CITY OF FLOWS

MODERNITY, NATURE, AND THE CITY

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Routledge
New York • London

material flows of commodified nature, labor power, technology, capital investment, and social relations—all of which had been discursively compartmentalized into distinct spaces in the modern era—opens up the possibility of conceiving nature and the city not as separate entities, but as dialectically related to each other, as the outcome of a unified process—the production of space.

CHAPTER 2
The Urbanization of Nature

> Nature underlies crucial modes of political arguments: justice, chance, freedom, limits of human action, source and possibility of knowledge.
>
> *S. Phelan, Intimate Distance (1993)*[1]

Modernity's Promethean Project

According to the ancient Greek myth of Prometheus, when Zeus withheld the gift of fire from humankind in one of his customary moments of rage, Prometheus (literally meaning the one who foresees) stole a branch of the holy fire and brought it back to Men, thus contributing greatly towards making nature work for the benefit of humankind against all odds — even against the gods' will. Prometheus' act, however, was the embodiment of *hubris*, and the outraged Zeus ordered *Κράτος* (the State) and *Βία* (Violence) to seize and bind Prometheus on Mt. Caucasus where an eagle fed daily upon his liver, which would regenerate itself in the evening, thus making the torture last for ever. Despite the torture, Prometheus would never cease to despise Zeus and after thirty thousand years of suffering he was finally released and took his honorary place among the immortals.[2]

The ancient Greek world recognized in Prometheus the benefactor of humankind and the father of all the arts and sciences. Some twenty centuries later, the "enlightened" Western world found in the same mythological figure the cultural icon of the Modern Hero. Although the origin of the term "Modernity" and its chronological boundaries remain a source

of academic debate,[3] I hereby subscribe to an apprehension of modernity as a period that began in the 17th century—characterized by a new, forward looking world view and a new set of social expectations. The taming of nature became a major project within modernity's broader aims, a project that scholars came to term "Promethean".[4] Within this context, the modern scientist or engineer would be the new Prometheus, who fights for human emancipation through the domination of nature. The modern hero would employ creativity, ingenuity, romantic heroic attitude, and a touch of hubris against the given order of the world.[5] "Modernity's Promethean project" would defy the power of nature, reject divine order, and launch on a quest to free Man (sic!) from his premodern fears, serve human needs and deliver social equity and material goods to everybody through progress, truth, reason, and rationality.[6]

As part of this project, according to Latour,[7] Western societies set out to "purify" the world in order to study it better. Nature became separated from society in order to be scientifically studied, and ultimately tamed, and the world was separated into things natural (the objects of study of natural sciences) and things social (the objects of study of social sciences).[8] Although not always explicitly addressed, the nature/society relation lay at the heart of numerous early scientific, political, and social writings: Malthus' *An Essay on the Principle of Population* (1798), Engels' *Condition of the Working Class in England* (1844), and Darwin's *On the Origin of Species* (1859) addressed this duality in one way or another. Numerous social-political movements also treated the nature/society relation as central to the question of social organization: social darwinism; the anarchism of Peter Kropotkin (whose *Mutual Aid* (1902)[9] retaliated against social darwinism by advocating a remaking of man and nature through cooperation, rather than competition); environmental determinism; early 20th century neo–lamarckianism; social biology; human ecology; and Nazi eugenics. The list of ideas driven by the desire to emancipate human beings (or social classes, or nations) by resolving the nature/society relationship in a scientific manner, while maintaining the dualism and the devotion in modernity's Promethean project is long.

However, it soon became evident that science, reason, technology, and planning could not work as an *automatic* means for human emancipation (see also Chapters 3 and 7), and that the positive outcome of progress would not be spread evenly throughout society. As Herbert Marcuse[10] argued, the human creativity so celebrated by Enlightenment's thinkers was soon transformed into a sternly productivist instrumental rationality that came to permeate all facets of modern life. As Marx and Engels had pointed out as early as 1859, the project for mastering nature expanded under capitalism to include the mastering and domination of human beings:

> [A]ll progress in capitalist agriculture is a progress in the art, not only of robbing the labourer, but of robbing the soil.... Capitalist production therefore, develops technology, and the combining together of various processes into a social whole, only by sapping the original sources of all wealth—the soil and the labourer.[11]

