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2016 and was also Consultant of Accessibility for the Conference of Sustainability RIO+20. EAAE INTERNATIONAL PRIZE 2001-2002 - Writings in Architecture Education, European Association for Architecture Education (EAAE) - Best Architecture Education Methodology of the world co-authored with Cristiane Rose Duarte. Many other awards for scientific projects realized, published studies on accessibility for persons with disability.

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WALKABILITY, MOBILITY AND ACCESSIBILITY: Emotions in the Access to spaces of a city

Dr Regina Cohen

ABSTRACT

REGINA COHEN AFTER THE PANDEMY COVID 19 – MAIN PROJECTS AND RESULTS

On November 4th, 2022, I've been invited to make a presentation about our Project "Inclusive Urban Sidewalks", global initiative of G3ict's Smart Cities for All and the Taskar Center for Accessible Technology (TCAT) of the University of Washington working with city governments and other community leaders and stakeholders from 5 cities. As a Country Representative of Brazil on G3ict, I was enrolled on the pilot project about Artificial Intelligence for Accessible Sidewalks in the City of São Paulo, where we mapped data of sidewalks situations to improve the mobility and walkability in the 2 Districts of Lapa and Mariana.

One of the many events organized by the Special Commission of Brazilian Standards for Sustainable Cities and Communities (ABNT/CEE-268) was very well organized and had successful results and questions from professionals of different technical areas. I could be in touch with the information for an app with routes for all pedestrians, including the necessities of persons with disability or reduced mobility.

It was an opportunity to show a potential tool for Public Politics to get a better universal accessibility for all, including the vulnerable groups, usually excluded from the city, and especially from the

megalopolis of São Paulo. Everybody could understand and agree with this innovation to include quality of life and corporal satisfaction in AI for Inclusive Urban Sidewalks, a project sponsored by Microsoft's AI for Accessibility Program.

I'm very proud and with a great satisfaction with this opportunity to be part of this promising change on urban mobility.

Key Words: ***Urban Mobility, Walkability, Emotions, Accessibility, Persons with Disability, Rio de Janeiro, São Paulo***

INTRODUCTION

"Plan the Cities we want" **was a Program to be conducted by Rio de Janeiro State Council of Architects and Urbanists Accessibility Commission of Persons with Disability, Access without Limits, and the Pro-access Group from Federal University of Rio de Janeiro (UFRJ), searching for specific solutions to support the challenges of Walkability, Mobility and Accessibility faced by cities today, after COVID 19. Using main concepts such as accessible routes facilitators for the locomotion of all, including persons with disability or reduced mobility in smart cities, prioritizing emotions, and feelings in the promotion of accessibility and universal design. As methodology, it has been adopted resources of the "Method of Commented Routes" of Jean Paul-Thibaud, hearing the opinion of the citizen about emotions and feelings. I believe that only on this way we can build Living Cities, more sustainable and human. The Project searched for instruments to plan inclusive cities.**

We need to discuss and share all the acquired knowledge and our results with new ideas to conduct to a smart city development, far beyond technology, working with what a human being has as

fundamental – the subjective and emotional side on the development of the activities of their daily life.

We must think on vulnerable citizens, including the elderly and Persons with Disability, on accessible walkable cities and changing thoughts on the use of all spaces by all persons. People like meeting each other and want to be someone in the same space. As the coordinator of the Accessibility Commission in Rio and having also coordinated the Pro-access Group in the School of Architecture and Urbanism at UFRJ for more than 20 years (1999-2020), we've been working with workshops and a big research project in Rio de Janeiro, looking for the improvement of mobility and of affective and vibrant spaces. Later, as a representant member of Brazil in G3ict, I've been invited to work in the project Inclusive Urban Sidewalks, mapping and investigating São Paulo.

SMART CITIES MUST CONSIDER THE MOBILITY FOR ALL

In a planet becoming more digital and virtual, we've never thought as we do today on the physical meeting, and cities continue to be attractive. However, the social exclusion is always present in cities that also generate the urban exclusion.

As Jane Jacobs (1961) says: persons are included in their local surroundings because they are part of a relations system.

The inclusion promotes better the sharing of experiences. The solution of "Smart Cities" is promising in this context, considering together the challenges, there is also the advance of Information and Communication Technology (ICT). The growth of the cities and the great quantity of data about them and their citizens bring the possibility of changing the urban environment in a place where technology is adapted to new forms to attend all necessities. This new concept completely changes the relations of the community and urban services.

The project took place in the City of Rio de Janeiro. I could have the conclusion that accessibility is not only the suppression of physical barriers. Our approach encompassed the ambience that surrounds users in a place, as well as treating them as full human beings able to activate complex systems through their relationship with space and with others.

