EAAE-ARCC INTERNATIONAL CONFERENCE

2nd VALENCIA INTERNATIONAL BIENNIAL OF RESEARCH IN ARCHITECTURE

11-14 NOV 2020

THE ARCHITECT AND THE CITY

VOLUME 1

UNIVERSITAT POLITÈCNICA DE VALÈNCIA

ESCOLA TÈCNICA SUPERIOR D'ARQUITECTURA

Publisher:

Editorial Universitat Politècnica de València, 2020
http://www.lalibreria.upv.es
ISBN 978-84-9048-842-3 (Set of two volumes)
978-84-9048-981-9 (Volume 1)
978-84-9048-982-6 (Volume 2)

All rights reserved:

© of the images, their authors
© of the drawings, their authors
© of the texts, their authors
© of this edition

Editorial Committee:

Ivan Cabrera i Fausto
Ernesto Fenollosa Forner
Ángeles Mas Tomás
José Manuel Barrera Puigdollers
Lluís Bosch Roig
José Luis Higón Calvet
Alicia Llorca Ponce
María Teresa Palomares Figueres
Ana Portalés Mañanós
Juan María Songel González

Coordination and design:

Júlia Martínez Villaronga
Mariví Monfort Marí
Maria Piqueras Blasco
Diego Sanz Almela

EAAE-ARCC International Conference & 2nd VIBRArch: The architect and the city. / Editorial Universitat Politècnica de València

Se permite la reutilización de los contenidos mediante la copia, distribución, exhibición y representación de la obra, así como la generación de obras derivadas siempre que se reconozca la autoría y se cite con la información bibliográfica completa. No se permite el uso comercial y las obras derivadas deberán distribuirse con la misma licencia que regula la obra original.

Conference Chair:

Ivan Cabrera i Fausto

Steering Committee:

Oya Atalay Franck
Hazem Rashed-Ali
Ilaria Valente
Ivan Cabrera i Fausto

Organizing Committee:

Ernesto Fenollosa Forner
Ángeles Mas Tomás
José Manuel Barrera Puigdollers
Lluís Bosch Roig
José Luis Higón Calvet
Alicia Llorca Ponce
Maite Palomares Figueres
Ana Portalés Mañanós
Juan María Songel González
Mª Mercedes Cerdá Mengod

Design and Logistics:

Mariví Monfort Marí
Marcos Lizondo Chardí
Maria Piqueras Blasco

Scientific Committee:

Doreen Adengo
Adengo Architecture, Kampala

Fernando Agrasar Quiroga
Universidade da Coruña

Naime Esra Akin
Beykent University

Ajla Aksamija
University of Massachusetts Amherst

Ahmed K. Ali
Texas A&M University

Ana Almerich Chuliá
Universitat Politècnica de València

Miguel Alonso del Val
Universidad de Navarra

Adolfo Alonso Durá
Universitat Politècnica de València

Eva Álvarez Isidro
Universitat Politècnica de València

Cecilie Andersson
Bergen School of Architecture

Isabelle Anguelovski
Universitat Autònoma de Barcelona

Craig K. Anz
Southern Illinois University

César Aquino Insfrán
Universidad Autónoma de Encarnación

Eugenio Arbizzani
Sapienza Università di Roma

Maziar Asefi
Ryerson University

Izaskun Aseguinolaza Braga
Euskal Herriko Unibertsitatea

Oya Atalay Franck
Zurich University of Applied Sciences and Arts

Pnina Avidar
Fontys Hogescholen Tilburg

Rahman Azari
Illinois Institute of Technology

Marilda Azulay Tapiero
Universitat Politècnica de València

Ángela Baldellou Plaza
Observatorio del CSCAE

Berta Bardí i Milà
Universitat Politècnica de Catalunya

César Bargues Ballester
The Getty Conservation Institute

Michela Barosio
Politecnico di Torino

José Manuel Barrera Puigdollers
Universitat Politècnica de València

Luisa Basset Salom
Universitat Politècnica de València

Genevieve Baudoin
Kansas State University

Liliana O. Beltrán
Texas A&M University

Julio Bermúdez
The Catholic University of America

Henriette Bier
Technische Universiteit Delft

Manuel Blanco Lage
Universidad Politécnica de Madrid

María del Carmen Blasco Sánchez
Universitat Politècnica de València

Ana Bonet Miró
The University of Edinburgh

Victoria E. Bonet Solves
Universitat Politècnica de València

Mary Ben Bonham
Miami University

Lluís Bosch Roig
Universitat Politècnica de València

Dag Boutsen
KU Leuven

Anne Mette Boye
Arkitektskolen Aarhus

Ewan Branda
Woodbury University

Danelle Briscoe
The University of Texas at Austin

Óscar Brito González
University of the Arts London

Sigita Bugenienė
Kaunas City Municipal Administration

Ivan Cabrera i Fausto
Universitat Politècnica de València

Romina Canna
IE University

Roberto Vicente Cañete Ferreira
Universidad Autónoma de Encarnación

Miguel Ángel Carrión Carmona
Universitat Politècnica de València

María Emilia Casar Furió
Universitat Politècnica de València

Pepa Cassinello
Universidad Politécnica de Madrid

Nuria Castilla Cabanes
Universitat Politècnica de València

Roberto Cavallo
Technische Universiteit Delft

M. Rosa Cervera Sardá
Universidad de Alcalá

Pilar Chías Navarro
Universidad de Alcalá

Carola Clemente
Sapienza Università di Roma

Helena Coch Roura
Universitat Politècnica de Catalunya

Beatriz Colomina
Princeton University

Edoarda Corradi Dell'Acqua
Illinois Institute of Technology

Manuel Couceiro da Costa
Universidade de Lisboa

Catherine Croft
Twentieth Century Society

Nur Çaglar
TOBB University of Economics and Technology at Ankara

Ana-Maria Dabija
Universitatea de Arhitectura si Urbanism "Ion Mincu"

