Scientific Research Publishing

Current Urban Studies, 2025, 13(3), 259-292
https://www.scirp.org/journal/cus
ISSN Online: 2328-4919
ISSN Print: 2328-4900

From Mexico to Vietnam, Fieldwork as a Method: Elements for a Sociology of Cities in Development

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How to cite this paper: Bolay, J.-C. (2025). From Mexico to Vietnam, Fieldwork as a Method: Elements for a Sociology of Cities in Development. *Current Urban Studies, 13,* 259-292.
https://doi.org/10.4236/cus.2025.133013

Received: August 12, 2025
Accepted: September 9, 2025
Published: September 12, 2025

Abstract

Urban research in Southern countries continues to be severely limited by a lack of data and information necessary for a rigorous and reliable analysis of demographic, social, and territorial developments. Researchers must therefore commit to understanding the reality on the ground by going into the field to gather information, not only from official sources, such as representatives of supervisory institutions, but from all stakeholders—namely residents—who can not only quantify facts but can also provide a sensitive account of their lived experience. This is all the more important given that residents' requests are often ignored due to their illegal and informal status, and the difficulty that disadvantaged populations face in addressing the issues with regard to their urban settlement. In terms of methodology, fieldwork consisting of observation, data collection, and dialogue is essential. With over 40 years of urban investigation and intervention, this methodology has proven its worth time and time again by corroborating knowledge acquired elsewhere. It also allows us to hear the voices of those most directly affected: the inhabitants, particularly the poorest and most disadvantaged living in the most impoverished neighborhoods of Global South cities. In this article, we pay tribute to these city dwellers and formulate some guidelines to contribute to urban research and the interdisciplinary approach it requires. We also lay out the priority's decision makers must establish in order to make cities more livable for all, while taking into account both urban constraints and the extraordinary potential afforded by innovative, inclusive approaches. Examples from diverse cities, such as Toluca (Mexico), Douala (Cameroon), Ho Chi Minh City (Vietnam), Nuevo de Julio (Argentina), and Montes Claros (Brazil) collected over the years demonstrate that fieldwork and dialogue between stakeholders are essential for solving urban planning, land use and social equity issues.

Keywords

Urban Development, Urban Sociology, Urban Stakeholders, Urban Settlements, Slum Upgrading, Fieldwork, Methodology, Vietnam, Cameroon, Burkina Faso, Brazil, Argentina

1. First Steps: Working in the City

It was January 1981, many years ago. I'd just arrived in Mexico City on a grant from the SNF (Swiss National Foundation for Science) as a visiting doctoral student at the Colegio de México, an institution renowned for its social sciences and humanities research. I'd already chosen my thesis topic and had my institutional sponsor. All I needed was a field of application—and fast. Through a series of chance encounters, I met Laura, a Mexican professor and anthropologist from the Universidad Iboamericana who was working on the rural regions bordering the federal capital. My thesis on the urban integration of immigrants from rural areas was a valuable addition to their research. Laura, Carlos (a Spanish researcher) and I thus became the first interdisciplinary, international, inter-university research team, a spontaneous ensemble bursting with energy.

A few weeks later, I arrived in Toluca, a city of 500,000 inhabitants as well as the capital of the State of Mexico. It is located some 60 kilometers from Mexico City, the megalopolis and federal capital, which Mexicans call *DF* (*Distrito Federal*[1]).

I spoke to one of the priests in charge of the Catholic Seminary of Toluca and told him I wanted to interview residents living in the neighborhood of the same name—*Colonia Seminario*—a marginalized area of makeshift housing, mainly occupied by families from rural areas. I explained to him that I wanted to plan my fieldwork and begin my doctoral thesis on the integration of immigrants in an urban environment. He suggested I speak to Don John, the leader of one of the communities living in one of the three zones of the *colonia*. Don John, a man of influence and credibility, would be my mentor, advising me and guiding me in my endeavors. He would do so free of charge.

Trust was crucial for a young Swiss researcher to walk in such a slum and question the inhabitants.

Several years later, in the late 1980s, in another city in another country—the Central African Republic—on another continent, I was working for the Swiss Cooperation Agency. I was head of the liaison and land affairs office of the Nylon Zone Restructuring and Development Agency (MAETUR-ARAN), on the outskirts of Douala in Cameroon. After years of technical studies, the urban renewal work was about to begin. Along with a team of about twenty technicians and administrative staff people, the liaison and land affairs office, which oversaw rela-

[1]It's their way of differentiating between Mexico City, Mexico as a country, and the State of Mexico, which borders the national capital and whose urban center is precisely the city of Toluca.

tions with local associations and small and medium-sized enterprises. We also processed the administrative procedures for informal residents who wanted to regularize their settlement status and become owners of their land, after paying a fee to the agency. It was these early academic and professional experiences, along with my knowledge of the urban issues, that opened the doors to the EPFL (Swiss Federal Institute of Technology, Lausanne), allowing me to translate this pragmatic, operational approach into scientific research. I ran several university cooperation programs on urban development, with colleagues and partners in Latin America, initially in Bolivia and Argentina, and later in many other parts of the world, including Cuba, Ecuador, Vietnam (See Photo 1) and China.

Photo 1. Ho Chi Minh City, along a branch of the Mekong (Source: Photo J.-C. Bolay, 2012).

Today, I realize that my knowledge of Southern cities has come as much from walking their streets, working in the field, as from reading articles and books. This combination of experience in the field and theoretical knowledge is my trademark: an urban science at the crossroads of urban planning and the social sciences. My goal is to better understand ever-changing urban complexity, draw meaningful conclusions, open perspectives, and promote knowledge, change and implementation.

Learning, doing and understanding requires collaboration. While difficult to coordinate at times, projects are carried out through teamwork and international cooperation.

2. Intentions and Methods

Understanding human, social and global reality requires a blend of approaches and methods to capture its complexity and grasp its various meanings.

Over the past 40 years, urban science has been at the crossroads of acquired knowledge (i.e. knowledge passed down by others) and the insights gained through empirical fieldwork. This was approached without naivety, bearing in mind that, as an urban researcher, I was also an active participant in the process of transforming reality.

This first point to address is the researcher's position in the field and the need for methodological rigor to obtain reliable results. I was always aware, as an intermediary in the interactions among city dwellers, that I would necessarily affect the reality I was analyzing. The work of Georges Devereux (1994) certainly had the greatest impact on me as a young researcher, guiding me as I formulated the objectives and methods of my future doctoral thesis. A researcher's subjectivity is ever-present and invariably influences their interpretation of the observed facts. This is particularly true outside the laboratory, far from scientific books and articles, especially when navigating uncharted territories where personal landmarks and biases have little meaning. His perspective changes when he intervenes directly "in the field" and experiences a new reality firsthand; he must try to understand it and gather information based on individuals' interactions with one another.

Photo 2. Koudougou, Burkina Faso. Discussion with craftswomen (Source: Photo J.-C. Bolay, 2014).

