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LABORATORIZING THE CITY
Design and the Promise of Practice-Based Research

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The social sciences need to re-imagine themselves, their methods, and indeed, their ‘worlds’ if they are to work productively in the twenty-first century.

John Law and John Urry

Introduction

Cities have long served as sites of experimentation for scholarly research. One of the most celebrated examples is the Chicago School of Sociology of the 1910s and 1920s where Robert Park, Ernest Burgess, and their colleagues developed a unique academic program based on ethnographic fieldwork and theory building, using the city of Chicago as their proving ground. Today, activities of ‘laboratorizing the city’ continue through the rediscovery of old research practices as well as the invention of new ones in an attempt to unpack and interrogate the complexity and heterogeneity of the urban condition.

One emerging practice of laboratorizing the city involves the application of Actor-Network Theory (ANT) to urban research. ANT was first developed in the 1980s to trace the development of scientific facts by natural scientists in their laboratories. In subsequent decades, the approach has been applied in many different disciplines and contexts, disrupting conventional notions of human agency, questioning the supposed split between facts and values, forwarding the importance

1 Law and Urry 2004, p. 390
2 For a recent introduction to ANT, see Latour 2005.
of non-humans and materiality to the social sciences, and so on. Such a perspective opens up urban research to new ways of knowing by moving away from the containerized view of cities as hubs of human consumption, capitals of economic development, and dense conglomerations of human culture to instead focus on the messy, tenuous relations between humans and nonhumans, facts and values, subjects and objects, and so on. While creating new ways of thinking about cities, ANT has also raised questions about how researchers act upon cities. It is this tension between theory and methodology, between thinking and acting, between knowing and doing, this is the catalyst for this paper.

To begin, I describe some of the ontological and epistemological implications of conducting urban research through an ANT lens by drawing on the work of human and urban geographers who have interpreted this perspective as a relational theory of space and place. I then note the dissonance between existing research methodologies and a relational perspective, and propose practice-based research approaches from the design disciplines as a suitable alternative. I illustrate the practice-based research approach with a brief description of a case study in Philadelphia that combines pedagogy, community engagement, and design practice. In conclusion, I argue that practice-based research informed by interdisciplinary collaboration between the social sciences and the design disciplines offers a bridge between our thinking on cities and how we act upon them through our research activities. Such an approach acknowledges the ethical implications of laboratorizing the city while also offering opportunities for researchers to participate in the realization of different (and hopefully improved) urban futures.
The City as Relational Achievement

ANT has been applied to the study of cities through a wide variety of disciplines including sociology, anthropology, political science, economics, urban planning, and architecture. However, perhaps the most vibrant dialogue on ANT and urban research has occurred in geography, where the theory has been integrated into a larger dialogue on non-representational, non-foundational, and non-essentialist perspectives of space and place. ANT can be useful in capturing the vibrancy, the realness, and the mess of the contemporary city by tracing the imbroglios of humans, nature, and technology.

One of the most important implications of ANT to urban research is its radical ontological stance. Here, the division between the natural sciences and social sciences can be interpreted as one of competing epistemological outlooks with natural scientists understanding reality to be shaped by natural laws forward the human construction of the world. ANT theorists such as Bruno Latour disrupt this realist-constructivist debate by arguing that both camps rely on a shared but flawed ontological continuum. Latour points to the pervasive dichotomies of human/nonhuman, society/nature, value/fact, subject/object, and so forth, with natural and social scientists residing at either end of this ontological continuum. In contrast, ANT scholars reject this common ontological stance, arguing that these dichotomies present us with impoverished accounts of the world. By rejecting these

3 For example, see Farias and Bender 2009.
4 For various examples of this work, see Whatmore 2002, Murdoch 2006, and Thrift 2007.
dichotomies, Latour argues that “relativism would disappear with absolutism. There would remain relationalism, the common world to be built.”6