Pau de Solà-Morales Serra
Universitat Rovira i Virgili

Johan de Walsche
Universiteit Antwerpen

Lynne Marie Dearborn
University of Illinois at Urbana-Champaign

Adalberto Del Bo
Politecnico di Milano

Matt Demers
Barker/Nestor Architects

Miguel Ángel Díaz Camacho
Universidad Camilo José Cela

Carmen Díez Medina
Universidad de Zaragoza

Victoria Domínguez Ruiz
Universidad de Sevilla

Neslihan Dostoğlu
İstanbul Kültür University

Laurent Duport
Ecole Nationale Supérieure d'Architecture de Montpellier

Ihab Elzeyadi
University of Oregon

Inmaculada Esteban Maluenda
Universidad Complutense de Madrid

Maria Faraone
Oxford Brookes University

Emilio Faroldi
Politecnico di Milano

Ernesto Fenollosa Forner
Universitat Politècnica de València

Laura Fernández Durán
Universidad CEU Cardenal Herrera

J. Kent Fitzsimons
Ecole Nationale Supérieure d'Architecture et de Paysage de Bordeaux

Teresa Fonseca
Universidade do Porto

Giovanna Franco
Università degli studi di Genova

Jordi Franquesa Sánchez
Universitat Politècnica de Catalunya

Mercedes Galiana Agulló
Universidad Católica de Murcia

Inés García Clariana
Universidad Europea de Valencia

Ángela García Codoñer
Universitat Politècnica de València

Ángela García de Paredes
Universidad Politécnica de Madrid

Daniel García-Escudero
Universitat Politècnica de Catalunya

Carolina B. García-Estévez
Universitat Politècnica de Catalunya

Lidia García Soriano
Universitat Politècnica de València

Queralt Garriga Gimeno
Universitat Politècnica de Catalunya

Mariona Genís Vinyals
BAU, Centre Universitari de Disseny de Barcelona

Saul Golden
Ulster University

Carlos Gómez Alfonso
Universitat Politècnica de València

Enkarni Gómez Genua
Euskal Herriko Unibertsitatea

M. Esther Gómez-Martín
Universitat Politècnica de València

Walter Grondzik
Ball State University

Arianna Guardiola Víllora
Universitat Politècnica de València

Ignacio Guillén Guillamón
Universitat Politècnica de València

Elsa Gutiérrez Labory
Universidad de Las Palmas de Gran Canaria

Mary Guzowski
University of Minnesota

Bruce Haglund
University of Idaho

J. Brooke Harrington
Temple University

Harriet Harriss
Pratt Institute

Richard Lee Hayes
Central Michigan University

Deirdre L.C. Hennebury
University of Michigan

José Luis Higón Calvet
Universitat Politècnica de València

Dalibor Hlaváček
Czech Technical University in Prague

Roberta Ingaramo
Politecnico di Torino

Susana Iñarra Abad
Universitat Politècnica de València

Edurne Izagirre Elizaran
Universidad Autónoma de Encarnación

Eva Jiménez Gómez
Universitat Politècnica de Catalunya

Carmen Jordá Such
Universitat Politècnica de València

Ignacio Juan Ferruses
Universidad CEU Cardenal Herrera

Francisco Juan Vidal
Universitat Politècnica de València

Susanne Komossa
Technische Universiteit Delft

Robert J. Krawczyk
Illinois Institute of Technology

Pablo La Roche
California Polytechnic State University Pomona

Vincenzina La Spina
Universidad Politécnica de Cartagena

Carlos Lameiro
Universidade de Lisboa

Susana Landrove
Fundación DOCOMOMO Ibérico

Riva Lava
National Technical University Athens

Laura Lizondo Sevilla
Universitat Politècnica de València

Blanca Lleó Fernández
Universidad Politécnica de Madrid

Jaime Llinares Millán
Universitat Politècnica de València

Maria Carmen Llinares Millán
Universitat Politècnica de València

Verónica Llopis Pulido
Universitat Politècnica de València

Alicia Llorca Ponce
Universitat Politècnica de València

Angela Lombardi
The University of Texas at San Antonio

Emma López Bahut
Universidade da Coruña

Concha López González
Universitat Politècnica de València

Mar Loren Méndez
Universidad de Sevilla

Antonio Maciá Mateu
Universitat d'Alacant

Khaled Mansy
Oklahoma State University

Polyxeni Mantzou
Democritus University of Thrace

Frederick Marks
Salk Institute for Biological Studies

Kat Martindale
Architecture + Urbanism Research Office

Arturo Martínez Boquera
Universitat Politècnica de València

Raquel Martínez Gutiérrez
Universidad Rey Juan Carlos

Antonio Martinez-Molina
University of Texas at San Antonio

Roser Martínez Ramos e Iruela
Universidad de Granada

Ángeles Mas Tomás
Universitat Politècnica de València

Marta Masdéu Bernat
Universitat de Girona

Nuria Matarredona Desantes
Conselleria d'Habitatge i Arquitectura Bioclimàtica

Thomas McQuillan
Arkitektur- og designhøgskolen i Oslo

Laura Liliana Medina Valenzuela
Universidad Autónoma de Encarnación

Clara Mejía Vallejo
Universitat Politècnica de València

Camilla Mileto
Universitat Politècnica de València

José Luis Miralles i García
Universitat Politècnica de València

Valerian Miranda
Texas A&M University

Alex Mitxelena Etxeberria
Euskal Herriko Unibertsitatea

Eugenia Moliner
Roosevelt University

Javier Monclús Fraga
Universidad de Zaragoza

Francisco Javier Montero Fernández
Universidad de Sevilla

Jésica Moreno Puchalt
Universitat Politècnica de València

Sofia Morgado
Universidade de Lisboa

Michel Mounayar
Ball State University

Brook Muller
University of Oregon

Daniela Müller-Eie
Universitetet i Stavanger

Stefano Musso
Università degli studi di Genova

Zaida Muxi
Universitat Politècnica de Catalunya

Marc Neveu
Arizona State University

Rashida Ng
Temple University

Lucyna Nyka
Gdańsk University of Technology

Derya Oktay
Ondokuz Mayıs University

Leticia Ortega Madrigal
Institut Valencià de l'Edificació

Dolores Otero Chans
Universidade da Coruña

María Teresa Palomares Figueres
Universitat Politècnica de València

Cristina Pardo García
Universitat de València

Ulrike Passe
Iowa State University

Luz Paz Agras
Universidade da Coruña

José Manuel Pelegrín Santacruz
Universidad Central del Ecuador

Víctor Pérez Escolano
Universidad de Sevilla

Javier Pérez Igualada
Universitat Politècnica de València

Marta Pérez Rodríguez
Universitat Politècnica de València

Alfred Peris Manguillot
Universitat Politècnica de València

Troy Peters
Wentworth Institute of Technology

Marios C. Phocas
University of Cyprus

Àngel Pitarch Roig
Universitat Jaume I

Philip Plowright
Lawrence Technological University

Ute Poerschke
The Pennsylvania State University

Çiğdem Polatoğlu
Yıldız Teknik Üniversitesi

Ana Portalés Mañanós
Universitat Politècnica de València

Javier Poyatos Sebastián
Universitat Politècnica de València

Sonia Puente Landazuri
Comunica:Ciudad

Núria Ramon Marqués
Universitat de Lleida

Ana Ramos Sanz
Fundació Mies van der Rohe

Hazem Rashed-Ali
The University of Texas at San Antonio

Traci Rose Rider
North Carolina State University

Fatih A. Rifki
Montana State University

Michelle Rinehart
Georgia Institute of Technology

Carmen Ripollés
Portland State University

Clare Robinson
The University of Arizona

Julia W Robinson
University of Minnesota

David Rockwood
University of Hawaii at Manoa

Krešimir Rogina
University American College Skopje

Pilar Roig Picazo
Universitat Politècnica de València

Marcos Ros Sempere
Universidad Politécnica de Cartagena

Mia Roth-Čerina
Sveučilište u Zagrebu

Alberto Rubio Garrido
Institut Valencià de l'Edificació

Felipe Samarán Saló
Universidad Francisco de Vitoria

João Rafael Santos
Universidade de Lisboa

Marja Sarvimaki
Bond University

Paola Sassi
Oxford Brookes University

Meredith Sattler
California Polytechnic State University

