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The Promenades of Paris. Alphand and the Urbanization of Garden Art, 1852-1871

Abstract

This study investigates a formative episode in the history of modern landscape architecture and public space design: the rapid creation of public parks, squares, and tree-lined thoroughfares in Paris between 1852 and 1870, the period of the French Second Empire, to form a series of interconnecting “promenades.” It seeks to identify continuities and innovations with respect to traditions of garden art, urban art, and engineering in France. It asks how a multi-disciplinary team of public servants, led by the engineer Alphand, responded to the simultaneous demands of cultural and utilitarian necessities, and how the public received the new gardens. The research method consists primarily in interpretive analysis of archival and historic texts, design drawings, popular media accounts, art and literature, and physical landscapes. Of particular interest is Alphand’s treatise, *Les Promenades de Paris* (1867-73), which points back to a lineage of earlier texts, but also forward to an age in which environment and infrastructure are fundamental to the urban landscape. The record shows that Parisians had mixed reactions to the growth of the city and to the new vegetated spaces that would supposedly improve public health via fresh air. The promenades of Paris also show an intriguing ambiguity in defining the public good as collective health and/or collective pleasure. Alphand and his collaborators in the Service des Promenades et Plantations, or parks department—including Barillet-Deschamps, Davioud, Belgrand, Darcel, and André—forged a systematic approach that accommodated practical necessities, difficult sites, and a wide range of scales. Their work was bound by an ethics of purposefulness and respect for the limits of a given situation. Nonetheless they pursued an artistic and decorative agenda, reflecting a desire to ennoble the public sphere. The landscapes that they designed are marked by a frequent divergence between visible and invisible elements, the latter encompassing both buried infrastructures and intangible metaphors. Categories of true and false natures gave way to questions of what urban landscapes do, in relation to their surroundings, and what people do in them.

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THE PROMENADES OF PARIS. ALPHAND AND THE URBANIZATION OF
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Gideon Fink Shapiro

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THE PROMENADES OF PARIS. ALPHAND AND THE URBANIZATION OF
GARDEN ART, 1852-1871

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Gideon Fink Shapiro

For all my teachers.

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ABSTRACT

THE PROMENADES OF PARIS. ALPHAND AND THE URBANIZATION OF GARDEN ART, 1852-1871

Gideon Fink Shapiro

Supervisor: John Dixon Hunt, Ph.D.

This study investigates a formative episode in the history of modern landscape architecture and public space design: the rapid creation of public parks, squares, and tree-lined thoroughfares in Paris between 1852 and 1870, the period of the French Second Empire, to form a series of interconnecting “*promenades*.” It seeks to identify continuities and innovations with respect to traditions of garden art, urban art, and engineering in France. It asks how a multi-disciplinary team of public servants, led by the engineer Alphand, responded to the simultaneous demands of cultural and utilitarian necessities, and how the public received the new gardens. The research method consists primarily in interpretive analysis of archival and historic texts, design drawings, popular media accounts, art and literature, and physical landscapes. Of particular interest is Alphand’s treatise, *Les Promenades de Paris* (1867-73), which points back to a lineage of earlier texts, but also forward to an age in which environment and infrastructure are fundamental to the urban landscape. The record shows that Parisians had mixed reactions to the growth of the city and to the new vegetated spaces that would supposedly improve public health via fresh air. The promenades of Paris also show an intriguing ambiguity in defining the public good as collective health and/or collective pleasure. Alphand and his collaborators in the *Service des Promenades et Plantations*, or parks department—including Barillet-Deschamps, Davioud, Belgrand, Darcel, and André—forged a systematic approach that accommodated practical necessities, difficult sites, and a wide range of scales. Their work was bound by an ethics of purposefulness and respect for the limits of a given situation. Nonetheless they pursued an artistic and decorative agenda, reflecting a desire to ennoble the public sphere. The landscapes that they designed are marked by a frequent divergence between visible and invisible elements, the latter encompassing both buried infrastructures and intangible metaphors. Categories of true and false natures gave way to questions of what urban landscapes *do*, in relation to their surroundings, and what people do in them.

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PREFACE

Garden art can be compatible with urban art. That is one of the revelations demonstrated by the public parks, gardens, and tree-shaded thoroughfares, collectively known as promenades, opened in Paris during the period of the French Second Empire, 1852-1870. These spaces were created through the combined efforts of the prefect G.-E. Haussmann, the engineer J.-C. Adolphe Alphand, the landscape architect Jean-Pierre Barillet-Deschamps, and the architect Gabriel Davioud, among many other collaborators, working under the regime of the Emperor Napoléon III. To plant not only a series of gardens, but also a sense of *paysage* (landscape)—a term long associated with picturing nature and the countryside—in the space of the modern city required new compromises between practices of gardening, civil engineering, and planning. “*La nature acclimatée dans notre monde de moellons et de poussière*” (nature acclimatized to our world of rubble and dust), is how the author George Sand aptly called the new urban squares and gardens.¹ But she also noted the urbane, decorative, even theatrical character of these spaces, which reflected a different set of needs from the rustic landscapes from which they supposedly drew inspiration.

¹ George Sand, “La Rêverie à Paris,” in *Paris-Guide par les principaux écrivains et artistes de la France, Vol. 2—La Vie* (Paris: Librairie Internationale, 1867), 1196.

The municipality of Paris after 1850 was the first to systematically integrate landscape within the striated, hardened field of the modern city. Today the problem of adjudicating between something that might be called “nature” on the one hand, and modern urban environments on the other, remains a high priority in the planning and design of public spaces, though the concepts and the scale have changed. Ecological relationships and processes are now embedded in the idea of landscape, and the entity of the city has become more difficult to locate amidst sprawling agglomerations and infrastructural networks. But the core idea that landscape architecture can help build the city has returned as a driving force of twenty-first century public space design.

There has been no shortage of studies examining the public works of Haussmann’s Paris, which have offered an almost irresistible image of modernity as an urban, capitalist, and technological phenomenon. A smaller number of scholars, writing alternately in French, English, or both, have set their sights specifically on the landscape architecture of parks and squares, and the multi-disciplinary team that created them. The present generation of scholarship on these *promenades* effectively began in the mid-1970s, with articles by Françoise Choay, Antoine Grumbach, and John Merivale. Subsequent articles by Luisa Marceca and Elizabeth Meyer examined the concepts of circulation and multi-layered design techniques, respectively, in the work of Alphand. In the present century, Ann Komara and Antoine Picon have authored articles on Alphand, and Simon Texier has gathered intelligent essays on Second-Empire Parisian “espaces verdoyants” (green spaces) by a number of authors including Luisa Limido, Vincent Saint-Marie-Gauthier, Geraldine Texier-Rideau, and Françoise Hamon.

Luisa Limido, in a 2002 book based on her Ph.D. dissertation, successfully brought Barillet-Deschamps into visibility from behind the long shadow of Alphand. Limido shows that the landscape architect played a determining role in the design of the Parisian parks and squares of the Second Empire, despite Alphand's failure to acknowledge him in *Les Promenades de Paris*. Documents and drawings from the private collection of Barillet-Deschamps confirm that he was indeed a creative force behind many public gardens in Paris and abroad, as well as private gardens commissioned by French elites close to the regime of Napoléon III. Alphand's other important deputy, the architect Davioud, was the subject of an exhibition (with accompanying catalogue) in 1981, which portrayed him as a Beaux-Arts-trained architect who became increasingly preoccupied with the problem of renewing the classical tradition in an age of industry.

The cultural construction of nature in nineteenth-century France was established in Nicholas Green's landmark study (1993). Heath Schenker (2009) interpreted the parks of Second Empire Paris through the lens of theater culture. A new book by Richard Hopkins, *Planning the Greenspaces of Nineteenth-Century Paris* (2015), based on his Ph.D. dissertation, takes a people's view of the squares and parks of Paris. Hopkins uses forgotten troves of correspondence between members of the public and Alphand's Service des Promenades et Plantations to reveal the way in which planners, designers, and administrators responded to the evolving requests and demands of ordinary park users, merchants, neighborhood associations, property owners, and government officials. Hopkins shows the designed urban landscape to be truly a social construct, as Rozensweig and Blackmar did in their history of New York's Central Park (1992).

Another set of studies has discussed the landscape architecture of Second Empire Paris in relation to parallel cultural productions, or in the context of what came before and after. Richard Becherer's book (1984) on César Daly and the influential architectural journal, *Revue Générale de l'Architecture et des Travaux Publics*, illuminates the debates between positivist and idealist thought in architecture culture of the mid-nineteenth century. T.J. Clark's canonical *The Painting of Modern Life* (1984) offers invaluable perspectives on the reshaping of Paris under Haussmann from the perspective of art history. John Dixon Hunt has elucidated the picturesque theories and practices that helped inform the work of Barillet-Deschamps and Alphand, and also discussed Paris in the second half of the nineteenth century in an essay on Impressionist gardens (1992). The collection that Hunt co-edited with Michel Conan, *Tradition and Innovation in French Garden Art: Chapters of a New History* (1992), provides the larger historical arc in which Alphand's work can be situated. Art historian Emmanuel Pernoud has analyzed artists' representation of public gardens (2013). And recent exhibition and catalogue on the photographer Charles Marville (2013), official photographer of Paris under Haussmann, offered a vivid reflection on the transformation of the capital.

If the studies mentioned above helped inform the present work, they also call for an explanation of the purpose of an additional study on the public parks and gardens of Second Empire Paris. Several areas in which I have attempted to contribute to the existing body of work include: historicizing the confluence of garden art and urban art; theorizing the relationship between the designed surface of the landscape and the underlying structures, substances, and processes, both human-made and not; exploring

connections between landscape and cultural practices, such as theater; placing Alphand's treatise in a discursive context; analyzing the changing relationship between city, country, and promenade; and probing material culture. The question of *what is manifest, what is concealed, what is evoked?* pertains not only to function and ornament, but also to the ability of a design to accommodate multiple kinds of use, to reach outside itself, and to invite interpretation. These topics, though broad, have led me investigate specific practices, theories, and works in the promenades of Paris and their orbit.