Devereux's warnings struck a chord in me. As a young scholar from Switzerland who had worked in a public immigrant integration office, I conducted an initial survey in Lausanne on the integration of young second-generation Italians into their local community. I interviewed 50 young people aged 18 - 20, listened to their stories, and then summarized and interpreted their narratives (Bolay, 1981). Based on this experience, I replicated a similar approach in a Mexican slum. This settlement was illegal because it was in violation of Mexican land and building regulations and sprang up as a result of illicit dealings between new residents, fraudulent land developers and corrupt government employees (Bolay, 1986). As a foreign researcher asking factual questions about the physical, economic and social integration of migrants from rural areas who had been forced to live in this new outlying district, maintaining objectivity was challenging. While Devereux described the researcher's anguish in a psychoanalytical and conceptual way, for me, this "fear" was very concrete and disturbing. I was not merely observing an object of study; I was interacting with real people, most of whom were benevolent, though some were suspicious or even hostile towards my presence (See **Photo 2**). These experiences formed my daily life as a field researcher, though aware that I was not the first to consider this subjectivity "outside the walls" (De Sardan, 2000). A small difference, but one with major ramifications.

The process of translating this ethno-psychoanalytical approach into a socio-anthropological method was based on a few simple, easily applicable principles. These principles remain valid today and were updated as part of recent work on several published articles and two books on urban planning (Bolay, 2016, 2018, 2020b, 2021; Bolay, Labattut, Loan, My Lan, 2019).

Our work, both as individuals and as part of a research team, has proved a source of innovation, once we grasp our purpose there, and that leaving the laboratory means more than just "getting some fresh air". This investigatory approach is the very essence of anthropology, and one that many social scientists can (and, I would argue, should) practice. Fieldwork is a method! De Sardan (2001) highlights that different methods of data production converge in fieldwork: observation, interviews, and data collection using systematized procedures (maps, cards, etc.). These methods sometimes create added value and sometimes clash. The author describes this direct application in the field as impregnation, meaning a whole series of informal processes by which a researcher becomes accustomed to understanding all the social codes and social logics of behavior, at their most impalpable, everyday level.

Having worked on urban policies and planning with a focus on housing for the poor in contexts as diverse as Douala in Cameroon, Ho Chi Minh City in Vietnam, and La Paz in Bolivia. Dubois (2012) argues that the researcher's physical presence in the field is necessary appealing. Going into the field with a focus on public policy enables him to grasp how policies are implemented by public officials in practice. He also considers the experiences of individuals for whom public policy is not merely a law or decree, but rather a tangible measure from which they may or may not benefit.

As an extension of this observation of the practical implementation of decisions made at political and administrative levels, fieldwork is also an effective way of refining our research questions and hypotheses, be they theoretical or applied. Baldassarri and Abascal (2017) demonstrate this in their article: "By contrast, field experimental methods serve to channel research toward a virtuous circle of inquiry, in which theories are explicitly specified, evaluated, and refined incrementally."

I will not claim that fieldwork is a "magic potion", but it is certainly a way of confronting reality in its full complexity, with all the resources and the tools necessary for understanding it.

This methodological blend—a hybridization of conceptual and theoretical reflection coupled with "*in vivo*" exploration—is based on a number of relatively easily applicable principles, provided the objectives are clearly stated, the investigation is led in an plural way, and both time and means are sufficient:

1) ***A diverse range of sources***, that represents the diversity of the stakeholders, be they social or institutional, through both their points of view and in terms of analysis.

Though an exhaustive analysis of any given social fact is impossible, it is nonetheless useful to first reflect on the forces at work, to avoid a unilateral perspective. This helps to counterbalance the researcher's subjectivity by multiplying sources of information and exploiting cross-views.

2) ***Complementary disciplinary approaches***, so as to deconstruct urban complexity and translate the sectoral aggregations specific to the various sciences and technical disciplines that shape and describe the urban environment into a holistic perspective.

The quest for interdisciplinary unity through the combining of approaches is easily understandable on a conceptual level. However, it is rarely practiced in the urban sciences as it requires the sharing of scientific knowledge and inter-and trans-disciplinary dissemination (Tejada et al., 2019). It can only be achieved through collective effort, by challenging oversimplification of the issues, and transcending power and domination games, whether political or mercantile.

3) ***A participatory approach*** that aims to open the process to all stakeholders involved in development and societal transformation. In the case of the urban issues we explored, residents position themselves relative to the common good that is the city, its infrastructure, community facilities, services, and accommodations. But they are not alone. Thus, they find themselves up against other stakeholders of urban governance, including political authorities, public and private decision-makers, urban professionals, businesses, and residents, with a multitude of interests that are not always compatible.

This openness to participatory management is a rational part of governance based on collective efforts to support a common territory, be it a neighborhood, a city, a metropolis, an agglomeration or an urban region. All these spaces are co-produced by individuals, groups and institutions. Co-production and cooperation

are based on the principle of inclusivity (Africité & FPH, 2003), which we adopt in our scientific aim and methodological approach (Bolay, 2016).

4) ***The transactional perspective*** is inspired by work on social transactions and aims to establish the interests and positions of the various stakeholders. This is achieved by entering a process of debate which, though less formal than negotiation, both precedes and prepares for it (Rémy & Foucart, 2013).

Any multi-stakeholder social transformation process-in our case, urban planning-generates conflicts of interest, opposition and social struggles, which, in the optimal scenario, lead to mutual adjustments. This form of interaction is a way of operationalizing the concept of participation and applying it to urban transformation.

5) ***A change-oriented objective*** that aims to transcend scientific knowledge-the focal point of our approach-to turn it into practical tools that can transform reality (F3E, 2018). This multi-faceted transformation could be considered a key challenge of "sustainable development, with an urban character" (Almulhim et al., 2024).

Implementing change based on scientific analysis fosters transformation in a sustainable development perspective for the greater good.

6) In this framework, ***sustainable urban development*** is the larger framework in which our approach is grounded. It fully integrates the environmental, social and economic dimensions, and incorporates the territorial and political factors that form the foundations of urban governance (Bolay, 2020b).

A sustainable development approach involves finding a balance between environmental, social and economic factors (Keith et al., 2023). It also requires turning various urban projects, which are often highly sector-based, into complementary, coherent elements aimed at short- and long-term development.

3. Where to Draw the Line: Needs vs. Social Demands vs. Technical Know-How

Most urban projects, as they are designed and developed in practice, generally respond to imperatives determined by the public authorities, or by private players in the case of construction on private land. They are frequently implemented by private operators on behalf of the public authorities.

This established and accepted reality hides other, less visible, overlooked practices. These informal processes represent a whole other section of reality that also influences urban development, in Global South countries and beyond. These range from the resourcefulness of the "poor"—new immigrants, low-income families, etc.—to illicit activities involving corruption, entitlement and other misuse of the laws and the exploitation of loopholes that govern urban and regional planning.