Thomas Schroepfer
Singapore University of Technology and Design

Veronika Schröpfer
Architects' Council of Europe

Marina Sender Contell
Universitat Politècnica de València

Carla Sentieri Omarrementeria
Universitat Politècnica de València

Begoña Serrano Lanzarote
Universitat Politècnica de València

Adil Sharag-Eldin
Kent State University

Lamila Simisic Pasic
International University of Sarajevo

Madlen Simon
University of Maryland

Brian Robert Sinclair
University of Calgary

Félix Solaguren-Beascoa de Corral
Universitat Politècnica de Catalunya

Enrique Solana Suárez
Universidad de Las Palmas de Gran Canaria

Juan María Songel González
Universitat Politècnica de València

Cristina Soriano Cuesta
Universidad de Sevilla

Asenet Sosa Espinosa
Universitat Politècnica de València

Laura Soto Francés
Conselleria d'Habitatge i Arquitectura Bioclimàtica

Constantin Spiridonidis
Aristotle University of Thessaloniki

John C. Stallmeyer
University of Illinois at Urbana-Champaign

Alexandra Staub
The Pennsylvania State University

Sally Stewart
Mackintosh School of Architecture, Glasgow School of Art

Jae Yong Suk
The University of Texas at San Antonio

Judit Taberna Torres
Universitat Politècnica de Catalunya

Beatriz Tarazona Vento
Universidad Central del Ecuador

Rafael Temes Córdovez
Universitat Politècnica de València

Aron Temkin
Norwich University

Ana Torres Barchino
Universitat Politècnica de València

Vasilia Trova
University of Thessaly

Macarena Trujillo Guillén
Universitat Politècnica de València

Marci Uihlein
University of Illinois at Urbana-Champaign

Judith Urbano
Universitat Internacional de Catalunya

Mónica Val Fiel
Universitat Politècnica de València

Ilaria Valente
Politecnico di Milano

Koenraad Van Cleempoel
Universiteit Hasselt

Sara Van Rompaey
E2ARC

José Antonio Vázquez Rodríguez
Universidade da Coruña

Fernando Vegas López-Manzanares
Universitat Politècnica de València

Anna Verges Parisi
Observatori Metropolità de l'Habitatge de Barcelona

Maria Pilar Vettori
Politecnico di Milano

Marisol Vidal
Graz University of Technology

Blanca Vila Cortell
Universidad Anáhuac Puebla

María José Viñals Blasco
Universitat Politècnica de València

Maria Voyatzaki
Aristotle University of Thessaloniki

Kate Wingert-Playdon
Temple University

João Pedro Xavier
Universidade do Porto

Dongwoo Jason Yeom
Lawrence Technological University

Shai Yeshayahu
Ryerson University

Shao Yong
Tongji University

Zdenek Zavrel
Czech Technical University

Tadeja Zupančič
Univerza v Ljubljani

INDEX

VOLUME 1

0031_0. INTRODUCTION
Ivan Cabrera i Fausto

0041_BLOCK 1: DEVISING, REPRESENTING AND NARRATING THE CITY

0042_Paper #1.01: The City in the Landscape : Alfred Caldwell's broader perspective on urban design
Kristin Jones, Zaida Garcia-Requejo

0052_Paper #1.02: The face of the city
Nuria Casais, Ferran Grau

0064_Paper #1.03: Co-Drawing: Collaborative Representations of the City
Antje Steinmuller, Christopher Falliers

0076_Paper #1.04: Graphic narratives for reading Indian cities in constant motion
Alisia Tognon, Mariana Felix Paisana

0088_Paper #1.05: The current image of the city of Yerevan (Armenia) through the study of urban spaces
Anna Sanasaryan, María José Viñals

0098_Paper #1.06: Toward a Sustainable Urban Development (SUD): A Case Study on Ancient City of Kazerun, Iran
Mohammad Akbari Riyabi, Farzaneh Soflaei

0112_Paper #1.07: And with a pinch of nostalgia: Traces of the past in Nicosia's present and future
Christakis Chatzjichristou, Kyriakos Miltiadous

0126_Paper #1.08: Many cities in one. Enclaves and microcosms in the general structure of the city: the case of Prague's Ghetto
Domenico Chizzoniti, Yuliia Batkova

0136_Paper #1.09: From the grid to the layer: post-industrial city as city in (morphological) transition
Michela Barosio

0148_Paper #1.10: Grid geometry and core structure: Space Syntax analysis of small and medium 'grid-like' US Cities
Saif Haq

0160_Paper #1.11: The Politics of the Illusion / The Image as a Rejection of Typological Tyranny
Jonathan Scelsa

0172_Paper #1.12: The architecture of Chandigarh Capitol
Maite Palomares Figueres, Ivo Vidal Climent, Ciro Vidal Climent

0184_Paper #1.13: The new cities of the thirteenth century – a new urban paradigm in the Iberian Peninsula
Filipe Brandão do Carmo

0194_Paper #1.14: The performance of gender and ethnic identity in the diaspora mosque
Irem Oz, Alexandra Staub

0206_Paper #1.15: Architectural and graphic expression of the Route 66 from Chicago to Los Angeles
Sigrun Prahl

0214_Paper #1.16: Seeing beyond cities
Ray Kinoshita Mann

0224_Paper #1.17: Corporeal Polis
Paul Holmquist

0234_Paper #1.18: The diffuse museum. Toward a new model for interpreting architecture
Queralt Garriga Gimeno

0242_Paper #1.19: Urban Meta Museum
Polyxeni Mantzou, Xenofon Bitsikas, Anastasis Floros

0252_Paper #1.20: The skyway as an inhabitable mode of urban representation
Mike Christenson, Erin Kindell

0262_Paper #1.21: FABRIC[ATED]: Fabric Innovation in Architecture + Education
Tolya Syril Stonorov

0274_Paper #1.22: Visual spaces of change: the use of Image for rendering visible dynamics of urban change in contemporary cities
Pedro Leão Neto

0288_Paper #1.23: Drawing water: The making of fluid graphics
Brook Muller, Matt Tierney

0300_Paper #1.24: Energy Visualization in the Architectural Design Process
Giovanna Togo, Marina Maurin

0312_Paper #1.25: Thin architecture: energy, economy and the all-glass archetype
Elizabeth L McCormick, Waleed AlGhamdi

0322_Paper #1.26: VR, photogrammetry and drawing over: envisioning the city of the future
Olivier Chamel, Laurent Lescop

0333_BLOCK 2: LIVING IN URBAN LANDSCAPES

0334_Paper #2.01: Getting a grip on fiction: graphic narratives as study sites for urban design
Carmina Sánchez-del-Valle, V.M. Price

0344_Paper #2.02: Transescalarity, an instrument for the sustainable territorial development
Celia Izamar Vidal-Elguera, Claudia Bengoa-Alvarez, Cinthya Butron-Revilla

0356_Paper #2.03: Top down planning approaches and urban reality: The case of Delhi, India
Sana Ahrar, Alexandra Staub

0364_Paper #2.04: An inquiry on the architecture of the open cities in the age of planetary urbanization
Esin Komez Daglioglu

0374_Paper #2.05: Green infrastructure as urban planning regulation of public residential neighborhoods
Andrea Iacomoni

0384_Paper #2.06: Artificially unnatural: Nature 2.0
Gayatri Tawari, Alka Tawari

0394_Paper #2.07: Mapping the Passive Natural Surveillance The Bilbao Metropolitan Area
Iñigo Galdeano Pérez

0406_Paper #2.08: Reconnecting with nature: identifying new models of urbanisation
Steffen Lehmann

0420_Paper #2.09: Considering Ladakhi self-sufficiency under climate change, COVID-19 and beyond
Carey Clouse

0430_Paper #2.10: Sense of absence: place keeping of the intangible
Elena Rocchi

0442_Paper #2.11: Contact and impact (influence). Timeless events in the contemporary city landscape
Salvatore Rugino

0450_Paper #2.12: Architecture beyond permanence: temporariness in 21st century urban architecture
Marco Enia, Flavio Martella

0460_Paper #2.13: Public squares, social interactions, and urban sustainability: lessons learned from Middle Eastern Maidans
Shima Molavi Sanzighi, Farzaneh Soflaei