The following chapters focus primarily on issues of design, but also consider aspects of public reception and use. Where Nicholas Green showed how French metropolitan culture produced a new version of nature, I would like to suggest, conversely, that landscape architecture helped create the metropolis—its built environment, its social life, and its image. At issue is both an officially sanctioned construction of urban space, and the everyday practice of space by the people who inhabit the city, as theorized by Michel de Certeau.² The dual frame of spatial design and spatial practice is already suggested by the French term *promenade*, which I proceed to consider in the fourth chapter. I have tried to take care in using terms in their proper context—garden art versus landscape architecture, for example—though some slippage is inevitable, not least because the definitions of garden art and promenade were in flux in the mid-nineteenth century. Hovering in the background are questions about the advent of urban *green space* and its relationship to older qualifications of vegetated and urban

² See Michel de Certeau, *The Practice of Everyday Life*, trans. Steven Rendall (Berkeley: University of California Press, 1984), 94-98. Henri Lefebvre also discusses these issues in *The Production of Space*.

space. Also at issue are tensions between systemic solutions and site-specific adjustments, and between articulating and masking the workings of the built environment.

The sources for my research include the writings and drawings of the principal design collaborators; archival newspapers, journals, and guidebooks available through the digitized collections of the Bibliothèque nationale de France; engineering manuals of the Ponts et Chaussées; cultural artifacts such as novels, travelogues, engravings, photographs, and paintings; theoretical treatises on garden art and architecture from the eighteenth and nineteenth centuries; and a variety of secondary material pertaining to landscape architecture, engineering, architecture, opera, and art. In short I have tried to convene a conversation that recalls the making of these public spaces in all their strangeness and excitement, drawing upon a broader range of sources to put them into historical and cultural context.

The dissertation is organized thematically. The initial chapters focus on issues of integrating the garden with the urban fabric, while the final chapters turn to questions of representation and evocation. The first chapter provides a historic context for the work of the Service des Promenades and Plantations in Paris, and explores the primacy of factors such as scale, repetition, typology, and systematization. The second chapter focuses on the *squares*, relatively modest spaces that exemplify the systematic combination of garden with plaza to accommodate the urban public. The third chapter analyzes the renovation of the Bois de Boulogne through the lens of hydrography. I argue that understanding and managing the visible and invisible flows of water was key to the work

of Varé, then especially Alphand and his team, in transforming the formerly arid forest into a park filled with lush features. The fourth chapter looks at the changing relationship between the urban center and periphery, with implications for both urban form and the Parisian practice of promenade. Here I look closely at the creation of inner-city avenues and boulevards furnished with trees, drainage, and equipment of everyday use. The fifth chapter takes up the problem of surface decoration, or landscape décor, in the context of theater culture as well as theories of garden art and architecture. The sixth and final chapter shows how the parks of Second Empire Paris elaborated upon a tradition of evoking landscapes beyond themselves.

This study does not uncover an unknown trove of original documents in the attic of the Hôtel de Ville of Paris, as did the curators of the 1981 exhibition on Gabriel Davioud; nor have I found a private collection of design drawings, as Luisa Limido did to support her research on Barillet-Deschamps. In a few cases I am bringing little-known material to light, as in my revisionist account of the disgraced landscape architect Varé, which calls into question Haussmann's version of events. For the most part, the original contributions of this study reside in the framing and synthesis of existing sources to yield topical interpretations. It is in reading garden art treatises side by side with engineering manuals, for example; in the pairing of journalistic with professional sources; in historicizing the notion of "green space;" or in tracing the development of the Parisian square as a hybrid of *place* and *jardin*; that I have tried to add something to the existing literature on the parks and gardens of Second Empire Paris.

A number of historians and theorists have demonstrated the problem of an analytical lens that focuses too narrowly on what has come to be called “Le Petit Paris,” which is to say, the French capital as defined since 1860 by the boundary of the fortifications, later converted into the peripheral beltway. Derek Schilling (2015) has criticized a retrograde “intramural bias” on the part of historians of Paris, and instead favors a view of the wider urban agglomeration. John Merriman’s *Margins of City Life* (1991) demonstrated the historical primacy of the urban periphery. A 2010 colloquium and subsequent volume on the afterlife of the 1860 boundary, *Agrandir Paris, 1860-1970*, examined the growth of the metropolis beyond the limits of the city itself. Recent planning, transportation, and policy initiatives promise to formalize the 762-square-kilometer *Métropole du Grand Paris*, an urban area over seven times larger than the municipality. In 2013, the *Atlas du Grand Paris* designed by geographers and architects, attempted to creatively visualize the new metropolis. The above studies might seem to discourage the very notion of a study focused inside the beltway. However, if the municipal limits today appear archaically narrow, they appeared, on the contrary, radically expansive in the period of the Second Empire. The 1860 extension of the city reflected a metropolitan vision of the city as it enfolded the towns and farms between the eighteenth-century tax boundary of the *Fermiers-généraux* and the Thiers defensive wall erected in the 1840s. There was little reason not to assume that the centuries-long pattern of expansion would simply continue in future decades, potentially encompassing all of the Department of the Seine (now subdivided) and beyond. In this study I try to show how the program of squares, parks, and planted ways contributed to the expansion of the capital in its now-familiar form.

I have allowed Alphand to remain the central, if not dominant, figure of this study of public landscapes, and his treatise to serve as a privileged object of analysis. Despite Limido's persuasive case for the primacy of Barillet-Deschamps as designer, it is Alphand, as senior engineer-gardener, whose role has remained in some ways the most enigmatic. He was as much a project manager and administrator as designer and engineer, reflecting the collective nature of the enterprise undertaken by his bureau. Many sources mention or credit Alphand, but few venture to analyze his approach to synthesizing garden art and public works. I have supplemented my analysis of the official design documents with analysis of popular and alternative sources. In the end I have opted for something between a traditional art-historical analysis and a cultural analysis based on popular texts and images.

Alphand was born in Grenoble on October 17, 1817. His family apparently had roots in the area of Vallouise, nestled in the mountains of the Hautes-Alpes department.³ His father was an artillery officer in the military who reached the rank of colonel. After attending the *Lycée Charlemagne* in Paris (1834-35), he was admitted to the highly selective *École Royale Polytechnique* on 20 October 1835.⁴ In 1837 he graduated 41st in a class of 107 students, and became a student engineer of the *École Royale des Ponts et Chaussées* while beginning his public service in the departments of Isère (Grenoble) and Charente Inférieure (near Bordeaux).⁵ In 1839 he was assigned to Bordeaux, where he

³ Joseph Alphand, "A Monsieur Alphand, Directeur de l'exposition de 1889," dated 7 July 1890, *Papiers Adolphe Alphand*, Ms. 2255, Bibliothèque Historique de la Ville de Paris (BHVP), 316-318.

⁴ Correspondence dated 20 Oct. 1835, *Papiers Alphand*.

⁵ Correspondence dated 23 Oct. 1837 and 9 Nov. 1837, *Papiers Alphand*, BHVP.

would spend 15 years. In 1840, at the end of his first year as a cadet, he ranked 11th out of 44 cadets and received prizes for his work in the categories of construction (masonry bridges) and mechanics.⁶ Attaining the rank of *ingénieur ordinaire, 2nd classe* in August of 1843, he renovated part of the harbor and built a quay to accommodate especially large cargo vessels.⁷ He worked on a special *Travaux Maritimes* unit under the command of Deschamps (not to be confused with Barillet-Deschamps).⁸ Alphan was also tasked with the oversight of private railroad operators in the region.⁹ He met his wife in Bordeaux; they eventually had three children. Alphan became a municipal councilman of Bordeaux, and also served on the advisory panel for the city's *exposition industrielle* of 1854.¹⁰ He was named Chevalier of the Legion of Honor in 1852.

Hausmann offered Alphan the job of engineer of the Bois de Boulogne in November of 1854; the latter accepted in December, shortly after the birth of his daughter. In 1856 Alphan became head of the newly formed *Service des Promenades et Plantations*, one of the three branches of Hausmann's new *Service Municipal des Travaux Publics*. In this capacity he oversaw the design, construction, and maintenance

⁶ Ecole Royale des Ponts et Chaussées, "Session 1839-1840, 2^{ème} Classe de 1839-1840 / Relevé des Prix et Accessits," 16 May 1840, Signed Carbé, *Papiers Alphan*, BHVP.

⁷ "Biographie de M. Alphan," (Paris: Cadoux, 1891), 3. Archives Nationales F8 11459, *Chronique du service, Alphan, Jean-Charles Adolphe*, Ministère de Travaux Publics, Département de la Seine, Service Municipal de Paris, last entry 1891, cited in Richard Hopkins, *Planning the Greenspaces of Nineteenth-Century Paris* (Baton Rouge: Louisiana State University Press, 2015), 84.

⁸ *Annales des ponts et chaussées 3rd Series* Vol. 1, Part 2 (Paris: Carilian-Goeury and Dalmont, 1851), 56.

⁹ *Ibid.*, 190. This function was listed under "*Service de control et de surveillance des chemins de fer concédés.*"

¹⁰ "Alphan, Jean Charles Adolphe" Anciens Elèves Web - Notice complète, Bibliothèque Centrale, École Polytechnique (accessed 7 Mar. 2013).

of the two bois, three parks, twenty-odd squares, and various planted avenues, boulevards, and plazas. His rose through the ranks from *Ingénieur* up to *Inspecteur-Générale*, 1st class.¹¹ He quickly earned the trust of Haussmann and remained faithful to him, despite the latter's rancorous exit from public office in 1869. While Haussmann earned a reputation for his brashly authoritative persona, Alphand, by contrast, was praised for "*la courtoisie bien connue*" (his well-known courtesy).¹² During the war with Prussia in 1870, Alphand was ordered to organize the *Corps du Génie auxiliaire*, of which he commanded one battalion as a ranking colonel. The architect Viollet-le-Duc, as Lieutenant-colonel, commanded the other.