Later, on 2021 and 2022, I worked as a Country Representative Member in a project in the City of São Paulo, organized by G3ict's Smart Cities for All and the Taskar Center for Accessible Technology (TCAT) of the University of Washington.

In Brazil, we have good laws and standards on accessibility. However, one of the great problems is the fact that is not usually applied by professionals related to urban space planning, not really being able to recognize a completely accessible place. Many continue to think that a simple ramp is enough to allow the access of elderly or persons with sensorial, physical, or intellectual disability. On this way, we try to clarify what means "smart cities". For this and with the Brazilian standards of Accessibility we've worked with a methodology of commented routes with

persons with disability, filling Checklists with photographs survey, mapping and analyzing routes realized by the major circulation of walkers and persons with disability.

WALKABILITY FOR PEDESTRIANS, PERSONS WITH DISABILITY AND WITH REDUCED MOBILITY

WHY WE NEED TO TALK ABOUT URBAN MOBILITY?

Urban Mobility is one of the fundamental elements for sustainable urban development: walkable cities are more inclusive and contribute to the health and security of its inhabitants. Walking is the more democratic form of moving. The debate of the quality of life in the contemporary cities and about the importance of planning the urban space for the pedestrian is today one of the more relevant and urgent in the global agenda, presented in the directions of the Sustainable Development Objectives of the United Nations and in the New Urban Agenda, declared in Habitat III. The Project searches to stimulate the view for the human scale in the city.

The possibility of walking with security and comfort in cities, having convenient access to public and private services, to leisure and culture, and to work opportunities, are some of the reasons for this work. Sustainable mobility is one of the challenges of this century, an urgent demand to build more human and inclusive cities.

Walking has the power to unlock the city. Providing infrastructure creates more opportunities to move safely, efficiently, and sustainably. Access to places means independence. While we think of the process of changing infrastructure for many years, hear from the Cities of Rio de Janeiro and São Paulo in Brazil, a

developing country, that needs to implement complete walking networks, we fundamentally are transforming their streets. We are working with the main conceptual basis of Open Sidewalks, for travelers of all ages and abilities:

- ***The pedestrian mobility in a walkable city.***
- ***Pedestrian and Urban Development.***
- ***The network of pedestrian mobility.***
- ***Laws and standards as tools for evaluating urban mobility for all.***

STREETS FOR PEOPLE – SECURE AND OPEN SIDEWALKS

- ***The design of secure and Open Sidewalks.***
- ***Strategies for implementing secure and Open Sidewalks.***
- ***Tactic Urbanism and accessible mobility.***

The integration of transport development and Open Sidewalks is also fundamental for the promotion of sustainable urban mobility. The Project is also based on the Oriented Transports Sustainable Development Objectives of the United Nations and in the New Urban Agenda (DOTS), with a future vision of more connected and adapted cities to collective transports. The strategies try to reach this objective, promoting the democratization of access to urban opportunities and accessible routes in universal cities.

- ***Development of Oriented Transport with Sustainability (DOTS)***
- ***Introduction of Principles and objectives performance of DOTS***
- ***Steps for the implementation of DOTS politics and projects***

MOBILITY AND ACCESSIBILITY TO SPACES

- **THEORETICAL AND CONCEPTUAL BASIS**

a) Space, Atmosphere and Ambience

The notion of ambience makes part of a group of ethno methodological works and interdisciplinary practices developed in the School of Architecture in Grenoble by the French sociologist Jean-Paul Thibaud and partners. The introduction of this new concept comes to widen the idea of urban space and turn it into an unbreakable link to the body and its sensorial-motor activities in the city.

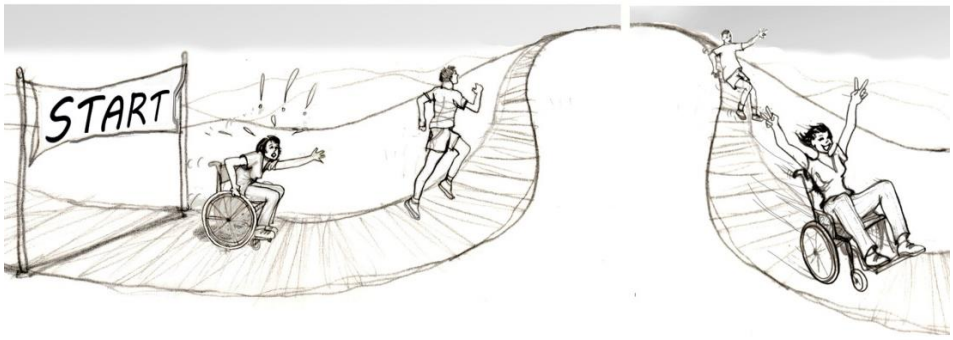
The term" ambience" developed by Thibaud has also made us reflect on experience, perception and actions situated in a certain context based on Persons with Mobility Difficulty (PMD). A concrete example of a pedestrian in an open public space and accessibility is given by Rachel Tomas (2000)0Fwhen analyzing the perception of problematic mobility situations related to people with motor disease.