0474_Paper #2.14: Urban landscape living lab. Base Camp : Vadozner Huus (BC : VH), Liechtenstein
Clarissa Rhomberg, Anne Brandl, Johannes Herburger, Luis Hilti

0486_Paper #2.15: Sevilla 1910, the motion of censure against the architectural style Art Noveau. Perpetuating and controlling the narrative of the symbolic city in the modern era
Reyes Abad Flores

0496_Paper #2.16: Urban landscapes in Berlin shaped through cultural diversity
Sigrun Prahl

0508_Paper #2.17: Was Le Corbusier a utopian thinker or a realistic visionary? An analysis of two diverging views
Cihan Yusufoglu, Alexandra Staub

0518_Paper #2.18: University is city. The infrastructure of education and research as an engine of urban regeneration
Emilio Faroldi, Maria Pilar Vettori

0530_Paper #2.19: The Mediterranean Peri-urban Historical *Huertas* (Murcia-Alicante-Valencia-Zaragoza). Transversal research
Juan José Tuset, Rafael Temes, Ana Ruiz-Varona, Fernando García-Martín, Clara García-Mayor, Marcos Ros-Sempere

0542_Paper #2.20: Employing the industrial landscape. Insights on the use of collective spaces of industrialization in Ethiopia
Arnout De Schryvera

0554_Paper #2.21: The "second life" of a building. Hidden flexibility possibilities on appropriation of architectural space
Caio R. Castro, Amílcar Gil Pires, João Mascarenhas Mateus

0566_Paper #2.22: Shopping center and contemporary city: Discussion of appropriation forms
Pedro Bento

0578_Paper #2.23: Intersections with the ground in the contemporary city
Luigi Savio Margagliottai

0590_Paper #2.24: The domestic city: Expansion of the domesticity in the contemporary city
Flavio Martella, Marco Enia

0598_Paper #2.25: The sustainable house: psychology vs technology
Olivia Longo

0606_Poster #2.26: Comfortable parks
Anastasiya Volkova, Madlen Simon

0611_BLOCK 3: THE NEW FACES THE OLD

0612_Paper #3.01: From Dismissal to Development: the Challenge of Architecture
Roberta Ingaramo

0622_Paper #3.02: The hidden designer: rethinking urban rules in city making
Caterina Barioglio, Daniele Campobenedetto, Marianna Nigra, Lucia Baima

0632_Paper #3.03: Designed to change: The future of architecture is Agile
Salah Imam, Brian R. Sinclair

0644_Paper #3.04: Performance: The Fantastical Dichotomies of City-Making.
Shai Yeshayahu, Maria del C. Vera

0654_Paper #3.05: Infrastructure for collectivity: built heritage and service planning in the city
Francesca Daprà

0664_Paper #3.06: Circular economy and recycle of architectural heritage in fragile territories
Marco Bovati, Alisia Tognon

0676_Paper #3.07: Binckhorst: A palimpsest of architectural lives
Angeliki Sioli, Willemijn Wilm Floet, Pierre Jennen

0688_Paper #3.08: Pursuing potential arising from collision: The Islamic city considering Western hegemony
Sabeen bin Zayyad, Brian Robert Sinclair

0702_Paper #3.09: New VS Old: Understanding Architectural Tensions in the Design of Public Spaces
Giulia Setti

0712_Paper #3.10: (sub)URBAN; Merging Suburban Home Qualities with Urban Housing
Craig S. Griffen

0724_Paper #3.11: Changing the Currency of Manufactured Lakes in the Great Plains
David Karle

0736_Paper #3.12: Scarpa in light of croce: the post-lyrical city
Frank Harrison Weiner

0746_Paper #3.13: What Does A Single Building Tell About A City?
Burcin Basyazici, Birsen Sterler, Safak Cudi Ince

0760_Paper #3.14: The Urban Church: Repurposing a Community Detail
William O'Neil Bourke

0772_Paper #3.15: New old cities. The rebirth of German historical centers
Michele Giovanni Caja

0784_Paper #3.16: Adaptive reuse & regeneration as potential for industrial sites in the metropolitan cities of Pakistan
Naveed Iqbal, Koenraad Van Cleempoel

0796_Paper #3.17: Metamorphoses in Paris: the fate of Samaritaine among preservation and innovation
Antonella Versaci, Alessio Cardaci

0808_Paper #3.18: Building a Modern Asuncion: Contributions of the Hotel Guarani in the Configuration of a New Urban Space
Julio Diarte, Elena Vazquez

0818_Paper #3.19: The architectural Spanish imprint in China. Why an “Alhambra-style” mansion in Shanghai?
Álvaro Leonardo Pérez

0830_Paper #3.20: Transformation of a historical area in Elche through an apparently invisible architecture
Antonio Maciá Mateu, Ana Mora Vitoria

0840_Paper #3.21: Recuperation of the staircase space of Arma Christi San Jerónimo of Cotalba
José Manuel Barrera Puigdollers

0852_Paper #3.22: Workspaces evolution, towards the new coworking spaces
Alicia Llorca Ponce, Franca Cracogna

0863_BLOCK 4: SMART CITIES VS. TECH CITIES

0864_Paper #4.01: Is Dubai a New Paradigm for Smart Cities?
Sabeeb bin Zayyad, Thomas Patrick Keenan

0876_Paper #4.02: Performing and Measuring smartness Giving ground to urban intelligence by an alternative metric
Julien Lafontaine Carboni, Dario Negueruela del Castillo

0888_Paper #4.03: Smart Design for Bicycle Parking Stations. A proposal for the Historical Center of Arequipa, Peru
Gabriela Manchego, Cinthya Butrón Revilla

0898_Paper #4.04: A biomimetic research on how cities can mimic forests to become sustainable and smart
Aliye Rahşan Karabetça

0908_Paper #4.05: Aggregated data management and business model in designing Positive Energy Districts
Paolo Civiero, Jaume Salom, Jordi Pascual

0918_Paper #4.06: Purposeful Play: Bridging the energy-efficiency gap in Cities
Malini Srivastava

0928_Paper #4.07: Optimal Operation Strategies of Three Different HVAC Systems Installed in a Building
Yeo Beom Yoon, Byeongmo Seoa Suwon Song, Soolyeon Cho

PAPER #1.04

GRAPHIC NARRATIVES FOR READING INDIAN CITIES IN CONSTANT MOTION

Alisia Tognon[a], Mariana Felix Paisana[b]
[a]Politecnico di Milano, Milano, Italy
[b]CEPT University, Ahmedabad, India

ABSTRACT

This paper focuses on the definition of a methodological approach to map the territory through a perceptive/phenomenological investigation that represents time, space, and activities in urban space.
The primary research question of the paper is how to determine a methodology of analysis of urban settlement, by mapping spatial dynamics, temporal, and intangible characteristics of a place, and defining appropriate strategies to decode the sense of the "Kinetic City" (Mehrotra 2008) through urban narratives that depict in dialogue the temporality and fluidity of urban spaces.
Indian cities, like many in South Asia, are characterized by physical and visual contradictions, producing landscapes of extreme pluralism. Post-colonial urban spaces are the result of a continuous negotiation between elite and subaltern cultures, resulting in a temporal articulation and occupation of space.
Indian cities are in "constant flux" (Mehrotra et al. 2017), and therefore its mapping requires a study of the temporary occupations of space by people, animals, vehicles, and its different actions, such as vending, celebrating or resting. Mapping Indian territory has to include aspects of informality and temporality because these dynamic processes constitute the base for urbanization. According to Ananya Roy, "informality is inscribed in the ever-shifting relationship between what is legal and illegal, legitimate and illegitimate, authorized and unauthorized" (Roy 2009, 80).
The outcome of this paper is to focus on new methods for conceiving and narrating the dynamics of the city: firstly, pointing out methods to read and record the complex urban reality and secondly, elaborating guidelines and indicators to understand and explain the city and the constant motion of everyday life.