This informality fosters corrupt practices. However, we must be vigilant as the illegal/perilous dimension is often highlighted in the media and on social networks, as a way of demonizing poor residents who are simply trying to "scrape

by". These poor residents have nearly no belongings and are at the mercy of "profiteers", or *loteadores*, as they were called in Toluca (See **Photo 3**). With their limited financial resources and no real means of pressuring either formal or informal decision-makers, they have virtually no influence in circles of power. Yet, they must comply with the legal and extra-legal requirements imposed on them by certain fraudulent urban players. Corruption is an intrinsic part of urban development, particularly when large sums of money are at stake. It primarily affects the upper classes of urban society, including individuals in positions of power, politicians, entrepreneurs, administrative officials—in short, those directly or indirectly responsible for urban planning and management (Alexander et al., 2022). However, it also affects the urban poor, low-income families and immigrants from rural areas, who are the victims of this malpractice. As Zinbauer (2020) states in his book on the subject, "People living and/or earning livelihoods informally have been widely documented as being subject to persistent harassment, violent abuse, and extortion, with female vendors often the primary victims". This directly affects urban land planning and habitat (Chiweshe, 2021). This combination of practices-formal and informal, legal and illegal, legitimate and corrupt-must be acknowledged if we are to tackle the complexities of urban development and its ambiguities rigorously. In this sense, urban exploration—fieldwork through direct observation and interviews—is undoubtedly the best way to comprehend the varied, disparate, often contradictory elements that govern urban organization and development. Most of the time, these elements remain unseen. Only careful investigation can reveal their true nature and meaning.

3.1. What Are the Needs? A Seemingly Simple Question, but One That Reflects the Complexity of Urban Development

When discussing urban needs and necessities, it is important to determine who is proposing which vision for the future, prior to highlighting the potential solutions.

Identified needs represent the priority elements studied and defined by public and private experts to ensure or improve the constructive, infrastructural, social, and economic dimensions of living conditions specific to each stratum of the population.

Conversely, social demand corresponds to what the inhabitants themselves consider to be a priority in order to secure their present and future, whether in terms of land security, access to housing, employment, and social, educational, and health care.

Analysis of numerous urban neighborhood's upgrading projects shows that there is often a gap between what residents want and what urban decision-makers offer them.

When it comes to urban development, it is clear that the public authorities and the operators who help meet these needs define them first and foremost. All too often, however, a key stakeholder is overlooked: the resident and user, or—to use another term—the citizen inhabitant. This resident is omnipresent and highly active by necessity in dealing with their daily reality and resolving the many difficulties inherent in their condition.

Photo 3. Toluca, Mexico. A resident of the Colonia Seminario, staying in his home (Source: Photo J.-C. Bolay, 1984).

This is rooted in the political, institutional and practical approaches to urban development—design, planning and implementation—that have existed since time immemorial. Authorities and economic actors make decisions according to procedures that are more or less democratic, while developers act to create, destroy and re-create the city, developing' this inhabited space for the benefit of all in theory. Residents are considered the "beneficiaries" of these decisions. However, numerous analyses (Monti et al., 2014; Bolay, 2011; Watson, 2009; Myllylä and Kuvaja, 2005; Carley et al., 2001) show that urban planning often remains highly bureaucratic, poorly controlled in terms of time and costs. Furthermore, it neglects an essential dimension: social demand. Put simply, needs are defined by technical imperatives established by specialists, including urban planners, engineers and architects in collaboration with political and administrative decision-makers. Social demand, as an expression of citizen residents, is not considered. At best, so-called participatory processes implement procedures to survey the opinions of "beneficiary" populations on the actions envisaged by the authorities and their private partners. Rarely do projects respond to the actual needs or requests of residents.

It is clear that the participatory approach has its limitations and is not a miracle solution. The diversity of social demands must be taken into account, depending on the neighborhood, the origin of the inhabitants, and their socioeconomic integration. In light of this, public authorities must make investment choices and set priorities. However, it is preferable to favor a bottom-up approach over a top-down process, as projects will be carried out with the agreement of citizens and without major conflict. This moves us away from a technocratic and authoritarian vision in favor of a more democratic and consensual approach.

According to World Bank estimates, urbanization is divided between technological and town-planning initiatives with obvious social impacts. Sometimes these impacts are positive for the community, such as the expansion of urban bus systems in Latin American cities (Souza Vieira, 2024; Hidalgo et al., 2024). However, there is also a multitude of projects that target capital-intensive urban

growth, with no regard for the acceleration of urban social misery. The World Bank predicts that a third of the world's city dwellers (over 1.5 billion people) could live in poverty by 2030 (Baker, 2008).

The work we did in Montes Claros in 2016 with geographers from UNIMONTES University (Universidade Estadual de Montes Claros) exemplifies the quasi-philosophical gap between urban planning and the social development of the population as a whole (See **Photo 4**). The municipality of Montes Claros had set up a working group to establish urban planning goals for the coming decade (a federal obligation in Brazil). This group included private sector and academic stakeholders, but not members of the public, and functioned in a top-down manner. The proposals originated from administrative bodies and were debated by specialists. Once an agreement had been reached on the measures to be taken, information sessions were organized with residents of different parts of the city to inform them about the plans and get their feedback. Our field surveys in four separate neighborhoods revealed that not a single resident had been informed of the future urban development plan, nor had they ever been interviewed. Even worse, the peri-urban zones, which were missing from the map, were excluded from this planning.

Is this mere bureaucratic nonsense? More likely, it was a political decision not to commit to complex areas populated by newcomers to the city in the long term. In fact, the planning exercise was a failure, despite a unique opportunity (and, again an obligation under Brazilian law) to truly rethink the future of this city of over 400,000 inhabitants. This example demonstrates how the technical urban planning tools and theory are often used as instruments of power in struggles between political leaders and urban actors (Bolay, 2016). This is not to demean the skills of urban planning professionals, but rather to question the methodological, conceptual and theoretical approaches used.

Photo 4. Fieldtrip of a scientific team in a neighborhood of Montes Claros, Brasil (Source: Photo J.-C. Bolay, 2018).

Based on the premise that "we" urban professionals are the city's experts and know what is best for its future, we inevitably rely on our expertise without considering the local, empirical knowledge of urban residents. The latter often express requests and proposals for improving their daily lives, often in vain. However, their input should form the cornerstone of urban innovation, alongside and in contrast to the needs identified by specialists and the social demands of citizens.

Here again, two examples from my work in Mexico and Cameroon can help us to better understand the difference between "identified needs" and "social demand", depending on who expresses them and who acts.

During my interviews with residents of the Seminario neighborhood in Toluca, I asked them what they considered to be the priority for improving living conditions there. As a foreigner, I was shocked at the poor state of their housing at the time. I therefore expected them to talk about renovating buildings, infrastructure, and community services. Instead, they complained about the mediocre quality of the television network! Other concerns fueled later discussions, but at that time and point in their lives, that was where their priorities lay. How can we explain the discrepancy between the assumptions of a young doctoral sociologist and the concerns expressed by the residents of the Colonia Seminario? Living informally on the outskirts of Toluca and having negotiated the acquisition of their plots illegally, they knew they had no recourse for demanding major public investment in developing their neighborhood. So, they withdrew into their personal sphere—their homes—which they could not afford to improve or embellish. Yet they desired it to be as welcoming as possible. Back in 1982 television was the lifeblood of daily existence for many.

A few years later, in the so-called "Nylon" area of Douala in Cameroon, I asked the same question of the heads of neighborhood committees who were facing a major urban rehabilitation project. The public authorities wanted to transform their neighborhoods, with the support of foreign donors.

Residents praised two major project initiatives: the installation of drains and sewers, and the creation of traffic lanes within the neighborhood. After many years of community work and campaigning, community leaders finally felt that their concerns had been addressed. When the first houses were built in the 1960s and 1970s, mothers would tie their infants to the tops of wooden tables during the rainy season to ensure their young children survived the floodwater in the dwellings.

