We are witnessing a unique momentum in urban research, maybe as important as the one that gave birth to the Chicago School in sociology. Indeed, studies on societal and urban transformations (e.g. aging population, metropolization, globalization, global warming, new information and communication technologies, social diversity) are proliferating, accompanied by major theoretical and methodological developments (e.g. complexity theory, systems theory, geographical information systems). This being said, if there is an abundant and rich scientific literature endorsing the complexity of urban phenomena, findings have only modestly permeated urban and architectural teaching and practice. I suggest that this is due to the persistent gap between scientific, professional and artistic knowledge and to the rigidity of established disciplinary academic traditions (see Després, Vachon & Fortin, 2011, for the development of this argument). This chapter illustrates how the approach to research and action developed by GIRBa—Interdisciplinary Research Group on Suburbs— at Laval University in Quebec constitutes an avenue for minimizing these disjunctions. The group’s ultimate goal is to stimulate and improve collaboration between scientists, professionals and policy decision-makers, as well as train urban planners, architects and social scientists to work together and become “agents of change.”

I want to acknowledge the role of my colleagues at GIRBa but also of all the past and current fellows and students in nourishing the reflection presented here.

Groupe interdisciplinaire de recherche sur les banlieues, in French.
The first part of this chapter traces the genealogy of GIRBa, starting with my multidisciplinary doctoral training at the University of Wisconsin-Milwaukee, and explains its current mission. The second part exposes the group’s transdisciplinary approach to research and action, and presents the work produced these last ten years; the process rather than results is discussed. The third part highlights the strengths and limitations of GIRBa’s approach, critically evaluating the group’s production. The Conclusions points out the challenges facing Environment-Behavior researchers, namely to keep the understanding of environment-behavior studies an essential and valued training for architects and planners, but also to contribute to changing the educational culture of these goal-oriented professions.

The Making of GIRBa

Multi-, Inter- and Transdisciplinary Research: A Short Story of an Academic Career

My doctoral dissertation dealt with shared housing, investigating the architectural properties of shared dwellings as well as their uses and meanings (e.g. Després, 1991a & b, 1993, 1994). The adopted perspective was multidisciplinary and came as a natural outcome of being trained by professors with respective research training in social ecology, environmental psychology and cultural anthropology. By multidisciplinary, I mean the combination of various disciplinary perspectives to understanding shared housing in its architectural, psychological and societal dimensions through analyses of shared dwellings’ architectural morphology and space syntax, of the psychosociological meanings and daily experiences associated with shared housing, as well as of its associated societal dimensions. The aim was “the juxtaposition of theoretical models belonging to different disciplines” to better of understanding the phenomena (Ramadier, 2004, 433). While stimulating, working alone within this multidisciplinary framework was a heavy intellectual responsibility, and gathering and analyzing data a time-consuming and solitary labor, as no formally established research groups on housing research were in place at UWM’s School of Architecture and Planning at the time (Figure 1).

Starting my teaching career at Laval University in 1989, my first research project focused on terrace housing - also called triplex housing - built in early 20th century streetcar suburbs. While keeping the study focus on the form, uses and meanings of housing, I enlarged its scope to include the scale of the neighborhood. Teaming
with Pierre Larochelle, a colleague trained in urban and architectural morphology (Figure 2), I was responsible for the interviews with the residents. Although we defined the research problem together, we mostly work independently at data gathering and analyses, using disciplinary concepts and methods. Later on, we met to interpret cultural changes and permanencies across three generations of residents. This was my first acquaintance with the challenges of operationalizing an interdisciplinary collaboration, as an attempt to construct a posteriori shared model based on a dialogue between our respective disciplinary researchers’ backgrounds (Ramadier, 2004). The results gave way to scholarly publications (e.g. Després & Larochelle, 1996)\(^3\) and were taught to several cohorts of students in housing class and studios.