The ontology of ANT recognizes the world as being rife with messy and unruly hybrids. Jonathan Murdoch writes that this causes us to “shift our gaze away from the pure forms (that is, the stabilized categories of ‘actor’, structure’, ‘local’ and ‘global’) to the associations which give rise to the purified outcomes (that is, the processes of category making).”7 He considers ANT to be an ecological theory, not in the natural science sense, but in its emphasis on connections and relations.8 Difference continues to exist in the world but it takes a backseat to commonalities, overlaps, and shared attributes. Thus, ANT is a project intended to transcend the realist/relativist debate of natural and social scientists and instead, embark on a project of assembling a hybrid world.9

The rejection of dualisms involves a deconstruction of our most basic and dearly held ontological assumptions and a subsequent construction of new frameworks that rely on relations as the fundamental building blocks of the world.10

This emphasis on relations in geography is not surprising, given the history of the

6 Latour 2004, p. 220. Latour often writes about ‘building’ and ‘construction’ processes and is frequently labeled as either a social constructivist or a deconstructivist, although he distances himself from both camps. See Latour 2003, Karvonen and Guy [forthcoming].
7 Murdoch 1997b, p. 334
8 Murdoch 2001
9 See Latour 2003, 2005
10 Murdoch 2006. ANT is not the first or only relational theory. For various perspectives on relational thinking, see Harvey 1996a, Graham and Healey 1999, Murdoch 2006. The relational implications of ANT would seem to mesh with the urban research approach of the Chicago School of Sociology mentioned at the beginning of this paper. However, the nonhuman aspects of cities were of little interest in the Chicago School; they merely adopted ecological science metaphors to study humans. See Wolch et al. 2001, Braun 2005.
discipline and its struggles with the human-physical divide. However, it has raised significant questions about the study of space and place. As Murdoch writes,

Spanning the divides, overcoming dualisms will not simply be a matter of adding terms such as ‘hybrid’ or ‘cyborg’ into our existing modes of thought but will require a much more thorough reexamination of our theories and methodologies for there is an ever-present danger that the dualisms will prise apart the connections and associations we manage to stitch together.

Applying this relational notion to cities, it is apparent that we can no longer divvy up the various components of the city to the various disciplines for independent analysis. Where the study of infrastructure networks could once be assigned to engineers, policymaking activities to political scientists, cultural issues and norms to sociologists and anthropologists, and so on, there is now a need to embrace the unavoidable messiness of the city to understand its vibrancy and realness. The city is a relational achievement and the task of the urban researcher is to trace these relations. But how do you interpret this messiness? How do you simultaneously address the human and the nonhuman? In other words, how can research methodologies reflect the relational ontology of ANT?

**New Perspectives of the Relational Researcher**

John Law notes that contemporary research methods are “based on the assumption that the world is properly understood as a set of fairly specific, determinate, and

11 Castree 2003
12 Murdoch 1997a, p. 732
more or less identifiable processes.” The challenge for the relational scholar is to
develop and apply rigorous practices and procedures that can re-entangle categories
of social, natural, and technical to create more complex and challenging scientific
practices, but also ones that are arguably more useful. The overarching aim is to
embrace the hybridity of the world rather than attempt to simplify it.

John Law has taken a special interest in the spatial implications of ANT and
sees it as a method for waging war on Euclideanism. The conventional view of
space is a topographic one of superficial coherence that conveniently disguises the
relations of the world beneath smooth and uncontested surfaces. Heterogeneous
material flows and divergent perspectives are collapsed into a single, homogenous
surface that David Harvey describes as a “power-laden act of domination.” Instead
of interpreting space as a well-ordered network with absolute and fixed coordinates,
a relational perspective emphasis topologic space. Here, space is no longer an empty
container waiting to be filled by social or natural activities but rather an active
presence held together by stable links or relations. As Murdoch writes, “Space,
although partly physical, is therefore wholly relational.”