Thanks to the developer's attentiveness to the community's needs, runoff water was reduced, thereby reducing flooding. Likewise, improved roads would finally enable ambulances to access the neighborhoods in an emergency, when expectant mothers needed to be taken to hospital for high-risk deliveries.

The heads of the neighborhood committees knew the limits of their power to act, as they were exogenous community—a term used in Cameroon to describe people from other regions and ethnic groups—who had come to settle on land designated as "non edificandi". However, they didn't give up. During my three-

year tenure heading community relations and land regularization for the Nylon zone development agency, I met regularly with neighborhood committees' leaders to seek compromises between the obligations imposed by infrastructure work and respect for the inhabitants' social life. This was not always successful, but it was a step forward in the social dialogue. In these circumstances, the commitment of all urban players was apparent (Bolay, 1988).

A technical analysis of the situation in the area called for major works and juxtaposed these with the demands of neighborhood committees, which had been active for nearly twenty years and were the project's original promoters. Thanks to their community mobilization and weekly collective work, the Swiss cooperation agency (SDC[2]) and the World Bank decided to support the Cameroonian government in launching the famous "Nylon Project", a US$160 million investment benefiting 150,000 inhabitants of the area (see **Photo 5**).

This was a magnificent demonstration of a lively and active dialogue between the population, the public authorities, and cooperation agencies. Though far from peaceful or friendly—and sometimes downright conflictual—it was essential in improving this outlying area both in terms of urban development and socially.

Photo 5. Fresh food market in the Nylon zone, Douala, Cameroun (Source: Photo J.-C. Bolay, 2014).

[2]SDC (Swiss Agency for Development and Cooperation; https://www.eda.admin.ch/eda/en/fdfa/fdfa/organisation-fdfa/directorates-divisions/sdc.html).

3.2. Technical Know-How... Sometimes Out of Sync

Since the early 2000s, the knowledge and expertise of urban planning professions has multiplied, largely thanks to technological advances linked to the computerization of data and the geospatial visualization of information. These tools have become indispensable. However, they are used relatively little in developing countries due to their cost, and even less so in informal territories.

In most cases, the development of squatter settlements is preceded by hastily carried-out studies by private consultants. At the instigation of public decision-makers and financial donors, these consultants use—and abuse—the "copy and paste" approach, adapting the main points from preliminary studies and updating their projections in highly dissimilar contexts (Radliya et al., 2020).

This follows a capitalist rationale of profitability, implying a calculation of effort within a competitive framework (e.g. competitive bidding, where the highest bidder wins control of economic and financial imperatives while often neglecting the social and environmental foundations of the approach). There are many examples of this practice, each yielding mixed results (Magalhães et al., 2016; Freire, 2013).

Analytical tools have undergone extraordinary advances in recent decades. "Smart city" is undoubtedly the most emblematic term for describing the technological leap in the description of territory, urban and architectural construction, the management of technical networks, and the political and social governance of cities and their inhabitants (Das, 2025; Bolay, 2020a).

Smart cities highlight the added value that innovative technologies bring to the technical and social management of cities. However, as stated in my 2020 article, it appears that deploying these technologies requires costly investments and that only cities with the financial means will be able to afford these innovations. During interviews with residents of poor neighborhoods, it becomes clear that their demands focus on more basic needs: housing, public transportation, schools, safety, etc. Once again, it appears that the poorest cities in developing countries will have to wait until these technologies become more widely available at a lower cost before they can benefit from them.

However, this is not the whole story. The concerns of residents must still be integrated into the technological machinery. Meanwhile, functional urban planning logic remains largely uncreative. Stakeholders (local authorities, private offices, cooperation agencies, etc.) do not make use of local knowledge and community expertise (although urban planning is not anthropology!). This is happening at a time when new planning tools can translate the activities and practices of inhabitants into decision-making factors (Shin and Shin, 2012; Wilson et al., 2017). Technology offers a wealth of data that could inform decisions on urban investment priorities. However, this must be situated within a broader framework of sustainable urban development (Yigitcanlar & Teriman, 2015). This requires a participatory approach combining quantitative and qualitative sciences (Clifton et al., 2008).

Our 2015 study in Koudougou (Bolay, 2015) illustrates the ambiguity between investments, feasibility studies, stakeholder interactions and project outcomes. In consultation with the local authorities and local shopkeepers, the Swiss Cooperation Agency financed the construction of the town's central market, promoting the use of local human resources, materials and traditional expertise, as well as innovation. The result was the construction of 120 buildings, 1200 shops and a 3000 m^2 canopied structure housing around 600 stalls. The project, completed in 2005, won the Aga Khan International Prize. Jury members highlighted that Koudougou's central market had been designed in a "participatory manner". The future beneficiaries of the market—the shopkeepers—were involved in its design from the outset, alongside religious and traditional authorities, decentralized state structures, and local representatives. Initially, a larger site had been earmarked for the market's new location, but the merchants did not support relocation, preferring to remain on the original, smaller but more central site. Their wishes were respected (SDC, 2007).

This admirable achievement is emblematic of how things are done in this intermediate town in Burkina Faso. The town, with a population of 90,000, has financial resources a roughly 1.5 million US dollars a year. With additional subsidies from the national government, this figure increases to nearly 2 million, two-thirds of are spent on public employees' salaries.

So, how did Koudougou manage to build a market, maintain its public spaces and manage community services (See **Photo 6**)? This would simply be unthinkable without international cooperation! I started by talking to young private urban planners from Burkina Faso.

Photo 6. The new central market of Koudougou, Burkina Faso, built with the support of the Swiss Development Cooperation office (Source: Photo J.-C. Bolay, 2014).

They had been hired by a private French firm, which was funded by the French Agency for Development (AFD), to draft yet another communal urban development plan. The local consultancy produced a technical study, listing the projects to be built and their timings and costs over the next 10 years. On average, $6 million would be needed each year. I asked how funding could be acquired under these conditions. The planners replied that their plans had met the required specifications, and financial decisions were the responsibility of the local authorities.

I decided to interview the city's mayor, a banking executive who shared his insight with me, telling me with certainty that the urban development plan, as it had been drafted, would never see the light of day. However, all international cooperation agencies require one. Depending on their thematic priorities and financial resources, they would choose which of the projects to finance and maintain for several years to come. For France, the priority was hygiene and the construction of public latrines. For Switzerland, the investment focus was on public fresh food markets. And so the list went on, according to the donor in question. For the mayor, all of these projects were indispensable and required international funding, without which they would remain unrealizable. The development plan was, in effect, a catalog from which foreign partners could pick and choose. The plan was adapted to the preferences of the financial partners and, therefore, to the real conditions of urban development.

The example of Koudougou, a more recent example than Douala or Toluca, shows that we are still a long way from the "smart city" and the use of cutting-edge technologies for urban management that benefit the whole community.