My next research project focused on Quebec City’s postwar suburbs built between 1950 and 1975. The study was triggered by the interest of one suburban municipality for developing intergenerational housing for its aging population. To tackle the issues of sprawl and aging, I teamed with Andrée Fortin, a sociologist at Laval University. Thierry Ramadier, a post-doctorate fellow in environmental psychology from Paris, also joined us as well as Geneviève Vachon, a colleague in urban design at Laval University who oversaw the morphological analyses. The intent was to understand how people’s residential biography and car use influenced the meanings and daily experiences of housing and neighborhood, but also shape their territorial identity and representations, with a special focus on elderly residents. This time we worked in close collaboration from the start and set the basis of a true interdisciplinary approach, which lies “in the practice of transfers, either of models or of tools” from one discipline to others, and where the “participatory disciplines must submit to shared rules and principles” (Ramadier, 2004, 433). We defined an integrated research protocol (Figure 3), with our key challenges being to share a common vocabulary, data gathering techniques and interpretative concepts.\(^4\) In parallel, the research was used for the definition of design problems for undergraduate and advanced housing and urban design studios (e.g. accessory apartments, ecological street prototypes, elderly care and services centers, rental infill housing). We also conducted sponsored research for housing government agencies and suburban municipalities on related issues (e.g. accessory apartments design guidelines, proposal for regulatory revisions). The resulting architectural, urban and regulatory revision proposals were discussed in

\(^3\) The references to publications throughout the chapter have been limited to those in English although more are available are in French; a complete listing is available upon request.

\(^4\) Several scholarly publications (e.g. Després & Lord, 2005; Vachon, Luka & Lacroix, 2004,) and Master’s theses (e.g. see Luka, 2001) came out of this research.
Figure 1: A Multidisciplinary Research: The form, experience and meaning of home in shared housing, C. Després, 1991, Doctoral dissertation, University of Wisconsin-Milwaukee.

Figure 2: Initiating Interdisciplinary Research: The form, uses and meanings of terrace housing in Limoilou, Québec. C. Després & P. Larochelle, 1992-1996, Université Laval.

Figure 3: Consolidating Interdisciplinarity Research: Suburbia revisited. A. Fortin, C. Després & G. Vachon, 1998-2001. Université Laval.
publications dedicated to concerned professional audiences (e.g., Vachon, Després, Moretti & Vaillant, 2006).

In 2001, my colleagues Fortin, Vachon and I were awarded a grant from Quebec’s main research funding agency to structure our work into a program of research and action, with a strong emphasis on knowledge transfer toward decision makers. Since not much had been published on aging suburbs at the time, neither in Canada nor in the U.S., our first move was to write the book *La banlieue revisitée* (2002), presenting the findings of our empirical, design and sponsored applied research that we purposively addressed to a wide audience. Quebec City’s amalgamation with its surrounding postwar suburban municipalities in 2002 offered us a unique opportunity to test the relevance and usefulness of this knowledge. We convinced decision makers from key government agencies to join a collaborative planning exercise on the future of Quebec City’s postwar suburbs. Two university professors joined GIRBa during the process – GianPiero Moretti, architect and urban designer, Florent Joerin, engineer and head of Canada’s Research Chair in territorial decision-making support – along with Nicole Brais, a post-doctorate candidate specializing in urban geography and participatory processes. The team was being enriched with new disciplinary training and experiences.

During and after the two years that it took to complete this planning exercise, researchers, civil servants from several ministries, and stakeholders from various local and regional associations asked us to explain our approach for conducting collaborative research. With this opportunity for introspection, we gathered all GIRBa’s senior and junior researchers and started dissecting our own work: we read the writings of several inspiring thinkers in which we recognized our approach, namely German and French philosophers and sociologists Jürgen Habermas and Edgar Morin, U.S. philosopher Donald Schōn, U.K. and U.S. planners Patsy Healy and John Forester, and French, U.S. and Italian architects Daniel Pinson, Bryan Lawson and Bernardo Secchi (Figure 4). We also evaluated the concrete results of our applied and participatory research but also its limitations. This reflective work allowed us to better understand how we operated. This is when the concept of *transdisciplinarity* was consciously introduced as part of what now characterizes our program of research and action (see Després, Brais, Avellan 2004). It is then that the name GIRBa - Interdisciplinary Research group on Suburbs - was formally adopted.