Alphand survived and thrived as a civil servant after Haussmann's downfall, amassing greater power than ever during the Third Republic. From 1871, he served as overall Director of Public Works of Paris. When Belgrand died in 1878, Alphand assumed authority over the water and sewers department, too. His crowning achievement was in organizing the *Exposition universelle* of 1889, for which received the Grand Croix of the Legion of Honor. Elected to the Académie des Beaux-Arts in 1891, he was a figure of considerable public stature when he died in Paris on December 6, 1891. His well-attended funeral commenced beneath the decorated central dome of the 1889 exposition grounds on the Champs de Mars, proceeded to the Cathedral of Notre-Dame, and thence

¹¹ Archives des Ponts et Chaussées, Dossier LH.25.63, 1882.

¹² César Daly, "Bois de Boulogne," *Revue Generale de l'Architecture* XXV (1867), 241.

to Père-Lachaise cemetery.¹³ Alphand died several weeks before he was scheduled to delivery a eulogy to Haussmann, who had died on January 11, 1891, at the Académie des Beaux-Arts. On December 26, the eulogy was read by another member. Alphand had intended to praise Haussmann for establishing and steadfastly supporting the *Service des Promenades et Plantations*:

Il a su faire comprendre au Gouvernement, au Parlement et au Conseil municipal, avec l'énergie et le talent qui le caractérisaient, les avantages considérables, tant pour la salubrité que pour la beauté de la ville, qui devaient resulter de la creation de belles promenades et de la plantation de nos voies publiques.¹⁴

(With characteristic energy, he knew how to make the Government, the Parliament, and the Municipal Council understand the considerable advantages that would result from the creation of beautiful promenades and the planting of our public ways, as much for the health as for the beauty of the city.)

¹³ “Les Obsèques de M. Alphand,” *Le Monde illustré*, 19 Dec. 1891, 387. The weekly *Le Monde illustré* devoted its cover page to Alphand two weeks in a row: a portrait and eulogy on 12 Dec.; and the following week, a view and story about the lavish funeral that the city gave him.

¹⁴ “Discours de M. Alphand sur le Baron Haussmann. Lu à l’Académie des Beaux-Arts, le 26 decembre 1891,” in G.-E. Haussmann, *Mémoires du Baron Haussmann, Tome III: Grands Travaux de Paris* (Paris: Victor-Havard, 1893), VI.

1. The Urbanization of Garden Art

Context of urban development

“Transforming Paris was a question of money, enormous, unheard of amounts of money,” the American historian David Jordan has observed.¹⁵ The 178 million Francs that Haussmann allotted for the *voie publique* (public right-of-way)—including roadwork, earthworks, horticulture, water features, grilles, and architecture of the parks and promenades—represented only a fraction of the sum he borrowed for general operations of *voirie*, or infrastructure, which totaled around 1.4 billion Francs.¹⁶ Yet of all the changes in Paris, the public promenades were the most praiseworthy, according to an 1863 article by César Daly, editor of the *Revue Générale de l'Architecture et des Travaux Publics*. He wrote, “*Beauté, hygiène, et utilité; tout s’y trouve*” (Beauty, hygiene, and utility, it’s all there).¹⁷

Garden art had a marked effect on the face and culture of the city, but in turn, the city left its mark on the art of gardens. The new parks and squares were characteristically urban, despite the rustic provenance of the picturesque tradition that inspired their layout

¹⁵ David Jordan, *Transforming Paris: The Life and Labors of Baron Haussmann* (New York: Simon & Schuster, 1995), 225.

¹⁶ *Ibid.*, 518.

¹⁷ César Daly, “Promenades et Plantations. Parcs. Jardins publics. Squares et Boulevards de Paris,” *Revue Générale d'Architecture* (1863), 249.

and design. The speed and scale of development, the adjacency of market halls and public buildings, the connections with utilities and transportation infrastructure, the repetition of elements, and the need to accommodate a diverse public defined the urban quality of the landscapes designed by the municipal Service des Promenades et Plantations, or parks service. The park service, headed by Alphand from 1854, was one of four engineer-led bureaus that Haussmann established under his public works department, the Service Municipal des Travaux Publics. The other three services were responsible for roads, water, and sewers. The structure of this bureaucracy framed *promenades* as a branch of public works, or perhaps even as a kind of urban infrastructure. Yet the Emperor Napoléon III, Haussmann's superior, cared for the art of gardens, as did many Parisians. They held the art of gardens, steeped in tradition, apart from public works and infrastructure projects. It was left to Alphand and his collaborators in the Service des Promenades et Plantations to figure out how to reconcile garden art and urban infrastructure. The result was not only a greener Paris, but also a systematic approach to urban landscape design that I will call the *urbanization of garden art*.

Urban development both enabled and constrained the landscape operations of the parks service. Squares, plazas, and *allées* often followed the distribution of municipal buildings and the infrastructure of urban circulation. A plan prepared under Alphand's direction shows the avenues, boulevards, railway lines, and parks completed between 1854 and 1871 (fig. 1.1), though the smaller squares are hard to make out. Here one can see the difference between the old city and the newly annexed peripheral zones beyond the second ring of boulevards. It is also apparent that the majority of the works were

concentrated in the central and western districts of the city, rather than in the predominantly working-class eastern *quartiers*. Haussmann took pains to present his interventions in Paris as the will of the Emperor, who had given Haussmann a hand-drawn plan of the city with colored lines representing his more and less urgent priorities for public works. This plan, lost since 1871, is known only from secondhand reports, but is thought to have served as the initial impetus for many of Haussmann's projects.¹⁸

It is worth reciting a few statistics—taken mostly from Haussmann and Alphand, both ardent record-keepers—to give a sense of the larger project and process of urbanization of which the promenades were part. The population of Paris grew from just over one million in 1851 to 1.8 million in 1866.¹⁹ This growth can be attributed partly to the annexation of the suburban zone in 1860, which more than doubled the area of Paris from 3,403 to 7,802 hectares; and partly to migration from the countryside to the city. Haussmann famously (or infamously) cut new avenues and boulevards through tightly knit old *quartiers*, but the increase in the number of streets during his administration was less remarkable than the increased width of streets, as well as their axial realignment. Haussmann doubled the average width of major thoroughfares in the old core of Paris from 12 meters to 24 meters, and enlarged the public ways in the annexed zone from an

¹⁸ Jordan, *Transforming Paris*, 170.

¹⁹ Haussmann, *Mémoires III*, 408-409.

average of 13 meters to 18 meters wide.²⁰ Homogenous apartment blocks, designed with vaguely Renaissance-revival facades, lined the new boulevards and avenues.²¹

Of crucial significance to pedestrian circulation and *promenade*, the length and surface area of *trottoirs* (sidewalks) along Paris streets was increased to a total of 1088 km and 296 ha in 1869, compared with 424 km and 107 ha in 1859 (including old Paris and the suburban zone).²² In 1869, pedestrian walks—not including the larger parks and promenades—thus occupied 23 percent of the total surface area of 1290 ha accorded to the city’s *voie publique* (public right-of-way). This combined area of roads and walks in turn accounted for 16 percent of the city’s total surface area of 7802 ha. Alphan and his team reportedly tripled the population of street trees, or *arbres d’alignement*, to around 150,000 by the mid-1860s.²³ However, the city lost some 50,000 trees to the “*douloureux événement que Paris vient de traverser*” (painful events that Paris has just gone through), as Alphan euphemistically referred to the Prussian shelling and siege of 1870, followed by the street fighting and raging infernos that erupted during the suppression of the

²⁰ Haussmann, *Mémoires II: Préfecture de la Seine*, 512. The average width of eliminated streets in the core of Paris was seven meters, as can still be seen in the Marais. The building and rebuilding of major streets and boulevards proceeded in three stages: first, Haussmann concentrated around the central crossing of the old city and the Île de la Cité; second, he reworked plazas and thoroughfares near the second ring of boulevards, the outer limits of the old city; and third, after the annexation of 1860, he initiated projects in the former suburban zone that his successors continued in subsequent decades.

²¹ For an analysis of the architecture of the apartments and civic buildings of the period, see Christopher Mead, “Urban Contingency and the Problem of Representation in Second Empire Paris,” *Journal of the Society of Architectural Historians* Vol. 54, No. 2 (Jun. 1995), 138-174.

²² Haussmann, *Mémoires II*, 513.

²³ Haussmann counted an increase from 50,466 to 95,577 trees in Paris by the end of his tenure in 1869, though this number hides the number of older trees were replaced (*Ibid.*) Daly gave the figure of 150,000 in “Promenades et plantations,” 129.

Commune of 1871.²⁴ There is no reason to doubt Haussmann's assertion that the professionalization of the municipal park service led to better care and maintenance of the street trees.²⁵

The avenues and boulevards were lined not only with trees spaced five meters apart, but also with streetlamps, mostly fueled by gas, which numbered 33,859 by 1869—a roughly twofold increase since 1852, including both the central and annexed suburban zones.²⁶ Haussmann rebuilt the old sewer system and expanded it by a factor of four, to a cumulative length of 560 kilometers of pipe (fig. 1.2).²⁷ Fresh water supplies were similarly multiplied: in 1852, Paris received only 112,000 cubic meters of water per day, the majority of which came from the Canal de l'Ourcq, the rest from the pumps along the Seine and the artesian well of Grenelle.²⁸ Haussmann more than tripled that capacity by bringing water from the Dhuis and Vanne by aqueduct (fig. 1.3), by purchasing and building waterworks along the Marne, by refurbishing the steam pumps along the Seine (Chaillot and Pont d'Austerlitz), and by drilling three artesian wells.²⁹ In addition to helping to improve Parisians' sanitation and everyday quality of life, the water and sewer

²⁴ Jean-Charles Adolphe Alphand, *Les Promenades de Paris* (Paris: J. Rothschild, 1867-73), 246. Alphand, apparently writing after 1871, gives the Parisian tree population as 102,154.

²⁵ Haussmann, *Mémoires* II, 513.

²⁶ *Ibid.*, 514.

²⁷ *Ibid.*, 517. For a historical analysis of the development of the sewer system under Belgrand, see Matthew Gandy, "The Paris sewers and the rationalization of urban space," *Transactions of the Institute of British Geographers* Vol. 24 No. 1 (Apr. 1999), 23-44.