For promoters of technological innovation, the "smart city is a place where traditional networks and services are made more efficient with the use of digital solutions for the benefit of its inhabitants and business"[3]. More prosaically, technical knowledge is broken down into tools that facilitate urban organization and management (Dai et al., 2024). These tools are rooted in sectors whose efficiency can be improved through prudent management of inputs and flows. As Law and Lynch (2019) state: "A common theme to most definitions is the utilization of information and communication technologies (ICT) as an enabler to support city development, enhance urban services, and increase stakeholder access to information". They add that "the market opportunity for smart city solutions is undoubtedly huge but equally complex. All forms of digital technologies are being hyped for all sorts of smart city projects (...) Digitally connected, a smart city combines a diverse set of data from the built environment and people to pinpoint city needs, to develop strategies to efficiently manage assets and resources, and to optimize operations and services". In recent years, this has led to significant progress in areas of public interest, such as public transportation, environmental protection, natural resource and energy management, and community services, including health, education and safety. However, it is important to consider investment

[3]https://commission.europa.eu/eu-regional-and-urban-development/topics/cities-and-urban-development/city-initiatives/smart-cities_en.

and maintenance costs, without which these transformations would be inconceivable. Who pays for which services? There is also the key question of accessibility. Rani et al. (2021) highlight obstacles hindering the deployment of these innovations in some cities. "In some of the countries, the industry is incompetent to deliver the required infrastructure for smart city services. It has been observed that the lack of technology, skilled manpower, and finance are the main reasons causing delay of many smart city projects". Bolay (2020b) also found that for many Southern cities lack financial resources for such investments, especially in small and medium-sized towns, which are unable to mobilize the necessary funds despite having the skills and expertise.

3.3. Social Demands and Citizen Expression

The form and content of social demands depend largely on the social organization and modes of expression that prevail in the respective towns and cities, reflecting local governance practices at the neighborhood and town levels, as well as at the regional and national levels. Neighborhood life is stimulated by two essential factors: people knowing one another and lending a hand.

In Ho Chi Minh City in the late 1990s, thousands of Vietnamese families who were forcibly exiled to remote rural areas after the war and the unification of the country took advantage of new measures that allowed them to return to the Old Saigon (nowadays Ho Chi Minh City, HCMC). In those days, finding a plot of land and the means to earn a living was challenging. Returning to the city was a goal for these former city dwellers who had been displaced from their hometown. However, reintegration proved complicated.

Given the lack of space in the central districts of Ho Chi Minh City (HCMC) and the obvious constraints of moving to the distant suburbs—namely the nonexistent local job market, the lack of networks (namely electricity and drinking water), and rare and costly public transportation—what could be done? In the 1990s, around 20,000 new residents built homes on stilts along the city's canals and rivers. Although they just get by, they do not neglect their neighbors. They utilize one another's' skills and do their best in the laissez faire typical of the Doi Moi era (Hoang Anh, 2009). The waterways served as both cesspools and sewers. Nevertheless, the desire to reintegrate far outweighs the precariousness of the situation. A succession of wooden houses and footbridges has taken over the rivers and canals, facilitating accommodation and travel but creating problems such as garbage congestion, water blockages, and flooding of neighboring properties. These issues were gradually resolved by rehousing the families in purpose-built buildings (Wust et al., 2002; Wust, 2001). The resourcefulness and solidarity of these inhabitants, far removed from official regulations and prevailing norms, are remarkable. Those who have share with the others through unofficial yet real negotiations. Water pipes run through alleys and overhang pontoons, and individually metered electrical connections distribute essential energy to those who do not enjoy recognition of their urban settlement.

This mix of legal and illegal, licit and illicit, permitted and prohibited systems was widely used by the population of Ho Chi Minh City at the time. More generally, this characteristic is common in Southern cities and is not a relic of the past. Rather, it represents the "art" of integration outside of official regulations, comprised of widespread practices that are known to and accepted by all, though not formally recognized. This would not be possible without collusion with the other stakeholders and shared confidence based on history, personal relationships and knowledge of the environment. Demonstrations are sometimes held to assert the "human right" to live in the city, but negotiations more often take place, highlighting the importance of personal contacts and possible arrangements.

In these conditions, social demand primarily refers to the community and collective expression of residents' needs. Sometimes residents organize neighborhood committees, associations and other collective groups to defend common interests (Mitlin, 2008). Other times, needs are met on an individual basis, such as when housing becomes available and immigrants and their families can improve their living conditions, even if it comes at a financial cost that is seldom acknowledged.

The urban integration of the poor always follows a certain logic. Nothing is ever completely left to hazard. They know their needs perfectly as workers, members of nuclear families, and parts of wider family collectives, both rural and urban. When speaking with them, one discovers the extent of their reflection and how they strive to improve their living conditions.

The first issue for the urban poor is that of land and property (Durand-Lasserve & Royston, 2002), including where to live, under what conditions, and at what price. The idea that new urban immigrants make hasty or strictly individual (or family) decisions about where to settle in the city is erroneous. At this level, it is also a strategy of spatial mobility that reflects personal objectives while remaining coherent with those of relatives in the village of origin and at the destination, despite precarious means.

The case of Târgoviste, an industrial town in Bulgaria, illustrates this point. Who decides, and who does what? What needs have been identified, and what responses can be offered to address recurring problems?

The Swiss Agency for Cooperation and Development (SDC) consulted us, the EPFL[4], to conduct a feasibility study for future urban investments in Târgoviste, a city devastated by the closure of Soviet arms factories (Bouvet & Bolay, 2000). An engineer and a political scientist carried out joint work focusing on two possible interventions: one in Malcho Malchev, self-built district by Roma families and which the authorities wanted to physically eliminate in favor of a new rehousing district (see **Photo 7**); and the other in a social housing district whose ownership had been privatized, but for which there were no management rules. These two situations were quite different, but both merited a preliminary study before any intervention by the public authorities and the support of a cooperation organization.

[4]Swiss Federal Institute of Technology, Lausanne, Switzerland.

Most locals consider Roma neighborhoods in Central European cities to be lawless, uninhabitable, and dangerous areas, much like shanty towns in Southern countries. This is the case in Bulgaria, where people describe them as "poor but dangerous". Entering these neighborhoods is complicated due to the mutual mistrust between the Bulgarian and Roma populations. The Roma's mistrust extends to anyone who intervenes in their neighborhood, given the precariousness of their residential situation and the general hostility they face.

Photo 7. Târgoviste, Bulgaria. The Roma neighborhood of Malcho Malchev (Source: Photo J.-C. Bolay, 2014).

In our case, the Roma's relationship with EPFL began through Médecins Sans Frontières, an international non-governmental organization that provides primary health care in the Roma neighborhood. Through this connection, my colleague and I were made to feel welcome, as the residents had heard that Switzerland was planning to invest in the district to improve infrastructure and housing services. We were able to visit the neighborhood and enter homes to speak with the residents—translation tool in hand—and learn what they expected from the project. They explained that their homes lacked basic amenities, including drinking water supply, sewage disposal, and electricity. The neighborhood had dirty streets and lacked a sewage system and public facilities, except for a small walk-in health center set up by Médecins sans Frontières. And this was Europe! When we asked the inhabitants about the authorities' proposal to move them to new, modern housing, they were firmly opposed it, believing that this was where their neighborhood belonged. They had built it with their own hands, and it was the fruit of their labor. It was also close to the city center. They felt it was here that future developments should be planned here, in this neighborhood that they had built and whose sense of community, mutual aid, and solidarity they loved.