At the same time, people experience emotions in the ordinary acts of body when walking and perceiving spaces.

The reality of some ambiences may reveal problematic situations for the right perception of those with reduced mobility. Because of that, the analysis was at the context and situations where those people act and move on, taking into consideration how they feel and understand ambiences.

Disability has been investigated by Rachel Tomas as a situation or context of urban ambiences when handicapped urban situation,

which takes off from people`s shoulders the strict responsibility for not experiencing spaces and replaces it to urban universe.



THE SPACE IS DISABLED WHEN IT´S NOT ABLE TO WELCOME THE DIVERSITY
INTERNATIONAL CLASSIFICATION OF FUNCIONALITY, INABILITY AND HEALTH
WORLD HEALTH ORGANIZATION, 2003

Bernardo Bertolucci
"Rome is a city forbidden for persons with disability", says the elderly Italian cineaste:

"I live in a forbidden city. And, and in the places around my house in Trastevere, it seems a place for war: I can't circulate with my motorized wheelchair", told him when presenting his more recent film.
He also said that he needed to be carried by strangers to get to the Capitolium, the municipality of Rome, to participate in a wedding. "When I asked if there was a ramp, they looked at me as I was from Marte".

On the other hand, when a sensitive ambience acquires the expression of a place it also allows free routes and itineraries that involve body, movement and make people aware of their rights of movement in a specific ambience.

The ordinary routes of a person or a PMD made me reflect on the embodiment of spaces that are embraced by people who are able to move and be guided by the language of space. For this phenomenon to happen it is necessary to deal with motor, emotional and social levels of compromises that are developed in a context that also mobilizes perception.

b) Ambience, Space and Place

The environmental experience, according to Yi-Fu Tuan (1983) sometimes involves topophilia feelings of people. Tuan was the first theorist to work with signs of affection and love people usually develop to environment.

The perspective of Tuan's humanistic geography may have influenced other theorists that have plunged into the investigation over urban experience and spaces that turn into "places" of actions and feelings.
Inwards the notion of ambience there is the idea of spaces changed into places for urban mobility by PMD. The vision of a proper "dwelling "is also very appreciated by architecture and anthropology.

It is clear for us that ambience plays a leading role in the context of mobility phenomena that come from body to place. In this topic we should add the contributions of phenomenological authors such as Christian Norberg-Schulz (1981) and Maurice Merleau-Ponty (1996), for whom ambiences acquire this power of privacy and immanence when they are able to promote rich urban experiences and satisfy everyone`s motor needs.

It is acknowledged that identification, belonging and appropriation are necessary for the understanding of the existential and environmental condition of places.

▪ PERSONS WITH DISABILITY WALKING ON STREETS – METHODOLOGY OF RESEARCH

The reunion of works on "research methods of urban spaces ", developed by Grosjean and Thibaud (2001) shows an evolution in the way of analyzing cities. The approaches merge Urban Ecology, Anthropology of Imagery, Environmental Psychology, Post-occupancy Evaluation and even works in Sociology and Semiology of Space.

The studies referring to cities are divided into two movements. In the first one, urban space is treated separately as an architectonic or sociological dimension. It was only in the 80s, as a second movement, that new paradigms over the modern city started being released, as Grosjean and Thibaud comment.

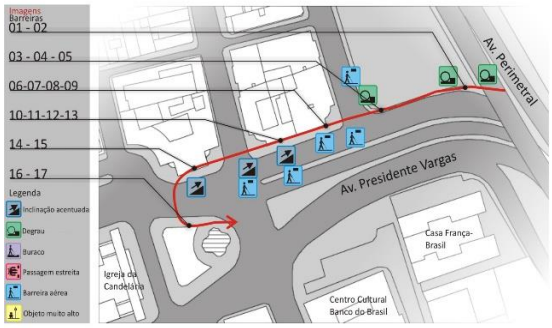
With these new conceptions of study, it is even more evident the search for the comprehension of places as spaces for the management of dwellings. PMD are closely related to their subjective ambiences by the interconnection with visual, auditive, olfactive, thermic and kinesthetic senses that are present in displacements.

