different directions, presence of afforestation and reference points that facilitate location bicyclist. In the third step, 24 axes were selected connecting with neighborhoods noting that of the 95 urban areas, over 80% of the neighborhoods would be connected by this proposition and as we review bus corridor designs to know the potential for intermodal connection, it has been shown that city has high potential for implementation of bicycle path infrastructure.

For Tomás Di Tomaso, bicycling contributes to the formation of educational-cognitive processes by establishing citizenship communication in the public space among subjects make up traffic correlation diverse cuestiones violency simbolic:

There is intergenerational communication between people in the workshop in another way, there are children linked to adults in the same space, something that happens only in the streets, we are used to teach us not to talk to strangers for being dangerous, that becomes like a kind of interface, there is a bridge that are social classes and there are people from different neighborhoods mixed with urban cyclists and cyclists linked to the same shared work environment. Yes, children learn to interact with traffic, they are curious to see a cyclist in the workshop, they are investigating on their own, nobody is obliged to go to the workshop, they come because they want to. With the crisis formal education, being space that children choose to return without doing a defined activity because they like bicycling or because he likes to be accepted, is to think other and different dynamic institutionalized, it happens to every human being related to looking for limits, especially children being of age that demarcates personality and the workshop is very diffuse, the limit child is looking for is property that cannot be used, sometimes spare parts are missing and bicycle parts that are in project that we cannot be controlling, How do we solve that? We open all the time ask them and also adult people if someone stole a camera because he doesn't have the money to buy, nor can it make me steal something I don't care how we try to solve, the first thing was to inform the person who is leaving the bicycle in a public space and we are not responsible because we have other concerns. That kind situation began to happen and we conclude that it is preferable bicycle of an adult who abandoned a child stole the wheel and is using, It is better that the child is using that abandoned according to the occupation of public space, the re-significance with the creation of something new that was obsolete, which side do we put ourselves on? To the side that defends private property or to the side of the child who is expropriating something to use it? We tried to frame limits that change all the time, recently we had a lack of tools which is painful because they are what keeps workshop, if we don't have a confidence that you can have from the other, it's like the destruction itself, which limit we set, in a wisdom of consensus among all the things that are being said, we conclude to make a counter proposal inviting us to assemble a bicycle to raffle and get

the money to repair the tools, after they will continue fix their bicycles, but first you have to do return of the space they are damaging.

For Cristiano Rosa, daily bicycling enhances pedagogical work of conscious transformation from a practical intentionality from the classroom to the discussion about public bicycle infrastructure policy:

I am a teacher and in this person there is a human figure of transformation, with bicycling there is a possibility of action as a transformative agent. If on the one hand, when using motorized transport, people due to their status end up seeing each other as a potential enemy, on the bike everybody is the same, How can the cyclist do any harm? No one sees the difference if I'm a teacher, if I am an executive, if I am the lord going to work, this is why it is accessible to reach these people seeing someone who deserves to be respected. With the public management, there is an open dialogue channel, but it gets complicated talking to motorist politicians who little understand the reality of the bicycle guy, have to slowly show, be insistent, if during the meeting he says something, we answer that it doesn't work indicating a possible alternative, so we can't expect a quick resolution, it depends on the mindset being open, but it is difficult for the adult to receive because a concept has been created in his unconscious, it takes time to have credibility, the way is to show examples of possibilities knowing that the city is a big market, We have to show business owners the economic advantages of using a bicycle.

For Emerson Violin, his work as a bike courier has helped understand the complexity of road sharing that requires ongoing attention to prevent possible accidents and careful avoidance of driver conflicts. Thus traffic education and bicycle infrastructure are essential components in optimizing safety bicyclists:

Bike Entrega company existed since 2010, for a year and a half worked alone, I transferred the phone to my cell and stayed out all day. There are two moments in São Paulo, before bike paths and after bike paths, when actually working on the street, didn't have a bike lane like today, so bike-car living was a little more difficult, but less than today, for example, a street like Vergueiro that has a bike path, I'm riding her, if I need to make a delivery outside the block, I will be harassed for being off the bike path, formerly not, as pedaled in the middle of the cars, just stopped, so orient myself in a defensive posture to the bike courier relationship in traffic, there are some rules for pedaling from behavior like walking in the middle of the signposted lane, the guy has to be seen stay alive traffic. With the implementation of bicycling infrastructure, it was easier to ride in the city, but the "bike-car-cyclist" relationship sharing space with motorized transport is complex, I still can't understand what's going on in the driver's head, there is a permanent conflict, It is difficult not to have occurrence of closed, thin, hostility. On one occasion I was riding in the bus lane and a car driver broke into that lane wanting to overtake me, passed, bumped my arm,

stopped the car, got out and put the gun in my face, it's absurd, some respect, others harass, there are often deaths from these situations.