KEYWORDS

Graphic narratives; Indian city; temporality; informal activities.

INTRODUCTION

This paper focuses on decoding a methodological approach to mapping, through a 'perceptive/phenomenological' system that can represent not only tri-dimensionality but also the fourth dimension of urban space claimed by human activities or events. These mapping strategies have the potential to translate and represent the intrinsic meanings of the "Kinetic City" concept (Mehrotra 2008), with narratives that uncover the relation between temporal and spatial structures.
Pioneering studies about the interrelation of urban spaces and social interactions were developed when urban areas started to bring together many cultural strands. In particular, the accelerated processes of urbanization and the effects they had on social sentiments gave rise to studies of Urban sociology, since the beginning of the last century. Sociologists such as Max Weber and Georg Simmel (1903) laid the foundations of urban sociology. Moreover, urban theories of the Everyday Life (Certeau 1984) and Everyday

Urbanism (Chase, Crawford and Kaliski 2008) developed an understanding of urban design not focused on aesthetics or style but on social structures, user experience, and co-creation of culture. As well as methodological approaches to the study of urban life by William Whyte, Donald Appleyard and Jan Gehl.

The object of this investigation is the urban context in India, which is amid a fundamentally transformative urban awakening. The processes of urbanization and urban growth are embedded in and play constitutive roles in shaping the complex and interactive political, social, demographic and ethno-religious contexts. In 1991, just under 220 million people lived in the country's urban areas. Exponentially, this increased to 380 million in 2011 and is forecast to rise to over 600 million by 2030 (Ahluwalia, Kanbur, Mohanty 2014). As per United Nations estimates, an additional half a billion people will live in Indian cities in the next 35 years, becoming almost 900 million by 2050. The urban modes of living have been long debated in the Indian context, where urbanization comes with its peculiar set of challenges. These are further exacerbated by the phenomena of urban informality (Roy 2005, 147–158), particularly in peri urban expansion or in rapidly growing small and medium towns (Denis & Marius-Gnanou 2011). The complexities of Indian cities also intensify issues of social, economic and political exclusion: the post-liberalization India has seen an 'invisibilization' of marginalized groups (Fernandes 2004), linked with urban economic modernization.

In this complex environment, the aim is to understand how mapping can be useful for rising appropriate design strategies. Cartographical work can effectively communicate temporal appropriations and particular uses of urban space, and layout methods and strategies for its application. For this reason, it is crucial to understand mapping not as an objective outcome but as a construct and representational device, that is an integral part of the design process, as it is speculative and projective (Desimini & Waldheim et al. 2016).

This study is part of the ongoing research developed by the authors during the fellowship at CEPT University, Ahmedabad, India (2019). It also includes a comprehensive reflection about how it can be taught for the researchers, as a method for reading the Indian complexity and strategies for mapping urban spaces in constant motion.

1. THE INDIAN CONTEXT AND THE KINETIC CITY – THE CASE OF AHMEDABAD

The city of Ahmedabad has been taken as a case study for this research as it embodies all the main characteristics and contradictions of the Indian city. Today, Indian cities comprise two components that occupy the same physical space. The first, which could be called the Static City, is made up of more permanent materials - concrete, steel, and brick. This is the two-dimensional conception that appears on traditional maps, and its presence is monumental. The other is the Kinetic City. Incomprehensible as a two-dimensional entity, it is perceived as a moving city, a three-dimensional construct in progressive development. The Kinetic City has a temporary nature and is often built from recycled materials - plastic sheets, scrap metal, canvas, and scrap timber. It is continuously modified and reinvented. Kinetic City is not perceived in architectural terms, but rather in terms of spaces and occupation patterns. It is indigenous urbanization with its particular 'local' logic (Mehrotra 2008).

In the international world, Ahmedabad is commonly known as an architecture Mecca, where the masterpieces designed by Le Corbusier, Louis Kahn, Charles Correa and Balkrishna Doshi, as well the historical old city submerge in a vibrant kaleidoscope of everyday activities. Moreover, it has become

the seventh-largest metropolis in India and the largest in the state of Gujarat (Forbe's 2010). In 2017, the historic city of Ahmedabad (Walled City or Old City) became part of the UNESCO World Heritage list, according to criteria II, V (https://whc.unesco.org/en/list/1551). The motivation was the evident universal significance. The Walled City is not only a tangible testimony of a historical artefact that reflects the succession of eras, but also has a high intangible value of cultural tradition, transliterated in the urban landscape. In the light of these reasons, looking at the city today, Ahmedabad seems to reflect two distinctive souls, with the flow of the Sabarmati river dividing the city in two halves.

Ahmedabad was founded in 1411 AD as a walled city on the eastern bank of the river Sabarmati. It was established as the new capital of the Sultanate of Gujarat in western India by Ahmad Shah, the second sultan of the Muhammadan dynasty (Forrest 1977, 62-86). In those years, the Citadel was built (Bhadra Citadel) and the city was structured with significant trade fair routes in order to transform it into a manufacturing and trade center. Marbles and other precious materials had been imported from afar, to build magnificent mosques, tombs and palaces (Forrest 1977, 64). From this time until the arrival of the Marathas dynasty the city has grown and has consolidated its urban structure - the walls were built, in defense of the *pur*[1] (neighborhoods), administratively independent and controlled by the nobility named by the king (Gillion 1968, 26).

Still today, the wallet city has preserved a fairly semi-circular plan, with the core in the center and radiating streets connecting the center to the edge. The site chosen on the eastern banks of the river provided the ideal condition for the growth of the city, due to its location at the crossroads of important sub-continental trade routes and the proximity to water.

For this reason, historically, Ahmedabad has been one of the most important centers of trade and commerce in western India. The city's prosperous and eventful past and present is embodied in its vibrant kaleidoscope of history, art and culture. These conditions and character contributed to enrich the 'old city', which has a great architectural tradition reflected in many exquisite monuments, temples and even modern buildings (e.g. Premabhai Hall, 1976 or Central Bank Of India 1966 - 1967 designed by B.V. Doshi). This peculiar urban fabric is perfectly integrated into a multicultural palimpsest of different eras, in which the monumental landmarks emerge (http://asi.nic.in). In fact, within the walls, there are more than 30 mosques and *dargahs*, more than 30 Hindu temples, under one hundred Jain temples, and more *madrasas, jamaatkhaana, upaashray, dharmashaala*. Moreover, the rich domestic architecture in inlaid wood remains in several cases as precious testimony to the minute scale of the urban fabric.