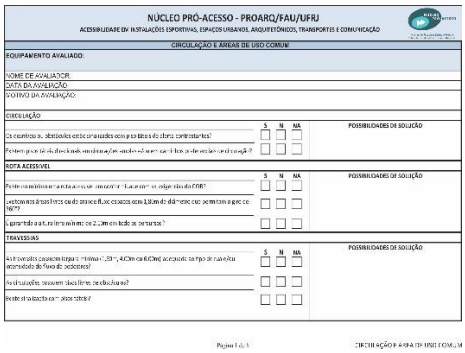
Because of that, and based on ethnomethodology, the main question regarding the relation between body and environment has turned out to be a crucial matter. We have chosen to focus our works in diverse areas that could match the same subjects, but we have selected environmental psychology, perception,

phenomenology, anthropology and urbanism as leading ones. Inter-disciplinarily has helped us define a way of investigation: the method of annotated routes by Thibaud.

This method did not only consider the movement of People with Mobility Difficulty but also the ways of perceiving space and context. The proposal of Thibaud`s work is to comprehend the sensitive characteristics of a place (1993) and to scrutinize the perception of a person that moves, feels and takes "the inevitable movement of perception" into consideration.

- **MAPS – CKECKLISTS AND ROUTES**





Mapping Routes and Using Checklists

- **WALKING AND INTERVIEWING**

"It's absurd, there is no access, we need to ask for help. On this street, sidewalks are completely broken, I need to wait the sign closing to Walk on the car street because it's impossible on the sidewalk."

"I pass here Every day and feel a little ashamed because we don't have the right of moving free. When it's raining everything becomes worst."

Interview with a Person with a Physical Disability walking on wheelchair – 41 years.

Descrição das Rotas

Planilha de descrição das rotas internas às escolas para avaliação de acessibilidade (desenvolvida pelo Núcleo Pro-acesso)

Pesquisador:
Data:
Local:
assinatura:

rota	origem	destino	descrição	qualidade	principais dificuldades
A1	estacio-namento	biblioteca	estacionamento com vaga especial, porta de acesso ampla; rampa com 8% sem marcação no piso; corredor menor que 1,5m, sinalização visível, catraca na porta da biblioteca (porém passagem lateral); estantes altas; ausência de computadores com sistema dos-vox.; um dos funcionários tem noções de libras.	☺	

Legenda:

QUALIDADE DA ROTA:
- ★ = rota plenamente acessível;
- ☺ = encontradas barreiras fáceis de serem removidas;
- 😐 = encontradas dificuldades, necessidade de ajuda de terceiros;
- ☹ = encontradas barreiras graves e difíceis de serem removidas;
- 💣 = condições de acesso muito ruins.

PRINCIPAIS DIFICULDADES PARA:
- = restrições visuais;
- = restrições motoras;
- = restrições auditivas;
- = restrições múltiplas ou combinadas

MOBILITY AND ACCESSIBILITY IN THE CITY OF RIO DE JANEIRO

In the city of Rio de Janeiro, the experience of adapting the public transport started in 1987 and there has been very little advance since then. The owners of the bus companies were fighting against the obligation to adapt buses. Today, the action of persons with disability moved from fighting and complaining to acting in the projects of the city administration in two important architecture and urbanism projects promoted by our Municipality.

City of Rio de Janeiro – Rio Orla Project 1991

And the Rio-City Project (1994):

Rio-City Project – District of Ipanema 1994

With the analysis of the urban intervention made in the "Rio-City Project", we could evaluate if the accessibility solutions adopted effectively improved the everyday life of "Persons with Disability".


Rio-City Project – District of Ipanema 1994

In a master's dissertation on Urbanism Regina Cohen analyzed the Rio-City Project. The endeavour was to attack the "Accessibility, Identity and Urban Everyday life" and its context in the city of Rio de Janeiro, and about the necessity of the adoption of an appropriate urban proposal with a larger human concept, that not only privilege the scale of the standard man, and that gives conditions to this group of exercising their citizenship. With this investigation, I intended to contribute for the accessibility discussions basis, in the creation of new paradigms for the Brazilian cities planning.

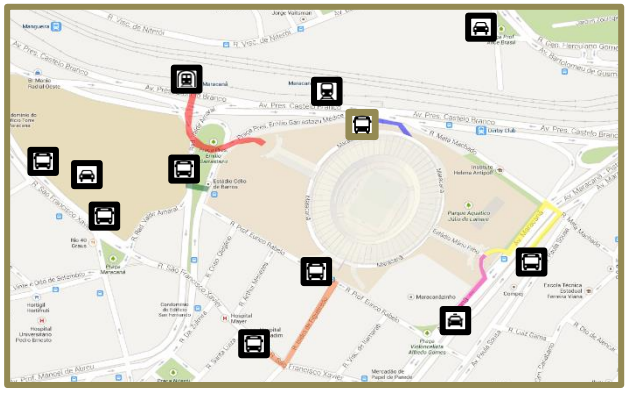
One of the products expected was a study that serves as an alternative to the planning of cities structure related to persons with disability and go in the awareness of professionals engaged in the production of the urban space related to the accessibility barriers.