²⁸ Haussmann, *Mémoires* II, 514-515.

²⁹ *Ibid.*, 515-516. The expanded water supply network was accompanied by a more than sixfold increase in reservoir capacity, achieved through the construction or acquisition of a dozen or so reservoirs, concentrated in the city's eastern heights. The three artesian wells were drilled at Passy, Buttes-aux-Cailles, and the Place Hébert.

systems enabled the parks service to irrigate their delicate plants and to run numerous fountains, streams, and cascades.

The promenades played an important role in the vast scheme of public works. Indeed, a profusion of new municipal parks and gardens made greenery congruent with the public realm of Paris. What began, under Haussmann's predecessor, with the renovation of the Bois de Boulogne, soon grew into a citywide landscape endeavor, distinguishing Paris from other cities. Alphand's *Plan Général*, apparently from 1867 or early 1868, shows the distribution of some 1,850 hectares of new or renovated public greenspace in Paris (fig. 1.4).³⁰ Most of this acreage is encompassed by the Bois de Boulogne and Bois de Vincennes, positioned just beyond the fortifications. Less than 300 hectares of municipal promenades lie inside the fortifications, though this represents a significant greening of the urban public realm, supplementing the older state gardens of the Tuileries, Luxembourg, and Plantes. The relatively large Buttes-Chaumont, the Champs-Élysées, and the temporary garden of the 1867 World's Fair are easy enough to spot on the plan. Less immediately visible, but just as meticulously shaded in subtle grays, are the sites of the Parc Monceau, Parc Montsouris, and over 20 squares tucked between roads, buildings, and railways. The smaller squares are a little difficult to find on the map at this scale, so I have highlighted them in a modified plan (fig. 1.5).

³⁰ The two ex-royal forests of Boulogne and Vincennes, converted into public parks, each encompassed over 800 hectares. The three new intramural parks of Monceau (renovated), Buttes-Chaumont, and Montsouris occupied a combined surface area of over 50 hectares, while the 24 modest squares collectively enclosed over 10 hectares. The renovated Champs-Élysées together with newly tree-lined avenues, boulevards, *contre-allées* (lateral lanes) and *places* added up to some 170 hectares of planted space.

The interconnected nature of the squares and parks with the avenues and boulevards suggests a kind of “*système des espaces verts*” (system of green spaces), in the words of Françoise Choay.³¹ By 1870, a *promeneur* who so desired could traverse the city from one Bois to the other, strolling mostly along tree-lined sidewalks if they preferred, and pausing at a handful of parks and squares. Perhaps more to the point, the new system of promenades enabled more Parisians to enjoy a quick garden stroll, take in the sun from a bench, or watch their toddlers play in safety. Amidst these impressive gains, there were also losses. The coupling of garden and city came at the cost of “opportunities for intimacy, small scale, and appropriate planting,” as Hunt has observed.³² Many small, private gardens were demolished along with older houses and streets. Even as the city added many new gardens, it sold off the edges of several beloved older gardens, such as Monceau and the Luxembourg. Haussmann elicited particularly strong resentment by sacrificing of the parterres of the southern part of the Luxembourg gardens to make way for new cross-streets and houses in 1867.³³

The *Plan Général* is the first plate in the volume of plates of Alphant’s treatise, *Les Promenades de Paris* (1867-1873). The plates of the treatise reflect a multi-faceted conception of the modern urban landscape. They are by turn schematic, pictorial,

³¹ Françoise Choay, “Haussmann et le système des espaces verts parisiens,” *Revue de l’art* 29 (1975), 83-89.

³² John Dixon Hunt, “French Impressionist Gardens and the Ecological Picturesque,” in *Gardens and the Picturesque*, 249. An early version of this essay was developed for the 1990 Bakwin Lecture in the History of Art at Wellesley College.

³³ Haussmann offers an extended defense of the Luxembourg development in his *Mémoires*, Vol. II, 81-86, in part by showing how the plan predated his administration. David Jordan discusses the uproar caused by the Luxembourg project in *Transforming Paris*, 264. Alphant summarizes the project in *Les Promenades de Paris*, 234-235.

analytical, idealized, and descriptive. The plates alone begin to illustrate the involvement of garden art with the built fabric of the city, the image of the city, the people of the city, and the geology and hydrology of the city. Herein lies evidence of the urbanization of garden art. The schematic plan is notable for not simply showing the locations of the promenades, but for showing them as part of a broader public urban realm composed of civic amenities and circulation systems: avenues and boulevards, railways and rail stations, canals, fortifications, government buildings, market halls, schools, churches, and most prominently of all, the River Seine. Many of the major thoroughfares—constructed, enlarged, or realigned since 1852, with evenly spaced dots representing trees—pass beyond the city limits into the suburbs, just like the railways that pierce the city walls at eight different points. The canals of Saint-Denis and Ourcq, entering from the northeast, merge and then abruptly change into the form of a boulevard. The line of fortifications clearly demarcates the city's boundary, yet just as clearly permits the movement of people, goods, and supplies to and from the hinterlands. The older state gardens of the Tuileries, Palais Royale, Place Royale (Vosges), Plantes, Luxembourg, and Invalides appear as white fields marked with geometric patterns.

An entirely different aspect of Alphand's endeavor is reflected in the frontispiece (fig. 1.6), the picture that greets the reader upon opening the volume of plates. The frontispiece shows an artful composition, almost a collage, of Parisian landmarks created or renovated by the *Service des Promenades et Plantations*. Architecture, sculpture, and vegetation frame the pictorial composition. On the left side, a fragment of the Naumachia of the Parc Monceau is enlarged to monumental proportions and ensconced by trees and

ivy. The transposed fountain of Nymphs and the restored Tour Saint-Jacques appear in the middle ground, recalling not only sixteenth-century architecture but also the new garden squares created around these refurbished monuments. In the background, the horizon is broken by the cliff of the Parc des Buttes-Chaumont, crowned with a temple and a few trees, and connected to a suspension bridge. As if bestowing this kingdom of promenades unto the viewer, two nymphs sit astride the city's coat of arms, their backs to the mash-up of urban icons, pouring waters of health and abundance into a finely decorated basin.

The frontispiece image condenses the urban landscape into a fictional skyline, a tableau of decontextualized landmarks for easy visual consumption. The composition gathers together various unrelated places, much as the Jardin d'Acclimatation gathered together diverse animals and plants in a vision of total harmony. The frontispiece makes for a striking contrast with the plan discussed above. Whereas the one gives full reign to pictorial design, liberating it from the constraints of real space; the other completely denies any pictorial aspect, and instead represents the city as a geographic entity defined by systems of circulation. One reflects a quest for imagery, the other a quest for territorial knowledge. Both rely on abstraction in the first place, and careful detailing in the second. Neither the plan nor the pictorial composition says anything about the junctures between garden and city. They give no specific information about materials, water control, plants, and soil. They say nothing about people and the social use of the urban landscape.

But other plates do. For example, the plate illustrating several "Details" of the design of the Square des Batignolles (fig. 1.7), links the general to the specific, and the

people to the landscape. Instead of iconography or systems, it presents the designed landscape at a finer grain, and at a human scale. It shows the minor but important equipment that constitutes the physical reality of the park, and that sets the stage for visitors' actions and experiences. Architectural components include the perimeter grille, two kinds of wood benches, a signpost, and a guard booth, all of which appear well suited to their purported function, but also display a certain lightness and grace borne of ornamental intentions. Rockwork and water constitute other key details: stepping stones across the small "river," a tiny dam to slow the descent of water down the slope, and the pile of rocks from which the river issues, all seen in cross-section and plan. The plate shows a toolshed hidden underground; the labor of maintenance was as assiduously concealed as the spectacle of running water was highlighted. All these details are tied together by the two transverse section cuts (profiles) at the bottom of the sheet, showing the change in elevation across the park. Finally, a glance at Alphand's geological section of the artesian well of Passy, topped with a public square (fig. 3.20), should dispel any suspicion that the promenades of Paris took a purely cosmetic or pictorial view of landscape.

Urbanité and urbanization

The term *urbanization* was not part of Alphand's lexicon, nor of Haussmann's. Nevertheless, the term cannot be excluded from a retrospective analysis of the promenades of Paris. Rather than take the word for granted, however, let us review its evolving usage. *Urbanité*, as the eighteenth-century French novelist Rétif de la Bretonne

had it, was synonymous with “*moeurs de la ville*,” or the manners and mores of the city.³⁴ Urbanity traditionally signified a refinement and sophistication associated with city-dwellers, as the English word *urbane* similarly denotes. The corresponding verb *urbaniser* (to urbanize), according to Rétif, signified a propagation of urbane manners, usually with regard to *people*. To urbanize was to acculturate and educate rustic persons into the ways of urban society.

The newer sense of *urbanization* as *city-building* appears to have been introduced into European discourse by the Spanish theorist and engineer Ildefons Cerdá in 1860-61.³⁵ Cerdá’s *urbanización* did not describe human social characteristics, but rather described the topographical development of the built environment. In his writing, he stripped the Latin root *urb* of any connotations of social hierarchy (linked more properly to *civitas* and its offspring, *citizen* and *city*). *Urb* thus became a functional designation for any group of buildings, “from the haughtiest city to the humblest encampment.”³⁶ Cerdá’s theory of urbanization, applied to urban planning projects for cities such as Barcelona and Madrid, translated into abstract grids to facilitate orderly growth and transportation (fig. 1.8). A schematic overview made it possible to envision a larger scale,

³⁴ Nicolas-Edme Rétif de La Bretonne, *Mes Inscriptions : journal intime de Restif de La Bretonne* (Paris: bibliothèque de l’Arsenal, 1889), 138. In his diary entry 25 November 1785, the author analyzes the family of terms to demonstrate how he will organize an etymological dictionary: “*Urbane* (ville); *Urber* (bâtir une ville); *Urbanité* (moeurs de la ville); *Urbaniser* (faire acquérir [sic] l’urbanité); *Urbainement* (avec urbanité); *Urbain, urbaine* (qui a les moeurs de la ville ou l’urbanité).” This passage was identified by Anselm Gerhard in *The Urbanization of Opera*, 5.

