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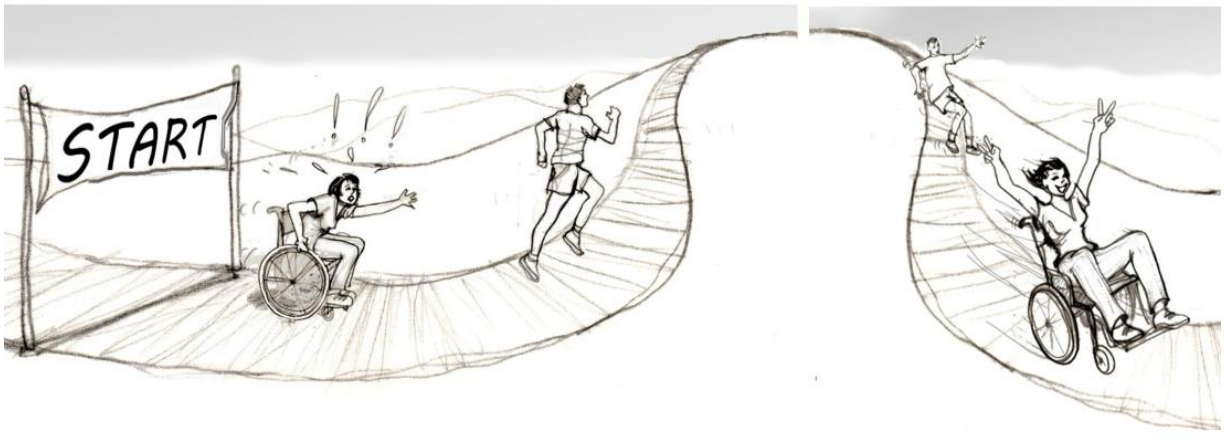

THE SPACE IS DISABLED WHEN IT´S NOT ABLE TO WELCOME THE DIVERSITY
INTERNATIONAL CLASSIFICATION OF FUNCIONALITY, INABILITY AND HEALTH
WORLD HEALTH ORGANIZATION, 2003

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

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Architect and Urbanist by the Federal University of Rio de Janeiro (1981), master on Urbanism by the Federal University of Rio de Janeiro (1999) and PhD on Psychosociology of Communities and Social Ecology by Federal University of Rio de Janeiro (2006) and is specialist on Art History and Brazilian Architecture by PUC RJ (1992). Experiences in the areas of Architecture and Urbanism, working mainly on these themes: accessibility, inclusion, museums, urban spaces, schools, superior education, universities and disability. Many articles published with the theme of "Accessibility of Persons with disabilities". Has been awarded by EAAE for the implementation of new Methodologies and Teaching in Architecture. Owns a vast list of published articles and books. Coordinator of the Research, Teaching and Planning Group on Accessibility and Universal Design (Pro-Access Group at UFRJ). Post-doctor on Architecture (scholarship FAPERJ – PROARQ/FAU/UFRJ): "Accessibility of Persons with Disability to Museums".

1. FIRST WORDS OF THIS JOURNAL

This Journal 'Design for All (ISSN: 2582-8304)' is part of a bigger project being developed in the scope of the work on accessibility done by a team of different professionals and institutions. The idea of "universal access or universal design" involves an interdisciplinary approach, with emphasis on understanding the concept of "smart cities", "mobility", "accessibility" and atmospheres as cognitive factors on the movement of the disabled body. We have rethought the paradigms used internationally, the "Design for all", "Universal Accessibility" and "Inclusive architecture", working on what the environment brings out in the most primary level of emotions. We believe that the situated context of environmental perception is built based on the access that people with disabilities can have to space, and the emotional connection with places which they visit. A person with disability will respond both to the perceived world as to the real world through their sensations. This perception will be influenced by previous experience of its sensitive environment. From this perspective, emphasizing "The Access for all", is included the important concept of atmosphere, which involves the relationship between people and places, their affections, pleasures and desires, their senses and their feelings while walking through an environment. Rather than focusing on behavioral theories or on the physical barriers to accessibility, our work zooms in on the conception that takes the responsibility of not being able to move through spaces, away from the person. Making them realize that some places can be deficient by themselves if they do not permit the mobility of people. What this person identifies or selects is part of this experience, and that will be the result of this environmental perception. Valuing the action of the individual, the settled perception, and the sensible qualities of an environment

added to the senses and feelings we have while walking through an atmosphere, we will also use the work already done in Brazil by Cohen and Duarte (2006) on fondness for a Place, and also some French researchers who follow the same line of investigation involving these features along pathways that are made in Brazilian and Mundial environments. I intend to move forward on the issue of Inclusion, following a new sensorial and emotional perspective from a person with disability while moving and perceiving with its object of action: the urban universe to be visited. The methodology has involved several research procedures: the unveiling and deepening of new concepts such as atmosphere, planning tours with people with disability, monitoring and mapping pathways, the evaluation of these pathways and access, photographing these pathways and experiences while conducting interviews to collect evidence, with the users of spaces and, people directly involved with the management of these environments. As architects, we also make our active observation about our own experiences. Even though in a simple way, our own daily field journal leads us to get more and more involved on day to day basis. Thus, we have broadened our horizons, expanded the network of concepts to be addressed as: memory, culture, identity, ownership, equity, senses and sensations, topics that go beyond the question of ambience and accessibility. Likewise, the study developed to an analysis of some Cities. Our work advanced greatly and the data collected is amazing and diversified, but still unique and not transferable to a more general assessment of all that we have been able to observe, participate in and presume. Many of the testimonies of people with disabilities were surprising, revealing the importance of a more holistic and motor experience that also involves universal access, route, touch, smell and feeling.

We believe we are still in the middle of a trend that certainly has a lot to evolve into a more dynamic global Inclusion in Global Smart Cities.

Regina Cohen

Architect, Country Representative for Brazil in the Group "Architecture for All" in the International Union of Architects (UIA 2024), G3ict/Smart Cities for All Country Representative for Brazil, CPABE (Certified Professional in Accessible Built Environments), International Accessibility Consultant, Associated researcher and a specialist on accessibility. Recently, she received an award from the United Nations Forum Zero Project. In 2014 has been a Visiting Assistant Professor at the Disability Studies Center of Syracuse University (FULBRIGHT/CAPES). Has a master's degree in Urbanism at Federal University of Rio de Janeiro UFRJ (2000), a PhD Degree in Psycho-sociology of Communities at UFRJ (2006), as well as a Post-Doctoral Degree (2013) (FAPERJ, UFRJ). Regina coordinated the Pro-access group at UFRJ. Has been a Visiting Assistant Professor on Disability Studies Center of Syracuse University (2014, FULBRIGHT/CAPES); was also a member of Municipal Council of Persons with Disability in RJ (COMDEF RIO). Regina is the Coordinator of the Rio de Janeiro State Accessibility Commission of the Architecture Council (CAU RJ, 2018-2020, 2024-2026) and member of the City of Rio de Janeiro Council (2024). Cohen was Member of the Forum UFRJ Accessible. Worked in the Project "Accessibility for the Brazilian World Cup 2014" (CNPq), in the Accessibility Manual of the Paralympic Games – RIO

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.

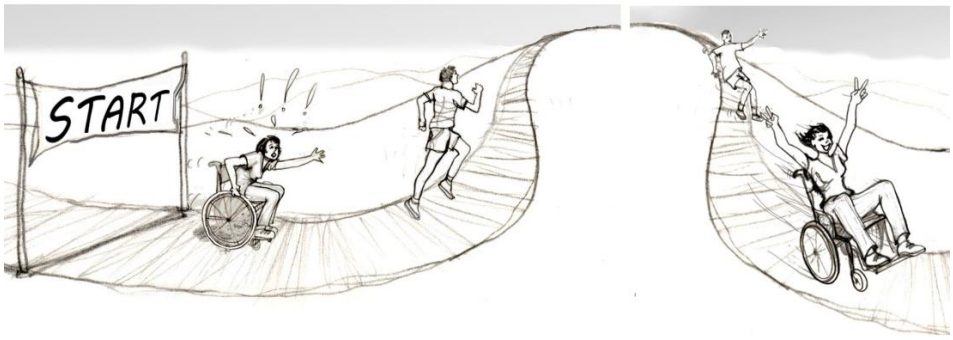
The term" ambience" developed by Thibaud has also made us reflect on experience, perception and actions situated in a certain context based on Persons with Mobility Difficulty (PMD). A concrete example of a pedestrian in an open public space and accessibility is given by Rachel Tomas (2000)0Fwhen analyzing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



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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.

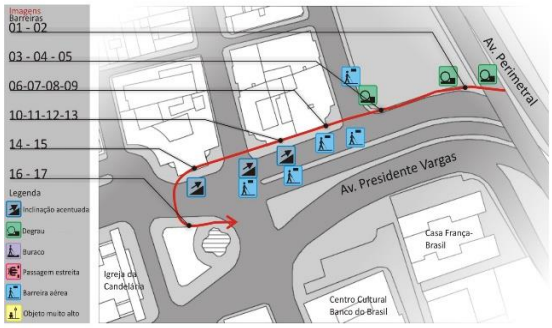
With these new conceptions of study, it is even more evident the search for the comprehension of places as spaces for the management of dwellings. PMD are closely related to their subjective ambiences by the interconnection with visual, auditive, olfactive, thermic and kinesthetic senses that are present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

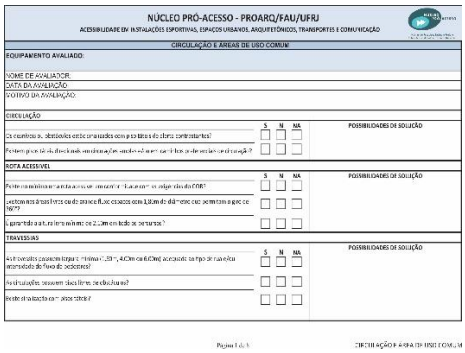
Because of that, and based on ethnomethodology, the main question regarding the relation between body and environment has turned out to be a crucial matter. We have chosen to focus our works in diverse areas that could match the same subjects, but we have selected environmental psychology, perception,

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: assinatura:
Data:
Local:

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.

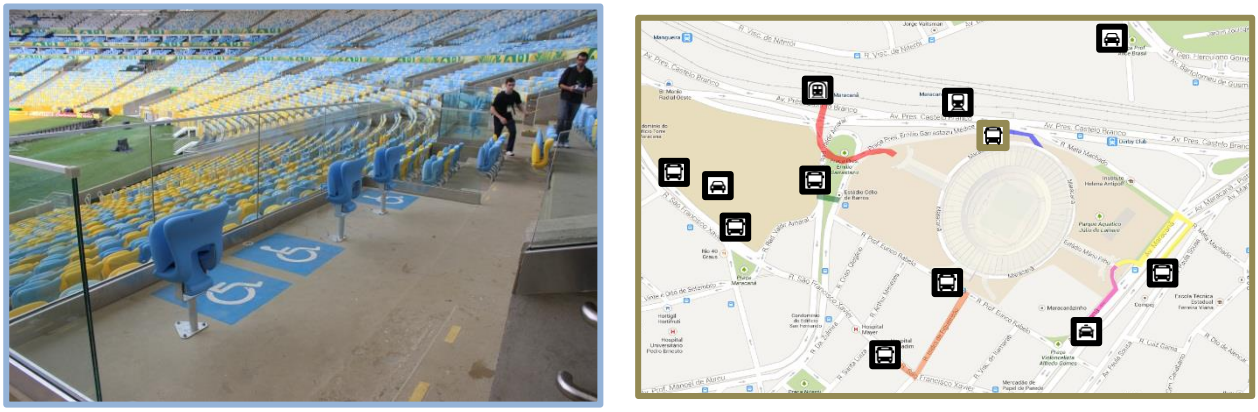
One of the products expected was a study that serves as an alternative to the planning of cities structure related to persons with disability and go in the awareness of professionals engaged in the production of the urban space related to the accessibility barriers.

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.

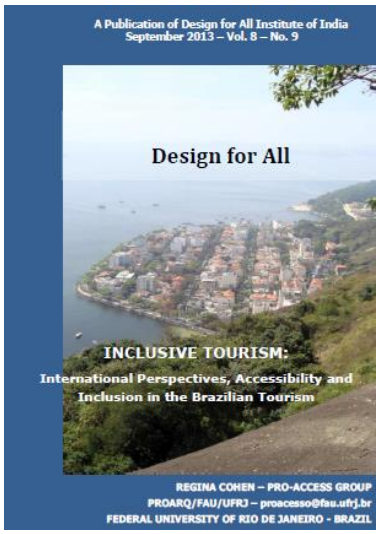
The author also verified some aspects of the access quality, the persons with mobility difficulty perception of society segregation, the access to the urban equipment (telephones, buses, etc.), and the technical solutions (ramps inclination, stairs, barriers, parking spaces).
In general, Cohen could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

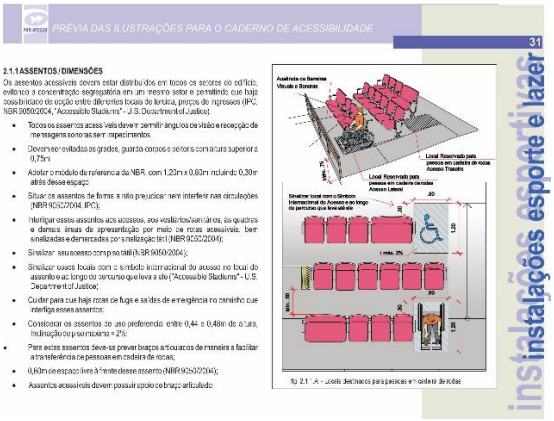
- **A NEW AND MORE COMPLETE PROJECT IN PARALYMPIC RIO 2016**

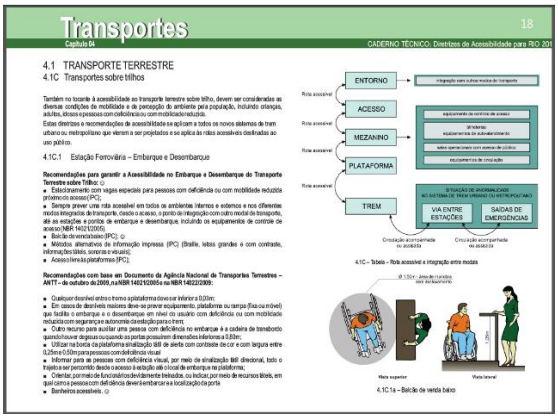
The Games of RIO 2016 wanted a celebration of changes, giving a sustainable legacy for an accessible and "smart city". However, all these indicatives haven't gone ahead, becoming only changes for a future legacy of accessibility and for the development of A SMART CITY.

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



Research and Results



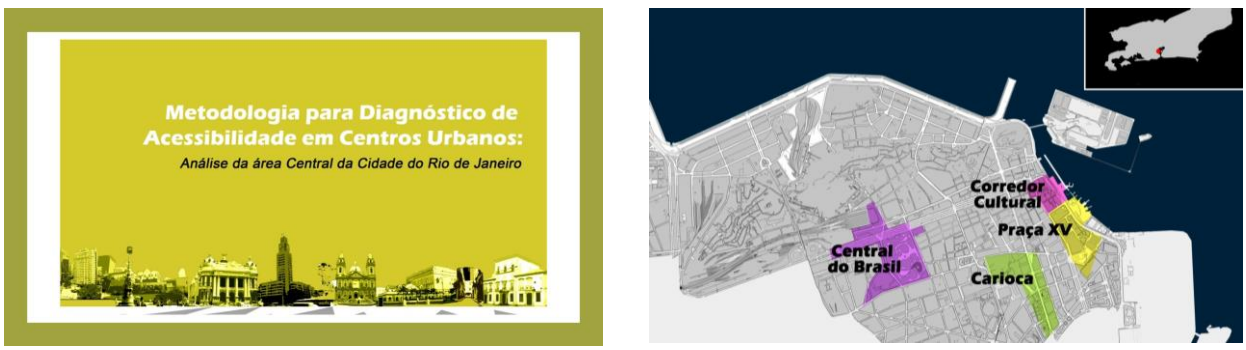


Accessibility Standards for the Paralympic Games RIO 2016

- **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.

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SMART CITIES, HAPPY CITIZENS: INTERACTION BETWEEN TECHNOLOGY, MOBILITY, AND HAPPINESS

Patrícia Fraga

Abstract

The development of smart cities, focused on the interaction between technology, mobility, accessibility, and citizens' well-being, highlights the crucial influence of emotions on the urban experience. An innovative approach, exemplified by the Abayomi Methodology, is proposed to create dynamic urban environments, and promote happiness among residents. The aim is to transcend the traditional conception of technological centers, emphasizing the importance of mobility and universal accessibility. By underscoring the relevance of inspiring global practices, the research encourages strategies to enhance inclusion in urban daily life, particularly for individuals with reduced mobility and various disabilities. The approach seeks a holistic understanding of smart cities, emphasizing technological efficiency and the positive impact on citizens' quality of life. The adoption of the Abayomi Methodology aims to positively influence urban development, creating more inclusive environments tailored to the diverse needs of residents.