Cohen had the intention to evaluate if the accessibility solutions adopted effectively improved the everyday life of "Persons with Mobility Difficulty (PMD)" and "Persons with Disability (PWD).

- **The World Cup FIFA 2014**

Recently, with two megaevents (The World Cup FIFA BRAZIL 2014 and the Olympic and Paralympic Games – RIO 2016), Rio de Janeiro has experienced a very particular moment in terms of local and national politics. In fighting the bad image, the loss of identity, the lack of neighborhood self-steam, and the low quality of life, for the past couple of years the city government has implemented various major urban design projects. In this sense, the research is serving as an important laboratory for different streetscapes and infrastructure design by architects through a series of public competitions.

Maracanã: the main Stadium of Football in the Country.



Spaces for Persons with Disability in the Stadium and Map of the Neighborhood. Sidewalks in the Neighbourhood of Maracanã Stadium.

Considering that the exclusion of these persons in the city's spaces can influence their social inclusion, everyday life and citizenship, Cohen made hypothesis verified with datum which

included questionnaires sent to 300 PMD who used these urban spaces.

The analysis of the answers allowed evaluate the urban interventions, the context in which projects were discussed with the society and to understand if this experience attended these persons necessities, in a democratisation of the public spaces developed by the municipal government.

The author also verified some aspects of the access quality, the persons with mobility difficulty perception of society segregation, the access to the urban equipment (telephones, buses, etc.), and the technical solutions (ramps inclination, stairs, barriers, parking spaces).

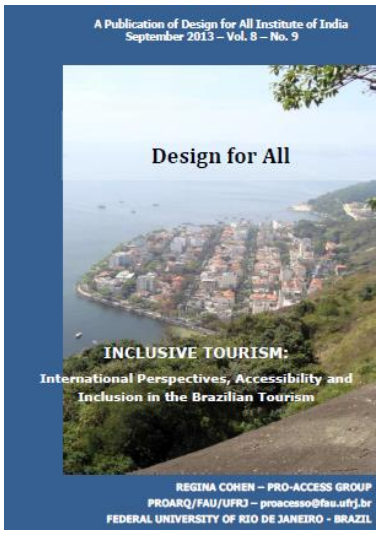
In general, Cohen could conclude that the majority of PMD is satisfied with the Program (52%), considered that everyday life became better (49%) but some of them don't see the satisfaction of their necessities (16%). The search also prompts the necessity of a society education because many barriers are related to attitudinal barriers (cars in the ramps, urban obstacles, etc.).

Cohen intended to contribute for the construction of accessibility discussions basis, in the creation of new paradigms for the Brazilian cities planning.

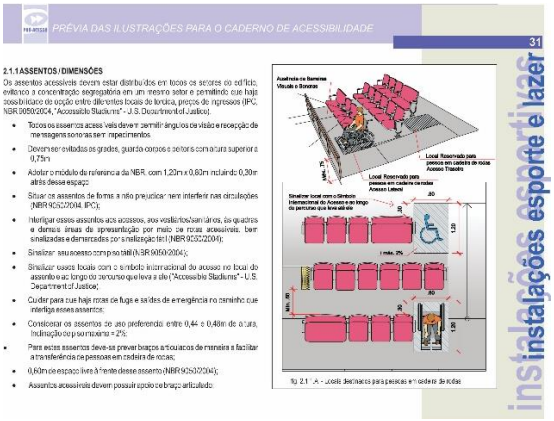
- **A NEW AND MORE COMPLETE PROJECT IN PARALYMPIC RIO 2016**

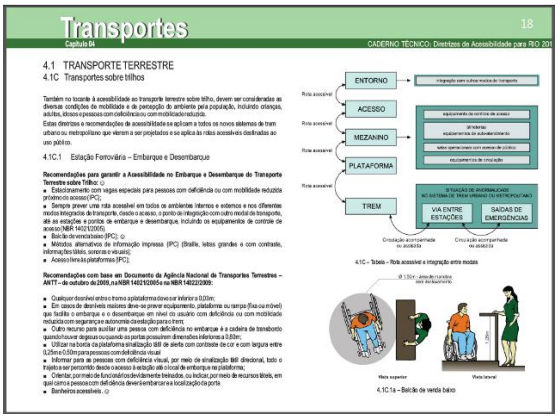
The Games of RIO 2016 wanted a celebration of changes, giving a sustainable legacy for an accessible and "smart city". However, all these indicatives haven't gone ahead, becoming only changes for a future legacy of accessibility and for the development of A SMART CITY.