³⁵ Arturo Soria y Puig, ed., *Cerdá: The Five Bases of the General Theory of Urbanization*, trans. Bernard Miller and Mary Fons i Fleming (Madrid: Electa, 1999), 79-87. The term did not enter French planning lexicon until several decades later.

³⁶ Ildefons Cerdá, *Teoría general de la urbanización* (Madrid: Imprenta Española, 1867), Vol. I, 481; in Soria y Puig, *Cerdá*, 84.

without dealing with particularities. Cerdá was interested less in the life or the image of the city, than in the systems that sustained it and linked it to its hinterland. He focused on issues of circulation, sanitation, drainage, and land use to guide rapid growth beyond the old city boundaries. Cerdá's version of urbanization encompassed the functionally defined systems stretching over the human-settled landscape, from city streets and houses to outlying farmland and reservoirs.

Another useful sense of *urbanization* concerns adaptation or response to the intensity, acceleration, and disjunctures of the urban environment in the age of industrial technology and rapid growth. Although the lineage of "modern" art and architecture dates to the eighteenth or even the seventeenth centuries, Paris and other nineteenth-century capitals produced new modes of perception and representation, as well as new ways to alter the environment.³⁷ Anselm Gerhard develops this sense of *urbanization* in his *Urbanization of Opera*, which analyzes a shift in the genre of opera in Paris over the middle decades of the nineteenth century. In this account, the changing experience of everyday life led audiences to embrace, even expect, the development of ever more elaborate and technical effects, and "new forms and conventions that have nothing to do with the historical predecessors of grand opera."³⁸

³⁷ See Jonathan Crary, *Suspensions of Perception: Attention, Spectacle, and Modern Culture* (Cambridge, Mass.: The MIT Press, 1999); and T.J. Clark, *Painting of Modern Life. Walter Benjamin's Arcades Project* is founded upon a similar premise.

³⁸ Anselm Gerhard, *The Urbanization of Opera: Music Theater in Paris in the Nineteenth Century*, trans. Mary Whittall (Chicago: University of Chicago, 1998), 6.

Marshall Berman discusses a different aspect of the same phenomenon, that of responding to the turmoil of the modern urban scene. He reads the preface to Baudelaire's *Spleen de Paris*, a collection of prose poems, as a call for a language corresponding to the raw and shifting edges of metropolitan life.³⁹ Baudelaire explained that he was striving for “*une prose poétique, musicale sans rythme et sans rime, assez souple et assez heurtée pour s'adapter aux mouvements lyriques de l'âme, aux ondulations de la rêverie, aux soubresauts de la conscience*” (a poetic prose, musical without rhythm and without rhyme, supple enough and rugged enough to adapt itself to the soul's lyrical impulses, the undulations of reverie, the convulsions of consciousness).⁴⁰ The poet added, “*C'est surtout de la fréquentation des villes énormes, c'est du croisement de leurs innombrables rapports que naît cet idéal obsédant*” (It was above all from the exploration of enormous cities and from the convergence of their innumerable connections that this obsessive ideal was born).⁴¹ For Baudelaire, the sensations and hallucinations he attached to “enormous cities,” Paris especially, necessitated a supple yet rugged kind writing—not necessarily poetry in recognizable form, but a more free and ruminating prose that could wander, like the *flâneur*, through vignettes of experience and meaning.

³⁹ Marshall Berman, *All that is Solid Melts into Air: The Experience of Modernity* (New York: Simon & Schuster, 1982), 148.

⁴⁰ Baudelaire, letter-preface to Arsène Houssaye originally published in *La Presse* 26 Aug. 1862, though it may as well be addressed directly to the reader. Quoted in Berman, *All That is Solid*, 148.

⁴¹ *Ibid.*

The public landscape architecture of Second Empire Paris evokes all three of the above senses of *urbanization*. With regard to the first, the new parks and squares broadened the urbane culture of promenade inherent to traditional public gardens like the Tuileries or Luxembourg. Some commentators of the day believed that the new parks and gardens would have an edifying and civilizing effect on the public who visited them, while instilling a passion and curiosity for nature. Here the act of “improving” the land symbolized a hoped-for cultural improvement as well. Park attendants monitored the comportment of visitors in an attempt to guarantee appropriate behavior. For all the talk about rustic landscapes and *rus in urbe*, the promenades of Paris bespoke urbane sophistication. In 1863, César Daly compared the “*parcs champêtres*” (rustic parks) of London with the “*parcs élégants*” (elegant parks) of Paris, the latter graced with more “*riche verdure*” (rich greenery) and “*flore ravissante*” (ravishing flowers).⁴² He believed that landscape architecture helped to make Paris, “*un foyer d’attraction, de séduction, pour le monde entier*” (a foyer of attraction, of seduction, for the whole world).⁴³ Daly aptly characterized the Pré-Catelan, a lavish garden inside the Bois de Boulogne, as, “*à la fois mondaine et champêtres*” (at once worldly and rustic).⁴⁴ William Robinson called the

⁴² Daly, “Promenades et plantations,” 249.

⁴³ *Ibid.*, 128.

⁴⁴ *Ibid.*, 131. Originally the Pré-Catelan offered theaters, a beer garden, impressive trees, copious amounts of flowers, a photography studio, a telegraph office, a fish hatchery, games and music, and gaslamps and fireworks for to evening festivities—before its proprietors went out of business in 1861, after only five years. See Décembre-Alonnier, *Les Merveilles du nouveau Paris* (Paris: Bernardin-Béchet, 1867), 104.

remade Bois de Boulogne, “a combination of wild wood and noble pleasure garden,” similarly describing the fusion of naturalistic with urbane qualities.⁴⁵

As for the second sense of *urbanization*, that of *city-building*, landscape architecture under Alphand contributed to the expansion and reorganization of modern Paris, by joining with infrastructure and serving a broad public. Here the art of gardens submitted to the regime of *travaux publics* (public works) long overseen by the engineers of the *ponts et chaussées*. Alphand, in *Les Promenades de Paris*, advocated using landscape architecture and planning to transform old cities, “*non en réalisant des œuvres de fantaisie et de vain faste comme dans l'antiquité, mais en appliquant les conquêtes de la science et de l'art à la viabilité et à la salubrité de la grande cité*” (not in realizing works of fantasy and vain pomp like in antiquity, but in applying the conquests of science and art to the viability and health of the great city).⁴⁶ Addressing an international audience of princes, bureaucrats, landscape architects and engineers, he noted that the enjoyment of public space was no less important than the promotion of public health in the architecture of the urban landscape.⁴⁷ One of the conditions of urban garden art was a disparity of extreme scales: the *Service des Promenades et Plantations* worked on tiny plazas, long boulevards, and large parks alike; and often on a very compressed schedule.

Many of the squares and parks were designed simultaneously with other public works, from individual streets and buildings to the development of new neighborhoods.

⁴⁵ William Robinson, *The Parks, Promenades, and Gardens of Paris* (London: John Murray, 1869), 18.

⁴⁶ Alphand, *Promenades*, LIX.

⁴⁷ *Ibid.*

For example, the Square du Temple (1857), a miniature landscape garden, accompanied a new iron-and-glass market hall, a modern public laundry (conveniently adjacent to the old used textile marketplace), and the local government hall built in the 1860s. A vault and deck built over of the Canal Saint-Martin, newly deepened to remain navigable, allowed for the creation of the Boulevard Richard-Lenoir (1861-63), planted in linear gardens. Numerous urban intersections received islands of trees and fountains. The goal, according to Alphand, was to bestow upon all quarters of the city, “*des avantages que procurent les végétaux et l'eau, au point de vue de l'aspect agréable de la cité et de ses conditions de salubrité*” (the advantages that plants and water procure, from the point of view of the city’s beauty and cleanliness).⁴⁸

Thirdly, the landscape architecture of the Second Empire reflected the fast-moving culture of the growing metropolis through a heightened density of program and effects. Alphand’s comment, “*Il faut que le paysage change d'aspect à mesure que l'on se déplace*” (the landscape must change its appearance as one moves through it), speaks to an aesthetic of moving scenery.⁴⁹ It is impossible not to mention the Parc des Buttes-Chaumont, with its extreme relief of cliffs and lake punctuated by sweeping views (fig. 1.9). But the other parks and larger squares exhibited more humble versions of the same pursuit of variety and effect. Horticultural practices also catered to a demand for sensory *éclat*: the public gardens remained in a state of near-perpetual bloom throughout the spring and summer, thanks to the labor-intensive practice of replacing the annuals

⁴⁸ *Ibid.*, 240.

⁴⁹ Alphand, *Promenades*, LVIII.

between their first and second bloom cycles. Audot could witness his beloved geraniums bloom twice per season, because the municipal nurseries at Passy kept fresh specimens or “replacement plants” on hand, “*pour que jamais on ne puisse apercevoir de vides ni de fleurs passées*” (so that one can never notice gaps or dead flowers).⁵⁰

Public gardens, traditionally a class apart

The art of public gardens in France essentially stalled during the century before Louis-Napoléon declared himself Emperor and appointed Varé to redesign the Bois de Boulogne in late 1852 or early 1853. While irregular, naturalistic gardening in the picturesque or *anglo-chinois* style flourished on private estates in France from the 1770s, it made little impact on public gardens and promenades in France up until the 1850s. Theorists and practitioners doubted the possibility of improving upon the winning formula of linear *allées* and parterres, perfected under Le Nôtre and his immediate successors in the era of the Bourbon monarchs. The gardens adjacent to the Tuileries (fig. 1.10) and Luxembourg palaces remained the standard-bearers for the French *jardin public*. These spaces, though replanted several times between 1650 and 1850, adhered to the spirit of Baroque garden art, if in simplified form.

⁵⁰ Louis-Eustache Audot, *Les nouveaux jardins des Champs-Élysées, du parc de Moncaux et des squares de la ville de Paris* (Paris: Audot, 1865), 8-9, 16-17. Audot asserted that the horticultural resplendence of the public gardens of Paris surpassed anything that would be possible in a private garden, because of the expenses involved in their planting and maintenance (16). Yet as Alphand’s lists of costs show, flowers and horticulture in general was often the least expensive aspect of the public works of Paris.