The presence of these architectural landmarks - places and buildings - give a peculiar sense of belonging, continuity and identity. This area of the city is now packed with bazaars, *'pur'* with the clustered *'pol'* system of dwellings, and numerous places of worship. From a morphological and typological point of view, it is interesting to understand the structure of the urban space, where there is a hierarchization between public and private space still evident today. These are the result of centuries of growth over which newer elements are juxtaposed continuously with older ones. Old buildings

[1] Traditionally in the Old city, the *pur* are composed of *pol*, groups of houses, with one or two entrances, in which the social unit is based on the link of caste or trade (Vastu Shilpa Foundation, 2002). Therefore, the urban fabric reflects a hierarchical system of movements and social relations: from the level of the city to the settlement (*pol*), from that to the family or community spaces (*khancha, khadki*). The analysis of the fabric underlines that there are primary roads (*bazaars*), where traders arrived even from out of town. Secondary roads are linked to these and are characterized by a particular type of products such as jewelry, metal objects and tools and are accessible to residents of the pol. Finally, a third hidden level (*alleys*) is accessible by the workers for cleaning the streets. (Desai 2019, 39; Yagnik, Sheth 2016, 91-97)

and older areas of the city are assets, as they represent the history of the communities, embodying their tradition, heritage, and culture through architecture and urban form (http://www.intach.org).

Due to high industrial growth and its social and political history, Ahmedabad represents the dynamic two souls in its own physical body. In the eastern part, the original Walled City rooted in the tradition with the outside suburbia dotted with textile mills and *chaals,* constituted the working and industrial class. On the west bank of Sabarmati, there are new sprawls mainly inhabited by the middle class and characterized by cultural centers, universities and masterpieces of modern architecture (Yagnik, Sheth 2016, 257-258).

Since decades Ahmedabad has been undergoing major transformation in terms of use as well as built form. It is the city where new directions of a new urban future were tried out during the Twentieth Century. It was one of the first cities in India to be industrialized and the second largest manufacturer of textiles after Bombay. For this peculiarity Ahmedabad had earned the title of "Manchester of India" (Spodek 2011). Beyond the textile mills, Spodek has found similarity between Ahmedabad and Manchester. He applied the definition of "shock city" to Ahmedabad, a term coined one year before by British historian Asa Briggs in his book "Victorian Cities" for Manchester. "Every age has its shock city" and the shock cities are a "center of problems, particularly ethnic and social problems, and it provoked sharply differing reactions from visitors" (Briggs 1963, 56). Throughout the Twentieth Century, almost one third of the adult male population was working in the cloth mills (Spodek 2011, 6-7) and in 1920 the first *Textile Labour Association* was born. Ahmedabad became the headquarters of the freedom movement and also one of the first places where movement against 'untouchability' had been taken up. In 1915 on his return to India, Gandhi decided to establish his ashram in Ahmedabad, until 1930. Gandhi's activities made Ahmedabad a shock city, bringing a sense of unity to the city (Spodek 2011, 167). It had one of the first municipalities, one of the first to have established schools for western education, and the first girls' school came up here in 1849 (Yagnik, Sheth 2016, 119-128).

Today Ahmedabad is a major industrial and financial city, contributing about 14% of the total investments in all stock exchanges in India and 60% of the total productivity of the state. Several scientific and educational institutions of national, regional and global importance have been established in the city, attracting a large pool of highly skilled young professionals. At the same time, a significant advancement of the IT sector and a virtuous development of transport infrastructure has been taken up, and in 2016 Ahmedabad has been selected among the first 20 Smart Cities in India (http://www.smartcities.gov.in/).

Moreover, Ahmedabad has had and is having a rapid urbanization. In 1992, the population of its Urban Agglomeration was 12 times that of the Walled City area (AUDA, 1992), but, at the same time, it is registering depopulation phenomena especially in the Old City, where the residents prefer to abandon the traditional pols for moving in the new neighborhoods of the city[2] . The Walled City reveals heavy congested traffic, intricate roads, polluted air, lack of water, weak maintenance of the traditional houses and fragile society. The city has indeed seen several communal riots in the recent past, due mostly to religious conflicts[3], which created others fragile conditions.

[2] Analysis conducted by MCR18 students on Mandvi ni pol during the monsoon semester 2019, Urban regeneration Studio, Cept University. Tutors: Alisia Tognon, Ashna Patel, Jigna Desai.

[3] In 1969 Gujarat saw a riot between Hindus and Muslims during September–October. Unofficial reports claim 2000 deaths and over 48,000 people lost their property. (Gayer, Jaffrelot 2012, 53–60). In 2002 another Gujarat violence called Gujarat pogrom during February – March. Almost 2000 dead and 2,500 injured. (Jaffrelot 2003)

This general situation is creating pressure on the main level of the city, and the definition of public spaces as well. Rapid urbanization is creating an urban complexity and a real estate pressure, which is taking over the open spaces from the future planning of the city.
Reading and understanding these issues is a central question in the study of the Indian context. Urban open spaces (public and private) are the stage for a myriad of activities, such as vending, celebrating or resting, where simultaneously different actors as people, animals or vehicles are living together. At the same time, the sites have a mixture of uses throughout the daytime and the seasons, transformed with different activities. In Ahmedabad, a significant example of this condition is Manek Chowk, in the core of 'old city'. This square contains various events throughout the day, changing functions every day with a similar temporal-spatial succession. Early in the morning, the cows are grazing the leftovers of the night food market and the vegetable vendors. During the day the jewelry market comes up, and the shops extend their selling devices into the open public space, together with the vegetable stalls. In the evening, it is a lively and crowded food market. Many examples, such as this one is representative of a constant and current condition of the Indian city: a city in 'constant flux', where the interchangeable temporary occupation of urban open spaces is perpetual.

2. MAPPING EVERYDAY LIFE

When looking at the morphological and typological aspects, as in the western context, the act of mapping focuses on the representation of the more permanent physical conditions: streets, buildings, green areas, and other tangible elements. Differently, in Indian cities it is required to also study the temporary occupations of space. The study of everyday life through maps can be crucial in understanding aspects of temporality and informality, and in designing appropriate solutions that take into account these dynamic processes that constitute the base of urbanization in India.
Referring to the concept of "Everyday Urbanism", as "an approach to Urbanism that finds its meanings in everyday life" (Chase, Crawford and Kaliski 2008), spatial ethnography builds an empirical approach about the sensibility of looking at frequently unnoticed situations and experiences that occur in everyday life. This concept relocates the human body and its social networks in the center of space production. Based on Certeau studies, the physical environment is not deterministic of the humans action in space (Certeau 1984). The users of urban space contest and create new rituals, patterns, and flows that mold the existing territory.
Likewise, Jan Gehl advocates for a methodology to study the 'life between buildings' based on systematic

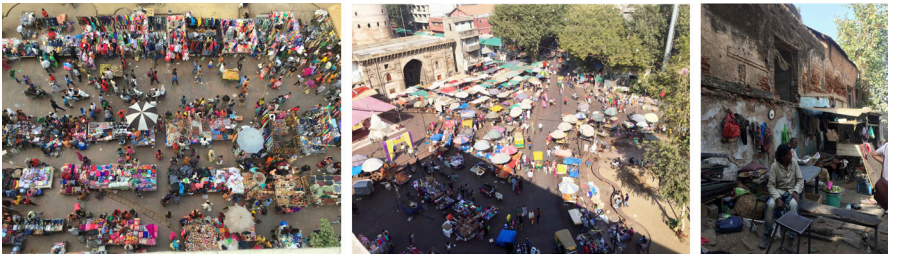

Figure 1. Market at Bhadra Fort, and informal settlements at Raikhad Gate, Ahmedabad (authors 2017-2019)

documentation, observation, and surveys, to understand how people behave in public open spaces. This is based on the premise that only by understanding how people interact with the physical environment, it is possible to design appropriate urban spaces. Understanding the agency of mapping as "neither reproduction nor imposition but rather in uncovering realities previously unseen or unimagined" (Cosgrove 1999, 213). Mapping is a precious method that can reveal and understand the logic and patterns of the everyday life of urban spaces.