5 *Suburbia revisited*, in English; see Fortin, Després & Vachon (2002).
How is Transdisciplinarity Different?

The words multidisciplinary and interdisciplinary have been used consistently for scientific research involving a number of disciplines, working in a more or less integrated manner (Bruce, Lyall, Tait & Williams, 2004). In contrast, the word transdisciplinary implies that research is not confined to the scientific domain; it has been used since the 1970s in debates surrounding teaching and professional practice. The Latin prefix “trans” denotes transgressing the boundaries defined by traditional disciplinary modes of enquiry. Working with collaborators endorsing the concept of transdisciplinarity in their research, architect Roderick Lawrence and I identified the following recurrent associated characteristics with this mode of knowledge production (Lawrence & Després 2004).

1. It tackles complexity in science and challenges knowledge fragmentation, dealing with research problems and organizations that are defined from complex and heterogeneous domains.
2. It is characterized by its hybrid nature, non-linearity and reflexivity.
3. It accepts local contexts and uncertainty; it is a context-specific negotiation of knowledge.
4. It includes the practical reasoning of individuals with the constraining and affording nature of social, organizational and material contexts.
5. It requires close and continuous collaboration between actors during all phases of a research project, allowing for “mediation space and time”
through interpersonal communication.

6. It is often oriented toward action, making linkages not only across disciplinary boundaries but also between theoretical development and practice.

7. It frequently deals with real-world topics, generating knowledge that not only addresses societal problems but also contributes to their solutions.

8. It generally aims at bridging the gap between knowledge derived from research and decision-making processes in society.

GIRBa’s Transdisciplinary Research and Action Program

GIRBa and its Mission

GIRBa now comprises ten professors, five acting as co-directors and five other as associate researchers. They are trained in anthropology, architecture, geomatics, planning, rural engineering and sociology. It also annually welcomes between 15 and 25 graduates students: post-doctorate interns, doctoral and master’s students conducting research in architecture, urban design and planning, but also several human and social sciences disciplines. In addition, about 30 to 40 designers work in close association with GIRBa through advanced studios and final theses, annually taught or directed by three of GIRBa’s co-directors.

GIRBa’s research territory is centered on the metropolitan area of Quebec, the capital of the only French-speaking province in Canada. Although most tourists only know of Quebec City’s picturesque historical center, its sprawled reality is quite different with just over half a million people spread on 500 km$^2$. Suburban developments are continuing to sprawl, with housing, commercial activities and jobs moving away from the city center to the countryside. With owning a single-family detached house in a low-density development remaining the dominant housing aspiration of most Quebecers, young families and retired people, developers are urging the expansion of the urbanization boundaries and the deregulation of protected agricultural land, forests and lakeshores. Understanding urban sprawl is thus the first fundamental dimension of GIRBa’s mission.

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6 Manon Boulianne, professor of anthropology, Tania Martin, professor of architecture and Stéphane Roche, professor of geomatics, all three from Laval University, as well as Nik Luka, professor of urban design and planning at McGill University, and Pierre Gauthier, professor of planning at Concordia University, all joined GIRBa as co-researchers in May 2010.
Quebec City is also one of the fastest aging cities in Canada; fertility and immigration rates will not be sufficient to assure the replacement of older generations. If new households will continue to be formed in the next ten years, it will likely stagnate after that and Quebec could become after 2030 a “shrinking city,” like other cities in Japan, Germany or Italy, but also many in the U.S., especially in the older Midwestern and Eastern cities - hence recent planning efforts of “rightsizing” or “downsizing.” Already, several first-ring suburbs, those built massively after WWII, have lost up to ten percent of their population and over half of their houses are occupied by people living alone or by childfree couples. Built between 1950 and 1975, their urban and architectural infrastructures need upgrading, namely streets, public equipment and rental housing. Understanding aging suburbs constitutes the second essential dimension of GIRBa’ mission.