Recently, the emergence of environmentalism and the ecological movement has fueled a strong critique of modernity's Promethean project,[12] impaired its credibility,[13] and forced the nature/society relation to return to the top of the political and academic agenda.[14] However, the nature/society dualism has not been produced and reproduced only at a theoretical and conceptual/ideological level. Since this separation inevitably permeated social and spatial practices, these ideas often became politicized and were translated into spatial practices: from the production of nature in cities in the form of parks that would help produce better societies, to Nazi eugenics that would manipulate nature in order to produce the perfect human being. Lefebvre[15] touches upon this issue when he points out that the separation between spaces of extraction, production, and reproduction (what he calls "the social building blocks of space" or "space envelopes") is related to the nature/society dualism, and notes that this is also accompanied by the fragmentation of everyday experience, and by an increasing commodification of everyday life. However, Katz[16] as well as Braun and Castree[17] note that, despite the intense study of the nature/society separation in recent academic literature, a systematic analysis of the *spatial* implications of this separation is yet to be undertaken.

In this chapter, I discuss the nature/city dualism as one of the spatial expressions of the nature/society dualism. I examine modernity's contradictory scriptings of nature and the city and investigate how the production of modern cities has historically been infused by particular visions and ideologies about the "nature" of nature and the "nature" of the city. Finally, I argue that urbanization is a process of perpetual socio-ecological change, and consider ways of reconceptualizing both nature and the city, not as static things categorized as either good or evil, but as processes and flows that embody a dialectics between good and evil.

> To combat nature or to "enter into" it to the point of penetration; to grasp its dialectical aspects with respect to concentration; to order it geometrically, or to make of it, in cultivating one's garden, ideal nature, a chosen cosmological precinct (earthly paradise, nature propitious) to human living as against wild nature; or pedagogically to invoke it as mirror of truth and goodness of man—these are attitudes to which have corresponded, each in turn, precise and differentiated architectural responses.[18]

Much of modern urban planning has been infused and inspired by particular scriptings of the "nature" of nature and of the "nature" of the city. In the above quote, Gregotti's enquiry into the relationship between nature and the built environment captures the multiplicity of meanings, and imaginings of nature[19]: nature as something that must be "penetrated," conquered, tamed; or, nature as something sacred, as ideal order and pedagogical inspiration. Figure 2.a is a representation of the almost schizophrenic attitude towards both nature and the city found in modernist architectural visions and planning practices. On the one hand, nature stands for the "uncivilized", the dark and untamed wilderness that requires control and whose frontier has to be pushed outwards as "progress" accelerates. On the other hand, nature is also perceived as inherently "good", as the embodiment of some innate superior moral code that has been subverted and perverted through "civilization" and "urbanization" and needs to be restored.

The city also falls into this dual scripting. It is often branded as "evil", harboring the underbelly of modern society, while at the same time, it is heralded as the pinnacle of civilization, as man's triumph over the barbarism of uncivilized earlier times and as a hallmark of the success of the project for pushing forwards the frontier of a wild and untamed "nature" (Figure 2.b). This double coding of both nature and the city as, on the one hand ecologically and morally superior and on the other hand barbaric and uncivilized, has prompted (and still prompts) many debates as well as conflicting spatial and social practices. This quintessentially schizophrenic attitude towards both nature and the city permeates the history of both environmental and urban theories.[20] Many urban planners, thinkers, and architects of the past (Howard, Olmsted, Proudhon, Unwin, or Geddes to name but a few) have invoked a romanticized imagery of an inherently good pristine "nature" as an inspiration and a practice for sanitizing the city, both literally (in terms of, for example, combating pollution) but also symbolically (in terms of, for example, providing "social sanitation" from urban crime, "deviance" and "undesirable" marginal