Until the Renaissance, maps were a hybrid representation of spatial relations between objects (houses, people, animals) and fields (settlements, cultivated plots, oceans), and figurative elements, as monsters symbolizing dangerous areas. A map drawn in 1502 by Leonardo da Vinci changed the paradigm of cartography, it represented only streets and buildings (without any figuration) in a parallel projection seen from above (Bosselmann 1998, 13). This became the conventional system of mapping, used in representations such as the Nolli map (1736-38) or the Barcelona Ensanche (1866). This method represented accurately the physical conditions of the city in plan, but, by definition, neglecting many other aspects such as tri-dimensionality, experiential attributes, and social systems. These and other urban qualities were later addressed by urbanists such as Camilo Sitte (*The art of building cities*, 1889), Gordon Cullen (*Townscape*, 1961), Kevin Lynch (*The image of the city*, 1960) or Jan Gehl (*Life between buildings*, 1971).

Different methods of representation reveal different urban ideologies and distinct conceptualization of the role of the urbanist. Gordon Cullen and, in late 90s, Peter Bosselmann, represented the city through a sequence of images along a path, at a human-eye level, focusing on the experience of walking in the city. Kevin Lynch and Stanley Milgram studied how the city was perceived and remembered by its users, representing those perceptions in maps (mental maps). In the 1960s, Jan Gehl related urban form with social sciences and studied, through maps, the activities of people in public space. This method represented geographical data with parallel projections, along with social data, represented by symbols. A map of Copenhagen done in 1968 shows the plan of a street with human temporal activities - people sitting and standing, street vendors, musicians - and the everyday life.

An important aspect of spatial ethnography of 'everyday life' is also its agency to challenge existing power structures. Annette Miae Kim, in her work about the sidewalk life in Ho Chi Minh City, uses the term "critical cartography" to 'describe the subset of mapmaking that aims to bring to the fore issues of power' (Kim 2015, 64) This is particularly relevant in the Indian context, where 'everyday life' is intrinsically connected with the 'informal'. Mapping everyday life means to document the informal along with the formal, and to build the bases for a new understanding of this relationship. Also, mapping has the agency to represent informal and formal structures with the same graphical quality, and therefore partially omitting the aesthetics of informality. This can reveal a new imagination, not based on aesthetics or material attributes, but focused on other aspects of these events, such as their metrics or the complexity of their operationality on the use of open space.

With the complexity of temporary occupations of public open space in the Indian context, it becomes relevant to conceptualize mapping as a representation of four-dimensional situations, where time plays an important role. The production of appropriate maps and cartographical work that look at everyday life along with the physical and more permanent environment can be a way to uncover the relations between the static and kinetic city, and to understand them not as binaries but as nuanced and interrelated realities. This

conceptualization of the Indian city and the traditional use of space is present on the works of Architect B.V. Doshi, the founder of CEPT University, in 1962. In the words of Prof. Neelkanth Chhaya about his work: "not to clean up and isolate an architectural environment into simply an architectural art, but to connect it to life forms, is something which is peculiarly Indian. The weaving in of outdoor spaces and movements across this is something like the way an Indian house or street would work"[4].

3. DEFINITION OF A METHOD TO MAP THE KINETIC CITY

The first step forward in studying Ahmedabad, as any other Indian city, is to understand how to examine its urban spaces by integrating physical and social information. Therefore, it is important to be able to formulate a method of spatial ethnography that binds together social science and physical spatial analysis. It is crucial to uncover how places are actually used in everyday life, the social process behind them and the meaning of these uses. Only then, design approaches can be appropriate to the complex context of an Indian city, where space is fluid and in flux.
Mapping Indian territory means to combine formal and informal aspects. The concept of "informality" represents a state of deregulation, where nothing is fixed, as per ownership or land use, and mapped according to a prescribed set of regulations or laws. Informality is a dynamic process, which is the ground of Indian urbanization (Roy 2009). Comprehending the meaning of 'everyday life' and reading it allows the capacity to generate comprehensive and useful maps, which will include formal and informal, static, and kinetic aspects.
Looking at the European context, the informal components in the urban spaces are rare compared with the static ones. Rarely in Europe, something is left unregulated, and generally, there is no informal appropriation of public spaces by citizens. Every area is planned, and there is an explicit definition between public and private spaces. These established conditions clarify the modality for reading urban spaces. Commonly, mapping a city in Europe means to map the physical elements: the streets, the functions, the buildings, the water systems, the green area, and not the human activities. On the contrary, mapping the Indian city means to study the movement of humans and animals, the social fabric and the temporal events, as part of the formal and informal occupation of public space.
In the afterword of the book *Cartographic Grounds* (Desimini & Waldheim et al. 2016, 251), Antoine Picon states the need for an urgent study of the conventional signs used in maps, since digital tools challenge the 'traditional notions about cartography'. A study of the mapping work developed in the Indian context, where reality is transformed at a fast pace, can bring forward a new nature of signs, that is able to represent the movement of bodies in space and the 'everyday life' in the urban context.
In the research about Kumbh Mela, by Harvard University (Mehrotra, Vera, 2015), we can see the event being mapped by a series of drawings spaced in time. Each map is done on a specific day and it represents a still frame of the construction and organization of semi-permanent shelter structures. This series of maps represents the dynamic process of assembling and disassembling a temporary city. The succession of maps uncovered the logics and patterns of temporary 'urbanization', not visible on one single map, but on the collection of many.
In many of the recent academic classes at CEPT University[5] we can see the centrality of human activities in the process of mapping. When asked to survey a territory, most of the students mapped the physical

[4] https://www.bloomberg.com/news/articles/2018-03-19/pritzker-winner-doshi-put-his-stamp-on-ahmedabad-india

and social environment, in dialogue. The maps revealed the temporary and informal uses of public space such as squatting, vending, or cow grazing, as well as the more permanent built environment such as dwellings or walls. For this, students created graphic codes for the 'events' happening in the territory, differentiating the temporal conditions of each one of them - mobile (walking, driving, cow grazing), stationary (seating, stadings, vending) or semi-permanent (squatting, vending, celebrating). Other studios experimented with a mapping process that examined the relation between everyday life activities and built form, through graphic narratives. These drawings narrated different events through perspectives or axonometries. Each of these frames presented a story about a place and its use by the movement of the bodies, expressing the activities performed and the relation with the physical environment. Just as a storyboard, these drawings mapped the use of space at a moment in time that is significant for the understanding of the territory. What determines the character of these places is the structure of relationships that materialize primarily on the ground: physical, cognitive, and symbolic connections. The drawings produced in this studio are synthesis, interposed between the tensions that bind permanence, erosions, and poetic resistances.

3.1. Method to study public spaces in Ahmedabad

For understanding the complexity of Ahmedabad's public spaces, the challenge is to identify a peculiar methodology for reading the flux and the constant motion of the city. To start, it is necessary to identify and compare different categories of public space that exist in the city of Ahmedabad. To be able to compare different open public spaces, it is essential to select a set of sites with comparable contexts and similar characteristics. The analysis conducted during the research field should be organized in three different steps: exploration (1), restitution of data (2) and interpretation (3).