What are the long-term ecological, economic and social impacts on older suburbs of territorial expansion? Should not the city administration be taking advantage of the limited forthcoming population growth for rejuvenating them to make them more attractive to new households in search of a green paradise, as well as more comfortable for elderly who wants to age in place? How should it be done? Can researchers raise the awareness of decision-makers and citizens on these issues? Informing and promoting the regeneration of aging suburbs over urban sprawl constitutes the third fundamental dimension of GIRBa’s mission.

The Program of Research and Action

To tackle this mission, GIRBa endorses the concept of transdisciplinarity and went from conducting, in an loosely connected manner, interdisciplinary academic research, architectural and urban studios, and sponsored applied research to their integration into a process favoring an iterative cycle between empirical research, evidence-based design and practiced-based research. Figure 5 illustrates the components of GIRBa’s transdisciplinary program of research and action and their functioning. The next sections illustrate some of GIRBa’s work under the labels of scientific research, design research and action research. The studies are either disciplinary, interdisciplinary or transdisciplinary depending of their objectives. They are published in referred journals and are at the heart of several doctoral and scientific Master’s theses.
Scientific Research

GIRBa’s scientific research investigates the urban and architectural morphology of Quebec City’s close and remote suburbs, their uses and meanings for respondents, their associated individual and societal representations, as well as their demographic outlook and evolution.

Researchers trained in morphology, mostly architects and planners, are responsible for analyzing the physical characteristics of Quebec City’s urbanized territory and landscape. Urban analyses are carried out using historical maps and aerial photographs, satellite maps and videos, along with typo-morphological analyses of dominant suburban housing (e.g. Vachon, Luka & Lacroix, 2004). Students trained in Environment-Behavior studies investigate the meanings and uses of suburbia. They come from architecture, urban planning, sociology and political science. With their help, GIRBa conducted two large qualitative surveys, one in 1999 on postwar suburbs with a longitudinal follow-up of elderly in 2006, and one in 2005 on exurbia, with a complementary survey of teenagers. Residents’ territorial mobility was spatialized with the help of geomatic software and analyzed with statistical programs developed by geographers (e.g. Bachiri, Desprès & Vachon, 2008). Respondents’ discourse about their house and car but also their personal residential biographies were examined using a qualitative analysis software. Research methods used for generating this last set of data are mostly borrowed from environmental psychology (e.g. Desprès & Lord, 2005; Lord, Desprès & Ramadier, 2010). Regarding the study of the societal forces that contributed in shaping suburban representations, we conducted several longitudinal
content analyses of housing advertisements, of paintings, etchings and postcards of Quebec, of reports and plans produced by planners, as well as Quebec’s movie production. In addition, content analyses of urban regulations controlling physical transformations were realized to evaluate their capacity to accommodate emerging needs. Finally, GIRBa is monitoring the aging phenomenon of postwar suburbs by conducting longitudinal analyses of Census data; sociologists in the team are mainly conducting these analyses.

**Design Research**

If understanding the parallel and paradoxical phenomena of urban sprawl and aging suburbs is one challenge, identifying sustainable and socially acceptable avenues for their control is another one. This is when designers augment the scientific work at GIRBa. Design is now recognized as a legitimate mode of inquiry that requires specific skills, knowledge and intuition to translate multidimensional problems into solutions (Lawson, 1997, 2001; Schön, 1991). At GIRBa, design problems are defined on the basis of empirical findings, making connections between different types of knowledge, which are also used to focus and refine design hypotheses. So far, original design proposals have been produced for the densification of postwar suburbs (infill rental housing, accessory apartment, recycling of neighborhood shopping malls), public and active transportation in low-density neighborhoods, and sustainable exurban developments (e.g. Vachon, Després, Moretti & Vaillant, 2006). Close and constant collaboration between researchers and designers is facilitated by GIRBa co-directors’ involvement in teaching design studios and in supervising students’ final theses, regular meetings of in-progress design proposals and on-going research projects, as well as diversified design and research profiles of its members.