Introduction

The concept of smart cities has transformed urban development, integrating technology, mobility, and accessibility to redefine the urban experience. As cities embrace technological advances, prioritizing the emotional well-being of citizens is crucial, moving beyond infrastructure and efficiency. The increasing focus on the

emotional influence of urbanization underscores the complex connection between positive experiences and the overall quality of life in cities.

> ***"[...] A smart city is the one that puts technology at the service of the citizens and the happiness of individuals and communities." (Fraga, P., 2021, p.11)***

In this paper, the aim is to elucidate the diverse dimensions of smart cities and their emotional implications. The complex interaction among technology, mobility, and accessibility forms the core of this analysis, connecting the objectives of smart cities to the transformative potential outlined by the Abayomi Methodology. This forward-looking and integrative approach goes beyond established norms, considering emotional well-being and happiness as fundamental pillars in urban development.

The relevance of happiness in urban environments is crucial, influencing citizens' interaction, perception, and care for their surroundings. In this analysis, real-world case studies are examined to extract lessons and inspiration for the desired urban development.

The Abayomi Methodology is presented as an innovative approach to enhancing positive emotions in smart cities, grounded in principles of well-being, inclusion, and happiness. It transcends conventional urban development strategies, connecting various fields of knowledge through 6 dimensions of analysis. Its main objective is to integrate these dimensions into the analysis of smart city structures, recognizing the fundamental role of intelligent resource use and emotions in the daily lives of urban residents.

In summary, this paper proposes an innovative analysis of smart cities, emphasizing the interaction between technology, mobility, and accessibility, and highlighting the importance of citizens' happiness. The aim is to understand positive and balanced urban experiences for the entire community, fostering dialogue on approaches that enhance accessibility and promote universal design. The effort seeks to facilitate the integration of people with reduced mobility, the elderly, and those with physical, sensory, or intellectual disabilities into urban dynamics, inspiring constructive debates to improve cities, making them more inclusive continually and adapted to a wide range of needs.

1. Smart Cities and Happiness

The urban landscape and contemporary life undergo profound transformations with smart cities, driven by technological innovations to increase efficiency, sustainability, and overall quality of life. These cities utilize interconnected devices, data analysis, and digital infrastructure to optimize various aspects of urban life.

Urban life profoundly impacts emotional well-being, influenced by factors such as city design, mobility, accessibility, and communication. The design of public spaces, green areas, and the quality of urban infrastructure are crucial for residents' emotional experiences (Gehl, 2010). Mouratidis (2021) highlights the role of urban design in creating environments conducive to positive emotions and social interactions. Caragliu, Del Bo, and Nijkamp (2011) underline that smart cities incorporate elements such as governance, population, mobility, economy, environment, and intelligent living, representing a new urban paradigm that adapts

old structures, creates new cities, and redefines human interactions with the environment.

As cities incorporate technologies like the Internet of Things (IoT), artificial intelligence (AI), and advanced data analysis to address urban challenges, intelligent mobility solutions such as innovative transportation systems simplify traffic and reduce environmental impact (Ahvenniemi et al., 2017). This technological integration in urban spaces also shapes citizens' interaction with the environment and access to essential services, which are crucial for positive emotional experiences. However, inadequate transportation infrastructures can generate frustration, negatively impacting residents' emotional well-being (Stanley et al, 2011).

Integrating emotional well-being into smart city initiatives poses challenges and opportunities. The need for approaches considering the diverse needs of inhabitants, including emotional ones, is a challenge highlighted by De Lange et al. (2020). Emotionally responsive urban environments require a nuanced understanding of cultural, social, and individual differences. The potential lies in adapting technology to meet citizens' emotional needs. AI-based applications, as mentioned by De Nadai et al. (2016), can analyze data to identify patterns of emotional well-being and inform urban planning decisions. The challenge is balancing technological advancements with a people-centric approach, prioritizing emotional satisfaction.

The current landscape of smart cities, driven by technological advances, provides opportunities to enhance emotional well-being. However, the emotional aspects of urban life require careful consideration in city planning, mobility, and accessibility to

create inclusive and satisfying environments for all residents. The upcoming sections will delve into the details of the Abayomi Methodology and its implications for promoting positive emotions in smart cities.

2. What is the Abayomi Methodology

After presenting the fundamental concepts of Smart Cities and their objectives, the Abayomi Methodology is introduced as a framework for subsequent urban analyses. Initiated in 2018, this dynamic methodology mirrors the complexity of urban life in continuous transformation. Its purpose is to model the emotional dimension in smart cities, surpassing conventional paradigms of urban planning. The Abayomi Methodology constitutes a holistic framework, emphasizing the essential interconnection between technology, community well-being, and urban emotional experiences.

Placing citizens at the core of urban development, the Abayomi Methodology emphasizes human-centered design principles to promote inclusion and a sense of belonging. Prioritizing not only technological advancements but also well-being, the methodology focuses on six areas: Conscious Citizenship, Physical and Digital Space, Innovative Management, Communication, Human Relations, and Health and Well-being.

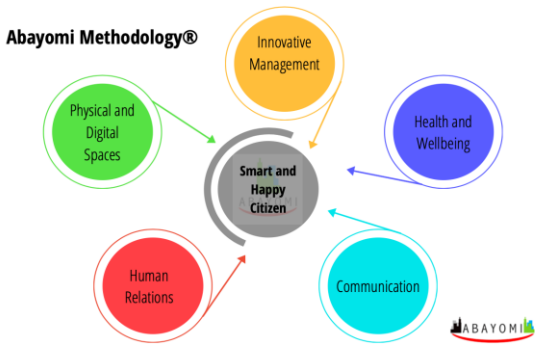

Image 1: The Abayomi Methodology
Source: Abayomi (2020)

The conscious citizen understands their space and needs and collaborates in seeking solutions for urban challenges. Physical and digital spaces should be adapted to local realities, establishing a connection between the real and the virtual. Efficient and Innovative management triggers solutions tailored to users' needs. Clear and inclusive communication guides movements. Strengthening human relations in environments contributes to compassionate cities. Urban environments should promote the health and well-being of inhabitants, encouraging practices that make cities more inclusive and dynamic.

The Abayomi Methodology aims to connect intelligent urban planning with community engagement, starting with Conscious Citizenship. A city's intelligence goes beyond technological achievements, including the ability to influence positive emotional experiences. Through active citizen participation, they become active contributors to the conception of the urban environment (Tobias et al, 2023). This collaborative approach fosters a sense of belonging, ownership, and connection, emotionally enriching the community (De Lange et al., 2020). Whether in creating green spaces, accessible infrastructures, or cultural centers, the Abayomi Methodology seeks to present an approach that not only promotes positive emotions but also empowers citizens to become co-authors of their urban narrative. The principles of the Abayomi Methodology aim to guide our journey toward truly smart cities and genuinely happy citizens.

3. Mobility and Accessibility: A Key Component for Smart Cities

The vitality of modern cities is intrinsically linked to mobility and accessibility. For a city to be considered "smart", it must develop fair and effective solutions in these aspects. A comprehensive

approach to mobility, considering its complexity, enhances the quality of life by promoting inclusive options that meet the needs of residents and consider their perception of happiness. Efficiency and universal accessibility, as complements, are significant factors for well-being, directly influencing cultural and social issues and fostering positive thinking (Tobias and Ramos, 2021, p. 35).

The interconnection between mobility, accessibility, and emotional experiences in urban environments is crucial in smart cities. As cities become more connected, citizens' movement significantly influences their integration and emotional well-being in urban life. Stanley et al. (2011) emphasizes understanding the emotional dimensions of transportation, highlighting that these experiences are not only functional but are intrinsically linked to individual feelings and perceptions.

Image 2: Urban Accessible Experience
Source: Mark Thomas (2023) from Pixabay

In developing smart cities, it is crucial to address mobility challenges and enhance universal accessibility. Mobility influences accessibility, shaping citizens' ability to connect with urban life. The Abayomi Methodology recognizes the crucial role of

technology in promoting inclusive environments, seeking to reshape the paradigms of urban mobility and accessibility, emphasizing the need for accessible transportation systems to enhance citizens' emotional experience.

The Abayomi Methodology prioritizes intelligent urban planning for mobility, requiring equitable access to various modes of transportation. This goes beyond traditional methods, including innovative solutions like smart public transportation systems and pedestrian-friendly spaces. These measures converge to create an urban environment where mobility is integrated into the emotional fabric of the city, surpassing its basic function.

Intelligent public transportation systems, leveraging advanced technologies such as real-time tracking and data analysis, play a crucial role in redefining urban mobility. They optimize routes, minimize wait times, and enhance overall efficiency, creating an experience that caters to diverse citizen needs, including those with reduced mobility and physical, sensory, and intellectual disabilities. Beyond public transportation, the adoption of shared mobility solutions, like ridesharing and bike-sharing, prioritizes accessibility, promoting efficiency, reducing traffic congestion, and providing inclusive options for residents.

Urban design is another dimension where a commitment to inclusive mobility should be evident. Prioritizing pedestrian-friendly spaces promotes not only efficient movement but also enhances citizens' emotional well-being. Well-designed walkways, green spaces, and universally accessible infrastructure contribute to an urban landscape that encourages active engagement with the surroundings, fostering a sense of community and connection.

Image 3: Urban Accessibility for All
Source: Antonio Faundes (2016) from Pixabay

The Abayomi Methodology, through its dimensions of analysis, understands that mobility and accessibility go beyond the conventional, ushering in a new era where technology and urban planning harmonize to create emotionally enriching and inclusive smart cities, where citizens actively participate in urban discussions.

4. Emotional Impact of Accessible and Efficient Mobility Solutions

Efficient and accessible mobility solutions deeply impact citizens, influencing urban experiences. Studies, such as Gehl's (2010), emphasize the relevance of accessible transport for a positive emotional connection between citizens and the city. Mouratidis (2021) highlights that accessible transportation promotes independence and inclusion, positively impacting emotional well-being. Facilitating city movement, regardless of physical abilities or socio-economic conditions, fosters inclusion and shared community. Implementing universal design principles in transportation infrastructure ensures full participation in urban life, including individuals with disabilities.

Integrating emotional dimensions, as proposed by Duarte and Cohen's "Emotional Accessibility" (2018), is crucial in the context of smart cities, ensuring inclusive and harmonious urban experiences. The concept underscores that accessibility extends beyond the physical, conveying a sense of welcome and respecting emotional, affective, and intellectual aspects. This approach challenges the notion that accessibility is limited to removing physical barriers, encompassing the ambiance that treats the user as a whole being. This perspective is inherently connected to the emotional impact of accessible and efficient mobility solutions.

Emotional benefits include stress reduction and increased well-being. Ahvenniemi et al. (2017) highlight that accessible transportation options contribute to a more relaxing urban experience. When citizens can navigate the city seamlessly, it positively impacts their mental and emotional states. Incorporating these emotional dimensions into the principles of smart city development is crucial.

The emotional impact of accessible and efficient mobility solutions, from the perspective of the Abayomi Methodology, goes beyond functional convenience. It encompasses a profound perspective that enhances citizens' emotional well-being, fosters a sense of community, and contributes to a positive urban experience. This begins with the awareness and active participation of citizens in discussions about mobility and accessibility in their own communities.

5. Promoting Inclusive Spaces and Happiness in Smart Cities

The dialogue on smart cities emphasizes the centrality of inclusive spaces, recognizing the need for urban environments to address

diverse needs. The idea goes beyond physical accessibility, encompassing dimensions such as age, gender, physical and intellectual ability, and socioeconomic conditions. Caragliu, Del Bo, and Nijkamp (2011) stress that a comprehensive vision of smart cities necessitates a commitment to inclusion.

The Abayomi Methodology highlights inclusive spaces as a fundamental principle, recognizing the interconnection between emotional well-being, belonging, and accessibility. The methodology advocates for the integration of universal design principles, ensuring that urban spaces are not only physically accessible but also welcoming to everyone, regardless of their background or abilities. Promoting emotional well-being through inclusive design is crucial in public spaces, a perspective addressed in the dimensions of the Abayomi Methodology.

Per Gehl (2010), in people-centered urban environments, collaboration in shaping these spaces aims to transform public areas into inclusive arenas capable of accommodating various activities and fostering a sense of community and shared ownership. This approach not only reduces environmental impact but also ensures the accessibility of urban spaces for individuals of all abilities. Inclusion in this context goes beyond physical infrastructure, encompassing the ease with which individuals interact with the surrounding environment.

The examples below illustrate strategies to enhance mobility and universal accessibility in various cities, linked to the analytical dimensions of the Abayomi Methodology. Understanding these dimensions can catalyze smart cities, focusing not only on creating spaces where each citizen feels valued and connected but also indicating how incorporating this methodology into

discussions about smart cities, mobility, and universal accessibility can significantly contribute to the design of truly effective, intelligent environments oriented towards people's well-being and happiness.

In Tokyo, Japan, citizen awareness is promoted through interactive educational campaigns on accessibility in public spaces. The city uses digital technologies to provide real-time information on accessibility conditions in public locations, promoting more conscious citizenship. This initiative contributes to enhancing both physical and digital space inclusively, thus connecting with the dimensions of the Abayomi Methodology, specifically Conscious Citizenship and Intelligent Physical and Digital Space.

Image 4: Barrier-Free in Public Spaces

Source: Japan National Tourism Organization (2024)

Stockholm, Sweden, adopts an innovative approach to public transportation management, ensuring universal accessibility. The city's bus system uses advanced algorithms to optimize routes in real time, catering to the specific needs of passengers with reduced mobility. Moreover, intelligent communication is facilitated by apps that provide information in an accessible manner, promoting innovative management and effective communication. This practice aligns with the dimensions of the

Abayomi Methodology, notably Innovative Management and Intelligent Communication.

Image 5: Stockholm App for People with Disabilities
Source: Startup Network (2021).

Copenhagen, Denmark, stands out in promoting human relations and well-being through its shared bicycle system adapted for people with disabilities. Investing in public spaces designed to encourage social interactions, the city contributes to the emotional health of the community and an inclusive environment. The dimensions of the Abayomi Methodology connected with this proposal are Human Relations, Health, and Well-being.

Image 6: Accessible Shared Bike System
Source: Coulon (2019). "Cycling Without Age".

Singapore integrates citizen awareness and intelligent technology to ensure accessibility. Its public transportation network uses IoT sensors to monitor real-time crowding and accessibility. Additionally, the city invests in smart sidewalks and digital

signage to create an inclusive physical and digital space, promoting awareness and facilitating mobility for all. This practice relates to the dimensions of the Abayomi Methodology, especially Conscious Citizenship and Intelligent Physical and Digital Space.

Image 7: IoT for People with Disabilities
Source: Lai (2017). Better Life by Design: Designing for People with Disabilities. A co-creation workshop with Design Singapore and Very Day

Barcelona, Spain, stands out as a comprehensive example of how the Abayomi Methodology is connected to urban decisions. The city embraces inclusive practices, from innovative public transportation to spaces adapted to foster human relationships and well-being. Active community participation in superblocks reflects a collaborative commitment. This model aligns with the Abayomi Methodology's emphasis on citizen involvement, ensuring that spaces meet diverse community needs. Barcelona is recognized for creating an inclusive and joyful urban environment, embracing diversity.

Image 8: Superblocos for All
Source: Robert (2019). "Superblocks: Barcelona's Plan to Free Itself from Cars".

The practices illustrate the transformative impact that the Abayomi Methodology can offer in smart cities, prioritizing spaces that promote belonging and universal connection. With its six dimensions, the methodology can guide the creation of inclusive environments and strengthen smart cities. By integrating universal design, people-centered approaches, and community engagement, it is possible to redefine urban spaces to nurture emotional well-being through inclusion and efficient use of available resources.

Conclusion

As we explore smart cities, it becomes clear that the interaction between technology, mobility, accessibility, and citizen well-being is vital in defining the urban future. This paper presents the Abayomi Methodology as an innovative contribution to urban discussions and a catalyst for harmonious and emotionally enriching environments, promoting well-being, community, and citizen participation.

The concept of smart cities goes beyond technology, aiming for citizens' happiness. A smart city puts technology at the service of well-being. The Abayomi Methodology, with its six dimensions, guides innovations by integrating universal design, digital environment, technologies, people-centered approaches, and strengthening community involvement.

The Abayomi Methodology, when examining mobility and accessibility, embraces a holistic perspective, considering both functional efficiency and emotional impact on citizens' lives. This interconnection between smart mobility, innovative management, and the promotion of universal accessibility emerges as a crucial strategy to build truly intelligent and emotionally enriching cities,

addressing diverse community needs. In this analysis, the importance of promoting inclusive spaces is highlighted as a fundamental pillar for emotional well-being. Drawing inspiration from exemplary practices in cities worldwide, such as Tokyo, Stockholm, Copenhagen, Singapore, and Barcelona, it becomes apparent that inclusion extends beyond physical accessibility, encompassing cultural, social, and individual aspects.