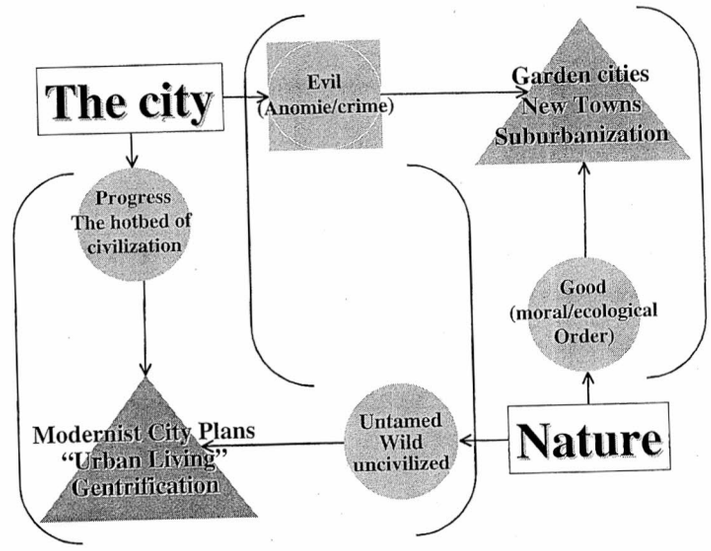

Fig. 2.a Modernity's double scripting of City and Nature.

urban groups). Simultaneously, however, the antipode of a "good" nature—the imagery of an evil, wild, and dangerous nature—is also employed as the counter-example to what a well ordered rational modern city should be. Expressions such as "the urban wilderness" and "the concrete jungle" invoke images of an out-of-control urbanization process and an uncivilized "nature", both of which need control and mastering.

In modernity's Promethean project, the nature/society dialectics has always been at the center of efforts to create a better society by creating a better urban environment. From the attempts of the 18th and the 19th century to create a "sanitized city", to the early 20th century's strive for a "rational city", to the contemporary quest for a "sustainable city", inspiration is sought for in ideas about the "greening" of the city and reducing pollutants[21] of all kinds emanating from urban life. It is, however, the "nature" of the perceived pollutants changed with time. In the 18th century it was miasmata and putrid air, in the 19th century rats and manure, in the 20th century bacteria, and today it is carbon dioxide. Despite the historically and geographically specific nature of what constitutes "threat" and "pollution" for urban environments, the above conceptualizations of an ideal city all share an understanding of nature and the city as two distinct, yet interrelated, domains. In the next section I will examine how changes in the understanding of what "nature" is, inspired views about what the city ought to be during the 19th and 20th centuries.

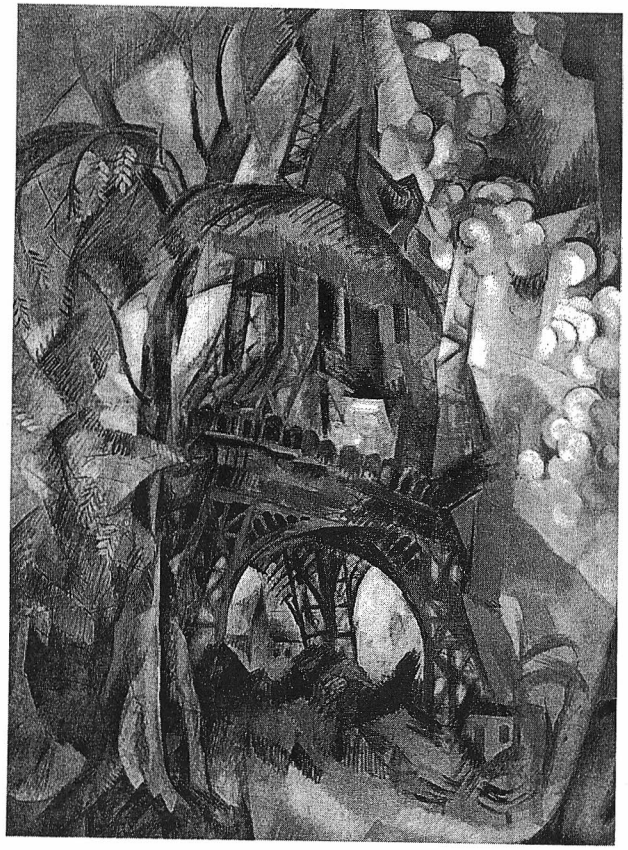

Fig. 2.b Pushing the frontier of nature; modernity's creative destruction is visualized in this 1910 painting by Robert Delaunay. Trees bow as progress pushes forward. Robert Delaunay, Eiffel Tower with Trees, Oil on Canvas, 1910 from the series "Visions of Paris". Solomon R. Guggenheim Museum, New York.