- **ACCESSIBILITY STANDARDS FOR PARALYMPIC GAMES RIO 2016**



Research and Results



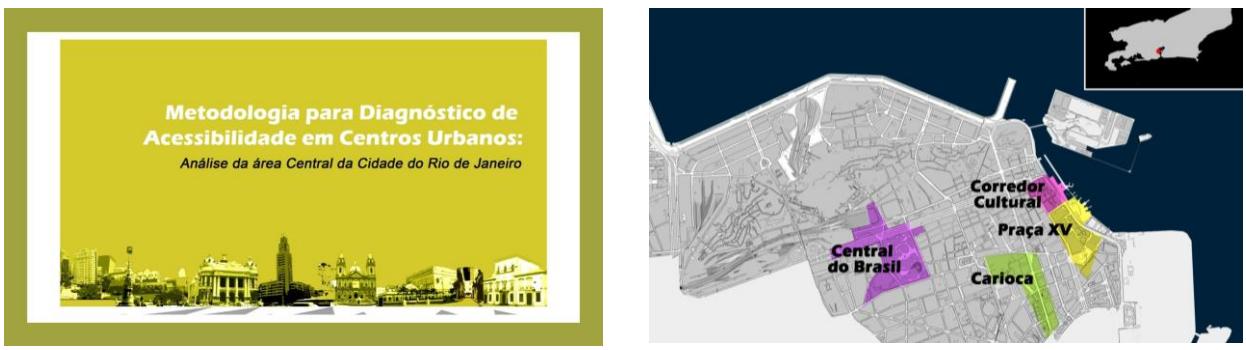


Accessibility Standards for the Paralympic Games RIO 2016

- **VIRTUAL ACCESSIBILITY GUIDE IN THE CITY OF RIO DE JANEIRO**

▪ THE RESEARCH PROJECT: MOBILITY AND ACESSIBILITY IN THE CITY OF RIO DE JANEIRO

On the last decades, the importance of universal accessibility has become, each day, the central point of planning discourses, considering the urban space and the architectonic object itself. Nevertheless, the initiatives for complete accessibility continue only on the discourse and goes on with an inadequate interpretation by the professional responsible for the spaces of our cities. In Brazil, we have laws and standards regulating the accessibility measures. This way, this article brings the results of several tools developed by Brazilian researchers, allowing technical certificates of "complete accessibility" (DUARTE & COHEN, 2012). We emphasize a multi-method approach, with many Checklists together with photographic survey, mapping, and evaluation of defined routes from the main circulation of pedestrians. On this way, the author also presents here the result of the application of these methods in the *Central Region of the City of Rio de Janeiro* and purpose a bigger discussion for improving more this kind of study and Project. As a conclusion, the projects point the necessity of an holistic view of the projected space, trying to allow a bigger appropriation of cities by all citizens.



Methodology for Accessibility Diagnosis in Urban Centers: an analysis of the Central Area of the City of Rio de Janeiro


Spatial support in the Central Area of Rio de Janeiro – Walking with Persons with Disability in Carioca – Center of Rio

- **OPINIONS OF SOME MEMBERS OF THE SCIENTIFIC COMMITTEE**

A) "I welcome the initiative of this book very much as it reflects many of the key elements for the professional approach to the accessibility analysis of a city: A clear and objective working method. Good references as guidelines. The assumption that lack of accessibility is not only a barrier for some minorities but a terrible way of social exclusion for many. Users' involvement. Easy to understand presentation of results. The ambition of making the city enjoyable not only to disabled people but for everyone. And the innovative approach of merging emotional appropriateness of the urban space by the citizens with the physical challenges associated. I wish the initiative presented in this book become an inspiration for cities administrators and planners aiming to plan and maintain the cities for and with all their citizens avoiding that any person would feel estranger in his or her own town."

Francesc Aragall, Barcelona

President of "Design for All Foundation"; Coordinator of the Center of Design in Barcelona; Council of "International Association for Universal Design"; Member of EIDD; Member of "Design for All Europe" and European Network for the Concept of Accessibility; works with "Design for All" in many countries (Singapura, European Union, Brazil, Saudi Arabia, among others). Manager at Enterprise Pro

solutions in Barcelona and Porto with urban planning projects.

B) "This book illustrates extensive case studies of accessibility conditions in central districts of Rio de Janeiro, with a qualitative, in-depth, and multi-faceted analysis of the different factors affecting the physical characteristics against which good accessibility should be ensured and the relation with the needs of larger user groups in their mobility across the surveyed venues. Throughout this collection of several examples, the book gives a full overview on a wide range of critical accessibility issues in a large metropolitan context together with a correctly methodological approach to defining the emerging issues, surveyed in a walk-through experience and diagnostics in relation to the national accessibility code requirements. Materials from this survey give a rich information scenario on how users with different abilities face a urban environment day by day and how they can become the main actors of the city's spaces, streets and squares. The book is a milestone – for its sensible and practical methodology approach – as a preparatory work for addressing technical, design and cost solutions for refurbishing metropolitan areas into newly accessible public spaces".

