The Medellin Studio: Providing Infrastructure for Informal Settlements in Bello, Colombia
4.163J /11.332J Urban Design Studio, Spring 2015 (DUSP Practicum) DRAFT

Instructors: Lorena Bello (lobello@mit.edu), Jota Samper (jota@mit.edu)
TA: TBD
Schedule: Tuesday & Thursday 1:00–6:00 pm, Room: TBD (within Arch Studios)
Travel to Medellin (required): Leaving January 24th; Coming back February 1st (air travel and stay included)
Size: Limited to 12 students (MCP and M.Arch)
Sponsor: Center for Advanced Urbanism, CAU

International Partners:
Universidad Nacional de Colombia in Medellín --**Instructor:** Catalina Ortiz (cortiz@unal.edu.co)
Planning Council of Nueva Jerusalem neighborhood

Overview

It is common knowledge today that the World is urbanizing at high speed. Urban thinkers are confronted with the statistics that five billion of us will be living in urban areas by 2030, meaning that one million people per week will be joining the urban life in many contexts of our planet in the next fifteen years. This urban growth rate has turned the attention of many scholars and designers towards the Global South, where most of the one billion living under the poverty line in informal settlements today, will be joined by another billion in less than two decades.

Slums, Comunas, Favelas, Bidonvilles, Chabolas, Correas, Barracas, Kampung, Morros, Squatters or Shanty Towns just to name a few, are the physical manifestation of this informality; A geography that results from the lack of capacity of city managers to effectively respond to this huge migration, speed of occupation and the lack of means of rural new

comers. As a result of this process, informal settlers usually occupy the undesirable left over spaces of their former host cities –flood areas or steep slopes; and they do so by plugging into their host urban infrastructures to survive. Even if many romanticize the plasticity for survival as well as our capacity as human beings to self-conform our landscapes for inhabitation, these informal fabrics are subject to many social and environmental problems which also compromise the ecological carrying capacity of their host territory.

These settlements are far from being new geographies in the 21st century; informality has coexisted with formality since the industrial revolution. What is new to this new era however, are both the speed and scale of the process as well as the growth in inequalities between formal and informal settlers. For these reasons many think that together with climate change, informality is one of the most pressing problems to be tackled by urban thinkers and designers in our century in the Global South; and the Medellin Urban Design Studio wants to join this challenge.

Pedagogical Framework

With the exhibition *'Uneven Growth: Tactical Urbanisms for Expanding Megacities,'* MOMA has recently joined a long list of initiatives around the globe that are trying to investigate the role that urban thinkers and designers could have to improve the life of non-formal urban dwellers. As an MIT graduate, it is very possible that you will be confronted with these environments soon. For this reason the studio considers it critical to expose and provide you with the tools and mechanisms by which to understand these processes, so that you can respond with innovative and sensitive urban design visions. We also share the idea that many are the lessons to be learned from these forms of urbanization in the global south towards a more sustainable and equitable global north and we will invite you to discover them with us.

Speed, scale and the non-linear nature of informality's complex processes have proven the old urban regime's toolbox obsolete; more important, the role of the solo-architect who 'only' listens to the genius loci of the place to give a personal answer is over. Societies and ecologies at risk argue for an interdisciplinary team work approach in design that blurs the boundaries between different disciplinary silos of knowledge first; transforming *urbanists* into mediators between the government and the community at stage to come up with innovative and alternative projects. They do so by bringing to the fore, the invisible layers that hide under bureaucratic and technocratic urban processes to build inclusive artifacts.

In this context, many have described these designs as *'synthetic projects'* which result from selectively making the links between all the constituencies at stage. Urbanists and designers such as John Habraken, Manuel de Sola-Morales, Diane Davis, David Harvey, Alejandro Aravena, Rahul Mehotra, Urban-Think Tank, Ecosistema Urbano, Christian Werthmann, Camilo Restrepo, Teddy Cruz, Jose Castillo, Joan Busquets or Alejandro Echeverri come to mind as great thinkers and synthetic designers in these contexts –and some of them will be invited to give lectures or participate in our studio reviews.

Background + Agenda

The Medellin approach to informal settlements has been celebrated as one of the best models in the World and it is also perceived as one of the leading cities in Latin America in improving the quality of life of informal dwellers. A strong social, political and design vision were able to transform a former world murder capital into a fairly good place to live in the last two decades. Alejandro Echeverri explains that the tenure of Mayor Sergio Fajardo between 2003 and 2007 was key to this process, when under the umbrella of education and his political campaign *'Medellin the most educated,'* social

and urban infrastructure were introduced as acupunctural inserts in very strategic points of the poor fabrics of the city. These inserts were called *'integrated urban projects'* as they normally upgraded one school, built a new public building and provided for linking infrastructure in between with public spaces like parks or *miradores*. In parallel, a metro-cable linked these poor areas with the richer parts of the city, providing the necessary plug-in mechanisms that radically regenerated the life in the *comunas* in just one generation.