The Nature/City Dialectics in Modernist Planning

Nature and the "environment" have been central to urban change and urban politics since the birth of planning. The horrid environmental conditions in early industrial cities inspired generations of writers, social engineers, philanthropists, philosophers, and planners. Charles Dickens, for example, gripped by a nostalgia that creeps up whenever the modernist process of "creative destruction" erases the imprint of the past, chronicled the life of London's underclass and lamented the loss of an allegedly superior, organic, non-urban social order. Visionaries of all sorts bemoaned the loss and change and proposed solutions and plans that would remedy the antinomies of urban life and produce a healthy "wholesome" urban living. In many of these accounts, the city figures as the antithesis of the assumed harmonious and equitable dynamics of "nature", while the "urban question" necessitates (so they argue) a decidedly anti-urban development trajectory. The founding fathers of modern sociology, Tönnies and Durkheim, were also captivated by the rapid modernization process and the accompanying rise of an urban order, which each of them put in contradistinction to an idealized and disappearing rural, environmentally equitable, harmonious, and inherently humane social order.[22]

The 19th century socio-environmental urban blight threatened not only the well-being of the elites; it began to challenge the very bedrock of capitalist society as the marginalized and the oppressed began to demand access to better environmental conditions (in terms of shelter, food, hygiene, medicine, and consumer commodities). However, prioritizing the recapture of "nature" conveniently swept the class character that underpinned socio-environmental injustices under the carpet. With only a few dissenting voices — such as that of Friedrich Engels, who linked up the horrid living conditions of the working class in 19th century Manchester with labor-bourgeoisie relations under capitalism — most theorists and planners argued that it was the nature of the city and not that of society that needed to change. Buckingham's 1849 utopian urban vision, for example, declared that the quest for a better city and a better society should rest on the principle of restoring natural order and sanitation:

> [T]o unite the greatest degree of order, symmetry, space, and healthfulness, in the largest supply of air and light.... And, in addition.... a large intermixture of grass lawn, garden ground, and flowers, and an abundant supply of water...[23]

According to this vision, by producing a city more in tune with the rhythms and rhymes of nature itself, a better society would "naturally" follow. It is not surprising then that visionary elites began to experiment with new forms of urban living that would change spatial organization and possibly alleviate social conflict while leaving social organization intact. Lord Leverhulme's Port Sunlight, the paternalistically designed proletarian utopia at the rural side of the Mersey was an early attempt to sanitize the industrial city and combine nature with "healthy" living as a means to stem the rising tide of social unrest and to safeguard the aesthetic and moral order of the elite. In Great Britain, Sir Titus Salt, inspired by similar anti-urban theories and plans, decided to relocate his business outside of Bradford (in northern England). In 1870 he built Saltaire,[24] a

new factory surrounded by a small town to house all his workers, thus pioneering Victorian industrial paternalism. The new environment for his workers was not only well organized and closer to "nature"; it was also away from the social unrest in which Bradford was embroiled at the time. Shortly later, Ebenezer Howard's *Garden Cities of Tomorrow* (1898) would codify the "imagineered" urban utopia in a systematic, rational, and "scientific" planning practice for an inclusive, orderly, and friction-less quasi-urban form of spatial organization, based on a harmonious coexistence of urban and rural conditions:

> [N]either the town magnet nor the country magnet represents the full plan and purpose of nature. Human society and the beauty of nature are meant to be enjoyed together. The two magnets must be made one. As man and woman...supplement each other, so should town and country. The town is the symbol...town and country must be married.[25]

Inspired by Howard's ideas, British New Towns, a postwar development (1946), breathed the same anti-urban spirit, while Prince Charles's crusade for urban villages is one of the most recent large-scale applications of similar anti-urban principles. While Howard's ideas greatly influenced Great Britain, on the other side of the Atlantic, another great figure, Frederick Law Olmsted, had already (since the 1870s) advocated a more symbiotic relation between nature and the city as a means to eliminate evil and promote "the pursuit of commerce."[26] The sanitizing and purifying delights of "air and foliage", he argued, would turn parks and green havens into the new and true centers of the city.