****LUIGI BIOCCA (Rome, Italia)***

Researcher responsible for ITC Rome on "Systems of Technology and Residence for the Quality of Urban Life". Professor of Assistive Technology, University of Trieste.

ACCESSIBILITY OR LEGACIES IN THE PARALYMPICS OF OTHER CITIES

Barcelona is usually mentioned as a reference for the Olympic Games, showing the accessibility legacy going ahead with a good urban planning, transforming each year for better: an inclusive and accessible city for all. It was 1992.

To host the Paralympics is an impact for the city in the way they consider disability, but mainly with relation to the creation of a "smart city" with an environment without barriers. In Greece, there was few considerations with sport for persons with disability. The environment needed great changes and the final reports of the games classified Athens as a not friendly or accessible city for persons with disability.
In Sydnei, the great amount of investment was designated to a pedagogic impact. They developed an educational program to promote a greater awareness. The case of the Olympic Games in London 2012, there is no doubt for specialists that, maybe for the first time, the Paralympics was seen as a positive major fact for the city.

The legacy promised by London 2012 gave to the Olympic an example of sustainable life, and also demonstrated that United Kingdom was creative, inclusive and an agreeable country to live or visit.

A sustainable, accessible, and inclusive environment in London made the efforts to become a very "smart city". London wanted to hold accessible games for all, but also helping to have the progress for reaching equal rights for persons with disability.

The warranty to promote accessible spaces for all people with cultural, social, economic, physic and sensorial disability is also a concretization of a political will to achieve the baseline of a similar planning to the most social developed country.

The Games of RIO 2016 wanted a celebration of changes, giving a sustainable legacy for an accessible and "smart city". However, all these indicatives haven't gone ahead, becoming only changes for a future legacy of accessibility and for the development of A SMART CITY.

The herein collected data point towards the paradox between cities that were experienced, wanted and imagined by the assessed individuals and spaces designed by urban planners. Overall, disabled people cannot appropriate all spaces; they are perfectly capable of experiencing positive senses and sensations, since the emotions can give the real feeling of a lived space. This work showed results of our methodology in the Central area of the City of Rio de Janeiro, considered one important tourist international destination, also in Brazil and Latin America.

IS RIO DE JANEIRO A "SMART CITY"? IS AN "ACCESSIBLE CITY"?

As said by Jane Jacobs, many cities are regenerating their central and empty areas. With her we can have a clearer vision of the urban planning. Many actions happen in the streets. If well related with the built environment, they can give the complement for senses and sensations. Some factors such as security, solidarity, and the sense of belonging to a place depend on the possibility of the use of streets. We also can consider some qualities: legibility, frequent intersections, possibility of using sidewalks, variability.

As Jacobs (1961) outlines: people join their neighborhood affairs because they are part of a *system of relations*

> **"*The inhabitants of a city never prefer to contemplate the empty, the order and the silence as the planers think. The pleasure of people to look to the movement and other persons is evident in all cities. When there is more strangers in the streets, more amusing she will be". Jane Jacobs***

FINAL CONSIDERATIONS

The growing urbanization is a phenomenon around the global world. Due to this, cities have many consumers of natural resources, and this fact strengthens the relation in the urban environment. Thus, this study was conceived around the urban planning thematic, focused on a new expanding development model that enables the introduction of technological components in the cities: the Smart Cities. The objective of this work is to explore this concept using theoretical references and international practices, to consistently evaluate Rio de Janeiro's situation in this context. Assisted by methodologies of bibliographic review and field research it's possible to identify the potential smart solutions applicable to Rio de Janeiro, appraising its perspectives to become a Smart City.

Here we considered space use and appropriation based on the experience of walking around of "People with Disability" or "Persons with Reduced Mobility".

The current research also advocates that the magic of walking lies on building temporalities: displacement connects space and time and can give the 'poetics of belonging'.

The importance of understanding sensorially also involves the walking of human body as the construction of emotions (LE BRETON, 2009), senses and sensations can influence the relation between the Self and the World, becoming the symbolic communicator of experienced emotions.

Results of the current research show that disabled individuals crave the city, as well as satisfy their dream of walking around freely. This is the translation of the desire to be part of a city. Belonging to a city give important meaning to the walking rather than the physical exploration of a space.

The act of walking can give new meanings to the continuous movement, since it turns unnoticed elements into new narrative-construction possibilities: traveling through city spaces allows the remembering of emotional memory references to recreate identities and attenuate differences. When it comes to persons with disability, the act of walking may represent the transgression of their own body condition, since it enables these persons to reaffirm well-being in the world.