**Action Research**

Action Research constitutes the keystone of GIRBa’s transdisciplinary approach. It mostly consists of participatory processes - consensus planning and participatory urban design initiatives - but also of decision-making support. These activities are conducted in close collaboration with decision makers from municipalities, government housing and planning agencies, as well as stakeholders from local associations and community groups. All of GIRBa’s students and researchers are involved in these processes. Since 2002, GIRBa orchestrated two major participatory planning processes. The first one, which consisted of an 18-month reflection on the future of postwar suburbs, involved
the participation of over 100 decision makers and civil servants from various regional and municipal governments, as well as key actors from associations and the community (Després, Brais & Avellan 2004). The second one, the Projet PACTE Myrand, aimed at designing a master plan for a new neighborhood on the Laval University campus. It involved about 120 stakeholders: student associations and professors, neighboring local merchants and citizens, architects and developers, university administrators, city planning representatives (Vachon, Després, Nembrini, Joerin, Fortin & Moretti, 2007). A third one is in the incubator for 2012-2013 on the theme “Quebec 2020: Toward a collective and sustainable project for the metropolitan area.”

Collaborative processes are divided in three phases: first, the diagnosis; second, the vision and orientations; and third, the project and its means for implementation. To feed the diagnosis, we plan specific participatory activities to disseminate scientific knowledge, share the instrumental knowledge of civil servants, administrators and developers, and learn about citizens’ tacit knowledge. These consist of mini-colloquia with concerned ministry stakeholders, workshops with borough administrations and district associations, and focus groups with citizen associations (e.g. immigrants, teenagers, seniors, single-mothers). After the diagnosis, the next and more difficult step consists of defining a shared vision and common objectives with all stakeholders. For this purpose, GIRBa designed specific activities to “activate the imaginary” such as innovation workshops. In addition, we conduct Internet consultations to the population to validate both diagnoses and orientations. The last phase consists of elaborating the strategic plan, along with clear indications as how to implement it. This is achieved through a two-day intensive participatory design charrette and a consensus workshop, where ways to implement the vision and reach the objectives are explored through design solutions and later endorsed in a consensual manner, along with means for action. Throughout the whole process, the larger community is kept informed by a website (for more detailed discussions, see Després, Brais & Avellan, 2004; Vachon et al., 2007).

As mentioned in the introduction of this section and illustrated in Figure 5, GIRBa’s transdisciplinary program of research and action is formally organized around the three interconnected types of research discussed above: (1) fundamental or scientific research on suburban morphology, uses and representations; (2) design research mostly conducted in advanced urban design studios; and (3) collaborative planning projects with municipalities, government housing and planning agencies, as well as with the population.
Looking Back: Outcomes and Limitations

Ten years later, what have we learned? In what ways has GIRBa’s transdisciplinary program of research and action made a difference? What kind of impact did it have on slowing urban sprawl and fostering the retrofitting of postwar suburbs?

Learning from Transdisciplinarity

Endorsing transdisciplinarity taught us a lot, not only about bringing together scientific, design and action research but also how to conduct research differently. First, we learned that scientific research is not performed in the same way when conducted in close and constant collaboration between researchers from different disciplines. Second, that by accepting intuition and uncertainty, design research produces original knowledge that helps understand complex problems. Third, that action research also produces knowledge and that its strength is to recognize practical reasoning, material and organizational constraints, as well as value public debate. Together, transdisciplinarity allowed GIRBa to reduce the gap not only between researchers in architecture, planning and social sciences but also between academics and practitioners, blurring boundaries between scientific knowledge, aesthetic knowledge and tacit knowledge.

Our experience also convinced us of the need to bring together representatives of four different types of knowledge and their associated ways of reasoning\(^7\) to identify, develop and implement sound solutions about complex urban problems. First, carriers\(^8\) of scientific knowledge or what is generally held as “true” and most often the result of empirical research; researchers and consultants are key spokespersons. Second, carriers of technical or instrumental knowledge or the knowledge of “what is possible,” or of how to go about things; experienced professionals, technicians or workers are the main channels. Third, carriers of ethical knowledge or “what is good” as linked to customs, beliefs, values and past experiences which help determine what is wrong or right; citizens and elected officials are prime sources. Finally, carriers of aesthetic knowledge or “what is beautiful” in relationship to aesthetic judgment and experience, as well as to tastes, preferences and feelings; artists, designers and citizens are key spokespersons. By bringing together stakeholders carrying these four types of knowledge along with their own ways of reasoning and giving them the opportunity for