With respect to urban studies, a relational ontology serves as a direct
challenge to modern conceptions of cities as bounded containers. Stephen Graham
and Patsy Healey argue that this containerized perspective dominates urban

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13 Law 2004, p. 5
14 This reflects a growing call from academic scholars who have proposed a new contract
between science and society, notably the advocates of Mode 2 science as well as Latour.
15 Law 1999
16 Harvey 1996b, p. 284
17 Law 1999, Murdoch 2006
18 Murdoch 1998, p. 361
research. They write, “The city is thus depicted as a ‘jigsaw’ of adjacent, contiguous land use parcels, tied together with infrastructure networks and laid out within a bounded, Euclidean, gridded plane.”\textsuperscript{19} In contrast, the relational perspective is decidedly non-Euclidean in an attempt to turn the focus of the urban researcher away from the well-ordered, categorized aspects of cities and towards the messy, unknown, and indeterminate interactions that occur between nature, technology, and humans.\textsuperscript{20} Cities here are interpreted as particular configurations of humans and nonhumans, and the goal of the relational researcher is to understand how these configurations succeed or fail, and how they change temporally and spatially.

The ontological perspective of ANT also has epistemological implications for research. Adopting a relational perspective means that it is not possible for the researchers to extract themselves from their field of study (in this case, the city). The typical stance of the scientist as an objective observer is replaced with a situated, grounded approach where the researcher is indelibly mixed up in the research topic.\textsuperscript{21} In other words, there is no objective ‘God’s eye view’ from which the urban researcher can gaze upon the research subject from afar. This suggests that epistemology and ontology are inextricably intertwined; how knowledge is created is intimately linked to our perspective of the world.

The embrace of a situated perspective in place of objectivity and subjectivity has important spatial implications for urban research. It encourages the researcher to focus his or her gaze on local investigations and interrogate the world at ground

\textsuperscript{19} Graham and Healey 1999, p. 626
\textsuperscript{20} On non-Euclidean perspectives and the embrace of mess in the social sciences, see Law 1999, 2004.
\textsuperscript{21} On the notion of situated knowledge, see Haraway 1988 and 1991.
level. Murdoch makes an explicit case for the grounded nature of ANT research when he states, “Actor-network theorists thus reject the view that social life is arranged into levels or tiers (some of which determine what goes on in others); everything is kept at ‘ground level’.” This means that macro characterizations of the city as an economic engine, a massive hub of human activity, or a complex cultural repository, should be abandoned in favor of fine-grained investigations of relations that bind the city into a whole.

However, Doreen Massey cautions against the substitution of total removal with total immersion. She writes, “There is no such thing as total immersion; there will always, still, be a perspective, some things will be missed. You will still be producing a particular knowledge.” The situated, grounded perspective of the relational researcher is a partial one, with the relational researcher occupying a middle position between the extremes of total objectivity and total subjectivity. Law differentiates between the singular world of positivists, the infinite world of relativists, and the in-between world of the relational researcher that is multiple, more than singular but less infinite. This middle position between singularism and relativism can be frustrating due to its incomplete, fragmentary character but it also suggests an opportunity for urban researchers to explore multiple narratives or storylines without being required to produce an infinite number of interpretations.

22 Massey 2003
23 Murdoch 1997b, p. 332. Pragmatist philosopher Richard Rorty (1985, p. 173) makes a similar claim when he states, “The way to reenchant the world is to stick to the concrete.” The similarities between American Pragmatism and relational thinking have yet to be explored systematically. For an overview, see Jones 2008.
24 Massey 2003, p. 75
26 On the notion of multiple urban narratives or storylines, see Guy and Moore 2007
The epistemological implications of relational research also have political and ethical implications. Sarah Whatmore likens the conventional form of data collection to a squirrel collecting acorns; the task is to go out into the field and collect bits of information for later analysis back in the laboratory. In contrast, she sees the relational research approach where “data, like questions, are produced, not found.”27 Relational researchers are not only embedded in their subjects of study but their interventions enact different relations. This insight emphasizes the emergent character of research; data are not ‘out there’ waiting to be collected but are rather created through the research process. Research is thus an intervention in the world, a performance rather than a set of procedures, and research methods describe but also produce reality.28