In the 20th century, the nature/city debate (and divide) remained at the heart of ideas and plans for the modern metropolis. During the 1930s, the avant-garde movement of Futurism renounced anything to do with nature and the natural world as a thing of the past with its only remaining appeal an aesthetic one. The movement rejected all inspiration drawn from nature as "architectonic prostitution", and asserted that everything natural should be eliminated from the consciousness of the modern urban dweller. Instead, the new society should draw inspiration from technology, the machine, the mechanical world. Around the same period, however, Le Corbusier and Frank Lloyd Wright, the gurus of 20th century modernism, introduced nature as a means of restoring a healthy vitality to modern urban living, while maintaining the belief in the power of technology to change society. Still, the notion of "nature" would take on very different meanings and interpretations for both of them.[27] In Le Corbusier's 1922 utopian plan for *Ville Contemporaine*,[28] nature took the form of regimented green spaces, which would provide the setting for his "machines for living in"[29] within an orthological, well-ordered spatial symmetry made up of building blocks of very high densities, segregated by class. On the other hand, Frank Lloyd Wright pursued an integration of green spaces and built form in very low density schemes. His *Broadacre City* (1924–1930s) was a utopia advocating the right to land ownership for everybody, but was also a development whose function depended heavily on the automobile, a scheme close to that of what would become the standard American suburb.[30] In both cases, the ideal living environment, which would guarantee social harmony and ease the tensions and class conflicts that characterized capitalist cities, was advocated at an ideological level by the idea of bringing human beings closer to nature, as LeGates and Stout[31] argue. However, at the material level, the successful "cleansing" and "sanitizing" of urban environments was almost invariably translated in spatially explicit social segregation right from the start, from the planning phase. Le Corbusier's *Ville Contemporaine* was conveniently already segregated by class in its very plans, while the function of *Broadacre City* was based on the assumption of universal car ownership. Moreover, it made car ownership a necessity for anybody who wanted to participate in the new green utopian world.

The idealized visions of how nature would sanitize the city—both materially and spiritually—celebrated a particular imagining of a manufactured "nature" as a healing force while condemning the "nature" of the capitalist city as dehumanizing. While both Wright and Le Corbusier intended to take further the 19th century ideas of marrying nature with the city as a means of restoring social harmony, their scripting of the city/nature relation and their recipe for stopping socio-environmental urban degradation was different: bringing nature back into the city, in the case of Le Corbusier; and bringing the city into nature, in the case of Wright.

While urban reformers reveled in the utopian idea of creating a wholesome urbanism by injecting the idealized virtues of a life closer to a form of balanced and harmonious "nature", a new generation of city-lovers came to the defense of the urban. Lewis Mumford, for example, reveled in the contradictory nature of modern urbanization.[32] To him, the delight of the urban dwells exactly in its ability to create opportunities for social disharmony and conflict, on the breath of the new, the cracks and meshes that enable new encounters, and where the unexpected can turn up just around the corner. In contrast to the vibrant character of the city center, nothing ever happened in the landscaped gardens of the newly developing suburbs. Marking the staleness of artificially green urban/suburban environments, Christopher Alexander distinguishes between "natural" cities and "artificial"

cities, the former arising "spontaneously, over many, many years", the latter being "cities and parts of cities which have been deliberately created by designers and planners."[33] He identifies the soft disorder—the gentle frictions associated with mixing, heterogeneity, difference, and the playful ease of everyday life—with "natural" cities, and argues that they are the social equivalent to the benevolent disorder of nature itself. Subsequent urbanists, from Jane Jacobs to Henri Lefebvre to Richard Sennett, made similar claims about the necessity of "disorder" for urban vitality.

However, it is also this same dialectic of order/chaos, opportunity/fear that perpetuates the conservative imagery of cities as places of social and environmental disintegration and moral decay.[34] The denial to acknowledge this dialectic lies at the heart of failed attempts to plan for a totally rational urban space during modernity. Notwithstanding the heroic attitude in the efforts of these great urban thinkers and planners to humanize (and "ecologize") the city by means of restoring a presumably lost natural order, most of their attempts to produce a "natural" fix for the ills and pains of modern urbanization failed dismally to achieve the harmonious urban order its advocates had hoped for. With the arrogance of a spatial fetishist (believing a better urban environment would automatically produce a better society) and the hubris of a modern hero, they were acting the same way as the planner in Italo Calvino's *Invisible Cities* who attempts to put forth a perfect plan for making Fedora the perfect city. Somehow, though, the city keeps escaping the fate he had designed for her and keeps transforming on her own accord, perpetually in front of his eyes, before he ever managed to complete his plans:

> [L]ooking at Fedora as it was, he imagined a way of making it the ideal city, but while he constructed his miniature model, Fedora was already no longer the same as before, and what had until yesterday a possible future, became only a toy in a glass globe.[35]

Failing to acknowledge the complexity of the urban, the rationalization process of modernist planning produced unpredictable urban environments. Green spaces quickly became dark, crime-ridden areas, avoided by women or children unless permanent supervision could be guaranteed. As the deserts bloomed into suburbs drowned in greenery, ecological and social disaster hit: water scarcity, pollution, congestion, and lack of sewage disposal combined with mounting economic and racial tension.[36]

The urban basis of environmental problems—and the dialectics between nature and the city—could no longer be ignored at a material level. The production of space encompasses both social categories of nature and the city. While on a world scale we are rapidly approaching a situation in which more than half of the world's population lives in urban settings, urban-natural formations correspond, more than ever before, to landscapes of power within a dominant neoliberal agenda, where islands of extreme wealth are interspersed with places of deprivation, exclusion, and decline. While Davis depicts the environments of the underbelly of the city as "dangerous ecological war zones",[37] many of the subtropical gardens in permanently irrigated gated communities display a level of biodiversity that is matched only by that of the Amazonian rainforest.[38] Unhealthy high ozone concentrations in city centers, the proliferation of asthmatic and other respiratory diseases (tuberculosis is now again endemic in the rat infested poor Bengali neighborhoods of East London), and spreading homelessness are reshaping urban landscapes and may claim more casualties than even the most pessimistic accounts of the impact of global warming predict. Today, it is clear that even if an environmental "fix" for urban problems could "restore" some form of nature in one place, it would accelerate socio-ecological disintegration elsewhere.

The fact that environmental problems are inseparable from the function of the urban environment and society was fully acknowledged by the environmental movement that blossomed in the 1960s and early 1970s. Echoing the voices of this movement, McHarg's seminal book *Design with Nature* (1969) drafted the first guidelines for "ecologizing" the city, no longer by bringing nature in the form of green spaces inside the city, but by bringing nature squarely into the multiple relations that structure the urbanization process and by treating nature and the city as interacting processes rather than inert things.[39] In these first seeds for political ecological thinking, nature and the city appear as a single interacting system. Changes to any of the parts will affect the operation of the whole.

The Urbanization of Nature...or...the Environment of the City

Following upon the environmental movement, over the past few years a new *rapprochement* has begun to assert itself between ecological thinking, political-economy, urban studies, critical social theory, and cultural studies of science. William Cronon,[40] for example, in *Nature's Metropolis*, tells the story of Chicago from the vantage point of the socio-natural processes that transformed both city and countryside and which produced the particular political-ecology that shaped the transformation of the Midwest as a distinct American urbanized socio-nature. Mike Davis, for his part in *City of Quartz* and in more recent publications,[41] documents how nature and society became materially constructed through Los Angeles' urbanization process, and documents the multiple social struggles that have infused and shaped this process in deeply uneven,

exclusive, and empowering/disempowering ways. Erik Swyngedouw, Roger Keil, Gene Desfor, and Matthew Gandy[42] have pioneered the integration of the nature debate into the urban debate, balancing the advancement in theorizing the city/nature relationship with rigorous empirical analysis. The rapprochement of social ecological and urban thinking culminates in David Harvey's *Justice, Nature and the Geography of Difference*[43] where he insists that, as a matter of fact, there is nothing particularly "unnatural" about New York City! Cities are dense networks of interwoven socio-spatial processes that are simultaneously human, material, natural, discursive, cultural, and organic. The myriad of transformations and metabolisms that support and maintain urban life, such as water, food, computers, or movies always combine environmental *and* social processes as infinitely interconnected.[44] Imagine, for example, standing at the corner of Piccadilly Circus and consider the socio-environmental metabolic relations that come together and emanate from this global-local place: smells, tastes, and bodies from all nooks and crannies of the world are floating by, consumed, displayed, narrated, visualized, and transformed. The Rainforest shop and restaurant play to the tune of eco-sensitive shopping and the multibillion pound eco-industry while competing with McDonald's and Dunkin' Donuts; the sounds of world music vibrate from Tower Records and people, spices, clothes, foodstuffs, and materials from all over the world whirl by. The neon lights are fed by energy coming from nuclear power plants and from coal or gas burning electricity generators. The cars burning fuels from oil-deposits and pumping CO_2 into the air, affecting forests and climates around the globe, further complete the global geographic mappings and traces that flow through the city, and produce London as a palimpsest of densely layered bodily, local, national, and global—but geographically uneven—socio-ecological processes. This intermingling of things material and symbolic combines to produce a particular socio-environmental *milieu* that welds nature, society and the city together in a deeply heterogeneous, conflicting and often disturbing whole.[45]