From the speeches analyzed, education for sustainable active mobility should be discussed intersectorally among educational institutions, social movements and private enterprise for the formation of an interdisciplinary epistemological basis for the purpose establishing a legitimate persuasive speech technical arguments, authorities public power to, at first, legal changes occur legal-administrative field and, in the second moment, investment bicycling path infrastructure and educational programs in urban planning.

### c) *Biciculture promoting*

In this unit of meaning, Alexandre Nascimento being the first Latin American to cross the African continent by bicycle whose experience is described in the book "*Mais que um leao por dia*", sparked your interest to understand technology transfer and mobility in Africa from the bicycle example:

It was an expedition across the African continent from Cairo to Cape Town through ten countries, Egypt, Sudan, Ethiopia, Kenya, Tanzania, Malawi, Zambia, Botswana, Namibia e South Africa I have a fascination for the African continent, It was a dream, and discovering that she could do this by bicycle turned into a book-report job as she crossed the African continent from end to end to learn about the cultures, politics and history of these countries, became a life goal and, From this I began to move all my efforts. In 2013 I embarked to Egypt, I was the first Brazilian Latin American cyclist to cross Africa from end to end with bicycle, it was four months of adventure, 121 days cycling over 12,000 kilometers. It was killing a lion a day, wind against, sandstorm, mosquitoes, rough terrain, political instability, it's an unpredictable, engaging and magical universe plunging into the unknown, a biking safari because the nature of Africa enchants me so much, I had the opportunity to see elephant, giraffes and zebras, it was an intense experience, another relationship with the environment, when you travel by car you want to arrive at the destination and travel by bike the way is the destination, It was a surprise every day how to change my mountain bike with an old child's bike and ride beside it, the language is a barrier, but by gestures and looks had the opportunity of this experience. Also the issue of overcoming, I rode with a temperature of 43 degrees and a sandstorm, I had heat stroke and hypoglycemia, my nose started to bleed had extreme moments of physical difficulty and mental tiredness, but thought, no one put a gun to his head and said go to Africa to pedal. When I saw Cape Town on the horizon, it was a sense of accomplishment, I crossed the continent living the great story of my life, going forward is profit, what I wanted is done.

For Thiago Neri, his research contributed to consolidate academic discussion about bicycling in the field of local urban mobility, resulting in social participation with organization cycleactivist association with objective establishing channels formal dialogue public management:



Most important my investigation was to arouse discussion in the government sphere *Maringá* that, until then there were few people talking about bikes, the work generated a curiosity of the local press to the point of conducting interviews on radio, television, internet and newspaper. As a process of disclosure, informal meetings began to take place within the city hall or even with cycle activists who had access to the research results, what the spread of information aroused the interest of social organizations related to the promotion of urban cycling and researchers promoting research within the university with the theme bike paths in undergraduate and postgraduate, then we had the opportunity to create the Northwest Paraná Cyclists Association (CICLONOROESTE) from my experience, the city started to observe the work and the feedback is positive. Since the 60's, we have public policies that prioritize road transport, just analyze the scrapping of the rail network, Brazilian cities planned to improve the flow of cars and, in the background, public transportation. This situation of lack organization of urban design reveals the mobility crisis with profound environmental and social consequences increasing inequality in access to services as lower-class people are relegated to oblivion, that is, car culture behaves like a cancer, this is why there is an urgent need to think of a reversal of values due to the poor conditions of this planning model.

For Cristiano Rosa, active community gathering of citizenship around sustainable active mobility potential transforming collective mindset discursively influenced by the motorized transport system that offers comfort and political status:

Every moment when bicycling, I'm exercising with bicycling, I have the criterion of eating something, not because I'm feeling hungry, but what is necessary and healthy because there are proven foods that generate diseases and people are not aware, on the bicycling is a meditation mind and body thinking about everything happening around you, people are surrounded by thinking doing same things in a targeted way without thinking why, there a moment individual explodes out of nowhere and then withers again, it was just a moment of stress that has burst out of necessity, but then recoils because afraid of overcoming this limit has to do comfort. Who rides a bike, questions everything, tries to act in this environment that is living and then we start to bother, the politician who is occupying his chair and we poke him as if to take the hand and show, we can not think of a revolution now in this situation thinking general population, but the small initiatives are emerging, each doing in its own place, lack recognition, but it's great, we have the example of the Cyclist's Pocket Square, worked on it, the energy was immense inside me and those who passed by, this transformation into a meeting for a certain occurrence that must have in the city shows common good is possible, waiting is not enough, if we can get our hands on and start creating our own initiatives, but we frustrated for not achieving a certain goal, we dream in Curitiba to have 2000 kilometers of bike paths or a bike path integrated whole of Paraná, but the population does not understand

cyclists, as politicians are not awake, so we have to start invading, dominate the management spaces and make the insertions, I can not talk about time, but it will be different, if today 20 cycleactivists talking, 20 years will be 400 speaking pressuring to influence institutionality, are doing started 10 years ago only tends to grow because there will be more and more people questioning about public space, more people wanting to ride their bikes quietly on the street questioning because there are no more parks in the city because the high speed downtown, this will be a transformative education.