The analytical dimensions of the Abayomi Methodology - Conscious Citizenship, Physical and Digital Space, Innovative Management, Communication, Human Relations, and Health and Well-being - provide a robust framework for analyzing and improving urban practices. Citizen awareness, intelligent use of technology, innovation in urban management, and the active promotion of human relations are key elements in creating cities where every citizen feels valued and connected.

The Abayomi Methodology goes beyond an approach to smart cities; it's a vision of recognizing emotions in constructing enriching urban spaces. By integrating it into discussions about smart cities, mobility, and universal accessibility, urban spaces can be redefined and become happy, inclusive communities tailored to diverse needs. The challenge is to adopt these principles in different urban contexts, empowering citizens to co-write the narrative of their cities, and ensuring a more sustainable, joyful, and equitable urban future.

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The development of mobility doesn't necessarily need engines – the conflicts of interest that hinder active mobility.

REnato César Arêas Siqueira

Abstract:

On a global scale, what we know today as urban mobility was treated in the city, in its historical context, as a hegemonically motorized means of travel from the beginning of the last century, without considering the accessible integration between the various existing means of mobility. This hegemonic idea came to have meant mainly due to the domination of the means of production in series and differentiated scale, with the advent of the Industrial Revolution, which began in the mid-nineteenth century, changing, significantly work and production relations. This has determined the technological process, creating distant and disconnected cities, predominant till the last decades of the XX Century.

In the mid-60s of the twentieth century, this motorized and non-inclusive model registered expressive movements of resistance and questioning, with alternative proposals that pointed to accessible solutions based on the inclusion of non-motorized means, either through exclusive spaces for pedestrians, or through exclusive spaces for bicycles, both accessible and integrated with each other. without, however, eliminating the motorized environment.

As a result, accessibility has become the object of city planning,

from the end of the twentieth century and the beginning of the twenty-first century, also due to the inclusion of the non-motorized modal in the transport system. The city of Campos dos Goytacazes, Rio de Janeiro, Brazil, is a good example of this recent conception of planning, even during the observed conflicts.

Introduction:

In the historical context, from the industrial-scale dominance of the motor vehicle as a means of transportation in the city, the automobile was introduced in this environment as the main element, capable of providing independence and agility.

Imagined as sufficient, the thesis was that it did not matter where the occupation would be in the city, since in particular the automobile represented an efficient means of travel, with relative independence, speed and safety.

In this sense, Sir Ebenezer Howard, considered an English pre-urbanist, idealized at the end of the nineteenth century, the utopian Garden City, a plan that inspired several interventions in cities around the world, to solve the problems they presented. Until then, there was no term urbanism, which began to be practiced in the 1940s in the twentieth century, coming from CIAM, the International Congress of Modern Architecture, created by a group of architects for an international debate about the directions of Modern Architecture, whose first realization was in 1928, with 10 CIAMs, the last one in 1959, in Yugoslavia.

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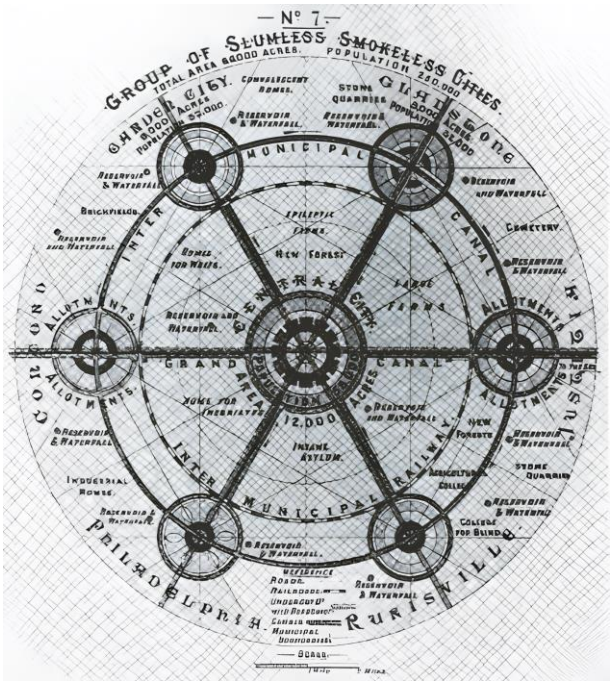


Graphic scheme of the Garden City with its radial axes. Source: Ebenezer Howard and the Garden City - Urbanities - Urbanism, Urban Planning and Master Plans

The golden age of the automobile occurred from the 50s of the twentieth century, with large industrial production of automobiles, concomitant with several urban plans for the opening and improvement of avenues, such as those of Prestes Maia, in the city of São Paulo and that of Pereira Passos in the city of Rio de Janeiro, inspired by both Howard's model, and in Haussman's, this one, in Paris. However, individual transport has reached its limit as a possibility of solving displacements in cities, which has promoted the need for collective public transport systems, such as trains, trams, and urban buses. The main issue becomes the long periods of displacement necessary for the classical relations of the essence of the human being's life in the city, that is, work, leisure, and rest. With a visible compromise in the balance of this tripod,

the quality of life in the city was seriously compromised, which made this model be questioned.

The paradigm shift:

Especially from the 1960s onwards, names such as Jane Jacobs (Death and Life of Great Cities, 1961) and Jan Gehl (Pedestrian Zone, Urban Pedestrian Areas, Denmark, 1965), began to publicly criticize urban interventions based on the automobile and the model of sprawl of the city disconnected from people, as well as the compromise of quality of life and, in the absence of accessible and complementary means by non-motorized means to the transport system in the city, with aggravation in the last decades of the twentieth century.

Stroget Street, Copenhagen, Denmark. Source: Jan Gehl: Biography, Phrases and Projects of the Great Icon of Urbanism (vivadecora.com.br)

From the debates that began in the early 60s, of the twentieth century, the problems of displacement and quality of life in the city have only worsened. In this scenario, not only the model of

occupation and use of urban land is discussed, but also the transport system as an effective and efficient means of displacement, where the inclusion of means that make it possible, especially, to travel over short and medium distances should be considered by non-motorized modes, whether human or road, as well as both in an integrated and complementary way.

In Brazil, the course of this debate occurs late, at the beginning of the twenty-first century, in a process that is still truncated, not exhausted with the advent of the so-called Citizen Constitution of 1988, in the twentieth century. However, these articles were only regulated 13 (thirteen) years later, in Law 10.257/2001, which became known as the Statute of the City and established a new paradigm for the development of the city.

The City Statute defines that the Master Plan is the basic instrument of city planning, understood as a whole, without segregated or neglected spaces, mandatory for cities with more than 20,000 inhabitants, or in an environmental condition of vulnerability.

Presidência da República
Casa Civil
Subchefia para Assuntos Jurídicos

LEI Nº 10.257, DE 10 DE JULHO DE 2001.

Regulamenta os arts. 182 e 183 da Constituição Federal, estabelece diretrizes gerais da política urbana e dá outras providências.

Source: L10257 (planalto.gov.br)

With this important achievement of Brazilian society, the revisions of the Master Plans began to take place in a participatory manner, with the holding of Conferences of the Cities, at the three levels of the Federation for the formulation of urban development policies integrated by the Federative Pact. This process brought to light

the reality of inequalities that exposed a scale of hardship beyond what had been imagined.

One of the most important inequalities found was related to the transport system, urban mobility, mainly due to the urban planning model focusing on motorized modal displacement, based on the automobile, worsened with the crisis of the 90s of the collective public transport system. In one of his critiques of this model, architect and urban planner Jan Gehl, published his book City for People, in 2010, which dialogues with the work and work of Jane Jacobs, whose proposal is the reduction of the urban scale in the context of people, favoring the displacements in the city made from the inclusive, non-motorized, walkable and bicycle means that were incorporated by Ghel in his hometown, Copenhagen, which becomes a great and successful laboratory for the experiments of accessibility and inclusion, based on its urban concepts that spread around the world. The so-called boardwalks and bike lanes originate from this practice.

In this book, the Danish architect and urban planner harshly criticizes the modernist city model, in the Brazilian case, the city of Brasilia, in what he conventionally called the "Brasília Syndrome", properly considered by the file (File and Summary of the book Cities for People – Jan Gehl – UNIVERSITY OF FRANCA LABORATORY – Studocu):

> ***"The three levels were to be treated and amalgamated into a compelling whole that would provide an inviting space for people in the city. Here, too, the problem is pointed out in models, especially the modernist ones, where we can observe only two scales, the large and the the medium, not taking into account the small scale, and because of that, when these buildings are***

built, they are beautiful only to the eye from above and far, but uncomfortable at eye level and impractical for humans, this is what happens with Brasilia, which has large buildings, wide streets, long and straight paths that seem exhausting. In order to avoid this problem, the three scales in priority levels must be taken into account, following the principle: first life, then space, and only then buildings."

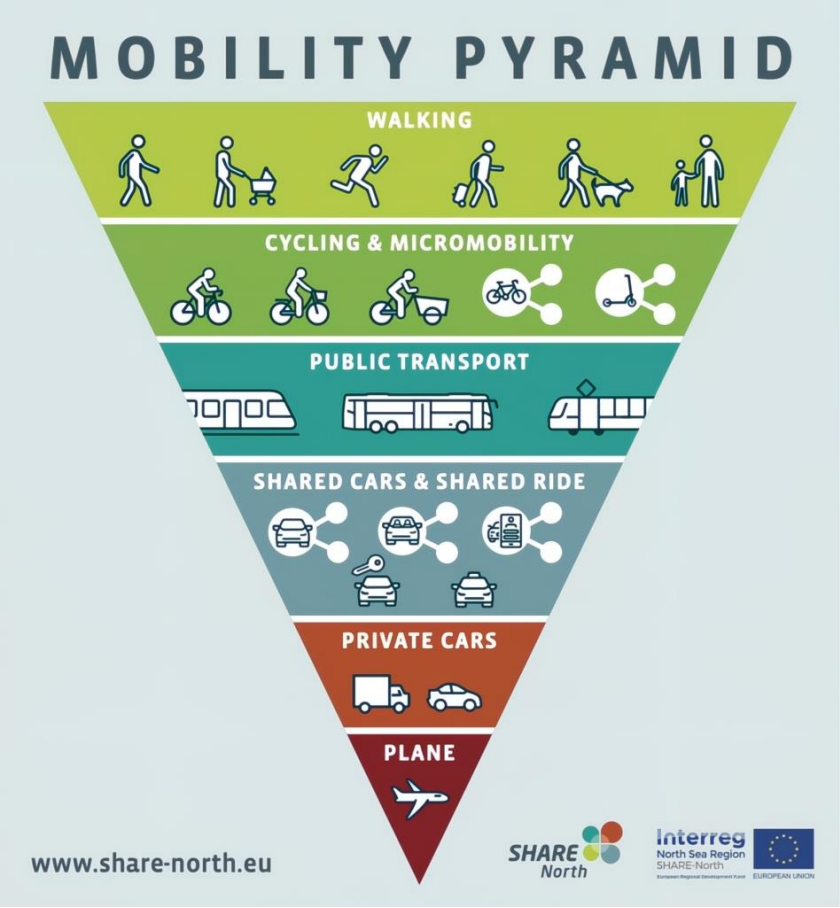
****Cities for people - Source: Internet***

The national and local contexts

Brazil:

The repercussion of this movement also involved Brazilian cities, culminating in Law 12.857/2012, which instituted the National Urban Mobility Policy, with the radical inversion of the mobility pyramid in the country, below, where non-motorized means are now prioritized, with an emphasis on walkability and the use of bicycles, to the detriment of motorized means, especially the

automobile. Once the legal framework was consolidated, the city's planning methods began to have mandatory content dedicated to the inclusion of non-motorized modes, through accessibility and adequacy of urban spaces, since the available infrastructure is primarily dedicated to motorized means with an emphasis on the automobile. Therefore, the challenge is to meet not only the inclusion of non-motorized means, but the integration and complementation with motorized means in the promotion of quality of life for the population, especially by reducing the emission of toxic gases.



Source: Internet

Campos dos Goytacazes/RJ:

The municipality of Campos dos Goytacazes, in 2022, has

approved its Sustainable Urban Mobility Plan, Law 9.137/2022.

Located in the northern region of the State of Rio de Janeiro, it is the largest municipality in territorial extension of the state, with 4,032 km². With a flat urban topographic surface, it has culturally the use of bicycles by the population, whose travel radii are around 8 km. According to data released by the Bicycle Observatory – Research shows the profile of cyclists from Campos and 15 other Brazilian cities - , based on a survey carried out by technicians from the Municipal Institute of Traffic and Transport (IMTT), in 2022, which involved 670 people, the following data were presented regarding the use of bicycles in the municipality:

From the interviewees:

> ***"82.1% of cyclists ride five or more times a week, while the national average is 72% for the same frequency range. The results of the survey show a higher concentration of cyclists in the age group of 30 to 39 years (23.9%), followed by the groups of 40 to 49 years (21%) and 20 to 29 years (19.7%). The survey also reveals that 82.9% of cyclists in Campos use bicycles to commute to work.***
>
> ***72.8% to make purchases; 79.2% socially; and 4.2% to go to school or college. The survey also indicates that, in the Covid-19 pandemic, 44.9% of people changed their routine to ride a bicycle and 5.4% increased their commute with a bicycle."***

Image of the main bike path in the municipality – Avenida 28 de Março. Source: Internet

With this case study, in line with the guidelines of the Sustainable Urban Mobility Plan, as well as Law 12.857/2012, an audacious program of expansion and integration of the municipal cycling network was initiated, which until then accounted for 50 km of extension not properly integrated and not accessible. In addition to the expansion and integration, there was the installation of two-way bike lanes, which until then did not exist, with the exception of the bike path on Avenida 28 de Março, in a process that goes against the premises of the city's Mobility Plan, aiming at accessible integration, with the human modal and with the motorized modal, both in an integrated and inclusive way, which concomitantly provide improvements to the health of the population by active means of displacement.

Bike lane – two-way – Avenida Alberto Torres – Source: Author

However, the process of expanding the cycling network has not been smooth. On the contrary, it has generated numerous complaints and demonstrations, especially from merchants in the central area, the Historic Center, according to a report by the Folha da Manhã newspaper – Merchants demonstrate asking for the removal of bike lanes in Barão de Miracema.

Burnt tires – Photo: Reproduction Folha da Manhã – Source: Internet

Among the complaints are the requests for the removal of the bike lanes, as recorded in the report above, on the occasion of the installation of the bike lane on Rua Barão de Miracema. Trader Jorge Pessanha said:

> ***"We are being harmed by the bike lane. The time we stay here, it's rare to pass by a bike. It has peak hours, which is from 6 am to 6 pm. Other than that, bike lanes are a white elephant. The reason for the demonstration is to see if the public agency, the manager or the engineer, has a little more study of the site and can come and see the need for the bike lane. There's no way our customer can stop here."***

An understanding corroborated by another merchant, Luiz Cláudio Franco, who adds:

> ***"The bike lane is harming our commerce....We run the risk of closing the doors due to lack of customers."***

The complaints extend to taxi drivers, hospitals and health clinics, since the places where they carried out their work activities, in the case of taxi drivers, or the use of boarding and disembarking areas, in the case of hospitals and clinics, have been occupied by the new bike lanes. This has been the common scenario in all other stretches of expansion of the cycling network with the new bike lanes, such as in the following places: Tenente Coronel Cardoso Street, Gilberto Cardoso Street, Alberto Torres Avenue, Goitacazes Street, among others, some of which also conflict with places of embarkation and disembarkation of public transport and commercial loading and unloading. Most of the complaints stem from the complete lack of dialogue on the part of the city hall with

the population, despite the fact that since 2017 there has been a law of the Municipal Council for Urban Mobility, COMURB, Law 8754/2017. However, this has not been installed, which undermines the participatory process in decisions related to urban mobility, which in this aspect make the complaints of a significant part of the population justified.

Notwithstanding the complaints observed, there is still a conflict of use, by other modes, where the undue occupation of the new bike lanes was registered, as recorded by J3News – You can't solve a problem by creating another one in the issue of bike lanes in Campos – J3News (jornalterceiravia.com.br) – pictured below:

J3News Reproduction - Source: Internet

It is noticeable that in all the reports and demonstrations, there is still no record of any reference to the improvement of the quality of life that the active media can offer to the population.