From this perspective, it becomes apparent that research is far from being an innocent and objective endeavor; it is an unavoidable political act.29 Research involves participation in the world rather than being an act of neutral observation, and the process of taking part in the world is one of making relations and by extension, making reality.30 This suggests that questions of research are about what is done rather than what is represented, and research is less about the production of knowledge and more about the processes of finding, thinking, and identifying linkages or relations.31 Social science methods become a “system of interference” that works towards producing particular relations while eroding or undermining

27 Whatmore 2003, p. 90
30 Law 2004
31 Crang 2003a, Crang 2003b, Law 2004. This perspective is similar to the Pragmatist argument that knowing and using are indistinguishable. See Allen 2003.
others. Reflecting on this political aspect of relational thinking, Law and Urry ask, “If methods help to make the realities they describe, then we are faced with the question: which realities might we try to enact?”

Old (Research) Habits Die Hard

Throughout the 1990s and 2000s, the relational perspective has become increasingly influential in human geography, not only with ANT scholars but also with post-structuralists, feminists, and other theorists who struggle to understand how the social and material interact. At the same time, the rise of the relational perspective has revealed a growing dissatisfaction with existing research methodologies. A number of commentators have noted that while there has been a radical change in how we think about the world, this has not changed conventional social science research methods. Geraldine Pratt summarizes this position when she states, “We have yet –still- to put much of our theoretical talk into our research practices.” Gail Davies and Claire Dwyer note that despite the emergence of new ontological and epistemological outlooks, “Many of the practical procedures of doing qualitative research remain the same. Human geographers continue to study texts, to conduct interviews, to convene focus groups and to engage in ethnography.” The conventional interpretation of methodology as informed by a largely empiricist

33 Law and Urry 2004, p. 396
35 Pratt 2000, p. 639
36 Davies and Dwyer 2007, p. 257
version of reality continues to hold, with a subsequent rift between theory and practice.\textsuperscript{37}

Indeed, when one reviews some of the most influential research over the last decade that traces the relations of humans, nature, and technology in cities, this criticism is largely accurate.\textsuperscript{38} These researchers frequently adopt a case study approach that is contextually-based and involves a combination of archival research, semi-structured interviews, and site visits to trace the associations that are relevant to their subject of study. To be sure, these studies make valuable contributions to our understanding of cities as complex, multifaceted, and interconnected; they problematize the notion of nature as being outside of cities, challenge the autonomy of technological development, debunk the teleological evolution of cities, and so on. But they also reveal the remarkable stability of conventional qualitative research methods amidst radical changes to theory. In other words, there is a distinct divorce between how we think about cities and how we act upon them as urban researchers, between ontology and epistemology.

To address this concern, some geographers have begun to develop performative research methods. Performance as a research methodology is intended to supplement and enhance conventional representational research methods that involve gathering and considering texts, images, and discourses. According to Alan Latham, “Reframing research as creative, performative practice allows the researcher to address some novel questions about the cultures of everyday urban experience

\textsuperscript{37} Law and Urry 2004
that more conventional, representationally oriented, methods fail to address adequately."\(^{39}\) Nigel Thrift and John-David Dewsbury echo this argument, seeing performativity as a means to “make space livelier” by producing spaces which “flirt and flout, gyre and gimble, twist and shout.”\(^{40}\) In other words, it is an attempt to expand the representational, “wordy worlds” produced by conventional social science methods with various practices (sensory, bodily, and otherwise) that can capture the realness, the materiality, and the liveliness of the world.\(^{41}\)