This sense of belonging is not unique to Târgoviste. It is prevalent in all working-class and informal settlements in cities around the world. These neighbor-

hoods, built by their own inhabitants, are the result of immeasurable effort and commitment by their residents, as was evident in our interviews with them. Immersion in the field and interacting with residents once again proved its worth, enabling us to better understand neighborhood priorities.

More recently, during a 2019 scientific mission to the Mekong Delta in Vietnam with geographers from the University of Social Sciences and Humanities in Ho Chi Minh City, Vietnamese students interviewed residents of different neighborhoods in the medium-sized town of Chau Doc. This town was considered representative of the different population strata. The goal was to gain a better understanding of how they perceive development and urban planning, while providing insight into the actions taken by the public authorities in their neighborhoods (Bolay et al., 2019).

According to the information on the city government's website, several projects to modernize infrastructure and beautify the city are planned between now and 2030. Several of these projects will directly affect planning in the neighborhoods where we conducted our survey. These include the widening of roadways and plans for new housing developments, a new cultural and sports center with a playing field, and the remodeling of the historic Nui Sam site (Bolay et al., 2019: p. 623).

Urban residents are not concerned about these projections. The vast majority of those interviewed had acquired their land and built their homes according to official guidelines and were in compliance with official regulations and. Some have lived in the city since the 1970s and1980s and claim private ownership of their land and property. However, land remains state property in Vietnam, and residents only have a right of occupancy.

Residents acknowledge the urban authorities' efforts to relieve traffic congestion, improve road quality, and combat flooding. However, public urban agents communicate little to the public about future actions, thus instilling a sense of unease among residents, who fear that large-scale projects managed by the city will affect their land and cast doubt on their rights. They are also concerned about the notable rise in air and water (notably the canals) pollution. They desire to dialogue with the urban authorities about these public health issues, as well as economic diversification, in the hope that their beloved city will evolve and become stronger in terms of its attractiveness and job opportunities in the tourism industry.

Such impressions are consistent from one country to the other. When it comes to implementing urban planning and management, decision-makers remain essentially technocratic and hierarchical. This leaves little room for residents to express themselves, particularly given the lack of real instruments for gathering opinions in a dialogue between the authorities and the population. If we hope to forge a more integrative—and therefore more democratic and respectful—approach to planning through participatory methods, this is certainly the road to pave.

4. Anthropology of the Street: Watching, Listening, and Dialoguing

4.1. The Formal Actions of Urban Stakeholders

Urban projects as defined by formal bodies (primarily public administrations and private companies) are characterized mainly by their formal planning, technical, and architectural dimensions. However, these projects sometimes fail to clearly define their social, economic and environmental goals, which are the benchmarks of sustainable development. They also fail to consider their relevance to the demands of city dwellers.

A survey of local initiatives in Southern cities reveals that many urban operators simply ignore social demands. When these demands are considered, they take the form of abstract principles and morals (e.g. adequate shelter for all, to use the terms of UN Habitat[5]) and unassailable values (whose material manifestation in situ is sometimes hard to envision (Rolnik, 2013).

It is important to qualify this statement. In recent years, the fields of architecture and urban planning have become more socially and environmentally aware. This shift is evident in both fields, as seen using environmentally friendly materials, adaptive bioclimatic architecture, and smart building systems (Holstov et al., 2017). Sustainable urbanism is gradually becoming a benchmark that emphasizes the relationship between the built and natural environments (Farr, 2007). There is growing concern for urban climate impact and long-term management (Long & Rice, 2019; UNDP, 2024). Sometimes, this urbanism incorporates citizen point of view and does not limit urban studies to financial and technical expertise (Roggema, 2017). In this sense, Merino-Saum's et al. (2020) work is interesting because it shows that SDG 11 (Sustainable cities and communities) is the most widely referenced goal in urban sustainability studies. Bansard, Hickmann and Kern (2019) trace the evolution of SDG 11, first in design and then in the urban policies that stem from it.

Photo 8. A new social settlement on the outskirts of Montes Claros, Brazil. (Source: Photo J.-C. Bolay, 2015).

[5]https://unhabitat.org/11-1-adequate-housing.

Our work in Nueve de Julio (Minas Gerais, Brazil) also addressed the creation of social settlements on the city's outskirts through federal funding (See **Photo 8**). While the initiative was commendable, conversations with residents revealed that urban integration remained problematic due to the absence of public transportation, schools, and employment opportunities in or near the new social settlements (Bolay, 2016).

The limitations of this approach have long been debated. Awuah and Abdulai (2022) highlight three major challenges impacting sustainable urban development goals in the cities studied: urban population growth, environmental and climate issues, and technological innovations. Of course, there is also the question of the financial and human resources necessary to achieve these goals.

However, an approach based on openness and a mixed methodology addresses the various facets of urban complexity. Such an approach combines diverse disciplines to analyze different urban situations, immerses us in the reality of the situation through interviews with those involved, and takes us into the field to fully understand what is happening "*in vivo*" and confirm (or disprove) our initial hypotheses.

The most illustrative example of this approach comes from my academic and professional career. From doing fieldwork as a doctoral student in a Mexican city slum to working as an expert on an urban rehabilitation project in Central Africa, as a university researcher, a professor, and a private consultant on the implementation and evaluation of urban projects, I have always been surprised by the lack of synergy between urban professionals and academic institutions. Often, each side claims to possess knowledge and know-how that the others lack, demonstrating mutual ignorance and, at times, contempt.

Simply put, urban practitioners believe that researchers waste their time studying the same questions endlessly. For academics, consultancies and companies, the primary concern is the financial profitability of their interventions rather than their social impact. Meanwhile, public authorities are operating at a loss, generally favoring their relationships with private-sector stakeholders over those with academic institutions. I was astounded by the speed with which private firms carried out studies to guide future urban development projects, as well as by how long it takes academics to analyze urban evolution and its outcomes. These two approaches should be integrated to combine the depth and ambition of feasibility studies with the functionality of implementing changes.

4.2. The Hidden Face of Urban Development: The Informal Sector

Though somewhat of a catch-all term, informality is accepted by all urban specialists. Anyone who has visited a southern city has witnessed it firsthand: street vendors, money changers, impromptu taxis, urban areas encroaching on farmland, and shacks made of sheet metal and plank. While this can have an exotic or attractive allure, it can also be disturbing. Beyond these anecdotal appearances, informality is a profound and integral dimension of urban life, rooted in economic

and social activities (See Photo 9).

Photo 9. Self-built neighborhoods in the risky hills above La Paz, Bolivia (Source: Photo J.-C. Bolay, 2012).

Though seemingly in the shadows of "official" employment, such as salaried work and entrepreneurship registered with supervisory bodies, informality is nonetheless fully recognized by national and international bodies. This multifaceted sector concerns a large proportion of the working population, in economic, social, and residential terms. Although this reality is well known, decision-makers rarely take it into account.