The current research also advocates that the magic of walking lies on building temporalities: displacement connects space and time and can give the 'poetics of belonging'. This is only a part of a *"smart city."*

This area aims to address today's urban mobility challenges, including automotive technologies, green transport, intelligent transport systems, logistics and planning systems. This area's mission is to catalyse comprehensive integrated approaches by taking user needs, urban space requirements, implications of

technological innovations as well as the sound design and implementation of policies into account.

Bibliography

ASSOCIAÇÃO BRASILEIRA DE NORMAS TÉCNICAS (ABNT). NBR 9050: Acessibilidade de Pessoas com Mobilidade Reduzida às Edificações, Espaços e Equipamentos Urbanos. Rio de Janeiro: 2020.

BRASIL. Câmara dos Deputados. Legislação brasileira sobre pessoas portadoras de deficiência. – 7. ed. – Brasília: Edições Câmara, 2011a.

BRASIL. Secretaria de Direitos Humanos, Secretaria Nacional de Promoção dos Direitos da Pessoa com Deficiência. Convenção sobre os Direitos das Pessoas com Deficiência. Protocolo Facultativo à Convenção sobre os direitos das pessoas com deficiência – Decreto Legislativo no 186/2008 – Decreto no 6.949/2009. 4ª ed., rev. atual. Brasilia, 2011b.

BRASIL. DECRETO N. 5.296 de 2 de dezembro de 2004. Presidência da República. Disponível em www.planalto.gov.br/ccivil_03/_Ato2004-2006/2004/Decreto/D5296.htm. Acesso em 23 nov. 2004

. Constituição da República Federativa do Brasil de 1988. Disponível em: http://www.planalto.gov.br/ccivil_03/Constituicao/Constitui%C3%A7ao.htm . Acesso em 22 de março de 2012.

COHEN, Regina. Cidade, corpo e deficiência: percursos e discursos possíveis na experiência urbana. Tese de Doutorado, Rio de Janeiro: UFRJ, 2006.

. Acessibilidade, Identidade e Vida Cotidiana Urbana de Pessoas com Dificuldade de Locomoção: o caso do Projeto Rio-Cidade. Dissertação de Mestrado. PROURB/FAU/UFRJ, 1999.

. Estratégias para a Promoção dos Direitos da Pessoa Portadora de Deficiência. In GUIMARÃES, Samuel Pinheiro; PINHEIRO,

Paulo Sérgio (Org.). Direitos Humanos no Século XXI. Brasília: IPRI/Fundação Alexandre Gusmão, 1998.

. A Palavra de Regina Cohen. In. Manual "Direitos Humanos no Cotidiano". Brasília: Ministério da Justiça, Secretaria Nacional de Direitos Humanos, Universidade de São Paulo (USP) e UNESCO, 1998. (depoimento sobre o Artigo XIII (direito à locomoção) da "Declaração Universal dos Direitos Humanos")

; DUARTE, Cristiane Rose. Brazil: ideas into action for the accessibility rights in a developing country, In. Anais da 7 th International Conference on Mobility anda Transport for Elderly and Disabled People, Reading, Berkshire, United Kingdom, jul. 1995.

CRESPO, Ana Maria Morales. O que certos conceitos significam. In Revista Integração, São Paulo, ano 5, N. 20, março/93, p. 18.

DUARTE, Cristiane Rose da Siqueira; COHEN, Regina. Acessibilidade como fator de construção do lugar. In: ORNSTEIN, Sheila W; PRADO, A.R.A.; LOPES, M.E. (orgs.). Desenho Universal: caminhos da acessibilidade no Brasil. São Paulo: Annablume, p.81-94, 2010c.

. Afeto e lugar: a construção de uma experiência afetiva por Pessoas com Dificuldade de Locomoção. In: Anais do Seminário de Acessibilidade no Cotidiano. Rio de Janeiro: Núcleo Pró-Acesso/UFRJ, 2004.

. Acessibilidade e Desenho Universal: Fundamentação e Revisão Bibliográfica para Pesquisas - Relatório Técnico do Núcleo Pró-acesso, 2012

IBGE. Censo Demográfico 2010. Disponível em: <http://www.censo2010.ibge.gov.br>. Acesso em 03 de janeiro de 2013.

International Paralympic Committee (IPC). Accessibility Guide. Bonn, Alemanha: 2009.

SASSAKI, Romeu Kazumi. Inclusão: construindo uma sociedade para todos. Rio de Janeiro: WVA, 1997.

WORLD HEALTH ORGANIZATION (WHO). International Classification of Functioning, Disability and Health. Geneva: WHO, 2001.

WORLD HEALTH ORGANIZATION (WHO). International Classification of Impairment, Disability and Handicap. Geneva: WHO, 1980.