Conclusion:

It is necessary to understand, both on the part of the city hall and on the part of the population, that the paradigm related to urban mobility has changed, where the best mobility will be the product of the combination of the various modes, especially the non-motorized and the public collective, in this aspect the municipality registers a crisis of aggravation over 40 years. Therefore, in the current process of new modeling for the accessible and sustainable urban mobility system, the principle of relationship and exchange of knowledge, through a legitimate management instrument, which is the community council, in this case COMURB, in order to advance in the improvement of the condition of truly sustainable urban mobility, is appropriate. inclusive, by giving priority to the use of non-motorized resources, where, in particular, in the case highlighted, there is recognition of the natural and cultural vocation of the population, so that conflicts of interest are harmonized.

The desired, recognized and necessary expansion of the cycling network cannot mean loss, lack of inclusion and accessibility to other urban mobility needs, so the manager in his planning for the expansion of the cycling network must include the stretches of conflict of use with this infrastructure, so that they are properly mapped, signaled and well communicated, to do so, enable a safe and broadly compatible means of access in the construction and improvement of an urban environment truly for all, with well-being, where it is understood that the active modal can be an important ally in offering conditions that improve both mobility and the quality of life of the population in the city.

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EMOTIONAL ACCESSIBILITY

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ABSTRACT

The present paper argues that, beyond respecting current norms, Accessibility should be seen as an opportunity to establish more pleasant spaces that provide the user with a sense of well-being and affection for the Place. In this sense, the concept of "Emotional Accessibility" is proposed as a fundamental premise to achieve spatial empathy in both Architecture and Urbanism and Ergonomics and Design projects. To illustrate this paper's claims, the article relies on a didactic experience in the Professional postgraduate course at PROARQ / UFRJ that applied the concept of "Emotional Accessibility" in projects on heritage revitalization.

Keywords: ***Emotional Accessibility; affection for the place; Experience.***

1. INTRODUCTION

As a result of the struggle of social movements for the rights of people with disabilities, Brazil has devloped some achievements in terms of accessibility in our cities. This growth, however, does

not appear at the speed we desire, but the changes that have occurred in the last twenty years are visible.

Despite this small advance, few cities manage to offer real spatial pleasantness, which leads their inhabitants to enjoy sharing their spaces. We realize that planners, urban designers and architects seek to meet current standards, however, we feel that there is no awareness that a project with more generous accessibility could expand the bonds of affection that people develop with the city.

This article seeks to discuss this issue, which will be illustrated with a didactic experience carried out within the scope of the Professional Master's Degree at PROARQ/UFRJ, where we sought to sensitize the experienced professional to new, more holistic views of space.

2. THEORETICAL ARGUMENTATION

The discussions we bring here are based on the capacity of built spaces to generate spatial empathy and a feeling of welcome in their users. In this sense, in order to support these discussions, we believe that a brief explanation of the notion of "Spatial Empathy" and the concept of "Emotional Accessibility" is necessary.

Spatial Empathy

Empathy, as we know, is the ability to put ourselves in the Other's places. "Spatial Empathy" focuses on the capacity of spaces to produce in people a recognition of themselves in environments (DUARTE, 2015). This concept has been explored by authors from different areas of knowledge, from

neurosciences to urban design, including philosophy and psychology.

Since the 1940s, studies linked to phenomenology have understood that our awareness of our body is not restricted to its physical limits. Our senses are capable of expanding our Self beyond what we can touch with our hands and connects to everything we can see, feel, touch, smell. It is with this body expanded by the senses that we develop our understanding not only of the environment that surrounds us but also of our belonging to the world.

Scientifically, the work of neuroscientists (BERTHOZ, 2013) shows that this emotional displacement beyond oneself activates brain areas that are also responsible for spatial displacement. This makes it possible to explain why city spaces can often be understood as parts of ourselves. But for this feeling to exist there must be a tune, a resonance, that connects us with the environment around us. We call this resonance Spatial Empathy[11].

We can say that a space often takes a while to "conquer" us and doesn't always "succeed". This way of looking at space by personifying it demonstrates the potential for building narratives and dialogue between people and space. It is precisely this potential for dialogue that emerges when the space "demonstrates" to welcome its visitors, when there are signs that its users are welcome, predisposing the subject to establish a

[1] Spatial empathy should not be confused with "sympathy" for place. This resonance can occur even if we are sad and feel that the environment around us follows our feelings; we can, in the same way, be elated and feel as if the whole city is vibrating with us.

"pact" between themselves and the world, as said Merleau-Ponty.[2]

The conviction of the importance of this theme for the basis of projects for architectural and urban spaces made us take the issue of Spatial Empathy to studies on accessibility. Effectively, we know there is an adherence to the principles of Universal Design with the issue of the welcome that a space can offer to all people. It was in this context that we developed the concept of "Emotional Accessibility".

Emotional Accessibility

We maintain that a space is only fully accessible when it is capable of transmitting to the user a feeling of welcome; when the emotional, affective and intellectual aspects, essential for establishing connections between the user and the Place, are respected. It was in this sense that we developed the concept of "Emotional Accessibility" (DUARTE and COHEN, 2012), which assumes that just good physical accessibility to space is not enough to generate spatial empathy and promote pleasant conditions for experiencing the Place[3].

"Emotional Accessibility" therefore means the Place's ability to welcome its visitors, to generate affection, to awaken the feeling of being part of the environment and to recognize oneself as a welcome person. This concept dismisses the idea that accessibility only happens with the removal of physical barriers.

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[2] We refer to the experience in space, which produces the perception of harmony from the establishment of relationships with the Place, when there appears to be a "pact, established [...] between our body and the world, between ourselves and our body" (MERLEAU-PONTY, 1945, p.293).

[3] The concept of Emotional Accessibility developed by Duarte and Cohen (2012) was initially called "Full Accessibility", a term that was later replaced by the allusion to the subjective component of the relationship with space.

Thus, "Emotional Accessibility" encompasses the entire ambience that surrounds the user of the place, treating them as a total being, capable of activating complex systems of relationships with the space and with the Other.

Because it is concerned with the feeling of affection that environments can provide in people, "Emotional Accessibility" also covers sensoriality, physical differences and subjective aspects. The importance of understanding sensoriality sheds light on the recognition of the body as a bulwark of emotion (LE BRETON, 2009). Through the senses, the body establishes the relationship between the Self and the world and becomes the symbolic communicator of the emotion experienced. Therefore, to stimulate the construction of affection for the Place, the body must be considered in its physical, social, political, cultural and environmental diversity.

We have found in our research that these ideas are still little explored by designers in the areas of architecture and urban design[4]. Even though these professionals declare that they understand that designing for everyone also means promoting everyone's welcome and affection, broad accessibility is not always chosen as the premise of their projects.

But, in practice, what would a project based on "Emotional Accessibility" look like? We would be running the risk of remaining solely in the domain of utopian ideas if we did not test a direct application of these concepts in real projects.

[4] ***Professionals interviewed as part of the research carried out by the Pró-acesso Center.***

3. TEACHING EXPERIENCE

Usually, professionals in the areas of applied social sciences, especially in the specialties of architecture, urban design and ergonomics, are receptive towards the user of their projects. He is a professional who works empathetically: he usually imagines himself penetrating architectural spaces, admiring a created object; They generally have the ability to abstract themselves from themselves and place themselves in a strange situation as if it were the first time they were seeing an object, or receiving the impact of a new web page, for example.

However, it seems to us that, when it comes to accessibility, empathy ceases to exist and the project shows signs of meeting standards as if they were a mere bureaucratic obligation. In our search for accessible spaces we have come across mostly with uninviting locations. If this is so, why is the issue of accessibility not treated equally empathetically by professionals in the areas of architecture, urbanism and ergonomics?

One of the possible answers could be in the training of these planners. We know that the ability to design empathetically is taught to these professionals from the beginning of their undergraduate course, mainly through practical and simulation subjects. In our teaching experience with the discipline on accessibility we have obtained good results[5], proven not only by the reports of students but also verified by the monitoring of graduates who, in a significant number, produce pleasant and accessible spaces.

[5] ***The teaching methodology on accessibility taught at FAU/UFRJ was awarded by the European Association for Architectural Education 2003-2004 (see DUARTE and COHEN, 2003).***

However, if the awakening of this commitment to more affective accessibility depended solely on non-mandatory subjects in the architectural training curriculum, we could hardly expect a more egalitarian future in our spaces. In this sense, we asked ourselves whether an already trained professional, "hardened" in the job market and accustomed to complying with the norms and limitations of current codes could be sensitized – even if belatedly – to this new vision.

The experience was then carried out within the scope of the PROARQ[6] professional master's degree course. As we know, the Professional Master's course is aimed at planners who do not have as many ties to theory, having a much more practical profile. They are architects, urban planners and planners who are already in the job market, in public or private companies, who return to academia to recycle and improve their knowledge in a given sector.

In the aforementioned course, the subject "Inclusive Architecture", taught by the authors of this text, was established based on the concept of "Emotional Accessibility" and promoted debates, experience workshops and lectures with people with disabilities, who reported much more about their affective experiences in urban and architectural space than its difficulties with barriers or obstacles. Despite being practical and pragmatic, the debates were based on the trinomial Experience-Welcome-Emotion, seeking to review the notion of Heritage (focus of the course) within a new plan of sentimental needs for intervention / readjustment projects. The concept of "Emotional Accessibility"

[6] Professional Master's Course in Design and Heritage of the Postgraduate Program in Architecture, Federal University of Rio de Janeiro

was discussed through empathic simulation exercises of the disabled body in the designed space, seeking a greater range of forms of perception and spatial experience. Then, the professionals enrolled in the class were asked to develop projects for the requalification of existing heritage assets, in order to promote "Emotional Accessibility".

The results went beyond expectations[7]. The proposed projects, far beyond accessibility measures, brought reflections on the subjective and cultural dimensions of the built environment and on the insertion of the body in stimulating and welcoming spaces. Creative and critical ways were proposed for transforming heritage assets into spaces of experience and implementing the exercise of building affection for each user.

4. FINAL CONSIDERATIONS

We are led to believe that perhaps there is a gap in the way design disciplines are taught in the training of architects, urban planners and designers. When the undergraduate is presented with the possibility of "adapting" something, it means that, a priori, that something was no longer suitable for everyone. This creates a distance, an objectification of accessibility, which makes empathetic projection actions difficult. After graduating, many planners in Brazil continue to carry this distance with them and still have difficulty dealing with people with disabilities. The spectrum of users remains limited and accessibility is only an afterthought.

[7] Due to the short space imposed by this text, it will not be possible to describe the works that will, however, be exposed during the presentation at the congress

Thus, as Scott Rains (2011) says, accessibility goes half way towards achieving artificial norms and out of context of who is "normal". According to the author, accessibility constantly becomes a mere obligation. Through checklists, people with disabilities are considered as "problems" to be solved and "ticked" when standards are met. In this way, performance according to the "least worst" standard is accepted, seeking only the minimum that can be codified after the political commitment of legislation and obligation. A floor is thus established, but it is generally assumed that the ceiling is out of reach. This logic is materialized in spaces and products that do not welcome or awaken positive affects in their users.

However, our experience with architects working in the job market within the scope of the Professional Master's course showed us that it is possible to change this perspective by considering the importance of "Emotional Accessibility", sensitive and generous. We saw that, when the users' point of view is respected in an empathetic way, the experience takes center stage in relation to the disability.

We do not deny that the Technical Accessibility standards represent precious achievements that must be respected, but we understand that it is possible to go beyond these references and, by rethinking accessibility as a bridge to affection for places, it will be possible to build truly inclusive spaces and products.

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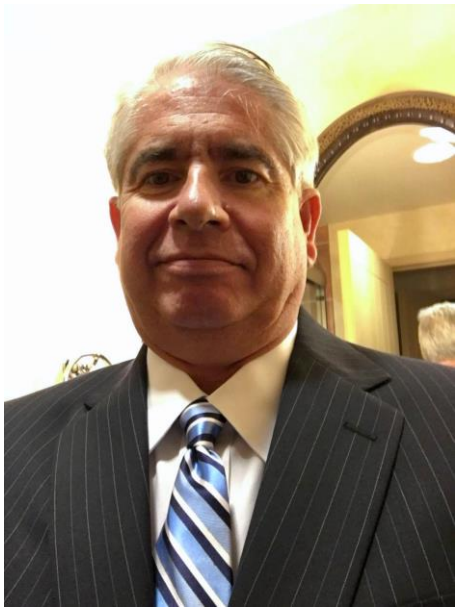

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SUSTAINABILITY IN SMART CITIES AND UNIVERSAL ACCESSIBILITY

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ABSTRACT

Considering the relation between the speech of "development" and the "seduction it exerts" (Rist, 1996) and the people with mobility difficulty (people depending on wheelchairs or crutches, suffering from temporary or permanent disability diseases, old people, pregnant women, obese people, people of low stature and so forth), concepts of accessibility, smart city and sustainability are analysed in this paper, topics that have taken a place of highlight and concern in this era of globalisation.

With the aim of proposing a reflection on the new approaches for the space planning in our cities, the present article starts from the idea the city cannot be dissociated from the social matter. The relation between environment and sustainability presupposes the integration of economic and social development.

In this context, the article focuses People with Mobility Difficulty (PMD), generally excluded from the spaces in the cities; exclusion that evolves itself by the lack of accessibility to certain resources, among what the urban space itself is the most important one.

This work fundaments its ideals in the notion of *borderline*, designed by George Simmel. For Simmel, the existence of borderlines or physical barriers constructed by men in the environment can lead to limitations in people's acting (Simmel, 1999).

In the specific case of PMDs, it may be associated to the notion of borderline set by Simmel the limits that they themselves impose to their daily experience and fulfilment.

From the studies of Simmel on the influence of the space organization over human behaviour, it's emerged a functionalist perspective from the School of Chicago on the explanation of the inter relation between man and environment, characterized by an interaction-made orientation and by new theories on deviation. The essays of one of his exponents', Erving Goffman, contributed to the considerations over stigma and identity of PMDs, listed in this article.

1. INTRODUCTION

In addition to environmental issues, contemporaneity has the challenge of establishing new parameters for development. About People with Mobility Difficulties (PDLs), the emphasis is on the search for a paradigm that abandons the old way of treating these people as passive recipients of help and charity and moves to a level where they have equal rights as citizens.

The article will briefly examine the construction of the identity of these people, based on theorists who have studied this concept. It will also be worked on and commented on the evolution of the idea of sustainability from the debates held during the UN World Commission on Environment and Development (UNCED), in 1987, when the concept of sustainability was inexorably linked to the idea of equality, basic freedoms, human rights and some notions of mental and spiritual well-being.

Likewise, the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992 and in 2002, maintained the theses of the first meeting held in Stockholm, generating commitments on the part of countries: Agenda 21.

In fact, there has been considerable progress since the Stockholm Conference in 1972. Social and cultural pressures towards a better quality of the environment are increasing. However, the article will show that to continue with progress, there needs to be no social exclusion in the built environment. Thus, for PMDs, the issue of accessibility has a key role to play.

Despite the evolution of mentality, it is still perceived that public planners, architects, urban planners, and professionals in design in several countries continue to conceive environments full of barriers in their planning.

The article concludes that, since sustainability policy must be the product of a social policy, accessibility and universal design are tools capable of correcting - or minimizing - inequalities. Thus, the principles of promoting the quality of life and identity of PMDs are sown, encouraging them to meet their own special needs.

It is to be assumed that sustainable development for our cities presupposes a new social order, where society, environment and quality of life can achieve a balance within the "city we want" and promote the socio-spatial integration of differences. Therefore, it is suggested a reflection on an environment that facilitates this identity and is constantly built with the total involvement of these people, who build and represent it, while playing the role of agents and actors in the environmental issue.

2. IDENTITY OF PERSONS WITH DISABILITY

Considering that identity is marked by difference and that, in turn, difference is sustained by exclusion, we begin our discussions about a specific group of people with mobility difficulties, thinking about what their identity consists of and how their difference is perceived. The difference associated with this identity may define the direction of exclusion that permeates the daily lives of these people and their physical and personal space.

Numerous theorists and intellectuals, including Stuart Hall, Erving Gofman, Gilles Deleuze, Michel Foucault, Tzvetan Todorov and others, have developed their thoughts towards understanding how these identities are constituted and what their conditions are in the social structure. Following the research leads of Kathryn Woodward (2000) and Stuart Hall (2001) on the importance of the concept of identity and its crisis in current times and postmodernity, it can be highlighted that: "*We need conceptualizations. To understand how identity work , we need to conceptualize it and divide it into its different dimensions*" (Woodward, 2000, p. 13).

> **Because it is believed that the examination of the issue should go through the recognition of the right to difference and never through a hegemonic process of equality, it is important to define new paradigms for this construction. After all, if no two beings are identical in physical, social, economic, intellectual, political or cultural terms, why has this been a controversy throughout history?**

In the specific case of the subjects we are analyzing, which can be, in addition to people with physical disabilities, any individual who is prevented from performing the same activities as those

considered "normal", such as the elderly, the physically disabled, pregnant women, obese people or people with street carts, what comes to light is the evidence of a concrete and visible difference that cannot be hidden or denied. This visibility can announce, at first, some of the characteristics that these people carry, but that, for sure, do not define their identity. Their differences may be just these, despite all the labels and stereotypes created beforehand and what Erving Goffman characterizes as the stigmas[8] that these people carry, despite other attributes that they possess. This constitutes what Goffman calls a virtual social identity, and it is quite different from what the person really is – his or her real social identity.