\(^{7}\) According to Habermas’ (1984) concept of “communicative rationality,” which consists of intuitively mastered rules for reaching an understanding and conducting argumentation.
\(^{8}\) Defined as people who possess accumulated knowledge of this type.
face-to-face communication, reflective thinking can occur and consensual solutions can emerge, giving way to a fifth type of knowledge – **communicative knowledge** – which is more than the sum of the four others since incoherence of thought and arguments are revealed and hopefully collectively overcome through communicative action (Després, Brais & Avellan, 2004; Habermas, 1984).

### Assuring the Diffusion and Transfer of Knowledge

Another positive outcome of our work is disseminating a considerable amount of knowledge on issues of aging suburbs, urban sprawl and sustainability. At the time we conducted our first survey of suburban residents, not much had been written about aging postwar suburbs, neither in Canada nor in the U.S.; in fact, there were negative stereotypes circulating in various architectural and planning debates, and suburbs were being left out of governmental strategic planning documents. We believe our work made a difference, at least locally, in raising awareness. Aging suburbs are now considered a valuable asset for governments and urban sprawl is on the agenda of Quebec City’s administration. Beyond scientific publications, we made sure the knowledge we produced was accessible, intellectually speaking. Our book *Suburbia Revisited*, purposively written for a wide audience, is still being used by civil servants and by professors in urban studies. We also published synthesis articles in professional and governmental newsletters and a series of editorials in Quebec’s main newspaper. Numerous interviews given to journalists also contributed to raising awareness. A measure of this is when GIRBa received an accomplishment award in 2004 from Quebec’s Order of Architects for its contribution to making suburban culture better understood by the profession.

### Influencing Planning Orientations

A third outcome of GIRBa’s work is the impact it had on planning orientations. All documents produced during our first collaborative planning process were made available to contributing stakeholders and widely circulated. In 2005, two years after completing the process, GIRBa posted an Internet survey on its website and invited all participants to evaluate its outcome. Beyond a very positive perception of the collaboration process, several key actors indicated that the general orientations, objectives and design criteria had made their way into their government agency,

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9 Our second book *La banlieue s’étale*, in French (*The sprawling of suburbs*) was just published (Fortin, Després & Vachon 2011); we hope to have the same impact.
something that we were able to verify in their official documents and websites (for more details about the evaluation, see Després, Fortin, Joerin, Vachon, Moretti & Gatti, 2008).

**Empowering Stakeholders**

An additional impact of our work has to do with empowerment, not just of stakeholders but also of all of GIRBa members. The collaborative processes empowered all participants in terms of their knowledge of the stakes and challenges facing aging suburbs with regard to urban sprawl and sustainability, and of their collaborative working experience and resulting multidisciplinary networking. This outcome was one of the most highly rated by participants in our Internet evaluative survey (see Després et al., 2008). By being trained differently, students at GIRBa also gained professional power in terms of their knowledge and experience of transdisciplinary research and collaborative processes, as well as development of professional networks. As designers and researchers with different disciplinary backgrounds, they learned to work together around complex urban problems. Designers learned to value and use scientific knowledge to orient design solutions; researchers, the need for scientific knowledge to be translated in usable forms for designers but also decision-makers They are also able to coordinate collaborative processes, which is considered by employers as a net professional capital gain. Finally, the reputation of GIRBa, as a group with broad expertise (and not as individuals), gained respect from government agencies, architects and planners, the press and even, the population.