Perpetual change and an ever-shifting mosaic of environmentally and socio-culturally distinct urban ecologies—varying from the manufactured landscaped gardens of gated communities and high-technology campuses to the ecological war-zones of depressed neighborhoods with lead-painted walls and asbestos covered ceilings, waste dumps, and pollutant-infested areas—shape the process of a capitalist urbanization. The environment of the city is deeply caught up in this dialectical process as are environmental ideologies, practices, and projects. The idea of some sort of pristine nature that needs to be saved (First Nature) or of a city as an entity separate to socio-environmental processes, becomes increasingly problematic as historical geographical processes continuously produce new "socio-natural" environments over space and time.[46] In sum, the world is a historical geographical process of perpetual metabolism in which "social" and "natural" processes combine in a historical geographical "production process of socio-nature" whose outcome (historical nature) embodies chemical, physical, social, economic, political, and cultural processes in highly contradictory but inseparable manners.

This constructionist perspective considers the process of urbanization to be integral to the production of new environments and new natures. It also sees nature and society as fundamentally combined historical-geographical production processes.[47] Consider, for example, the socio-ecological transformations of entire ecological systems, sand and clay metabolized into concrete buildings. Similarly, the contested production of new "genotypes" such as Oncomouse™ on which Haraway elaborates,[48] or Dolly the cloned sheep[49] support the impossibility of an *ontological* basis for a separation between human beings and nature, between nature and culture. Anthony Giddens[50] suggests that in this context we have reached "The End of Nature". Of course, he does not imply that nature has disappeared, but rather that nothing is out there anymore that has not been transformed, tainted, metabolized by society/culture. Latour contends that

> "nature" is merely the uncoded category that modernists oppose to "culture", in the same way that, prior to feminism, "man" was the uncoded category opposed to "woman". By coding the category of "natural object", anthropological science loses the former nature/culture dichotomy.[51]

As Lewontin suggests, modernity's nature is no longer fearful or strange. It is instead more open to fulfilling promises and desires, yet remains full of conflict and tension:

> A rational environmental movement cannot be built on the demand to save the environment, which, in any case, does not exist. Rather, we must decide what kind of world we want to live in and then try to manage the process of change as best we can approximate it.[52]

A City of Flows

> The question that now begins to gnaw at your mind is more anguished: outside Penthesilea does an outside exist? Or, no matter

how far you go from the city, will you only pass from one limbo to another, never managing to leave it?

I. Calvino, Invisible Cities (1974)[53]

Cultural studies of science, more than any other discipline, contest the idea that our knowledge about entities perceived as "natural" can be fixed, or that scientific knowledge provides "the truth" about a nature that is "out there" to be discovered. The analysis of the proliferation of modernity's "hybrids" in the work of Haraway and Latour illuminated the nature/society debate since it enabled everyone (including scientists) to see the impossibility of an *ontological* basis for a separation between human beings and nature, between nature and culture.[54] The irony, of course, is that these "impure" objects emerged out of the laboratories where the fundamental purpose had been to purify the world by separating it into distinct categories. Hence, Latour argues, the emergence of these objects was a hubris against modernity's project to purify the world. Their name, "hybrids", originates from the Greek *ὕβρις*, which means insult or violation but also signifies: "an impious disregard of the limits governing men's actions in an orderly universe...the sin to which the great and gifted are most susceptible."[55] Indeed, the proliferation of hybrids can be seen as an insult to the constructed order of a modern world that neatly separated things into "natural" and "cultural", as a hubris that reveals (most of the times unwittingly) the flaw in modernity's armor—it simply cannot deliver on the promise of a neatly separated and elegantly ordered world.