Often, the bodily difference characterized by a visible physical aspect serves to define who can be included. For Woodward (2000), "the *body is one of the places involved in establishing the boundaries that define who we are, serving as the foundation for identity*" (Woodward, 2000, p. 15) – for example, for physical identity. In this aspect, Hall also contributes to the broadening of the issue when he considers that: *"Conceiving the body as subjected to normalizing regimes of truth is a productive way of rethinking the so-called 'materiality of the body'"* (Hall, 2000, p.122).

What normalizing regimes would these be that classify according to this 'materiality of the body'? "*A division between what is 'normal' and 'abnormal', between 'equals' and 'different', ends up placing normal things and people on one side and on the other everything that diverges from society's expectations or escapes*

[8] ***The term 'stigma' was coined by the Greeks. For Erving Goffman, stigma characterizes the situation of the individual who is incapacitated for full social acceptance (Goffman, 1988, p.7).***

***this rule: the abnormal, the pathological and what is different*" (Cohen, 1998, p.926-927).[9]**

Normality is also questionable and too fragile a concept to define who can be included. People who do not correspond to the parameters established by society in terms of physical, sensory, mental, or aesthetic criteria may not have the same rules imposed by this same society. "*Other conflicts arise from tensions between expectations and social norms... Different identities can be constructed as 'strange' or 'deviant*'" (Woodward, 2000, p.32). A person with a physical disability may, however, have the feeling that he or she is the complete and normal person, and that others are the "deviants."

In the work developed by Tzvetan Todorov (1993), the question of alterity and the vision of the other, discussed by the author, highlights very old conceptions, which come from the discovery of America, about this external other. The identity and difference of People with Mobility Difficulties are marked by the same ambiguity: their otherness "*is simultaneously revealed and refused*" (Todorov, 1993, p.47).

If it was considered that this is research that can never be completed, this may be due to our eternal difficulty in living with the diversity that has always been so present in society. The denial of the other will also contain a repudiation of any dialogue. For these reasons, these brief considerations about the identity and difference of our subjects were developed. In this way, this

[9] ***These considerations were developed by the author of this paper and presented during the Seminar: Human Rights in the XXI Century, organized by the Institute for International Research. The article, among many others, was later published in book form. The Seminar and the publication of the articles were part of the Brazilian government's commemoration activities of the fiftieth anniversary of the Universal Declaration of Human Rights.***

possibility of dialogue is sought as a starting point in which the physically disabled person can participate. Who knows, maybe in this way we can really understand what the difference of People with Mobility Difficulties consists of and what identity they seek through their claims.

3. PERSONS WITH DISABILITY: Identity and Accessibility

> ***"On the other side of life there are also, among others, the insane, the physically handicapped and the elderly.... Most of the time they don't bother because they are not taken into account. Excluded from the streets, banished from our gaze, away from our consumerist, disposing, discriminatory and, allegedly, efficient haste, they timidly move through "our" space (...)***
>
> ***This is how the theme of accessibility in architecture finds its peers in the struggles for a more dignified treatment (...), in the efforts (...) to rescue respect for old age, to discover potentialities in the physically and mentally handicapped (...). All very recent themes, but which come up against an old difficulty, not only of respecting the other in solidarity, but, above all, of valuing the different as a possible element of composition of a given reality, which, only in this way, becomes richer and more generous – with everyone."***
>
> ***Ana Lúcia Maiolino. Accessibility, Brazil 500 Years and Our Eternal Difficulties with Difference.***
> ***http://www.brasil.terravista.pt/ipanema/3391/***

In view of the considerations made above, it can be perceived, according to Richard Sennet, that there is a paradox between this

visibility and the isolation that surrounds modern public life. Sennet is about an isolation *during visibility in this chaotic but still attractive domain*" (Sennet, 1988, p.44) of our cities.

Visibility deserves a new approach in the sense of thinking about these visible differences relating them to spaces. Bourdieu speaks of the existence of a social space as an objective space.

However, the issues of the identity of a PMD and its difference that is not always recognized, certainly, can assume a character of differentiation from the urban universe itself when there is no adequate and universal planning. What will happen will be the existence of many accessibility barriers in the built environment and the configuration of a universe that excludes these people with their differences.

The urban universe has become more and more extensive, thus imposing a greater need for the power of displacement and leading all men as citizens to use their mobility in this unstructured and heterogeneous space.

We live in smart cities that don't stop growing, which increases the number of commutes and that's why we see that movement increasingly marks urban life. This has been the view of many[10] who work with the city and where images of speed are also present.

For Gomes and Costa (1988) this is the characterization of modernity that combines constant changes in urban daily life with the rhythm and speed of transformations, tending to create an

[10] ***These authors include Choay (1979), Gomes (1994), Lefebvre (1991) and Mettetal-Dulard (1994).***

atmosphere that requires a great effort from the individual to reinterpret these changes at each step, recreating, albeit symbolically, their particular spaces of reference. (Gomes and Costa, 1988, p.58).

Given this dimension of cities, some theorists[11] observe that experiences with the environment lead to an ethic of the instant and of speed, which makes the speed of communications, displacements and changes of all kinds tend to be spatialized.

Thus, it can be assumed that the understanding of the urban environment is based on an accumulation of information received by the people who live in it during their displacements, having caused the very notions of space and time to evolve considerably over the last few years. For Harvey (1989), this represents the production of new meanings for space and time in a world of ephemerality and fragmentation.

In this way, for people whose main problem is precisely that of mobility and who cannot solve the space/time equation like most citizens, the process of exclusion is sometimes seen as a product of the smart city with severe accessibility problems for PMDs tends to discourage these people from leaving their homes.

Physical obstacles or accessibility barriers mean that people must plan their commutes to reduce the number of unpredictable things the city has. In these situations, it may be necessary to anticipate places because of the barriers encountered. In many cases, PMDs, before going somewhere, seek information whether they can get there.

[11] We can mention Michel Maffesoli as one of these theorists who work on this question. (Maffesoli, 1996)

"*I always have my itinerary in mind, down to the smallest detail, and it is a lack of freedom that often bothers me; I dream of speed, but I am haunted by anxieties such as the fear of falling when trying to go down a very high sidewalk...* (Interview, *in* Mettetal-Dulard, 1994, p.39)

Many PMDs will not go to certain places due to the obstacles they encounter, configuring spaces of exclusion or forbidden where there is no accessibility for people with limitations in movement. This means that the dimensions of the smart city appear, for them, reduced to certain locations.

Although Tuan (1980) considers that it is not possible for any person to know well only a fragment of this extensive urban universe of modern metropolises, it may also be true, according to the author's logic, that a PMD that inhabits a city has a psychological need to possess an image of the totality of the environment to locate its own neighborhood. other places and their space within the city.

Physical barriers also generate psychological barriers that accentuate the feeling of exclusion. In this way, it can be seen that the relationship of the PMDs with the smart city is not limited to the difficulties they encounter in moving around but reveals another dimension of space and a new form of social division and exclusion.

Although Goffman (1988) deals with conflicts generated by social discrimination, he also considered the role of spaces in this process. The notion of forbidden, reserved and open places,

developed and proposed by this sociologist, gives an idea of what spatial division can be.

In the reserved places described by the author, segregation finds its most striking form, as they will be inhabited by those who are different among their equals. This creates all the known ghettos. Open spaces are thus qualified because they are accessible and allow PMDs to use them. Spaces classified in this way are barrier-free spaces and can play an important role in allowing access to activities of daily living in an environment that allows travel to perform them.

Such spaces can be the 'locus' of a whole satisfactory perceptual spatial experience through which she can, perhaps, achieve intense sensations of belonging to the city and, thus, the awareness of not being excluded by it. This experience belongs to your daily life. According to Guimarães (1994), it will be the environments that challenge, as opposed to those that intimidate, that will allow the natural reaction of the user, who starts to develop physical and psychosocial skills.

A city, even if fragmented into forbidden, exclusionary, reserved, intimidating or difficult spaces for a PDL to move around, may, however, provide it with an even more extensive imaginary urban universe that will allow it to build its symbolic high point consisting of countless high points or living spaces.

Although the itineraries, routes, itineraries, and displacements of the PMDs are inscribed in an intricate game of strategies, prohibitions and spatial and social limits, their living spaces represent the meaning of their existence and integration. The concept of integration will be situated at the extreme of this

paradox of the city that, while excluding, continues to seduce a PMD. Cities continue to Even when access to certain places is permeated by many barriers, will continue to desire this smart city where the logic of movement and speed can be transformed into other paradigms of urbanity.

We understand that true urban spaces are those capable of changing people and being lived in common. They are still spaces of dream and imagination, but they are spaces where, despite the fragmentation of the city, the emotions, affections, and symbols of many of these people circulate. This will be the universe that will undeniably continue to seduce because it will symbolize, amid chaos and exclusion, and despite everything, a certain form of identification in spaces and in the built environment.

5. THE EVOLUTION OF THE CONCEPT OF SUSTAINABILITY

It is of fundamental importance for the study of the historical evolution of ideas ranging from the Chicago School to the concepts of sustainable development, to understand Simmel's study and its influence on the research work carried out by Robert Ezra Park on "The City" and his suggestions for the investigation of human behavior in the urban environment.

Since Kant, who, in turn, influenced Simmel, space has taken on the character of a "possibility of coexistence" (Simmel, 1999, p.601) and also its sociological role. This coexistence and reciprocal action between people makes space, previously empty, something meaningful insofar as it makes human relationships and interactions possible. Simmel adopted this idea as a premise both when trying to explain the meaning of spatiality for the forms

of socialization and when he proposed to verify the significance that the spatial conditions of a socialization have, from the sociological point of view, for their determination and evolution.

The notion of frontier and the discourse on the foreigner developed by Simmel also reveal essential aspects for the purposes of this work. It is a matter of absorbing from Simmel's considerations that space often contains divisions that give a unique nuance to the relations between its inhabitants.

We can associate the notion of frontier established by Simmel with the limits it imposes on their daily experience and realization. "*In all relations between men, the notion of frontier is of paramount importance, even if it is not always of a sociological sense; for very often it means only the fact that a personality has found its limits, as to its strength, its intelligence, its endurance, or its youth.*" (Simmel, 1999, p.607).

From Simmel's work on the influence of spatial organization on human behavior to Robert Park's explanations of the urban system, when the latter takes from Biology the concepts of the study of the ecosystems of living beings, we see the emergence of the functionalist perspective of the Chicago School in the explanation of the interrelationship between man and the environment.

The Chicago School developed a series of sociological research papers between 1915 and 1940. Professors and students at the University of Chicago inaugurated a kind of sociological inquiry unprecedented in American society. He also left his mark on the

studies carried out in urban sociology and on the main problems experienced by large American cities (Coulon, 1995, p.7-8). Its importance can be felt by the numerous works written by it and about it.

According to Coulon (1995), Chicago sociology was extended by the "second Chicago School", which emerged in the post-war period, and was characterized by works with an interactionist orientation and new theories of deviance. One of its exponents was the sociologist Erving Goffman, whose work contributed to considerations of stigma and identity.

The foundations of Human Ecology, as a discipline, formulated by Hawley (Marcondes, 1999, p.43) followed the premises of a technological determinism to the detriment of environmental determinism. However, Marcondes considers that it contributed little to the advancement of the environmental discussion by directing itself to an opposite line of analysis – that of social determinism.

Having initially established a relationship between man, society and nature, the paradigm evolved in terms of man and his environment, "*whether it was artificial nature (...), or that represented by the industrial Chicago of the twenties*" (Marcondes, 1999, p.43).

In view of the above, it is already possible to perceive the evolution of the debate on the environmental issue, ranging from conceptions of the environment as an autonomous figure, studies of ecology and ecosystems dissociated from their social

production, environmental determinism, technological determinism to the ideas of human ecology and social ecology.

5. FINAL CONSIDERATIONS

In addition to environmental issues, contemporaneity has been faced with the challenge of establishing new paradigms and new notions of development. Henri Bartoli believes that, despite all the efforts of international organizations, the same findings emerge every year in their reports on development: the persistence of a poor mass, a greater distance between individuals, groups and countries, an increase in the incidence of AIDS, unemployment and job insecurity, a decline in the average life expectancy in some countries. environmental insecurity, armed conflicts.

Conclusions that are not encouraging for the beginning of this millennium. In his article on rethinking development, Bartoli talks about the challenge proposed by Frederico Mayor for a development that he calls durable. This new paradigm involves reconciling the demands of economic growth, social equality, the strengthening of democracy and the preservation of the environment.

Despite the evidence with which the concept of sustainable development has been used, it is worth making a brief review of its history. In the 1960s, discussions about the risks of environmental degradation began.

The debates around eco-development have given way to the concept of sustainable development. In 1987 the UN World Commission on Environment and Development (UNCED), chaired by Gro Harlem Brundtland and Mansour Khalid, presented a

document called *Our Common Future*, better known as the Brundtland Report, which defined sustainable development as follows: "*It is one that harmonizes the imperative of economic growth with the promotion of social equity and preservation of the natural heritage, thus ensuring that the needs of current generations are met without compromising on meeting the needs of future generations*." (Brundtland Report, Our Common Future, 1988).

The importance of the introduction of this new concept lies in the fact that development does not concern only economic aspects, as was usually proposed. It is about encompassing in the idea of sustainability the concepts of equality, basic freedoms, human rights and some notions of mental and spiritual well-being. According to Jim S*. Sandhu (2001), "the closest we can get to defining all this is the human development index (HDI) developed by the United Nations Development Program (UNDP)*" (Sandhu, 2001, p.2).[12] His idea was to combine in a complex but rational medium the reach of a country with respect to life expectancy (health) and income level.

The United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, showed a growing global interest in the future of the planet; Many countries have ceased to ignore the links between socio-economic development and changes in the environment. According to Marcondes (1999), the document resulting from this conference, the Rio Declaration on Environment and Development, maintained the Stockholm theses, generating an agenda of commitments on the part of the signatory

[12] Ideas developed by Jim S. Sandhu in a lecture on "Inclusive Design and Sustainable Society", Quebec, Canada, June 2001, at the Congress "Inclusion By Design: Planning the Barrier-Free World". Her work, although not published, is available online at the www.ccrw.org website.

countries, Agenda 21, and the Joint Declaration of cities and local authorities.

Problems such as the unsustainable consumption of the earth's resources, especially in industrial countries, and the accelerated growth of population with greater demand for resources, were viewed by the industrialized with the belief that environmental degradation was essentially a problem of the poor. They were ready to provide some help.

In these circumstances, it is ironic that designers, rather than generating ideas to recycle this enormity of loss, are currently increasingly focusing on a disposable world: shirts, pens, socks, scarves, and even furniture and laptops. This is contrary to the principles of universal design and sustainability. It is also ironic, within the central theme of this work, that public planners, architects, urban planners and design professionals in Brazil and in some countries, poor and rich, continue to conceive environments full of obstacles, difficulties, barriers or borders for PDLs – to use the term used by Simmel – in their planning.

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Letter from the Chairman's Desk By Sunil Bhatia PhD

One day I was brooding about how our ancestors realized the concept of 'the product that should guide the users'. They might have realized in the initial days of laying the foundation of civilizations that the ultimate goal of the products should be designed in such a manner that the product should guide the users. This idea surfaced because it led to an error-free design for the function of the products. 'Were their thought processes more advanced than present modern people in designing?' What they thought and materialized the products on that philosophy our modern designers even have that level of mental capability to design such ideas in practice. I have not come across any such products designed in modern times by our designers where the product itself is guiding the user.

My brooding was disturbed and I experienced my ear canal having some itching and my instant attempt was to come out from that itching sensation as quickly as I could. My hand moved toward the ear from where the itching sensation was disturbing me. I inserted my small finger inside as deep as I could to take out the substance that was the reason for the itching. It was close to the entrance of the ear canal and I succeeded in taking it out and felt relieved.

Immediately I thought our ancestors might have faced the same situation because it is a biological natural part of the body's defences for cleaning, coating, and protecting our ear canal by trapping dirt and slowing the growth of bacteria. Earwax blockage occurs when earwax (cerumen) builds up in the ear or becomes too hard to wash away naturally and an itching sensation appears as signalling foreign unwanted elements are in the body. They might have used the same technique of using the finger for taking out wax as I did. They might have failed they would have used a small stick as an extension of a finger to take that foreign element out of the ear drum. As medical sciences advanced the idea of earbuds surfaced. These cotton buds are safe to use and are made with pure and soft cotton, sterilized, and clinically tested so as not to generate infections in the ear because of unhygienic foreign elements entering with sticks. It is the product that the users and his advancement of knowledge helped in removing other possibilities of damage with this cleaning process. It was the ear that guided the user to get rid of itching.