Performative research methods explicitly recognize research as a form of engagement, following on the argument above stating that methods produce realities and influence the complex relations that we are attempting to study.\(^{42}\) It is an attempt to go beyond the academy and traditional notions of knowledge making.\(^{43}\) Performative research methods encourage urban scholars to look back to earlier precedents of urban research such as the Parisian flâneur of the nineteenth century as well as \textit{avant garde} movements such as the Surrealists and the International Situationists.\(^{44}\) It also suggests that the fine arts and the humanities can inspire new methods of urban experimentation, such as theatre studies, dance and music theory, and sensory methods.\(^{45}\) The city is interpreted as a stage and the urban researcher is one of many actors engaged in acting out the drama of daily life.

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\(^{39}\) Latham 2003, p. 1994  
\(^{40}\) Thrift and Dewsbury 2000, p. 412  
\(^{41}\) Crang 2003a, Whatmore 2006  
\(^{42}\) Law and Urry 2004  
\(^{43}\) Thrift 2004, Whatmore 2006  
\(^{44}\) Commonly cited influences include Walter Benjamin, Georg Simmel, Guy de Bord, Henri Lefebvre, and Michel de Certeau.  
Performative methods are based on a wide variety of creative practices but the urban design disciplines are surprisingly absent. From the most common streetscape to the most unique building and from greenspaces to alleyways, the design disciplines (architects, urban planners, and landscape architects) are prominent in reconfiguring the relations between humans and nonhumans. Is not design also a kind of performance, an intervention in the built environment, a conscious attempt to reorient the relations that comprise the city? The neglect of design practices by human geographers is symptomatic of a larger tension between the social sciences and the design disciplines.\textsuperscript{46} The latter are seen as practice-oriented rather than theoretically driven and thus, are centered around the development of practical skills rather than fostering critical thinking. But there is an opportunity for design to be incorporated into research methodologies, to recognize and act upon urban relations.

**Design Practice as Relational Methodology**

One of the most significant barriers to considering design practice as a research methodology is the widespread interpretation of ‘high design’ with aesthetic perfection is the principal goal. Mirroring the form/function dichotomy that was widely embraced in the twentieth century, Albert Borgmann summarizes the conundrum of technological design as follows:

> Aesthetic design inevitably is confined to smoothing the interfaces and stylizing the surfaces of technological devices. Aesthetic design

\textsuperscript{46} On the relationship between design and the social sciences, see Frascara 2002.
becomes shallow, not because it is aesthetic, but because it has become superficial. It has been divorced from the powerful shaping of the material culture. Engineering has taken over the latter task. But it in turn conceals the power of its shapes under discreet and pleasant surfaces.47

Translating this interpretation of design to cities, it is hardly surprising that relational theorists (and social scientists in general) have little patience for the urban design disciplines. The activities of architects, urban planners, and landscape architects are interpreted as frivolous artistic expressions intended to dress up the urban fabric or the application of scientific rationality to make cities more efficient.48 Meanwhile, social scientists are relegated to studying the social patterns that take place upon these aesthetically pleasing or functionally efficient stages, or at best, to interrogate the implicit meanings embedded by designers and engineers in the built environment. This split between the social sciences and the design disciplines is particularly apparent in the field of urban planning departments where scholarship is divided between the social world of urban policy and the material world of urban design.

However, the field of design studies teaches us that this need not be the only interpretation of design practices.49 Carl Mitcham considers design as an “intermediary between thought and action” while Richard Buchanan and Victor Margolin interpret design as, “the place where theory and practice meet for

47 Borgmann 1995, p. 15
48 In the UK, Prince Charles has contribute to the public perception of design as an aesthetic practice with his long-running critique of Modernist building proposals
49 The field of design studies was founded by Victor Margolin in 1984. For an overview of the field, see Margolin 1989 and Buchanan and Margolin 1995a.
productive purposes.” 50 Thus, design can serve as a bridge between how we think about the world and the actions we take to shape it. Furthermore, design practices are “inherently tipped towards action” and serve as “the principal method used by society to envision how we want to live in the future.” 51 This reflects the perspective of influential design theorist Herbert Simon who interprets design as a normative practice. 52