**Innovating with Pedagogy**

Another outcome of ten years of research and action consists of the pedagogical innovations we were able to implement within the rigidity of the academic system as well as of the discipline-related program requirements. First, associating studio teaching with research training allowed to narrow the gap between action-oriented activities and scientific ones. Our experience convinced us that designers and scientists hold complementary sets of competencies and that by working together, they are more efficient at identifying creative solutions to complex urban problems (see Després, Vachon & Fortin, 2011). Second, by having all of GIRBa’s members involved in at least one collaborative planning activity during their stay in the group, we train design professionals and researchers to act as agents of societal change in their capacity to organize such processes. Finally, over the years, GIRBa has become a real incubator
for implementing transdisciplinarity, operationalizing this concept which too often remains a theoretical one. Our group now acts as a training centre for future scientists, architects and planners to appropriate and experience this specific multidimensional mode of knowledge production.

**Implementing Change**

If developing and diffusing knowledge and sound solutions for the regeneration of aging suburbs over urban sprawl is within GIRBa’s reach, getting urban and housing policies changed and demonstration projects built has not yet happened: it stands in the hands of elected officials. Although we are regularly asked to present GIRBa’s empirical findings and prospective solutions, we have indeed limited power to influence political agendas. Hence, we do not see change implemented as fast as we would like, although the relevance of our findings and of several proposals is acknowledged and valued by many civil servants in various ministries and municipalities. In recent years, we have been working at gaining political power by answering invitations to sit on planning and design commissions and work tasks whose mandates are related to GIRBa’s mission. Although being invited reflects to a certain extent the respect for GIRBa’s expertise among government agencies, these experiences, although mostly instructive, are disappointing in many respects, namely with regards to the absence in these structures for building communicative knowledge among members. This being said, by pursuing its mission, GIRBa has a definite capacity to empower future generations of architects, planners and social scientists with an understanding of the complexity of urban problems and a concrete experience of how to work in a collaborative manner as professionals, taking advantage of their respective skills and knowledge. Several of our graduates are now working in government agencies or private firms and there we can feel a wind of change.

**Conclusions**

If the story of my research trajectory, from including first multi-, then inter- and finally transdisciplinarity, looks like a long quiet river, the reality is anything but. The most common tasks at the beginning of my career were writing grant proposals, communications and papers, directing graduate students and conciliating research with common heavy architectural teaching loads. But several other tasks were
added through the years namely negotiating contracts with government agencies, developing community partnerships, keeping in touch with the local population through regular appearances in the media, recruiting researchers in needed disciplines, directing coordination meetings, conducting participatory processes and managing its logistical aspects, and so on. Overall, these translate into long working hours and unavoidable multitasking, with a need for coordination and vulgarization skills, as well as a certain audacity. This being said, I believe the doctoral training in Environment-Behavior Studies I received at University of Wisconsin-Milwaukee provided me with the appropriate skills and knowledge to gradually bridge the gap between research and practice. First, the varied disciplinary backgrounds of faculty members acquainted me early in my career with various competing explanatory perspectives. Second, the Program’s requirement for a minor area of concentration gave me the opportunity to explore social theories and concepts at UWM Center for 21st Century Studies (Center for Twentieth Century Studies at the time), with a clear focus on societal issues at the intersection of the humanities, arts and sciences (a characteristic of transdisciplinarity). Last but not least, the program was part of a school of architecture and planning, these two action-oriented disciplines in training future professionals for tackling multidimensional problems.

If twenty years ago, I had not heard of transdisciplinarity, I am deeply convinced that it should be taught as an approach to training architects and planners, as well as Environment-Behavior researchers. Urban planning and architecture are indeed two disciplines capable of a constructive dialogue with other domains of knowledge, including the natural and social/human sciences, due to their multidisciplinary position and action-oriented identity aimed at transforming the built and natural environment. It is time for these disciplines to embrace the complexity paradigm with regards to multiple contemporary urban configurations, uses, and representations. By neglecting complexity, new problems have a propensity to be tackled using familiar concepts, with good chances of leading to poorly adapted solutions. What GIRBa has learned from a decade of research, through interdisciplinary collaborations, action-oriented research, creative thinking and good common sense, the next generations could learn in a more effective way. Environment-Behavior Studies constitute fertile grounds for transdisciplinarity to bloom. It is our responsibilities, as carriers of this research tradition, to stimulate its development.
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