The International Monetary Fund (IMF) acknowledges its importance to the economic fabric. While two of its senior executives, Deléchat and Medina (2020), have cited some of its characteristics, its prevalence is often overlooked. However, based on statistics from the ILO (International Labor Organization), they assert that approximately 60% of the world's working population has worked informally at one time or another. Structurally, the informal sector accounts for one-third of economic activity in low- and middle-income countries, compared to 15% in more industrialized countries. The organization WIEGO (2025) supplements these figures with some key dimensions of informality: "The informal economy is the diverse set of economic activities, enterprises, jobs and workers that are not regulated or protected by the state", to which unprotected, salaried employment should be added. The issue is not so much determining whether the activity is legal or illegal (making informal workers quasi-delinquents) as it is understood that, for most informal workers, it is the only way to enter the labor market and earn a living. Many of these individuals have no social or legal protection or individual rights. WIEGO's Alter Chen (2012) notes that the informal sector is not isolated from formal businesses. Informal workers—be they

artisans, self-employed individuals or small organizations, subcontract for larger firms at lower cost. They take on production charges, costs, and risks. After juxtaposing various analyses on the subject and applying them to African countries, Yusuff (2011) rightly concludes that, in the case of Southern countries, the informal economy should not be viewed as a response to a crisis, but rather as a historical and social process rooted in a globalized and increasingly competitive market.

Informality is not just an economic phenomenon. It is also a feature of residential environments and the development of poor and/or peripheral neighborhoods.

In our book on slums, we write: "Informality is problematic in all cities because this is what 'makes' the city, over and beyond planning. Urban plans fail to predict the urban development of cities, serving only to ratify decisions a posteriori. The city creates itself, driven by its own dynamics; the plan that secures these outcomes follows months or years later. Urban dynamics make the city, not urban planning" (Bolay et al., 2016).

For many low-income city dwellers, housing remains problematic and inaccessible if they play by the formal rules (Bolay & Labattut, 2019; Bolay & Kern, 2011).

Field observation is important here, particularly when we consider informal settlements, on the fringes of official rules and laws. In such circumstances, the priority for researchers and the urban professionals is to earn the trust of residents and explain the merits of their approach.

Our observations of diverse urban situations reveal that the appropriation of an urban or peri-urban spaces by individuals and families does not occur in isolation or spontaneously. Physical integration into these spaces is always the result of negotiation between prospective residents, landowners (often the city or state), and "matchmakers" who are hired to facilitate relations between the stakeholders by "greasing the palms" of anyone who might oppose such transactions.

By building trust with residents, field researchers can understand how things really work. They learn that everything revolves around two key notions: social relations and money! Poor people from rural areas do not settle in urban areas without these two things. They know who to turn to and how much it will cost them. In Toluca, the Mexican city where I conducted my doctoral research in the early 1980s, four unoccupied areas near the Catholic seminary have gradually become populated by families from rural areas over the past 20 years. This was an *ejido*[6], which is governed by the Mexican constitution. At the time, people had no authorization to build any type of housing as the land was reserved for grazing[7]. Yet, several thousand people were living there, having been allocated land on which to build dwellings.

I gathered from the situation that one person "ruled" the area and acted as a middleman between the municipal administration and families seeking to settle,

[6]In Mexico, an "ejido" is a public land reserved for agricultural use.
[7]https://definicion.de/ejido/.

even though no one had told me as much. This *loteador*[8] made a great deal of profit from his trade. After more than 18 months of fieldwork, two of his henchmen approached me and simply told me to leave because I was disturbing life in the neighborhood. They said that if I did not heed this warning, I would end up at the bottom of a well. That was quite a shock! After discussing the matter with Don John, my neighborhood mentor, I left. The fieldwork had taught me to recognize when it was time to listen, talk, or act. I took what seemed to be the safest course of action. This is just one example, albeit somewhat extreme, that I experienced personally. Under these conditions, we operate on the edge of legality, facing all the risks that it entails.

A few years later, while working as a Swiss expert at an urban planning agency in Douala, Cameroon, I learned that the roughly 160,000 inhabitants of the Nylon zone also lacked title deeds for their land and houses. This peri-urban area, a former marshland close to the international airport, was classified as unbuildable for environmental and geological reasons. The Bamiléké ethnic group from western Cameroon had settled on this depreciated territory in the 1960s. They were known as allogenous group in the Douala region. It was the only territory that the local Douala and Bassa populations were willing to cede to them in exchange for payment. Soon thereafter, the traditional authorities of the new arrivals, led by Chief Biteck, negotiated with the local and metropolitan administrations to allow new families to settle informally. These families were allocated a 200-square-meter plot of land, with no electricity, drinking water, or sewage system. However, they were guaranteed a peaceful, conflict-free settlement.

This is the realm of informality: the self-building of houses on officially restricted land with a document signed by the traditional chief who brokered the deal with Douala representatives in the utmost secrecy.

In this sense, fieldwork was a valuable life lesson for me. As head of the Liaison and Land Affairs Office at the development agency, I had a specific role. The agency's location in the development zone offered many advantages: continuous observation over the long term, participation in neighborhood meetings, recognition of the development agency's validity, interviews, debates, and joint analysis of development operations. This human experience and fieldwork apprenticeship, with its three years of daily work in a vulnerable peripheral zone of an African city, will benefit me for the rest of my academic and professional career.

The knowledge I gained from these two extensive experiences in Mexico and Cameroon shaped my approach to all the projects I managed at the EPFL.

As I walked the streets and visited administrative offices, I realized that the question of financial and human resources was crucial. Southern cities inevitably suffer from limited means to transform their territory and improve living conditions (Pieterse & Hyman, 2014). Differences based on national wealth, demographics, economic importance, and available resources must be considered in

[8]"Loteador", in Spanish, is the informal negotiator who allocates land plots to new residents and gets public administration to turn a blind eye to this allocation.

each case. For example, Vietnam and Burkina Faso are both southern countries in terms of public budgets and investment capacity but are not comparable. Intermediate, small, and medium-sized cities, have proportionally fewer financial resources and human capacity but metropolises (Bolay, 2021).

However, most southern cities face challenging circumstances due to the lack of infrastructure, equipment and services, as well as limited financial and human resources. In 2016, we addressed the issue and committed to "learning from the slums", beginning with "the habitat of the urban poor in the making of emerging cities" in order to develop alternative planning strategies that would benefit the entire city (See **Photo 10**) (Bolay et al., 2016).

Photo 10. Workshop with residents, practitioners and scientists in La Habana, Cuba. (Source: Photo J.-C. Bolay, 1994).

Field observations and discussions with urban stakeholders show that planning, even participatory planning, is often ineffective, because most of the urban dynamics in southern cities originate from the inhabitants themselves and are not directly linked to the plans developed by urban authorities (Frediani & Cociña, 2019). Watson concludes by suggesting that urban development today requires a vision that "lends support to a form of planning that recognizes that 'the local' both shapes, and is shaped by, broader structural forces rather than a 'cultural turn' or blind support of local culture and practices" (Watson, 2002).

This questioning of the precepts that govern urban development directly challenges the role of urban "developers" (professionals, managers, and planners) because their understanding of urbanism and urbanity is based on top-down decision-making and follow-up on these decisions. Without input from residents, urban professionals and political decision-makers collaborate to determine needs, priority actions, and projects. In the other corner are the "city makers", including residents who self-build their homes, communities that create schools in their

neighborhoods, community groups that install drains and pave new alleyways (Pedrazzini et al., 1996). These residents and groups operate outside the rules, far from urban formalism. They know from experience that they are systematically excluded and ignored.

Getting out into the field is a way of discovering the needs that residents identify for themselves. Based on this observation, it is possible to determine whether these demands are urgent or long-term goals.