1 - Referring to the eight principles established by Jan Gehl in his book "How to study public life" the exploration phase sets the indicators of: counting, mapping, tracing, tracking, looking for traces, photographing, keeping a diary, test walk. Each site must be studied at different times of the day, and at two distinct moments of the week (e.g. weekdays and weekend). Generally, the most appropriate time for site visit is: 8am to 10.00 am and 06.00 pm to 08.00 pm. This is necessary because some particular places change drastically during the weekend. The Riverfront Sunday Market is such an example (Fig.3). The market was redesigned in 2012, along with a large area of the Ahmedabad's riverfront, to protect the city from the floods of Sabarmati River. The intrinsic character of the Sunday Market suggested studying the site during the week, while there is no market, and the area is almost empty, and Sunday when the entire area becomes crowded with people, animals, vehicles and vending structures.

2 - The second phase is to develop a way for the restitution of data by synthesizing and analyzing the data collected. The results of this phase are maps - of actors, flows, sounds and lights – that show not only the static elements of the physical space but also the changeable actors of the 'human space'. The aim is to express the tangible and the intangible aspects of the city, as a pillar for the kinetic soul of the Indian city.

3 - In the end, the analysis of the selected spaces is translated into a strategic plan or framework, to be used as tools in the design project. The definition of this framework establishes strategic outcomes for transforming urban spaces.

[5] https://portfolio.cept.ac.in/

Figure 2. Mapping the Riverfront market Ahmedabad, during the week (left) and on Sunday (right), an Indian case study of everyday urbanism, Master thesis Politecnico di Milano (Sara Rossi, 2019)

Figure 3. Riverfront market Ahmedabad, during the week (left) and on Sunday (right), Sunday (Authors, 2019)

CONCLUSION

In a broad definition, we would like to recognize not only the importance of reading the urban spaces through maps but above all, the importance of understanding which types of maps are appropriate for each environment. This is particularly relevant if we acknowledge mapping as an initial component of the design process, where the framework established initially can condition the consequent design decisions.

Drawings that represent not just absolute conditions but fluid realities, have the chance to generate solutions that understand the territory as ephemeral and therefore propose solutions that are also transitory. This is particularly important in a context of rapid urbanization as India, where urban spaces are in constant mutation, and are shared and

produced by people from different economic, social and religious backgrounds.
As underlined by Kim, urban design has produced disastrous results when it has been informed by ideological ideas that have been generated without ethnographic studies (Kim 2015). Ahmedabad has seen a recent increase of urban development projects that lacked critical knowledge about the local communities and the overall situation. Spatial ethnography is therefore essential for sensible and adequate projects that can explore the relation between pattern and logics of use of space and its physical limitations.
In the work of a student of Politecnico di Milano and exchange at CEPT University (fig.3), we can observe the methodology for mapping the kinetic condition of the Indian city organized in three phases. The first phase is set to explore the location and to rigorously study the site and the events that occur on it. For that it is necessary to examine the territory at different moments of the day, on different days of the week, or the year if there are any festival celebrations on the site. It is common that vacant spaces, for example, have seasonal festivals and are, therefore, occupied during parts of the year with temporary structures and activities, such as wedding parties or other celebrations. The data acquired during the visits is then synthesized and analyzed, looking for patterns and logics of everyday use. The result is a series of maps that represent not just the physical space but the 'choreography' of the bodies in the territory. This series of maps must then be analyzed to recognize logics of relation between physical environment and everyday use, and create new frameworks of understanding, which will inform the design process.
Since temporal and informal conditions of the urban territory constitute the bases of Indian urbanizations, these research offers a perspective on how maps can explore and make visible these phenomena, by mapping the everyday life.

REFERENCES

Arnaud, P. 1991. "The History of Cartography", *Vol. I: Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean.* Edited by J. B. Harley and David Woodward, 1987.

Bosselmann, P. 1998. *Representation of Places: Reality and Realism in City Design.* Berkeley: University of California Press.

Briggs, A. 1963. *Victorian cities.* Berkeley & Los Angeles: University of California Press.

Certeau, De M., Rendall, S. 1984. *The Practice of Everyday Life.* Berkeley: University of California Press.

Chase, J., Crawford, M., and Kaliski, J. 2008. *Everyday Urbanism.* New York: Monacelli Press.

Corner J. 1999. "The agency of mapping: speculation, critique and invention" in Cosgrove, D. E. 1999. *Mappings. Critical Views*. London: Reaktion

Denis, E., Marius-Gnanou, K. 2010. "Toward a Better Appraisal of Urbanization in India." *Cybergeo: : European Journal of Geography*, Systèmes, Modélisation, Géostatistiques, n. 569, 28-11-2010, http://journals.openedition.org/cybergeo/24798; DOI : https://doi.org/10.4000/cybergeo.24798

Desai, J. 2019. *Equity in Heritage Conservation: The Case of Ahmedabad, India.* Abingdon & New York: Routledge.

Fernandes, L. 2004. *"The politics of forgetting: Class politics, state power and the restructuring of urban space in India". Urban Studies* 41(12): 2415–2430.

Forrest C.I.E., G.W. 1977 "Ahmedabad", in *Cities of India*. Delhi: Metropolitan Book.

Gayer, L.; Jaffrelot, C. (2012). *Muslims in Indian Cities: Trajectories of Marginalisation.* Columbia University Press. pp. 53–60

Gillion, K. 1968. *Ahmedabad: A study of Indian Urban history.* London: University of California Press

Gehl, J. 1971. *Life between Buildings: Using Public Space.* 6th ed. Copenhagen: Danish Architectural Press,

Hope, T., Biggs, T., & Fergusson, J. 1866. *Architecture at Ahmadabad, the Capital of Goozerat, photographed by Colonel Biggs, With an historical and descriptive sketch by T.C.H.*, Architectural notes by J. Fergusson. London. De.

Jaffrelot, C. (July 2003). *"Communal Riots in Gujarat: The State at Risk?"* Heidelberg Papers in South Asian and Comparative Politics.

Kim, A. M. 2015. *Sidewalk City: Remapping Public Space in Ho Chi Minh City.* Chicago-London: University of Chicago Press.

Kotkin, J. 2010. "In pictures The Next Decade's fastest growing cities". *Forbes*.

Mehrotra, R. 2008. "Negotiating the Static and Kinetic Cities: The Emergent Urbanism of Mumbai". in Huyssen, A. *Other Cities, Other Worlds: Urban Imaginaries*,. Durham – London: Duke University Press.

Mehrotra, R. Vera, F. 2015. *Kumbh Mela: Mapping the Ephemeral Megacity*, Harvard University South Asia Institute: Hatje Cantz.

Mehrotra, R., Vera, F., Mayoral, J., Sennett, R., Burdett, R. 2017. *Ephemeral Urbanism: Does Permanence Matter?*. Santiago: ARQ ediciones.

Mohanty, P. K., Ahluwalia, I.J., Ravi Kanbur, S. M. 2014 *Urbanisation in India : Challenges, Opportunities and the Way Forward.* New Delhi: SAGE

Waldheim, C., Desimini, J., Mostafavi, M., 2016, *Cartographic Grounds: Projecting the Landscape Imaginary.* New York: Princeton Architectural Press.

Roy, A. 2005. "Urban Informality: Toward an Epistemology of Planning". *Journal of the American Planning Association* 71, no. 2

Roy, A. 2009, "Why India Cannot Plan Its Cities: Informality, Insurgence and the Idiom of Urbanization". *Planning Theory* 8, no. 1

Spodek, H. 2011. *Ahmedabad: Shock City of Twentieth-Century India*. New Delhi: Orient Blackswan.
Yagnik, A., Sheth, S. 2016, *Ahmedabad: From Royal City to Megacity*, Gurgaon: Penguin Books.