And like the social sciences, design can also be understood as a form of relational thinking and doing. Rob Shields writes, “The theme of relation, connectivity, and pattern is fundamental not only to social theory but to design theory and practice.” 53 Buchanan and Margolin add, “Design is a domain of contested principles and values, where competing ideas about individual and social life are played out in vivid debate through material and immaterial procedures.” 54 Indeed, even Latour has recently embraced the practice of design as a substitute for modernization on one hand and revolution on the other. He writes, “Designing is the antidote to founding, colonizing, establishing, or breaking with the past. It is an antidote to hubris and to the search for absolute certainty, absolute beginnings, and radical departures.” 55 Thus, design can be understood as a practice of relation building and an ethical intervention in the built environment aimed at producing different conditions.

50 Mitcham 1995, p. 173; Buchanan and Margolin 1995b, p. xxvi
51 Mitcham 1995, p. 180; Moore and Karvonen 2008, p. 30. Pratt (2000) argues that social scientists tend to privilege the indicative rather than subjunctive mood and worries that they only see the world as it is rather than how it might be otherwise.
52 See Simon 1969.
53 Shields 2002, p. 204. For several positions on design as it relates to Science and Technology Studies, see Woodhouse and Patton 2004, Moore and Karvonen 2008.
54 Buchanan and Margolin 1995b, p. xiv
55 Latour 2008, p. 5
So if design has such promise as a relational practice, where can we find exemplars of urban design practice that enact particular configurations of humans, nature, and technology? In the popular media, urban design is dominated by world-renowned architects such as Frank Gehry, Rem Koolhaas, Richard Rogers, and Zaha Hadid who produce provocative buildings that challenge our assumptions about conventional building form. However, the cachet of these architects lies in their ability to differentiate their work from other designers and more importantly, the inferred banality of the everyday urban landscape. Thus, their projects tend to focus on individual signature styles that are intentionally divorced from their cultural and material surroundings, a tendency that is in sharp opposition to the grounded, contextually-based perspective of the relational researcher. Furthermore, their emphasis is on the designed products (objects) rather than the processes through which they are realized (relation building).

At the other end of the spectrum are those designers who toil in the trenches, making incremental improvements to the everyday environment. These designers negotiate the norms and structures of urban development processes defined by economics, codes and regulations, cultural norms and expectations, and so on. Their work can be understood as a process of reorienting relations, but because they are not permitted the same degree of freedom as the ‘starchitects’ mentioned above, they hardly serve as exemplars for radical epistemological and ontological interpretations of the city.

So is there a middle ground between ‘starchitects’ and everyday designers that might reflect the radical ontological and epistemological implications of

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relational thinking? While there is potential for a wide array of designers to follow, I find inspiration in a small but growing group of designers who have developed project-based research approaches alternatively referred to as design/build, service learning, and practice-based education. These approaches are a subset of participatory action research and combine community outreach with formal education and architectural design practice. Some of the most well-known of these programs include Samuel Mockbee’s Rural Studio at Auburn University, Sergio Palleroni’s BaSiC Initiative at the University of Washington and the University of Texas at Austin, and Brian Bell’s Design Corps in Raleigh, North Carolina. The emphasis here is not on the end product of design but rather on the intertwined social and material processes of reorienting the built environment.

Project-based research is often situated in an academic setting, usually within schools of architecture and design, but differs from most design education because its focus is not on aesthetics or function but rather on the multivalent implications of intervening in the built environment. In many ways, it shares a research approach with social scientists who conduct in-depth case studies. There is an emphasis on context and lived conditions with an explicit goal of finding common ground between theory and practice. Project-based research involves recursive activities of analysis, reflection, and action.