One day I experienced the itching at my back and my all efforts to reach my hand failed for that spot for scratching. I was mentally disturbed because of the constant itching and the other side not reaching the spot for scratching by hand was frustrating. I immediately realized the corner of the pillar was a little round and not sharp for hurt me. I rested my back against the pillar and started rubbing for scratches. I was relieved. I recalled a cow was also feeling the same and she tried her hard effort to scratch with her tongue by turning her neck to reach that spot by all means to relieve itch. But she could not turn her neck to allow her tongue to scratch. I found she started scratching that spot by rubbing it with the trunk of the tree.

I narrated my experience to my friend and he gifted me a long metal scratcher that was a foot-long pipe where one end was having the shape of a hand made with plastic for scratching. It was a device that could reach any area of my back without any difficulty.

I realized a famous statement "A stem would have remained stem if someone had not designed and turned it into an arrow." Immediately I recalled the primitive person was aware that an arrow could accidentally hurt so he designed a long cylindrical box open at mouth attached with a long string to wrap around his shoulder to keep the box resting with his back to keep the number of arrows in it. That long box is designed by guided by the long arrow to keep in it so users can use it to hit the target as they wish. No body part is engaged in carrying and it is hung at the back, can run as fast with the box as he was without the box. The same design is still used when the rifle is carried by holding at back by the inverted position of the barrel toward the ground if in case accidentally trigger presses, the bullet will strike the ground. This is one kind of control to avoid accidental unintentional hurt of the target but it comes under partial design by man where the rifle is guiding the users to avoid unintentional hurt but readily available for intentionally hurting the desired objects by users.

One day a student asked me about the driverless vehicle. My answer was it is the design that is imitating the driver and the attempt was to make it virtual and incorporate all the possible actions in different situations imitating how the driver would have acted through design but the product is not guiding the users on how it should drive. It is a halfway journey of product guiding the users. Robotic Mop is not an example of a product guiding the user. Still, it is guiding itself by imitating the actual user manual

actions by replacing with virtual users for their desired outcome from their cleaning by broom and what they achieved by wet mop for floor cleaning. No machine yet achieved the level of deep manual cleaning but the attempt is to achieve the concept of a product guide for the users.

One day I was walking along the beach and found fishermen of any gender normally having long hair tied with ribbon. That made me realize it is the compulsion for fisherman who spend the majority of their life inside the sea or around the sea and face the strong wind striking their body. A person gets tired with the speed of wind strikes the ear as well as continuously dishevelled head hair. He has left with one option to get rid of tiredness because of continuous strikes of wind is either to go bald or to grow long hair and tie for proper management. In some places, I noticed they use long cloth wrapped around the head as a turban covering their head for controlling continuous disturbances of normal haircut due to wind and that also helps in covering the ear that does not allow the air to strike the drum of ear and head. The problem with this management with a turban is a short time and continuously working in the sea prevents using turban because it will difficult to manage in high sea wind.

People admiring a differently abled person was drawing the painting with holding painting brush dipped in colour by fixing in toe and finger. I also admired his courage in the absence of the hand he was drawing by holding a brush in between the toe and finger of his feet. Other side it made me think that the design of the brush or pen is the reason that is guiding him to hold with his toe and finger in the absence of a hand for holding. I wondered why man thought of holding by hand for writing and painting. The first hand is long, more flexible, and quickly sends the signals and

follows the same in return from the brain. Reflex actions are better than other parts of the body. The next possible was holding by mouth but it restricted speech as well person cannot hold for a long duration. I experienced that when I held the thermometer in my mouth even for a less than minute to measure body temperature I felt uneasiness and felt the thermometer would lose grip and fall to the ground. So it was the hand that qualified to hold a pen. It was the design of the pen now allows the users to hold between the fingers and thumb. The hand is the possible organ that has the capability of receiving and sending signals to the brain in no time for correction of mistakes in writing or the action of holding a pen/ brush if it does not come out as the user desires. The human hand was the first eraser for us. Later we designed a rubber eraser for removing graphite from the writing instrument of pencils.

Nature works on a basic rule 'acts what product is guiding'. Wherever the air pressure is low, the atmosphere moves to fill the air from possible nearby areas for maintaining equilibrium. If the degree of low pressure is extreme and the survival of living beings is in danger because of the absence of air, nature is not bothered by destroying a few who came on its way and that high-speed air in the form of a hurricane to save the majority. Destruction of uprooting trees or damage to physical buildings is a by-product and nature thinks of a major goal and does not bother in this process who faces minor destructions. Wherever no living is possible at the height of the atmosphere there is no need for air by nature at that level. Any bird can survive flying capacity is to attain a specific height and beyond that is not possible and beyond that nature thinks no need for an atmosphere.

Similarly, river water flows what Earth the product guide. Entire nature works on how users are guided by-products. No tree repairs the damage unless and until some damage surfaced. It is the damage that guides the users to act accordingly, never act on its own. People artificially harm the trees by extracting rubber and gum for human benefit. Our immune system has come into existence and presents states what intensity of foreign elements stuck in our body and is prepared to meet those challenges in the future. As our body fails to meet what the product is guiding we experience the other effects of products and prove the reason for our death.

River water flows from a higher level to a lower and its speed is controlled by rocks, large and small stones, and pebbles on its path that obstruct water and delay the speed of flow of water. In return, the water stays more with the presence of the size of rocks. Pebbles are created by continuous strikes of water on stones, and stones from rocks and decide the size required for controlling the size for how long water to stay in that specific area for the earth to absorb the level of water it needs underground for rejuvenating the living beings survive the outer crest of the earth. We made the mistake of removing the pebbles in the river path that allowed the water to pass at speed and did not allow the earth's surface of that location to be absorbed for maintaining a moist level by storing underground water of the earth. There is the availability of water but the guiding mechanism is disturbed. The product keeps guiding the users but the time factor is short for a proper outcome. Nature teaches humans everything has its own time for the function of the products, disturbing will not benefit the users with the products it is designed for. Designers should always give proper time for operations for every stage of the product to be operational and functional.

Similarly brain is guided by images we encounter every moment and that helps in designing our mind. Mind intensity is what we see. The level of this exercise guides the mind to expand beyond the physical boundary and we call consciousness journey to sub-consciousness. Mind is guiding the user's mind for a solution to the problem he is trying for. Everything in the natural world is not measurable. How small we can break the atom? At one stage we find nothing exists beyond one level of smallness but appears in physical existence at a specific limit. At what stage has physical appearance lost its existence and changed where we fail to measure it? Similarly how our idea for a specific solution stuck to someone is a mystery where the mind guides the human to explore for solution of specific problems.

The product fails to guide the users and it appears 'mystery' to humans.

I am happy that we have extended the invitation of Guest Editor to Regina Cohen, Ph.D. – Associated researcher, expertise in accessibility, Architect, and Town Planner with disability G3ict/Smart Cities for All Country Representative for Brazil on her past performance with us as Guest Editor in our special issue of September 2013 Vol-8 No-9. She is completely a dedicated academician who not only writes good papers but also can collect papers from competent personalities. She informed me that she lost her mother but her courage in overcoming this great loss and dedication is reflected in this special issue. The team of Design for All Institute of India prays for the departed soul.

Lambert Academic publication for celebration of the 150th special issue by publishing a book by compiling editorials "Design For All, Drivers of Design" in two sets Drivers of Design Drivers of Design

Volume-II was translated into eight different languages from ENGLISH to French, German, Italian, Russian, Dutch, and Portuguese. Kindly click the following link for the book. "Morebooks", one of the largest online bookstores. Here's the link to it:
https://www.morebooks.de/store/gb/book/design-forall/isbn/978-613-9-83306-1
Second Volume :
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Enjoy reading, be happy, and work for the betterment of society.

With Regards
Dr. Sunil Bhatia
Design For All Institute of India
www.designforall.in
dr_subha@yahoo.com
Tel 91-11-27853470®

ISSN: 2582-8304

Forthcoming Issues

March 2024 Vol-19 No-3

Dan Formosa Ph.D.

Dan consults with companies and organizations worldwide on design and innovation. An early proponent of "design for all" (a.k.a. Inclusive Design), he also lectures internationally on research and the future of design. He established his company ThinkActHuman with the goal of design for a better world. Dan holds degrees in product design, ergonomics and biomechanics. In addition to ThinkActHuman he co-founded 4B Collective, focused on design and gender, and co-founded the Masters in Branding program at the School of Visual Arts in New York.

He is the recipient of numerous awards, including Smithsonian's Cooper-Hewitt National Design Award (on behalf of Smart

Design). He also received IxDA's first annual Interaction Design Award, in the "Disruptive" category, for his work with Ford Motor Company. His work is included in the permanent collection of the Museum of Modern Art. He appears in a number of documentary films on design, including the award winning 2020 Life on Wheels. In other work, he's the host of the successful YouTube series Well Equipped, produced by Epicurious for Condé Nast, critiquing in a less-than-serious way the usability of various odd kitchen gadgets. He also co-authored and co-illustrated Baseball Field Guide, a bestselling book incorporating the best principles of information design to clearly explain the complex rules of Major League Baseball, now in its fourth edition.

April 2024 Vol-19 No-4

***Dr.ShatarupaThakurta Roy** has studied Fine Arts in VisvaBharati University Santiniketan and did her doctoral research in Visual Culturefrom the Department of Design, Indian Institute of Technology Guwahati.*

She is currently working in the Discipline of Fine Arts, Department ofHumanities and Social Sciences as an Associate Professor engaged inteaching and research in the area of Art and design. She is a painter andprintmaker with many national and international exhibitions to her credit.

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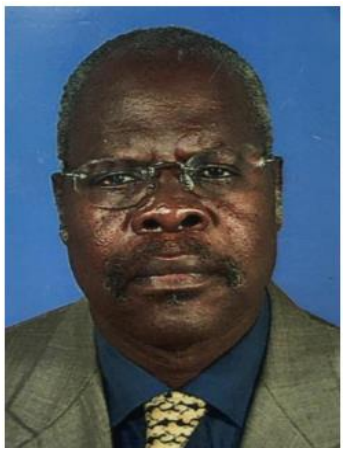
May 2024 Vol-19 No-5



Prof JP Odoch Pido

Prof Odoch Pido is a design educator and professional designer. He is an Associate Professor of Design at the Department of Design and Creative Media, the Technical University of Kenya. He has served on numerous administrative positions, boards and committees, setting curricula and judging Kenyan art and design projects and competitions. He has been a strong force in the preparation and development of more than five generations of Kenyan designers as they make their first halting steps and then flourish as professionals. His many professional credits include exhibition designs, graphic design and product development. Odoch's many publications include papers and chapters in books, conference presentations and journal articles focusing on the deep analysis of culture in relation to design, emerging trends in cultural expression, health and development. He has concentrated on issues in design education but the closest to his heart has been alternative communication techniques for controlling HIV-AIDS, especially for orphans and vulnerable children in rural Kenya. Together with other scholars he is examining groundswell as a cultural revolution in weddings and connecting African thought

system with mainstream philosophy, design and related disciplines. Odoch's photography of abstract forms in nature is his way of expressing his sensitive vision by focusing on small scale natural beauty that might otherwise go unnoticed.

June 2024 Vol-19 No-6

Per-OlofHedvall*works as Director of Certec, Department of Design Sciences, Lund University, Sweden. His research deals with accessibility, participation, and universal design, with a particular interest in the interplay between people and technology. Working closely with the disability movement, he focuses on people's lived perspectives and how human and artefactual aspects of products, services, and environments can be designed to support people in fulfilling their needs, wishes, and dreams. Hedvall has a background in computer engineering and has a particular interest in people's empowerment and opportunities for participation in their lives.*

Per-OlofHedvall often bases his work on Cultural-Historical Activity Theory. In 2009, Hedvall defended his doctoral dissertation in Rehabilitation Engineering and Design, "The Activity Diamond – Modelling an Enhanced Accessibility", where he developed a model for planned, lived, and long-term aspects of accessibility, as a prerequisite for participation.

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July 2024 Vol-19 No-7

Dr. George Vikiru ***is a Lecturer in the Department of Fine Art and Design, School of Law, Arts and Social Studies, Kenyatta University, Nairobi, Kenya.***

His areas of specialization are Textiles and Graphic Design with an emphasis on the utilization of the New Media Arts for Effective Communication and Social Transformation. His other areas of interest are in Indigenous Knowledge, gender, technology and media studies. Dr. Vikiru has had over twenty five years teaching experience at University where he has also carried out research, published widely and gained managerial experience.

August 2024 Vol-19 No-8

Dr. Bijaya K. Shrestha ***received Doctoral in Urban Engineering from the University of Tokyo, Japan (1995-'98),***

Master in Urban Design from the University of Hong Kong, Hong Kong (1993-'95) and Bachelor in Architecture from the University of Roorkee (now Indian Institute of Technology), India (1983-'88). Dr. Shrestha has got working experiences of more than two decades. He had already served to the Department of Housing and Urban Development, Ministry of Housing and Physical Planning, Government of Nepal, United Nations Centre for Regional Development (UNCRD), Japan and various architectural schools in Nepal before taking the present job at Town Development Fund (TDF). He has initiated a new master program in Urban Design and Conservation at Khwopa Engineering College, Purbanchal University, where he served two years as Head of Post-graduate Department of Urban Design and Conservation.

Dr. Shrestha is the recipient of numerous gold medals for his excellent academic performance and decorated by 'Calcutta Convention National Award 2006' by Indian Society for Technical Education for his best paper at the 35th ISTE Annual convention and National Seminar on Disaster – Prediction, Prevention and Management. He is also member of numerous professional bodies and life member of various alumni associations. He has already contributed more than five dozen of papers, published in various forms: book chapter, international journals, conference proceedings, local magazines and journals including in local newspapers. Moreover, he has been invited in numerous international conferences for presentation of his research findings. Finally, his field of expertise includes sustainable urban development, disaster management, housing, local government capacity building and development control. He will focus on universal design concept on Nepal

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September 2024 Vol-19 No-9

Steinar Valade-Amland.

He is market economist, and after more than 30 years of professional practice, I have accumulated extensive and valuable experience from a wide range of industries and manegerial roles within marketing and sales, communication, PR and advocacy - leading to the design industry as an account director and later CEO of one of Denmark's leading brand design agencies, culminating in the role of spokesperson for the Danish design community, heading Danish Designers - parallel with holding numerous honorary positions.

My primary role today is helping organisations and management teams to establish the best possible baseline for business development and change processes - through stakeholder engagement and moderated processes, through organisational learning and co-creation. I'm rather agnostic when it comes to models and methods, but design thinking and processes inspired by design methodologies are part of my DNA after 30 years in and closely connected to the industry.

He ***authored numerous articles and book contributions, amongst others with 15 articles to the Bloomsbury Encyclopaedia of Design, out in 2015.***

His latest book, DESIGN: A BUSINESS CASE - Thinking, Leading, and Managing by Design written together with Brigitte Borja de Mozota, is now out in English, Hindi and Korean.

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New Books

https://www.morebooks.shop/shop-ui/shop/book-launch-offer/74414a1df61c3d2ea8bf46ae7e3c0cf31769f261

LAP LAMBERT Academic Publishing

ISBN 978-613-9-83306-1

Sunil Bhatia

Design for All

Drivers of Design

Expression of gratitude to unknown, unsung, u nacknowledged, unnoticed and selfless millions of heroes who have contributed immensely in making our society worth living, their design of comb, kite, fireworks, glass, mirror even thread concept have revolutionized the thought process of human minds and prepared blueprint of future. Modern people may take for granted but its beyond imagination the hardships and how these innovative ideas could strike their minds. Discovery of fire was possible because of its presence in nature but management of fire through manmade designs was a significant attempt of thinking beyond survival and no doubt this contributed in establishing our supremacy over other living beings. Somewhere in journey of progress we lost the legacy of ancestors in shaping minds of future generations and completely ignored their philosophy and established a society that was beyond their imagination. I picked up such drivers that have contributed in our progress and continue guiding but we failed to recognize its role and functions. Even tears, confusion in designing products was marvelous attempt and design of ladder and many more helped in sustainable, inclusive growth.

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it is available on www.morebooks.de one of the largest online bookstores. Here's the link to it: https://www.morebooks.de/store/gb/book/design-for-all/isbn/978-613-9-83306-1

The Ultimate Resource for Aging in Place With Dignity and Grace!

Are you looking for housing options that are safer and more accommodating for independently aging in place? Do you want to enjoy comfort, accessibility, safety and peace of mind – despite your disabilities, limitations and health challenges? The help you need is available in the Universal Design Toolkit: Time-saving ideas, resources, solutions, and guidance for making homes accessible.