The whole notion of *paysage*, or landscape, was associated firmly with the countryside and its picturing. But the situation had changed considerably in France by 1868, when the historian Baron Ernouf proclaimed, “*L’art des jardins publics est, de toutes les branches de l’horticulture d’agrément, celle qui a pris de nos jours le développement le plus considérable.*” (The art of public gardens is, among all the branches of horticulture for pleasure, the one that has developed most considerably in our time).⁵¹ To see how radical a change this statement signified, it is worth reviewing several generations of theory that preceded it. The question of regular or irregular surface disposition might appear to concern “merely” aesthetics and changing tastes. But considered in the *longue durée* of landscape practice, there was more at stake, namely a debate over the possibility that nature—even if just a carefully edited version of nature oriented towards appearances—could have a place in the city.

The proscription against naturalistic landscape design in public space was formulated as early as 1771, in the preface to the French translation of the Thomas Whately’s influential *Observations on Modern Gardening*. Whately’s text of 1770 expressed an avid preference for curving layouts over symmetrical and regular ones, but did not address the topic of public gardens. So the author’s French translator, Latapie, wrote to ask for clarification. In response, Whately replied that public gardens formed a “class apart” from the rest of modern garden practice, and required wide, straight, tree-

⁵¹ Alfred-Auguste Ernouf, *L’art des jardins : histoire, théorie, pratique, de la composition des jardins, parcs, squares*, Vol. 2 (Paris: J. Rothschild, 1868), 161.

lined allées.⁵² Public gardens were thus excluded from the body of *modern*, i.e. naturalistic, garden art, and confined to their Baroque form.

French garden theorists soon echoed Whately's pronouncement. In 1774, Claude-Henri Watelet set aside public and urban gardens as the responsibility of architects and government officials—rather than garden artists. Public gardens demanded a simple, symmetrical layout to maintain order, safety, and ease of social gathering, he wrote.⁵³ In other words, urban gardens had functional requirements that offered little room for the lyrical expression of natural beauty. On the other hand, rural and suburban sites offered landscape gardeners more varied design opportunities, not to mention more business opportunities, where they might pay homage to nature or at least mine it for scenographic effects. In 1776, the French engineer and landscape architect Jean-Marie Morel, who generally despised regular and rectilinear layouts, agreed with Whately and Watelet in circumscribing the design of public gardens to well-aligned *allées*. For Morel, the traditional layout best served the social spectacle:

[Les Jardins publics] ne font que des places plantées d'arbres, située dans

l'enceinte des villes, où les citoyens se rendent non pour jouir du spectacle de la

⁵² François de Paule Latapie, “Discours préliminaire,” introduction to Thomas Whately, *L'art de former les jardins modernes, ou L'art des jardins anglois*. Trans. Latapie (Paris: Charles-Antoine Jombert, 1771), liv. I do not quote from the text because Latapie has rendered Whately's (probably English) correspondence in French, so the gist will suffice.

⁵³ Claude-Henri Watelet, *Essai sur les jardins* (Paris: Prault, 1774), 8-9. “Quant aux jardins de villes, leurs dispositions me semblent appartenir plus particulièrement à l'Architecture qu'aux autres Arts. En effet, les promenades publics... doivent être regardés comme des lieux de réunion et d'assemblée : la simplicité, la symétrie y sont convénables... l'ordre et les moeurs exigent que tout y soit facilement aperçu” (As for the gardens of cities, their arrangement appears to me to belong more particularly to architecture than to the other arts. In effect, public promenades... should be regarded as places for gathering and assembly: simplicity and symmetry are suitable here... orderliness and morality require that everything can be easily overseen).

*Nature, mais pour prendre une exercice momentané; où ils se rassemblent, pour étaler leur luxe et satisfaire leur curiosité.... C'est-là qu'il faut un terrain (sic) bien de niveau, des arbres bien alignés, un marcher facile en tous temps;... c'est-là enfin qu'il faut que la disposition soit telle que les promeneurs d'un et de l'autre sexe, dont le but et de se montrer, voient tout du même coup d'oeil et paroissent avec avantage; parce qu'ils sont tout-à-la-fois et spectateurs et spectacle.*⁵⁴

[Public gardens] are nothing but plazas planted with trees, located inside the city walls, where people go not to enjoy the spectacle of nature, but to take some quick exercise; where they come together to flaunt their luxury and satisfy their curiosity.... Here the terrain must be level, the trees well-aligned, for easy walking in all weather;... the layout must allow *promeneurs* of one and the other sex, whose mutual goal is to show themselves, to see everything at a glance and to appear advantageously; because they are at the same time spectators and spectacle.

In a similar vein, Girardin's widely read treatise, *De la composition des paysages* (1777), left no room for an application of landscape gardening principles to public gardens. Girardin focused on rural sites, excluding urban space except to reiterate the classical idea of the *place publique* at the junction of numerous roads, and the provision

⁵⁴ Jean-Marie Morel, *Théorie des jardins* (Paris: Pissot, 1776), 19-20.

for exercise outside the city walls.⁵⁵ Nearly a half-century later, garden designer Gabriel Thouin once again reaffirmed that public gardens and urban gardens must be *symétrique*; the vast majority of his designs published in *Plans raisonnés de toutes les espèces de jardins* (1820) were intended for the grounds of private villas or bourgeois country homes.⁵⁶ Quatremère de Quincy's *Dictionnaire historique d'architecture* of 1832 repeated the time-honored assumption that asymmetrical layouts and curving landforms were ill-suited for the public realm. Quatremère wrote, with regard to the *genre irrégulier* (irregular genre):

*“Il ne sauroit être raisonnablement employé dans ce qu'on appelle jardin public, ou promenade destinée à réunir la multitude des personnes qui les fréquentent pour voir et pour être vues. Aussi remarque-t-on que toutes les villes pour qui la promenade publique est le lieu de rendez-vous du grand nombre, ne pratique les jardins et leurs allées qu'en lignes droites, et selon le système régulier”*⁵⁷

(it cannot reasonably be employed in a so-called public garden, or a promenade designed to gather a multitude of people who go there to see and to be seen. We also note that all the cities in which the public promenade is the meeting place of the masses, only make their gardens and walkways in straight lines, and according to the regular system).

⁵⁵ René Louis de Girardin, *De la composition des paysages ou Des moyens d'embellir la nature autour des habitations, en joignant l'agréable à l'utile*. (Geneva: Delaguette, 1777), 108-109.

⁵⁶ Gabriel Thouin, *Plans raisonnés de toutes les espèces de jardins* (Paris: Lebégue, 1820), n.p (Préface).

⁵⁷ Antoine Chrysostôme Quatremère de Quincy, *Dictionnaire historique d'architecture Vol. 2* (Paris: Adrien Le Clere, 1832), 36.

Again in 1847, the botanist and geologist Pierre Boitard glossed quickly over the *jardin public* and *promenade publique*. He explained the former as analogous to the Luxembourg and Tuileries gardens, and the latter as consisting of rows of shade-giving trees.⁵⁸ As late as 1859, well into the Second Empire, Louis-Eustache Audot, aided by Boitard, released a new edition of the venerable *Traité de la composition et de l'ornement des jardins* (first published in 1818 as *Essai sur la composition et l'ornement des jardins*) without bothering to address public gardens. They explained, rather unconvincingly, that this genre was the province of the architects.⁵⁹ Whether or not that was true, it reflected a state of affairs in which the genre of public gardens was seen as closed to creative design.

Redefining the public garden

Even as French garden theorists and practitioners segregated public gardens from the modern garden art, their counterparts in Europe and Britain began experimenting with rustic forms in urban space, challenging the old formula. The Englischer Garten of Munich, opened to the public in 1789, offered the pleasures of the landscape garden (as well as agricultural and veterinary research) to the citizens of the city. It was built just outside the old city walls, but those walls were demolished shortly after the park's opening, allowing the city to grow around the park. In the 1820s-30s, John Nash designed several landscape parks in London, notably St. James Park and Regent's Park, for the

⁵⁸ Pierre Boitard, *L'art de composer et de décorer les jardins*, 3rd edition (Paris: Roret, 1847), 20.

⁵⁹ Pierre Boitard, *Traité de la composition et de l'ornement des jardins*, 6th edition (Paris: Audot, 1859), 49.

Prince Regent (Later King George IV), though the Crown frequently allowed the public to enter.⁶⁰

The first truly public urban landscape park was probably The Royal Victoria Park (Bath, 1830), designed by city architect of Bath, Edward Davis, though it was not a municipal park.⁶¹ The first municipal landscape park was Birkenhead Park (Birkenhead, England, 1847), funded by an act of Parliament and designed by Joseph Paxton. These parks responded to growing concerns about the spread of diseases and urban crime in an era of working-class migration to cities. They also showed that urban public uses were not incompatible with naturalistic and picturesque landscape design. In many respects, the Parisian parks and gardens of the Second Empire followed international precedents in bringing picturesque landscape design and the image of nature into the public, urban realm. It is not hard to find echoes of the London parks and squares in Paris.

However, the public promenades of Paris did not merely emulate British examples. Where they surpassed these precedents, as Choay has argued, was in “*le traitement de la ville dans son entièreté, selon une répartition équilibrée*” (treating the city as a whole, according to a balanced distribution).⁶² The British historian Conway agrees: “none of these [early nineteenth-century parks of London] could compare with the replanning of Paris... public parks formed an integral part of the new developments

⁶⁰ See Hazel Conway, *People's Parks, The Design and Development of Victorian Parks in Britain* (Cambridge, England: Cambridge University Press, 1991), 13-14.

⁶¹ *Ibid.*, 15.