The proliferation of entities of ambiguous nature that are neither purely "natural" nor purely "non-natural" becomes more and more the "normal" outcome of modernity's production processes. Swyngedouw and Kaika[56] take Latour's and Haraway's analyses into the urban debate, arguing that the existence of modernity's quasi-objects and hybrids can be extended to include spatial categories such as the modern city. Examined as one of modernity's socio-natural hybrids, the city is full of contradictions, tensions, and conflicts. Viewing the city as a process of continuous—but contested—socio-ecological change, which can be understood through the analysis of the circulation of socially and physically metabolized "nature", unlocks new arenas for thinking and acting on the city: society and nature. Representation and being are inseparable, integral to each other, infinitely bound up. The city becomes the palimpsest landscape that captures those proliferating objects that Haraway calls "Cyborgs" or "Tricksters"[57] and to which Latour refers as "Quasi-Objects". They are intermediaries that embody and mediate nature and society and weave networks of infinite transgressions and liminal spaces.

In this sense, there is no such thing as an unsustainable city in general, but rather there is a perpetual process of urbanization of nature, a series of urban and environmental processes that negatively affect some social groups while benefiting others. As Raymond Williams points out in *The Country and the City*,[58] the transformation of nature and the social relations inscribed therein are inextricably connected to the process of urbanization. The dialectic of the environment and urbanization consolidates a particular set of social relations through what Harvey calls "an ecological transformation which requires the reproduction of those relations in order to sustain it."[59] This process takes place today at a global scale, and the socio-ecological footprint of the city has become global. As in Calvino's *Penthesilea*, there is no longer an outside or a limit to the city. The urban harbors social and ecological processes that have a myriad of local, regional, national, and global connections, and occur in the realms of power in which actors strive to defend and create their own environments in a context of class, ethnic, racial, and/or gender conflicts and power struggles. Of course, under capitalism, the commodity relation veils the multiple socio-ecological processes of domination/subordination and exploitation/repression that feed the urbanization process and turns the city into a metabolic socio-environmental process that stretches from the immediate environment to the remotest corners of the globe. The apparently self-evident commodification of nature that fundamentally underpins a market-based society not only obscures the social relations of power inscribed therein, but also permits the disconnection of the perpetual flows of transformed and commodified nature from its inevitable foundation, i.e., the production of nature. In sum, the environment of the city (both social and physical) is the result of a historical geographical process of the urbanization of nature. Excavating the flows that constitute the urban would produce a political-ecology of the urbanization of nature.

If we were to capture some of the metabolized flows that weave together the urban fabric and excavate the networks that brought them there, we would "pass with continuity from the local to the global, from the human to the non-human."[60] These flows would narrate many interrelated tales of the city: of its people and the powerful socio-ecological processes that produce the urban (complete with its spaces of privilege and exclusion, of participation and marginality); of rats and bankers; of diseases and pork belly speculation; of chemical, physical, and biological transformations; of global warming and acid rain; of capital flows and the strategies of city builders; of plans implemented by engineers, scientists and economists. They would make up the (hi)story of a city of flows.

In the next chapter, we shall follow the flow of one of these elements, water, into the city and tell the story of the networks underneath and outside the city that contribute to the continuous transgressing of the boundaries between the natural, the urban, and the domestic, and point at the continuity and the dialectics of the production of space.

CHAPTER 3
The Phantasmagoria of the Modernist Dream

> "O, Texaco, Motor Oil, Esso, Shell, great inscriptions of human potentiality, soon shall we cross ourselves before your fountains and the youngest among us will perish for having contemplated their nymphs in naphtha..."
>
> *L. Aragon, The Paris Peasant (1926)*[1]

In Chapter 2, the city was exemplified as the metabolic and social transformation of nature through human labor, a "hybrid" of the natural and the cultural, the environmental and the social. Entering the city posits the city as flow, flux, and movement, and suggests social, material, and symbolic transformations and permutations. Yes, the city is a material entity, a "thing", but this thing exists in a perpetual state of transformation and change; it is a perpetual passing through deterritorialized materials. Harvey, Sennet, Castells, and Merrifield,[2] to name but a few, have depicted the city as a circulatory conduit, a flux that is always material (in all possible senses, including symbolic and discursive flows), but never fixed. Deleuze and Guattari capture this dialectic of process and thing in their definition of the city:

> The town is the correlate of the road. The town exists only as a function of circulation and of circuits; it is a singular point on the circuits which create it and which it creates. It is defined by entries