A key step in the urban transformation process is the practical mechanisms for translating fieldwork into actionable policy. This will depend on several factors.

First, there must be a genuine political will for change based on improving conditions for all citizens, regardless of their socioeconomic status, including poor residents and informal workers.

Furthermore, democratic processes must allow all city dwellers to express themselves and have their opinions taken into account in public decisions affecting their lives, their work, and their urban environment.

Once these elements are in place, it becomes possible to integrate fieldwork and its results as part of the urban transformation process. This is a mechanism for gathering the opinions of the population, in the same way that the analysis carried out by urban professionals and the research conducted by scientists will be taken into account.

Realistic solutions are based on methodological approaches and practical applications capable of overcoming the constraints inherent in urban management: financial capacity, the technical complexity of the work to be undertaken, the capacity of the practitioners involved in the projects, the accessibility of the beneficiaries, and the acceptance of the inhabitants.

5. Conclusions: From the Ground Up. Towards a Transformation of the Southern City

This plea for fieldwork, fueled by my experience, seems to me to offer fully up-to-date, contemporary advice.

However, this approach is not new. The pragmatism of the early 20th-century urban sociology of the Chicago School already called for "participant observation" to understand the meaning that social inhabitants give to the situations they experience. In his introduction to his book "City Readings on Doing Urban Fieldwork", Ocejo (2013) recalls that Robert Park, a co-founder of the Chicago School, urged his students to take their bodies and minds out of libraries and books and into the field (or the city, as it were). Heirs to this ethnographic method assert that fieldwork allows urban professionals to contextualize the dynamics of different urban sites and their communities. Fieldwork is also the only method that incorporates residents' perceptions of their own experiences, which often differ from the analyses of outside experts and the priorities established by decision-makers.

In fact, cities are incredibly diverse and heterogeneous entities to themselves (Zhou et al., 2017). They are the result of their history, geography, climate, and

the local, regional and national policies that govern. However, analytical tools and operational instruments do not reflect the major differences between megacities, such as Shanghai or Ho Chi Minh City, where we worked for several years (Kern & Bolay, 2013; Bolay & Ngoc Du, 1999) and medium-sized intermediate cities, which have insufficient financial and human resources (See **Photo 11**) (Bolay, 2021). Feasibility studies and scientific research on the urban environment and the required measures remain primarily in the hands of specialists who do not engage in dialogue with residents to better understand their social demands, needs, and feelings. Obviously, this would complicate matters for them.

Photo 11. Chau Doc, an intermediate city in the Mekong Delta, Vietnam. (Source: Photo J.-C. Bolay, 2019).

Yet the urban reality is intrinsically linked to a city's history, territory, and environment (e.g. North vs. South, size, environmental issues, and political management, etc.). The urban reality is the result of human actions and comprises multiple overlapping and interacting dimensions: surface area, population size, economic activities, employment patterns, climate, natural resources, social and political dynamics, rural-urban and international migration, and urban governance. Without knowledge of these dynamics, decision-makers and other urban stakeholders risk proposing projects and initiatives that do not meet residents' expectations.

Fieldwork is essential to grasp the human and historical issues that shape the present and compensate for this lack of knowledge. It is part of a multitude of approaches and methods that enrich our understanding of urban reality and allow us to truly appreciate the impact of measures on urban change through hybridization.

Several of the precepts have guided our work and reflections are worth highlighting. Some have proved excellent guidelines that could inspire further innovative work and scientific contributions with a significant and lasting effect on sustainable urban development.

I will review these points based on the projects I have been involved in:

1) *Fieldwork and diversity of sources*: My doctoral thesis on the integration of rural immigrants in the city of Toluca relied heavily on fieldwork involving participant observation in a slum, in-depth interviews with approximately fifty families, and interviews with political and administrative leaders. It also incorporated urban statistics and analyses by authors who specialize in urban issues in Mexico.

2) *Complementarity of disciplinary approaches*: Over 30 years of interuniversity research collaboration between the National University of Vietnam in Ho Chi Minh City and the EPFL has led to the formation of scientific consortia involving specialists in geography, economics, political science, environmental engineering, and chemistry. This consortium has enabled us to assess the extent of urban water pollution in relation to residential concentration in order to promote sustainable planning that focuses on improving the quality of life of inhabitants, encouraging resident participation, establishing and local committees, all with the cooperation of urban administrations.

3) *The participatory approach*: ARAN's $150+ million megaproject in Douala, where I headed the Liaison and Land Affairs Office of the parastatal agency responsible for the renovation and development of the Nylon zone, was based on effective dialogue with neighborhood committees. This approach defended the interests of informal residents who occupied the area, in collaboration with local and national administrations, as well as large and small companies that built infrastructure and community facilities. The residents' priorities were partially considered in the choice of community facilities and infrastructure through negotiations between the planning agency and neighborhood committees.

4) *A transactional perspective*: In Nuevo de Julio, Argentina, the CODEV team (EPFL's Center for Cooperation and Development[9]) collaborated with the city council and the college of architects of the Province of Buenos Aires. Together they identified and developed the necessary training for professionals working in both urban administration and the private sector. The goal of this training was to prepare them for upcoming changes and new methods.

5) *Change-oriented objectives*: As an urban researcher, professor, and director of the CODEV at EPFL, I have based my entire body of scientific work on the observation that southern cities are characterized by territorial fragmentation and

[9]https://archiveweb.epfl.ch/cooperation.epfl.ch.

ever-increasing social disparities. These segregated dynamics require research and action to integrate the poor into more harmonious urban planning that combats social disparities and respects the environment.

6) *Sustainable urban development*: The concept of sustainable development applied to cities is a major challenge because all urban governance should aim to safeguard futures for generations to come. To accomplish this, urban governance must reconcile responsible economic growth with a healthy environment and social equity for all city dwellers. While these notions are easy in theory, they are difficult to apply at level of intervention.

7) *A pragmatic, applicable methodology for international cooperation*: All my work has been applied within the framework of international scientific and non-academic partnerships involving all urban stakeholders, including residents. The methodology used to achieve these objectives has considered the available resources—human, material and financial—as well as the constraints specific to each context. Understanding the framework conditions for each project ensures that the results obtained will advance knowledge and promote changes that benefit all city dwellers, including the most disadvantaged.

Since its creation in 2007 at the EPFL, the UNESCO "Technologies for the Development" Chair[10], has successfully promoted research and learning centered on sustainable development, international cooperation, participatory approaches, and adapted technologies (Hostettler et al., 2015).

This interactive, participatory vision of development requires innovative technologies for complex environmental, technical and humanistic contexts. It also requires an economy of means, given the often limited financial and human resources.

Without fieldwork, the human dimension, along with its obstacles and opportunities, would be overlooked. The solutions proposed are often the result of technical and intellectual cogitation in laboratories and offices. Although these solutions are developed using cutting-edge technologies, they are often implemented at the expense of the poorest people and the most disadvantaged neighborhoods, thus accentuating urban inequalities instead of alleviating them.

Urban innovation cannot be reduced to technology alone. It requires a sociological and economic understanding of the issues at stake, using approaches and methods that integrate the participation of all stakeholders—with residents at the forefront—to ensure sustainable urban development that benefits everyone.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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