⁶² Choay, “Système des espaces verts,” 86. Choay believes it was Haussmann, especially, who reoriented landscape practice toward urban systems and a global conception of the city.

undertaken by Baron Haussmann.”⁶³ The original contribution of the Service des promenades et plantations was in integrating landscape practice and theory with urban planning and development. The vision of the city as an orderly whole was part of *l'idée napoléonienne*, the idea of Napoléon I to unite the disparate, unruly *quartiers* of Paris.⁶⁴ It was a vision largely unachieved by the time his nephew took power, but one with which he and his prefect, Haussmann, sympathized greatly. The irony was that the engineers responsible for implementing the idea of order upon the city were moving away from the Enlightenment ideal of geometrically regular urban form, towards an idea of “dynamic regulation” that could respond to irregularities in furnishing the desired results.⁶⁵

The advances in “public gardening” in Paris were evident to William Robinson, the Irish critic and gardener who dwelt in London, writing in 1869:

In Paris, public gardening assumes an importance which it does not possess with us; it is not confined to parks in one end of the town, and absent from the places where it is most wanted. It follows the street builders with trees, turns the little squares into gardens unsurpassed for good taste and beauty, drops down graceful fountains here and there, and margins them with flowers; it presents to the eye of

⁶³ Conway, *People's Parks*, 7.

⁶⁴ See Richard Becherer, *Science Plus Sentiment: César Daly's Formula for Modern Architecture* (Ann Arbor, Mich.: UMI Research Press, 1984), 172-173.

⁶⁵ Antoine Picon, “Les modèles de la métropole,” in *Le Paris des Polytechniciens : des ingénieurs dans la ville : 1794-1994*, eds. Bruno Belhoste, Francine Masson, Antoine Picon (Paris: Délégation à l'action artistique de la ville de Paris, 1994), 141. “La substitution de l'idée de régulation dynamique à l'idéal de régularité géométrique va de pair avec le renforcement des liens entre ville et territoire tissés par les ingénieurs.”

the poorest workman every charm of vegetation; it brings him pure air, and aims directly and effectively at the recreation and benefit of the people.⁶⁶

The hallmark of the new urban landscape practice was its close integration with the urban fabric (Its weaknesses, Robinson noted, included excessive undulation of the ground, and occasionally poorly designed plant groupings.⁶⁷) The promenades of Paris served as aesthetic pleasure grounds, but they also answered to utilitarian demands. They were supposed to contribute to public health, according to the science of the era, by providing access to fresh air, water, sunlight, shade, and space to exercise. In various cases they were also supposed to raise surrounding property values to balance the city's budget, to enhance political support for the administration, to educate the public about plants, and to smooth over awkward junctions in the layout of streets and boulevards.

The alliance between landscape architecture and urban development across the city took a few years to gel. Alphand was initially called simply to take charge of the renovation of the Bois de Boulogne, already well underway in late 1854, without a sense of the larger mission that awaited him as head of what grew into a large and important municipal agency, the *Service des Promenades et Plantations*, or park service, formally established on February 28, 1856. Yet there were calls for an expansion of the scope of landscape operations from commentators such as the journalist Louis Lazare, a sometime

⁶⁶ Robinson, *Parks, Promenades*, 2.

⁶⁷ *Ibid.*, 7, 48.

critic of Napoléon III.⁶⁸ In 1855, Lazare urged Alphand, whom he praised for managing the renovation of the Bois de Boulogne (notwithstanding the fact that Varé and Baudard had done most of the work through 1854), to turn his attention to “*le déplorable état de nos plantations parisiennes*” (the deplorable state of our Parisian plantings).⁶⁹ He could not have imagined the square- and park-building fury to come. If Alphand’s engineering colleagues initially chuckled at his new post as head of a “gardening” service, they changed their minds when they began to understand the importance of landscape architecture in reshaping Paris, Haussmann recalled: “*la raillerie fit place à l’envie*” (mockery gave way to envy).⁷⁰

Infrastructure in the Garden

There was something conspicuous about the leafy new public squares of Paris in the 1860s. “*Presque jamais on n’y peut oublier un moment qu’on est dans la patrie de gaz, de l’asphalte et du macadam*” (You can almost never forget for a moment that you are in the kingdom of gas, asphalt, and macadam),” noted the journalist and historian Victor Fournel.⁷¹ Even many observers who appreciated the abundant greenery, exotic plants, and flowing water could not help noticing the presence of urban infrastructure that now

⁶⁸ Lazare, a onetime government functionary, had a mixed relationship with the authorities of the Second Republic and the Second Empire, as discussed in Stephen W. Sawyer, *Locating Paris: The Parisian Municipality in Revolutionary France, 1789-1852*. Phd Dissertation, University of Chicago (Ann Arbor: ProQuest/UMI, 2008, Publication No. 3300447), 397-405.

⁶⁹ Louis Lazare, “Paris,” *Gazette municipale – Revue municipale*, 1 Nov. 1855, 1280.

⁷⁰ Haussmann, *Mémoires III*, 127.

⁷¹ Victor Fournel, *Paris nouveau et Paris futur* (Paris: Jacques Lecoffre, 1865), 89.

underpinned the garden. One author referred to the courtyard of the Tuileries as an “immense savannah planted with gaslamps instead of banana trees.”⁷² Making light of the urban quality of the renovated Parc Monceau, the satirist Fontenay quipped: “*Au milieu du parc de Monceau / Ces cascadelles si chétives / Sont les pleurs des nymphes plaintives / Que le gaz a fait fuir d’un lieu jadis*” (In the middle of the Parc Monceau / the puny little waterfalls / Are the tears of the crying nymphs / Whom the gas made flee from a once beautiful place.)⁷³ Architecture and infrastructure helped shape the environmental conditions of the new public squares, even as the squares were supposed to cleanse the urban environment with infusions of fresh air, light and aromas. For example, the increasingly ubiquitous gaslamps—markers either of the safety or the danger of the night, depending on one’s perspective—emitted not only light but also exhaust. According to André, a clump of Rhododendrons planted in the place Richelieu were “destroyed by the emanations of gas and the lack of air,” and had to be replaced with ivy.⁷⁴

The pedestrian promenade along the center of the newly created Boulevard Richard-Lenoir was dotted with large vents—concealed by rings of shrubs—that allowed light and air to pass through to the Canal Saint-Martin below (figs. 1.11). Alaphand called upon his engineering skills to organize the deepening of the canal, allowing it to remain navigable, followed by the construction of a vaulted roof and deck supporting the new

⁷² Paul-Ernest Rattier, *Paris n'existe pas* (Paris: Balarac Jeune, 1857), 41, in Walter Benjamin, *The Arcades Project*. Ed. Rolf Tiedmann. Trans. Howard Eiland & Kevin McLaughlin (Belknap / Harvard University Press, 2002), 422.

⁷³ Henri de Fontenay, *Boutades d'un promeneur dans Paris* (Paris: A. Laplace, 1867), 113.

⁷⁴ Edouard André, “Les Jardins de Paris” in *Paris-Guide par les principaux écrivains et artistes de la France, Vol. 2—La Vie* (Paris: Librairie Internationale, 1867), 1208.

boulevard (fig. 1.12). He seems to have considered the project one of his greatest achievements, and noted how it primed real estate development in the formerly *déclassé* canal district.⁷⁵ The pedestrian area in the center of the boulevard includes gardens, fountains, and market areas today, which betray little trace of the waterway below. It is only at the edge of the vault, and in the pages of *Les Promenades de Paris*, that Alphand openly reveals the overlay of canal and garden. In these moments of disclosure, the project rises to the level of infrastructure as conceived by Berrizbeitia and Pollack: “the graft that joins landscape to architecture remains visible in an unselfconscious manner, challenging a naturalistic conception of landscape whose ‘art’ is dedicated to concealment.”⁷⁶ The technical glory of the hydraulic plant of Saint-Maur, used to lift water to the lakes of the Bois de Vincennes, was revealed only in pictures (fig. 1.13). In several cases, Alphand and his collaborators attempted to express and monumentalize the otherwise hidden systems of circulation. An example can be found in the unbuilt proposal for a 31-meter tower and fountain atop the artesian well of Passy (figs. 3.21, 3.22). On a smaller scale, more than a dozen fountains and cascades in different parks and squares express the technical work of water supply as civic ornament.

Experiments carried out by Alphand and the *Service des Promenades et Plantations* sometimes set precedents for urban construction operations. For example, Alphand’s team used a steamroller to pave roads in the Bois de Boulogne in 1860, rather than a horse-drawn cylinder. In 1861, they successfully used a *double-cylinder*

⁷⁵ Alphand, *Promenades*, 239.

⁷⁶ Anita Berrizbeitia and Linda Pollak, *Inside Outside: Between Architecture and Landscape* (Gloucester, Mass.: Rockport, 2003), 13.

steamroller to finish the Avenue Daumesnil in the Bois de Vincennes, paving the way for the widespread replacement of horse-drawn rollers with double-cylinder, steam-powered models.⁷⁷ Although the machines initially frightened horses, the engineers Darcel and Labry predicted in 1862, that the horses of Paris would eventually grow accustomed to the noise and steam, just as the horses in the Passy district had grown accustomed to the shrieking trains running alongside the jardin du Ranelagh.⁷⁸

Picturesque landscapes were compatible with railway infrastructure, both in material and aesthetic terms. At the beginning of the renovation of the Bois de Vincennes, in 1856, the fill from the excavation of the Lac des Minimes helped build up the embankment of a railway between Nogent and Joinville, which today forms part of the RER network toward La Varenne.⁷⁹ From high upon the plateau of Gravelle, also in the Bois de Vincennes, it was the *view* of trains in the distance, en route to Lyon and Orléans, that Alphand appreciated. The two distant rail lines, he wrote, “*animent le paysage par le panache ondoyant de la fumée des locomotives*” (animate the landscape by the waving plume of smoke of the locomotives)⁸⁰ (fig. 1.14). Another placid lake in the Bois de Vincennes, that of Saint-Mandé (fig. 1.15), sits only 100 meters or so from a different portion of the same railway. It did not in the least spoil the landscape for Alphand, who wrote:

⁷⁷ Alphonse Alexis Debauxe, *Manuel de l'ingénieur des ponts et chaussées* (Paris: Dunod, 1873), 217.

⁷⁸ *Ibid.*, 218.

⁷⁹ *Ibid.*, 156.

⁸⁰ *Ibid.*, 165.