This is the ultimate resource for individuals and professionals who want to save time, money and energy when designing, building, remodeling or downsizing a home. The Universal Design Toolkit will help you take the steps to design homes for your clients or yourself while eliminating the costly trial and error challenges you'd inevitably encounter if faced with this learning curve on your own.

Rosemarie Rossetti, Ph.D., teamed with her husband Mark Leder in creating this unique Toolkit. They bring ten years of research, design and building expertise by serving as the general contractors for their home, the Universal Design Living Laboratory– which is the highest rated universal design home in North America.

Within the Toolkit's 200 richly illustrated pages, you'll find: Insights that distinguish *essential* products, services and resources from the *unnecessary*.

Proven, realistic tips for finding the right home.

Home features you need to look for. Nothing is assumed or left out.

Handy home checklists and assessments.

Interview questions to help you hire industry professionals with knowledge and experience. Photographs that provide a frame of reference to inspire, clarify and illuminate features andbenefits.

Valuable resources to save you time, money and energy.

Helpful sources of funding.

Space planning dimensions for access using assistive devices such as wheelchairs andwalkers.

And so much more!

If you want useful, dependable advice and easy to implement ideas from respected experts who know the ropes, you'll love Rossetti and Leder's perspective. As a speaker, author and consultant who uses a wheelchair, Rossetti has helped hundreds of people design their ideal homes. Now her comprehensive Toolkit is available to help and support you! Get the Universal Design Toolkit now to start your project!

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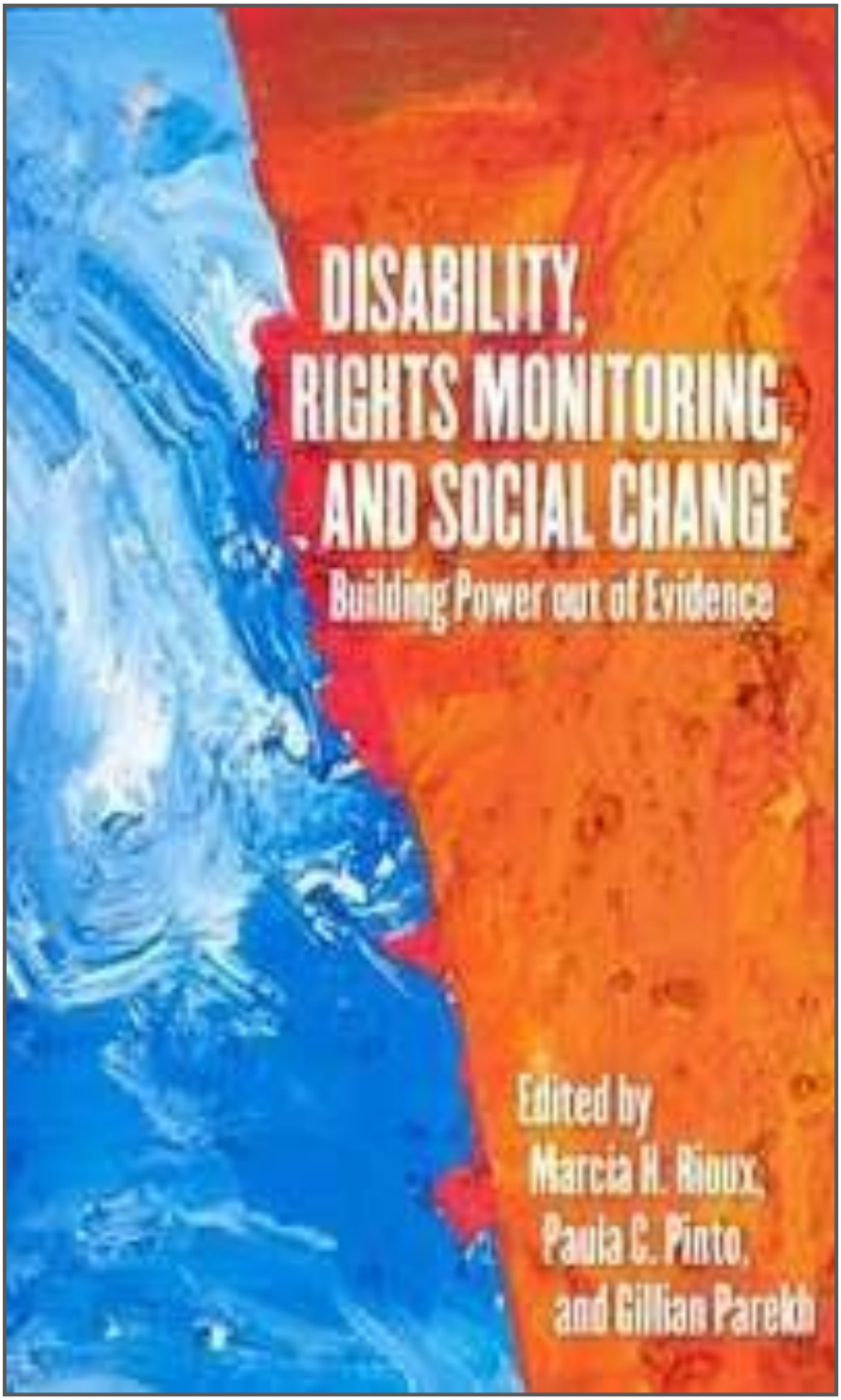
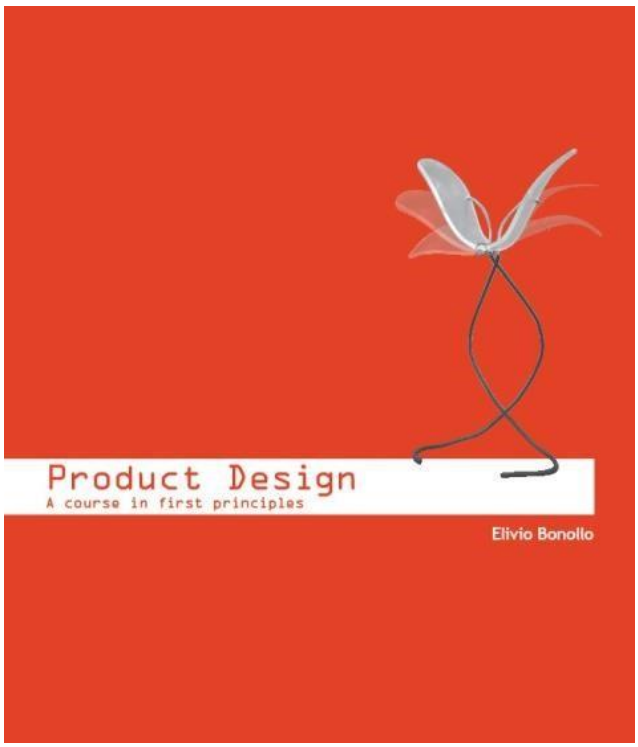
Disability, Rights Monitoring and Social Change:



New Update: ELIVIO BONOLLO (2015/16) PRODUCT DESIGN: A COURSE IN FIRST PRINCIPLES



Available as a paperback (320 pages), in black and white and full colour versions (book reviewed in Design and Technology Education: An International Journal 17.3, and on amazon.com).
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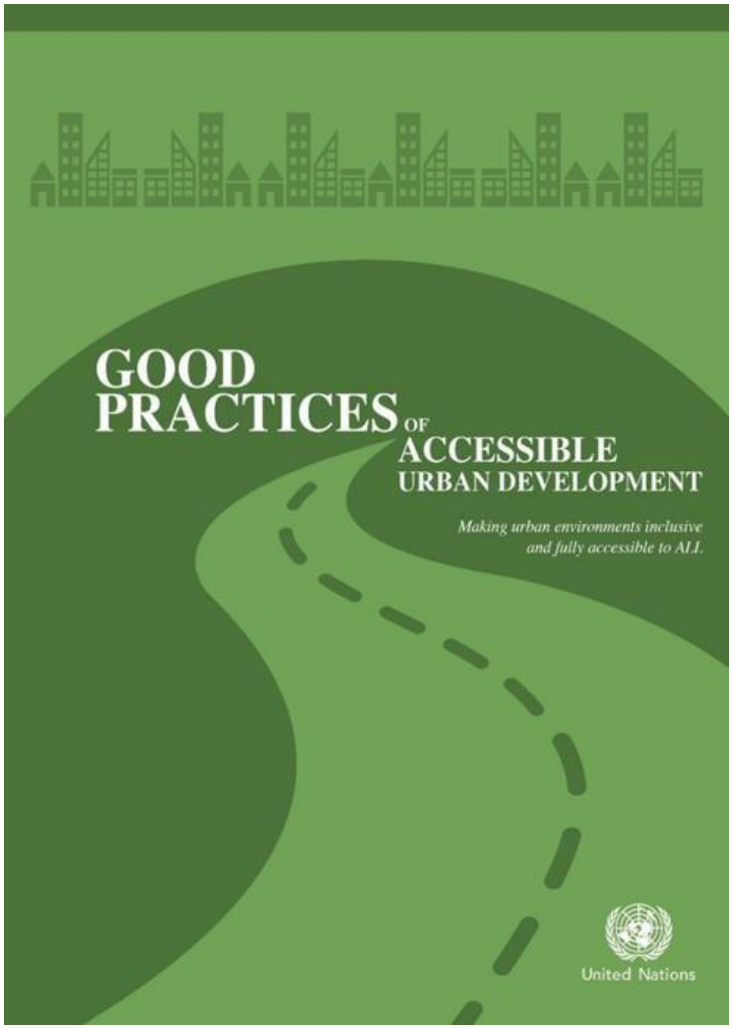
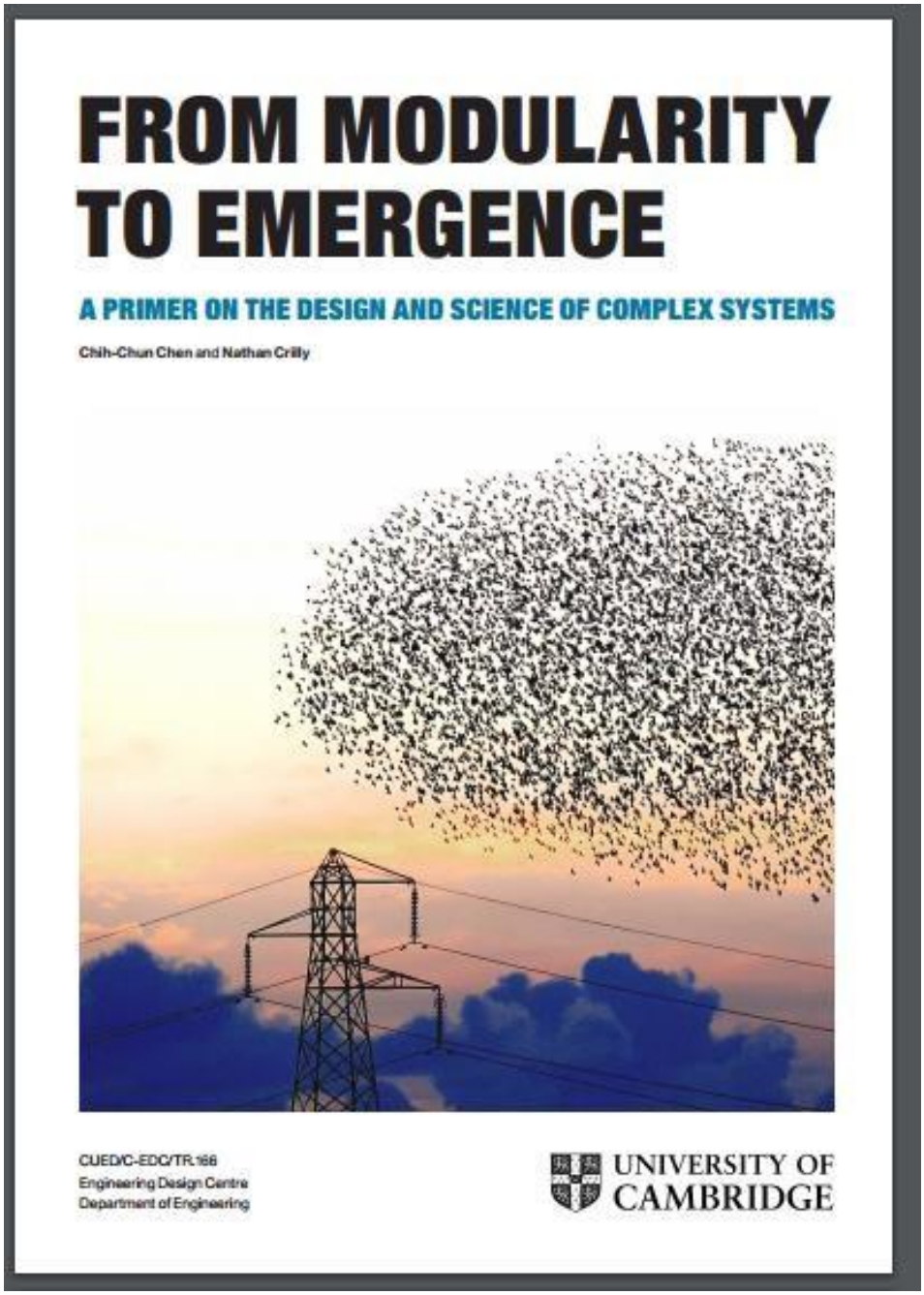


In light of the forthcoming United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) and the imminent launch of the New Urban Agenda, DESA in collaboration with the Essl Foundation (Zero Project) and others have prepared a new publication entitled: "Good practices of accessible urban development".

The publication provides case studies of innovative practices and policies in housing and built environments, as well as transportation, public spaces and public services, including information and communication technology (ICT) based services.

The publication concludes with strategies and innovations for promoting accessible urban development. The advance unedited text is available at:http://www.un.org/disabilities/documents/desa/good_practices_urban_dev.pdf



Dr Chih-Chun Chen and Dr Nathan Crilly of the Cambridge University Engineering Design Centre Design Practice Group have released a free, downloadable book, _A Primer on the Design and Science of Complex Systems_.

This project is funded by the UK Engineering and Physical Sciences Research Council (EP/K008196/1).

The book is available at URL: http://complexityprimer.eng.cam.ac.uk

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Changing Paradigms: Designing for a Sustainable Future

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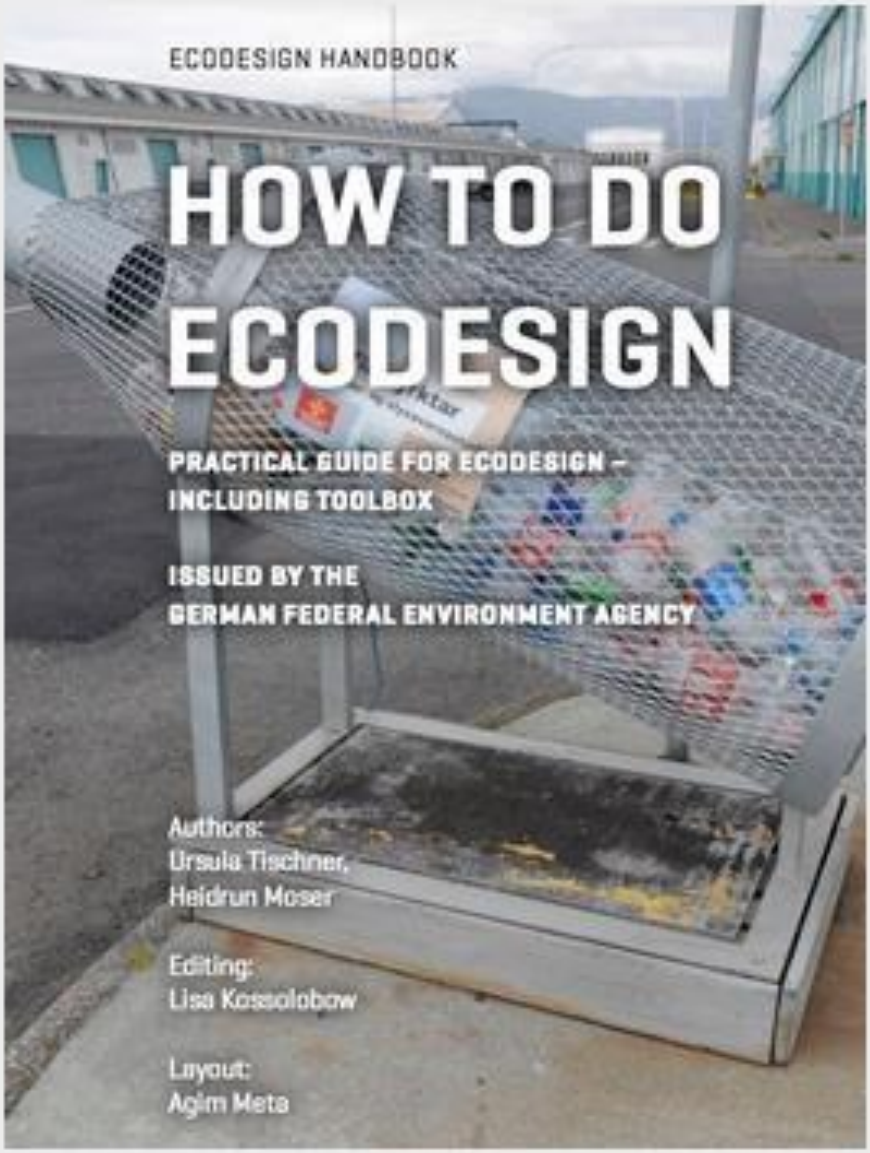
New iBook / ebook:
HOW TO DO ECODESIGN