With the increase of road conflicts due to the complexity provided increased speed daily commuting as a structured habit of human social life in modern occidental society, its economic reproduction generates externality still little calculated, legitime cycleactivist action grow in its emotional-afective appeal and citizen to have better conditions practice in Latin American cities. As analytical synthesis results, below conceptual units of meaning generate central category “Bicycling social life” with the phenomenological methodology of ecological cognition emerging from embedded, embodied, extended and enactive cognitive processes.

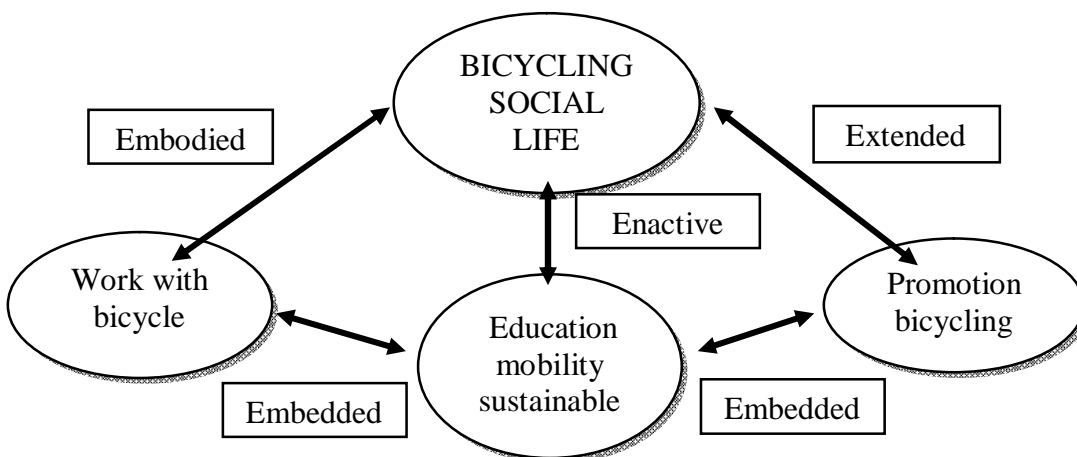


Figure 1. Ecological cognition analytical scheme bicycling

From the phenomenological method situated social life experience described by the interviewees extended the approach of ecological cognition with the human motricity of urban cycling, the general category is structured for the generation of enactive educational processes in the education for sustainable active mobility, incorporated in the bicycle work, extended the promotion of biculture and situated in the relationship between the units of existential meaning emanating from the critical discourse analysis.

#### 4. Conclusion

Considering purpose this article understand bicycling phenomenon from perspective bicyclists biker courier, educators and researchers, I affirm intentionality of the interviewees to expose one of the main structural problems contemporary way of life related dependency motorized transport system and its relationship with sustainable active mobility. This concern for compliance institutional rules extended to each interviewees life projects (work, education and research), demonstrates the difficulty of active citizenship in claiming changes in the organization of public

space which, in a violent way (physically and symbolically) controlled by the neoliberal rationality figure of the driver who complains about fluidity and agility in political-economic negotiations based on a fierce competence that co-opts public agents to fulfill their “duty” to favor motorized consumer market translates into the lack of supervision speed of travel that endangers the lives of people with possible accidents and the legal guarantee to make private parking lots available on the roads, making it difficult to formulate a fair public policy for bicycle infrastructure. On the other hand, thinking cycloactivist discourse in its ability to influence geographical organization of urban space, we are induced to be transported that dominates our time, assumes a fundamental importance a reflection between individual care and the environment in the sense influencing collective mindset for other fragile forms of existence, it is deciding that the larger adult path that slowly walks across the crippled callers in the crunch requires a segregated space to move with a sense of inclusion but all the more of the "normal" human assistance that is offered by children possibility of reaching the city, however, are controlled in their displeasure by the priests or the empowered ones who feel they have been deprived of their liberties, which justifies the need establishment of institutional dialogic relations between public management and organized civil society, aim to structure strategic political actions human motricity bicycling for collective environmental health.

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