**Practice-Based Research as Relational Practice**

58 Moore and Karvonen 2008
59 On the promise of design and case studies, Breslin and Buchanan 2007
Practice-based research in the design disciplines was founded in the Community Design Centers that first emerged in the US in the 1960s and 1970s as part of the broader social movements of the era that championed social equity. There is an explicit acknowledgement that design activities should be directed towards the improvement of material and social conditions of those who need it most. As such, these practices tend to focus on low-income communities in degraded environments (both urban and rural) where designers can make an appreciable difference. In general, the process of practice-based research consists of an instructor and students approaching a low-income community to learn about their needs. The team then works in close collaboration with community members to design and build a modest project such as a house, community building, park, streetscape, or other community amenity. In the process, students are exposed to the material and social aspects of design in a hands-on, iterative process of negotiation and collaboration.

Project-based research is closely aligned with relational thinking for at least three reasons. Design practice is understood to be embedded in material and social realities and thus, it is essential to understand how design activities shape and influence both material and social connections. At the same time, participatory design harnesses the creativity and experimentation inherent in design practice to realize different conditions. Design practices recognize the open-endedness of the built environment and the potential for improved futures. Third, and most importantly, project-based learning is an explicitly ethical endeavor; it is driven by the desire to implement social change.

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60 Pearson 2002
To illustrate how participatory design practices can enact a relational perspective, I summarize a project by landscape architect and theorist Anne Spirn. In the 1980s, Spirn emerged as an influential voice in the field of urban ecology movement through her work as a practitioner, teacher, and writer. Mirroring the argument of relational thinking described above, she writes, “It is not sufficient to understand either the processes of the social system or the processes of the natural system alone. Both mold the city’s physical environment, which forms the common ground between them.” Spirn’s interpretation of landscape design rejects conventional pursuits of aesthetic perfection or ecological harmony and instead, recognizes design as a practice of relation building.

In the mid-1980s, Spirn and her students at the University of Pennsylvania began a research project to study Mill Creek, a low-income neighbourhood in West Philadelphia. Spirn recognized an opportunity to put her ideas of nature and cities into practice by reintroducing natural processes in the vacant lots of this inner-city community. The project began as a conventional landscape architecture studio with the students studying the historical and contemporary conditions of the neighbourhood and developing design solutions to revegetate the empty lots. But the project gradually changed as Spirn and her students recognized the deep intertwining of human and nonhuman flows in the community. They discovered

61 Spirn 1984
62 Spirn 1984, p. 239
63 Scholars and practitioners of landscape architecture are unique amongst the design disciplines due to their explicit attempts to understand how nature, technology, and humans intermingle. To date, there has been little crossover between relational thinkers and landscape theorists and practitioners. For examples of contemporary landscape theory, see Thompson and Steiner 1997, Johnson and Hill 2002, Burns and Kahn 2005, and Waldheim 2006.
that the namesake of the neighbourhood, Mill Creek, had been paved over through urbanization processes in the late nineteenth century and in subsequent decades, the waterway emerged during flood events to create a pattern of uninhabitable lots. In short, Spirn and her students made a correlation between the materiality of the city, the history of urban development, and the socioeconomic conditions of Mill Creek’s residents. These residents literally lived at ‘the bottom’, both economically and physically.

This recognition of the intertwining of the physical and social expanded Spirn’s landscape studio beyond a reading of the landscape and proposing design solutions to resolve the tensions between nature and humans. They understood that the ecological restoration of the waterway needed to go hand-in-hand with social improvement and neighbourhood development. Spirn and her students initiated outreach activities with the community residents, first by sharing their historical contemporary research findings and then fostering dialogue to discuss proposed design solutions. This expanded to include the development of an environmental curriculum at the local school for 11- to 13-year-olds to use the creek as an urban laboratory for field trips, data gathering, and problem solving as well as several constructive activities to create a water garden, an outdoor classroom, community gardens, and maps, guides, and websites to share their accumulated knowledge.64 They interpreted the buried creek as “as a force to be reckoned with and a resource to be exploited.”65