Contradictory to this successful phenomenon, Medellin is counteracted by a high pressure of informal non-planned development for the rest of the cities in the metropolitan area which lack the mechanisms to stop encroachment. These municipalities (other eight) are now the recipients of hordes of new dwellers that arrive at the region in search for a safe and better economic future. Over the last ten years, these areas have seen the emergence of entire neighborhoods of thousands of informal dwellers and Nueva Jerusalem in the municipality of Bello is an example of such a process; a seven year old neighborhood of 32 hectares where most development is the result of informal dwellers' agency. Street network, water, sewer, and power are provided by informal entrepreneurs and the actions of our partner: the planning council of Nueva Jerusalem as we will discover in our visit.

The overall goal of the Medellin Studio is to take the New Jerusalem neighborhood as a case study for research and action which will let you discover firsthand the process and form of fast informal urbanization as well as its consequences. Learning from the successful social agenda and the *'integrated urban projects'* that regenerated the informal fabrics of Medellin, we would like to answer the following question: ***What if those infrastructural interventions could arrive in time?***

If this were the case then: How should they be deployed? Which would be the strategies? What should be their social and spatial mechanisms to direct future growth? What kind of hybrid programs and forms could help this community to overcome the challenge of becoming twenty times bigger than they are today in the following fifteen years? Our projects will not only help this neighborhood but they will also provide the growing metropolis of Medellin with some infrastructural prototypes to direct its future growth.

Collaboration + Travel (workshop)

With this challenge in mind, the Medellin Studio has been organized as an international collaboration between the two departments of MIT's School of Architecture + Planning, the School of Architecture and Planning at the Universidad Nacional de Colombia in Medellin, the planning council of Nueva Jerusalem in the Municipality of Bello, and the community who started to settle in this neighborhood in 2007.

The 12 students (MCP, M.Arch) will spend seven required days (eight nights) in Medellin over IAP 2015 on an initial workshop, visiting the urban projects in informal settlements and meeting with community partners in the city: Peers at the Universidad Nacional de Colombia in Medellin and community planning group of Nueva Jerusalem.

This hands-on workshop environment will enable students to generate quick ideas and strategies that will direct their future investigations during the semester. Through photographs, video-recordings, lectures, interviews, city walks, site visits and informative conversations with faculty, public officials and professionals of city making, students will be able to start gathering knowledge on urban synergies and successful projects on the city; they will be able to learn from the NJ planning council the needs that the community is facing, and with your own interests choose within the different lines of investigation that will continue to be researched through mapping and design when back at MIT.

Final Presentation + Report

Work will continue during the spring semester both in Medellin, Colombia and in Cambridge, MA. The Colombian academic counterparts will visit Cambridge during eight days in the first week of May where advance ideas on the proposals will be presented to the broad SA + P community to get feedback. A Final Review with MIT students will be held on the 12th or 14th of May with the rest of the Studios in the Departments of Architecture and Planning. At the end of the semester, a final document with MIT + UNAL students work will be compiled to be delivered to the community partner and the municipality of Bello at the beginning of summer 2015.

Studio Work Flow

Part I: Workshop: Medellin Laboratory (Jan 25th, Jan 31st)

Objectives: Exposing you to the principal actors and phenomena related to the studio site.

Format: A hands-on environment in teams with Medellin Architecture+Planning students, and members from the planning council of Nueva Jerusalem. This will include lectures, talks, interviews, as well as walks to successful urban design projects with some of their Architects and Urban Designers and visits to the studio site.

Pedagogical Goals: Develop students' skills in order to:
> Carry out fieldwork through photography, video or sound recording and sketches
> Gathering Information by observation and interviews
> Understand the nuances of non-familiar urban contexts
> Work in multi-disciplinary teams to understand the complexity of urban processes—informality this time.
> Identify the challenges as opportunities for your future interventions

Deliverables: In pairs, MIT students will gather the results of their discoveries and the design tactics discussed with their Colombian peers in a PowerPoint.

Part II: Mapping Processes (MIT) (Assigned: Feb 3rd- Review: Feb 26th)

Objectives: To produce an applied research document that can provide critical information about the site and its relationships with its larger territory. Students will use this collective body of work to inform and guide their future design explorations.