Practical Guide for Ecodesign – Including a Toolbox
Author: Ursula Tischner

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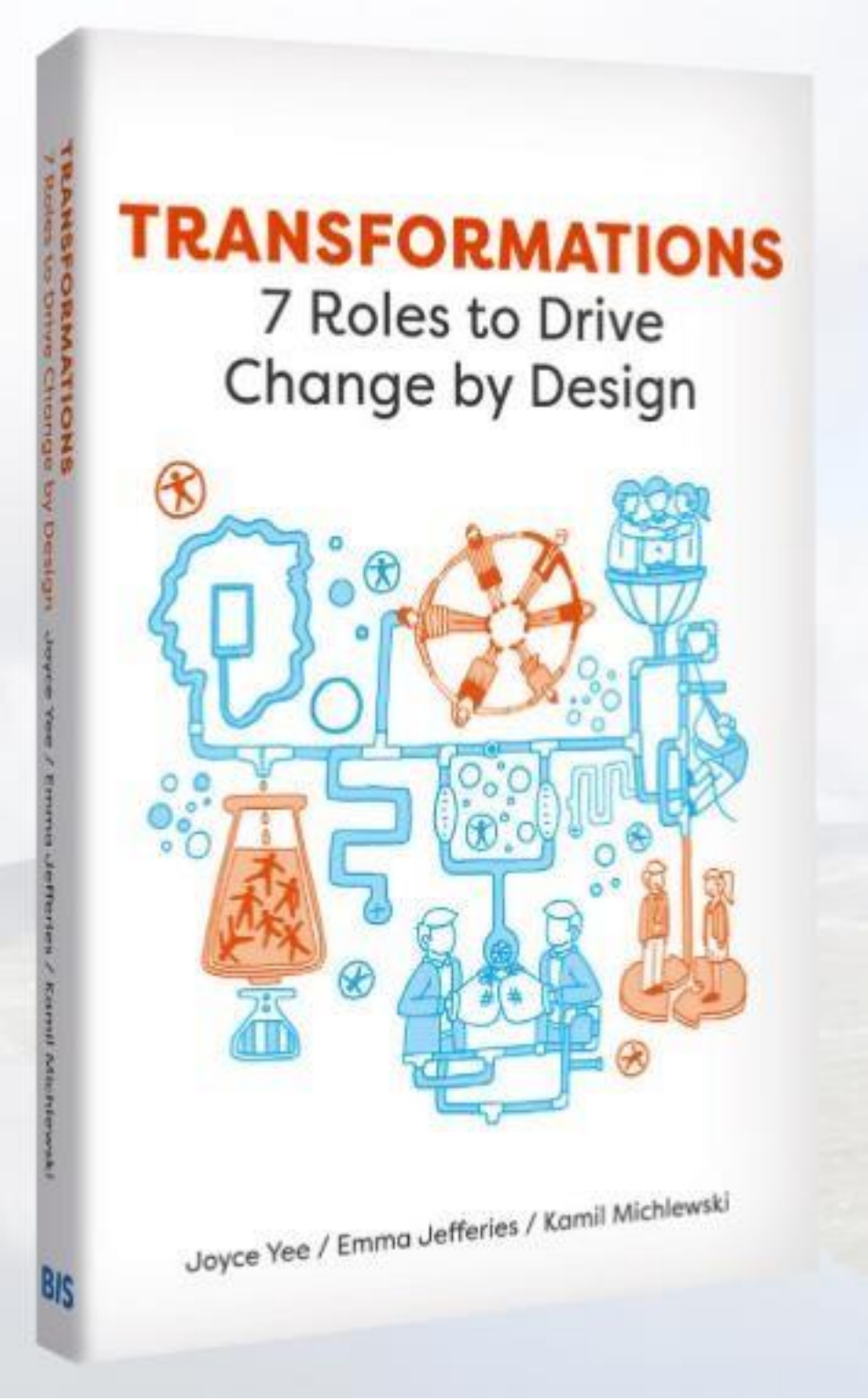

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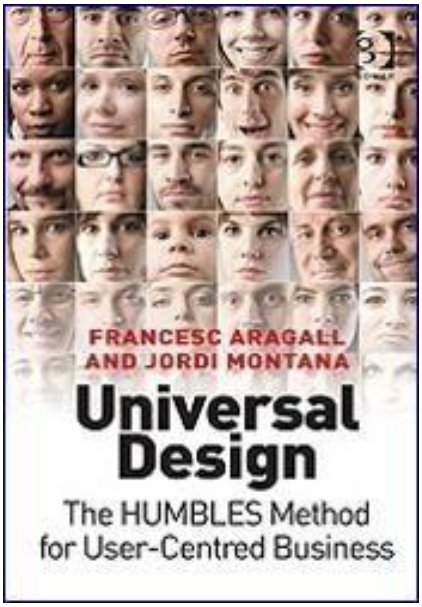
Universal Design: The HUMBLES Method for User-Centred Business



"Universal Design: The HUMBLES Method for User-Centred Business", written by FrancescAragall and Jordi Montaña and published by Gower, provides an innovative method to support businesses wishing to increase the number of satisfied users and clients and enhance their reputation by adapting their products and services to the diversity of their actual and potential customers, taking into account their needs, wishes and expectations.

The HUMBLES method (© Aragall) consists of a progressive, seven-phase approach for implementing Design for All within a business. By incorporating the user's point of view, it enables companies to evaluate their business strategies in order to improve provide an improved, more customer-oriented experience, and there by gain a competitive advantage in the marketplace. As well as a comprehensive guide to the method, the book provides case studies of multinational business which have successfully incorporated Design for All into their working practices.

According to Sandro Rossell, President of FC Barcelona, who in company with other leading business professionals endorsed the publication, it is "required reading for those who wish to understand how universal design is the only way to connect a brand to the widest possible public, increasing client loyalty and enhancing company prestige". To purchase the book, visit either the Design for All Foundation website

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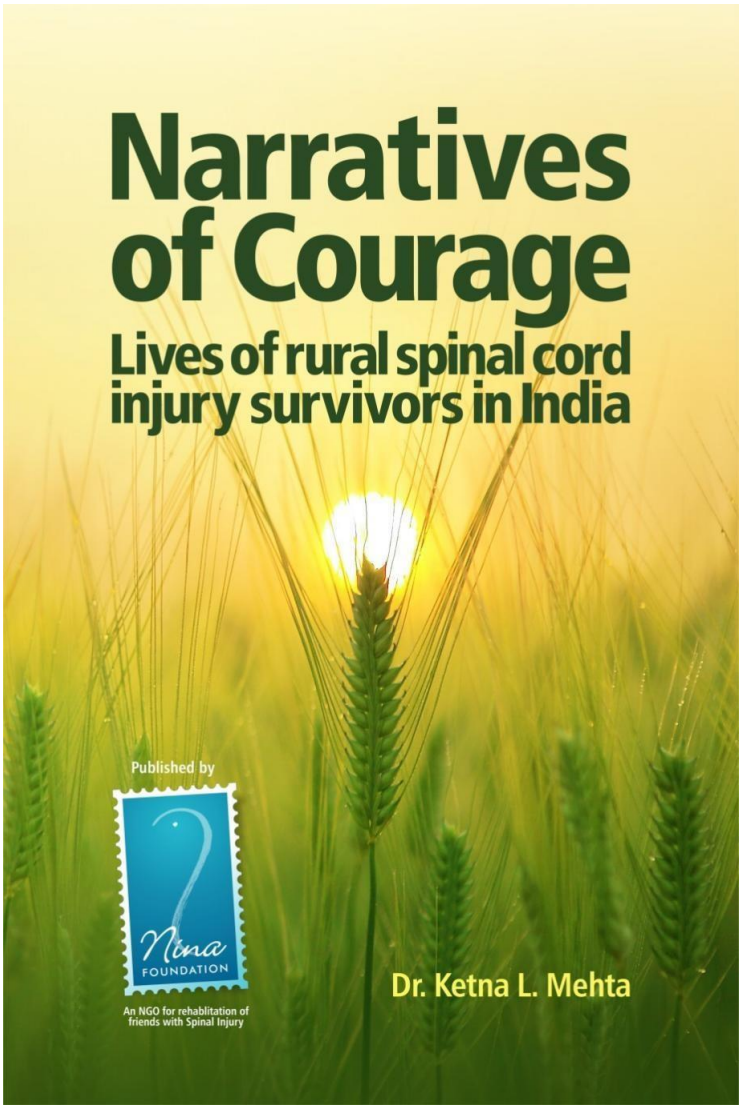


NOW AVAILABLE
Case Studies in Applied Behavior Analysis for Individuals with Disabilities (Second Edition)
Keith Storey, Ph.D., BCBA-D
Linda Haymes, Ph.D., BCBA-D
This book responds to a critical need for highly qualified personnel who will become exemplary professionals because of their advanced knowledge, skills, and experiences in working with students and adults that have varying disabilities, including Autism Spectrum Disorders (ASD). Since Board Certification for behavior analysts was introduced, there has been an expansion of training programs in Applied Behavior Analysis to meet the demands from school districts, health insurers, and families. In spite of these developments, a case studies book has not been available that uses the Behavior Analyst Certification Board Task List, Fifth Edition (BACB) guidelines for educating individuals receiving their BCBA, or for those in the field such as teachers, and service providers. The goal of this book is to fill that need. In this newly revised second edition, eighteen case studies are provided—case studies with complete analysis, case studies with partial analysis, and case studies without analysis. The format, readability, and detailed description of instructional methodology makes this text a valued resource for instructors and behavior analysts responsible for improving the skills of people with disabilities.
Charles C Thomas, Publishing is proud to announce the release of this second edition.
For more information, or to order your copy, scan the QR code below!
$59.95 [paper] ISBN 978-0-398-09400-3
$59.95 [eBook] ISBN 978-0-398-09401-0
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Case Studies in Applied

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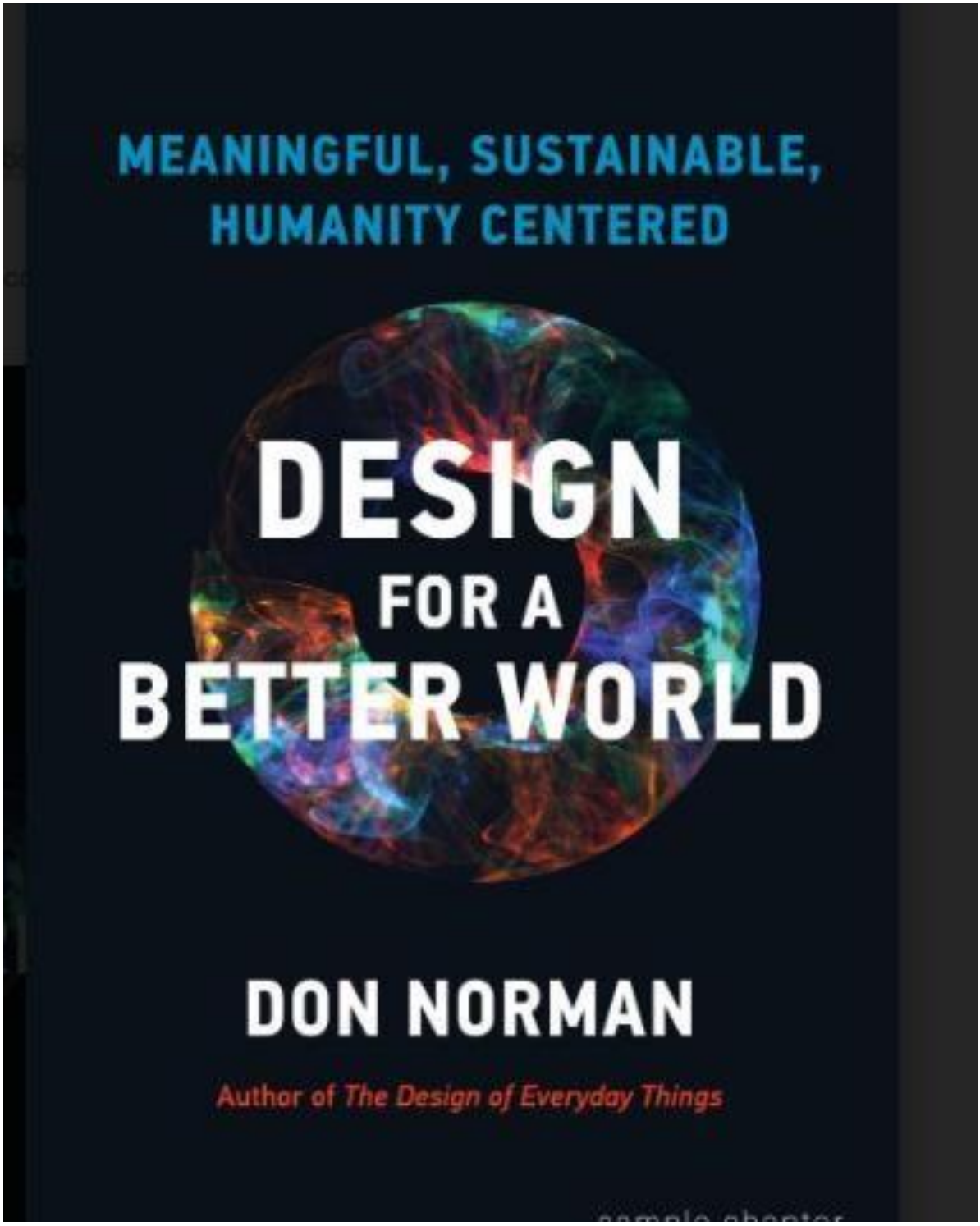

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News

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The architect on foot: Gita Balakrishnan on raising awareness on design

From discovering stories of construction workers to talking design as a career and taking the profession to schools, the Kolkata-based architect's tryst on the road is an inspiring one.

"Walk alone. Walk together. Walk for others. Walk for change. Walk to be changed."

– Gita Balakrishnan, Founder, Walk for Arcause

Architect Gita Balakrishnan is on a mission. She has covered over 2500 kilometres so far on foot, treading one city after the other, in the hope of sensitising people about the power of good design. Through her initiative *Walk for Arcause*, she emphasises architecture's social responsibility and the need for architects to break down the catacombs of architectural jargon and the imposingly high walls of their practices to connect with the community at large. Kolkata-based Balakrishnan is the founder and curator of *Ethos*, an organisation fostering extensive discourse to raise awareness around the built environment, and a

network connecting architects, designers, engineers, and students. Brimming with a childlike zeal, undeterred by strenuous routes, and ever eager to strike up a conversation with anyone she meets, Balakrishnan is quite a (gentle) force in herself. For someone who believes that construction workers should be included in design conversations, that history should be considered from the prism of living monuments, and design must move away from being a luxury to a right, these walks, she says, are only a means to a bigger cause.

(Courtesy: Stir World)

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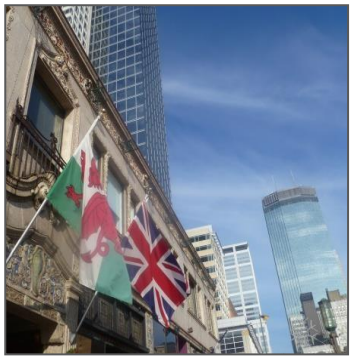

Programme and Events

Call for Entries to the ASLA 2024 Professional Awards Program Now Open

ASLA 2023 Student Collaboration Award of Excellence. On the Edge: A Climate Adaptive Park fo the Battleship NC Memorial. Wilmington, North Carolina. Marguerite Kroening, Student ASLA; Stella Wang, Student ASLA; Faculty Advisors: Andrew Fox, FASLA; David Hill. North Carolina State University / Marguerite Kroening

ASLA is now accepting submissions for its 2024 Student Award Program.

Registration deadline: Friday, May 3, 2024
Submission deadline: Friday, May 24, 2024

All participants must indicate their intent to submit a final project by "Following the Competition" via HeroX Platform by March 29, 2024.

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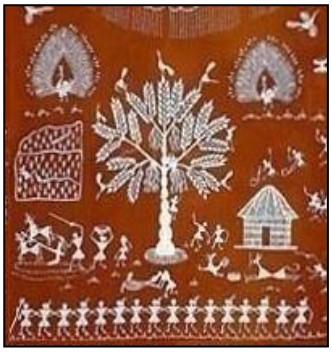

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