64 For descriptions of the Mill Creek project, see Spirn 1998, 2005 and the project website at www.wplp.net.
65 Spirn 2005, p. 401
Like all project-based learning projects, knowledge, growth, and learning flowed both ways at Mill Creek, with Spirn and her students learning about the connections between poverty and urban development processes, the experience of being embarrassed and ashamed about one’s neighborhood, and the financial, bureaucratic, and political challenges associated with changing existing conditions. The changes to date in the neighborhood have been modest but notable. Whereas two decades ago, the neighborhood was hardly acknowledge on city maps, today it is a vibrant urban laboratory full of stories and projects, and ongoing practices as a result of Spirn’s long-term engagement with the community.

Undoubtedly, there are numerous lessons to learn from the Mill Creek project. With respect to methodology, it serves as an example of how project-based research can be used to put relational theory into action, simultaneously understanding the landscape as ecological, social, political, ethical, and also educational. And it uses design practice as a means to change urban relations. Spirn’s project is an experiment with tangible, concrete implications; it is not intended as a blueprint for design professionals but rather an inspiration and motivation to pursue different futures using hands-on approaches that are informed by both theory and lived experience.

While there is great promise in practice-based research to enact a relational perspective on cities, the approach presents a number of significant practical and theoretical challenges to the urban researcher. First and foremost, there are ethical issues of experimenting with low-income, vulnerable human populations and the possibility that initiated projects will fail. Furthermore, practice-based research exposes the dissonance between the systematic, rigorous traditions of scientific
research and the open-ended, emergent emphasis of design practices. Michael Biggs and Daniela Büchler argue that practice-based research is “especially problematic for research funding councils and quality control because it risks creating fuzzy boundaries” for what counts as legitimate research. Finally, project-based research challenges the academic silos that define how research is conducted and who is involved. It draws on expertise from a wide range of sources (natural and social, formal and informal, scholarly and public) and allows for collaboration within the academy as well as with non-academic actors such as local and regional governments, non-governmental organizations, and community groups.

Conclusions

A city isn’t just a place to live, to shop, to go out and have kids play. It’s a place that implicates how one derives one’s ethics, how one develops a sense of justice, and most of all how one learns to talk with and learn from people who are unlike oneself, which is how a human being becomes human.

Richard Sennett

It has become commonplace to proclaim the twenty-first century as the first urban century. For the first time in human history, more than half of the world’s population lives in cities, and this figure is expected to rise to perhaps two-thirds by mid-century. This suggests that cities will be an increasingly important site for the

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66 This tension is not confined to the design disciplines but also exists in other practice-based disciplines such as engineering, law, nursing, and education. See Biggs and Büchler 2007.
67 Biggs and Büchler 2007, p. 63
68 On the challenges and prospects of interdisciplinary research, see Brand and Karvonen 2007, Karvonen and Brand 2009.
69 Sennett 1989, p. 84
imagining and realizing of different futures. Urban researchers can play a significant role in bringing these different futures in being by continuing to laboratorize the city. However, it is important to recognize that urban research has political and ethical consequences; it is no longer sufficient to think differently about space and place, we must also act differently. To paraphrase Richard Sennett, it is through the reworking of urban relations that we as urban researchers instil ethics in our academic endeavours and we as human beings become humans.

The application of ANT and other relational approaches to urban research opens up new ways of knowing cities by shifting our gaze to the connections and links that bind the city into a whole. But it also challenges us to devise new research methods to engage with and change these relations. Research as an intervention introduces a whole host of risks and challenges but also creates opportunities for experimentation, creativity, and the pursuit of knowledge by alternative means. The design disciplines offer one possible route for enacting the relational city, for putting relational perspectives to work, for recognizing our ethical commitments to society, and for making a demonstrable and concrete difference.

References


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