Format: In groups, students will start to investigate individually within the following *Lines* of Inquiry:

> **FIGURE:** Urban History, Growth, Housing, Ownership (Wiener, Sert, Samper, Aravena)
> **GROUND:** Urban Topos, Ecology, Risk, Public Spaces, Surfaces, Agriculture (Plan Bio 2030, Shifting Ground)
> **MOBILITY:** Types, Times, Volumes, Displacement (Urban-Think Tank, Senseable City Lab)
> **INFRASTRUCTURE:** Urban Artifacts for supply, Informal Neighborhood Improvement (U I P, PRIMED, EDU)
> **SOCIAL NETWORKS:** Public Safety, Formal and Informal Economy (Drug Cartels, FARC, Zonal Business)

Through these lines of inquiry, students will be able to analyze the different historical and current processes that are shaping the informal city. A lecture about mapping and representation will be held where multiple examples will be ex-

plained. These maps will allow them to start synthesizing their gathered data in order to inform design by establishing relationships across scales and users; in this way the drawings will stop being only descriptive to become projective tools that will inform and guide design.

Pedagogical Goals: Develop students' skills in order to:

Learn how to inform design through research

Understand the physical manifestation of urban processes across scales

Translate these relationships between processes and urban form across scales into drawings

Find the medium that successfully allows you to draw these relationships:

Collage, diagrams, cartography, timeline, the combination of the fore

Deliverables: Multiple media for first review (discussed with instructors). After the first review students groups will compile their maps into a PDF to be shared with the rest of the class.

Part III: Design Strategy (Assigned: Feb 26th - Review: April 2nd)

Objectives: Deployment of the site once the needs and processes have been understood with studio's thesis question in mind: *What if infrastructural interventions could arrive in time?* Then, how should they be deployed to re-direct encroachment and diminish its future hyper-density--20 times of today? What are the main key actions that need to happen first to catalyze this change? What kind of hybrid programs and forms could help this endeavor?

Format: In pairs, students will analyze first two case studies that are relevant to their area of interest. With those examples in mind, they will start exploring the site potential at 1:10.000 and 1:5000 with plans, sections, axonometrics and physical models.

Pedagogical Goals: Develop students' skills in order to:

Transform urban intentions into actions by design and find the right footprint for what they want to achieve

Program a terrain to improve its current social/ecological performance

Understand the urban projects' potential as acupunctural inserts with local/metropolitan/regional impact

Explore infrastructure's potential to reconfigure the site's current conditions and alter its evolution; this should lead to the invention of new building typologies and public spaces which result from mixing new programs

Deliverables: Boards for the review. Representational techniques should be informed by the intention.

Part IV: Urban Projects (Assigned: April 2nd - Final Review: May 12th) PDF for booklet: May 14th

Objectives: Move from site design strategies into urban projects

Format: Individually, students will continue to further develop their design strategy and will choose the infrastructural typology that they want to explore till the end of the semester. They will be allowed to zoom in and develop a piece with architectural detail or to zoom out as an overall metropolitan design.

Pedagogical Goals: Develop students' skills in order to go deeper into more detailed levels of design.

Deliverables: Boards for the review and Pdfs for booklet.

SEMESTER SCHEDULE

FEBRUARY

TUE,	3:	Wrap up session of field trip, syllabus.
		Part II: Mapping Exercise distributed. Group assignment
THU,	5:	Lecture: Towards an epistemology of the Informal City (Samper)
		On Mapping and Representation (Bello)
TUE,	10:	Lecture: SIGUS by Reinhard Goethert /// Desk Crits
THU,	12:	Desk Crits
TUE,	17:	No class (Monday Schedule of Classes)
THU,	19:	PIN UP
TUE,	24:	Desk Crits
THU,	26:	1st REVIEW
		Part III: Design Strategy Exercise distributed

MARCH

TUE,	3:	Lecture: Reimagining Mumbai's Back Bay by Rahul Mehrotra (TBC)
		(1st Exercise's PDFs due) /// Desk Crits
THU,	5:	Lecture: Urban Project Revisited (Bello). The case of Medellin, PUI (Samper) /// Desk Crits
TUE,	10:	PIN UP of Case Studies
THU,	12:	Desk Crits
TUE,	17:	Desk Crits
THU,	19:	Pre-Midterm REVIEW
TUE,	24:	No class (Spring Vacation)
THU,	26:	No class (Spring Vacation)
TUE,	31:	Desk Crits

APRIL

THU,	2:	MIDTERM REVIEW
		PART IV: Urban Project Exercise distributed
TUE,	7:	Lecture: Learning from Surabaya by Miho Mazereeuw (TBC) /// Desk Crits
THU,	9:	Lecture by Luis Callejas (TBC) /// Desk Crits
TUE,	14:	Desk Crits
THU,	16:	Desk Crits
TUE,	21:	No class (Patriots Day)
THU,	23:	PIN UP with critics
TUE,	28:	Desk Crits
THU,	30:	Pre-FINAL Presentation

MAY

TUE,	5:	Desk Crits (Colombian Peers @ MIT)
THU,	7:	Desk Crits (Colombian Peers @ MIT)
TUE,	12:	FINAL REVIEW
THU,	14:	PDFs for Booklet due

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