“Placé au fond d'une vallée verdoyante, entouré de routes sinueuses, encadré de plantations magnifiques, alimenté par des ruisseaux aux capricieux méandres, retombant çà et là en chutes sonores, le lac de Saint-Mandé est une des parties les plus pittoresques de la nouvelle promenade.”⁸¹

(Placed at the bottom of a verdant valley, surrounded by sinuous paths, framed by magnificent plantings, fed by meandering streams, falling here and there in sonorous chutes, the lake of Saint-Mandé is one of the most picturesque parts of the new promenade.)

Sitting by the placid lake in the Parc Montsouris (fig. 1.16), the muted rumble of trains periodically joins the sounds of chirping birds, quacking ducks, and rustling willows. The source of this noise is a railway trench, visible from above (fig. 1.17), which bisects the park and is punctuated by a station at the park's edge. When the Parc Montsouris opened in 1868 (though its construction lasted into the 1870s), it epitomized a progressive synthesis between garden and infrastructure.⁸² The Parc Montsouris is traversed by the trench of a second railway line, that of the *chemin de fer de ceinture*, or belt railway, completed in time for the 1867 *Exposition universelle* (abandoned in the 1970s). This rail circuit also passes through the Parc des Buttes-Chaumont, where Alphand's team exploited its kinetic effect of trains in the landscape: a restaurant directly

⁸¹ *Ibid.*, 159.

⁸² Gabrielle Heywang considers this aspect in “Le parc Montsouris, un parc haussmannien,” *Histoire de l'art* 73 (Dec. 2013), 4-5.

overlooks the mouth of the tunnel from which trains emerged. Railroads technologized³¹ the garden, while the gardens naturalized the railroads.

Theory catches up to practice

In the 1860s, French landscape theory finally began to reflect the urbanization of garden art taking place in Paris. The change was palpable in the way authors gave more consideration to the *jardin public*, and suspended old biases about its appropriate form. César Daly reflected in 1863 that with the sole exception of the Square des Arts-et-Métiers (1858, today Square Émile-Chautemps), “*Aucun de nos jardins publics, postérieurs à 1852, ne s'est inspiré de nos vieilles traditions nationales*” (Not a single one of our public gardens built since 1852 take after our old national traditions).⁸³ His article in the *Revue* considered the series of urban landscape projects undertaken in recent years, and anticipated others soon to come, such as the park of the Buttes-Chaumont. Gone were the conventions dutifully repeated in turn by Whately, Watelet, Morel, Thouin, Boitard, and Audot. The form of the landscape garden now overlaid the site of the public garden and *place*. Public spaces, liberated from inherited typological constraints, suddenly figured more prominently in garden theory and practice.

In 1865, Audot, no doubt aware of the inadequacy of his outdated treatise, published a brief description of the horticulture of the renovated Champs-Élysées, the Parc Monceau, and the squares. The article contains little theoretical reflection, but it

⁸³ Daly, “Promenades et plantations,” 129.

does renounce the old orthodoxy. Audot states that any gardens not directly connected with a building façade need not follow regular geometries.⁸⁴ Urban squares, though surrounded by buildings, are free to follow an irregular layout, he reasons, since their enclosing grillwork and intervening streets separate them from architectural facades.⁸⁵ Even conventional garden art manuals and source books began to acknowledge the progress in public gardens alongside private ones. *Parcs et jardins* (1865) by A. de Cérés begins with a series of instructions on survey and planning techniques for would-be (private or amateur) gardeners, but then illustrates best design practices with reference to the Parc Monceau, the two *bois* of Boulogne and Vincennes, the Champs-Élysées, “*et bientôt le parc de la butte Chaumont où l'on nous promet un chef-d'œuvre*” (and soon, the parc of the Buttes-Chaumont where we are promised a masterpiece).⁸⁶ Edouard André, senior gardener of Alphand’s park service, authored publications on horticulture in 1865 and 1866, mixing in a few words on public gardens based on his experience in Paris.⁸⁷ Both of these works were published by the firm of Jules Rothschild, an enthusiast of botany who had translated and published Rudolph Siebeck’s *Guide Pratique du Jardinier Paysagiste* in 1863, and continued to publish other titles in the field.

In 1867, the year the *exposition universelle* returned to Paris, a raft of publications trumpeted the new era of public gardening, first of all in the many guidebooks marketed to visitors. Some of the guidebooks, such as the one published by Bernardin-Béchet, took

⁸⁴ Audot, *Les nouveaux jardins*, 4.

⁸⁵ *Ibid.*, 5.

⁸⁶ A. de Cérés, *Parcs et Jardins* (Paris: Librairie agricole de la maison rustique, 1865), 72.

⁸⁷ See André, *Le Mouvement Horticole en 1865* (1865) and *Les Plantes à feuillage ornemental* (1866).

the form of a narrated promenade through the notable spaces of the city, including squares and parks.⁸⁸ The most remarkable was the *Paris-Guide*, in which dozens of celebrated authors and journalists each explored one aspect of the urban landscape.⁸⁹ One large section, “Promenades dans Paris,” covered gardens, bois, boulevards, plazas, squares, quays, and special neighborhoods inside the city. Another section, titled “Paris en Promenade,” took readers on short jaunts outside the city walls, in the traditional manner of suburban promenade. Another section, “*Paris souterrain*” (Paris Underground), divulged the sewer, water, and gas utilities as well as the old quarries and catacombs. Also in 1867, Hachette published *Les parcs et les jardins* by André Lefevre, concluding with a review of the renovated Bois de Boulogne and Vincennes. Daly noted in 1867 that he had been gathering material for a comprehensive publication on the new landscape architecture or promenades of Paris, until he learned that Alphand was preparing a monograph of his own.⁹⁰

Alphand’s *Les Promenades of Paris* (1867-73) warrants its own bibliographic history, which I undertake in the next section. For purposes of continuity with the present discussion, let us note that Alphand advanced the theory of public gardens farther than his predecessors, but more through drawing and description than through theoretical discussion as such. In his introductory essay, he only tentatively theorized the

⁸⁸ Décembre-Alonnier, *Les Merveilles du nouveau Paris*. Paris: Bernardin-Béchet, 1867. Comparable guidebooks can also be found from early and middle years of the Second Empire.

⁸⁹ *Paris-Guide par les principaux écrivains et artistes de la France, Vol. 2—La Vie*. Paris: Librairie Internationale, 1867.

⁹⁰ César Daly, “Bois de Boulogne,” *Revue Générale de l’Architecture et des travaux publics* (1867), 240.

urbanization of garden art that took place under his watch. But even Alphand's rather laconic remarks on public gardens are considerably more substantive than those of most of the authors of the preceding century. Alphand clearly respected the traditional social function of the *jardin public*, but he did not feel compelled to reproduce its traditional forms. A public garden might have a curving layout similar to those long since adopted in private gardens, he wrote—a radical departure from long-established norms—but it would still be different in important respects. A public garden or park needed more and wider paths, and more entrances and exits to accommodate visitors moving in different directions.⁹¹ Even if designed in a naturalistic style, he added, it should have open spaces and vistas to allow people to see each other.⁹²

Pragmatic questions of security, surveillance, durability, and comfort also had to be considered. And, in the case of small public gardens thronged with visitors—such as the Square des Arts-et-Métiers (1862, today Square Émile-Chautemps), bordered by a theater and two thoroughfares—it was best to plant trees in rows or *quinconces*, in the traditional way, to ensure sufficient shade cover for promeneurs and free space for children's games (figs. 1.18-1.19).⁹³ As for street plantings, Alphand deemed public gardens and tree-lined avenues “*absolument nécessaires*” (absolutely necessary) inside large cities, because they could supposedly help thwart infectious disease.⁹⁴ He added, however, that the plantings served, “*autant pour donner de l'agrément que pour*

⁹¹ Alphand, *Promenades*, LVIII.

⁹² *Ibid.*

⁹³ *Ibid.*, LIX.

⁹⁴ *Ibid.*

introduire dans les villes un élément de salubrité” (as much to give enjoyment as to introduce into cities an element of health).⁹⁵ In short, Alphand’s concept of the *jardin public* acknowledged the practical necessities of serving an urban public, while allowing for new experiments in the expression and enjoyment of nature in the city.

Other authors soon followed suit. The historian Alfred-Auguste Ernouf, an admirer of Alphand’s candidly reflected the dramatic evolution of public gardening in his own treatise of 1868. He devoted an entire 75-page section of his treatise to public gardens, explaining, “*L’art des jardins publics est, de toutes les branches de l’horticulture d’agrément, celle qui a pris de nos jours le développement le plus considérable.*” (The art of public gardens is, among all the branches of horticulture for pleasure, the one that has developed most considerably in our time).⁹⁶ He even speculated that public gardens, harbingers of democracy and enlightened planning, would soon overtake private gardens in offering the largest and most interesting design opportunities.⁹⁷ Ernouf’s book, like Alphand’s, was published by Rothschild in 1868 in two volumes, but sold at half the price.⁹⁸ By this time, Rothschild offered a whole library of horticulture-related titles, though most of the others were aimed at specialists. In 1869, William Robinson published *The Parks, Promenades, and Gardens of Paris*, almost half of which is devoted to the work of Alphand’s park service, the other half devoted to the agriculture of fruits,

⁹⁵ *Ibid.*

⁹⁶ Ernouf, *L’art des jardins* (1868), 161.

⁹⁷ *Ibid.*

⁹⁸ Alphand’s treatise was offered at 5 Francs for each volume; Ernouf’s at 5 Francs for both volumes. See the publisher’s catalogue following Ernouf’s *L’art des jardins* of 1868.

vegetables, and mushrooms sold in Parks food markets. Robinson noted that in a previous essay of his on French gardens, “the question of public gardening was scarcely alluded to,” a lacuna remedied in the 1869 text.⁹⁹

The engineer Alfred Darcel, a colleague of Alphand’s authored a treatise for engineer-gardeners in 1875, *Étude sur l’architecture des jardins*, influenced by Alphand. In 1879, Edouard André, horticulturist and landscape architect formerly employed by the *Service des Promenades et Plantations*, lucidly expressed the alliance between landscape and urban art in his own treatise, *L’art des jardins*. Although André was more artist than engineer, he embraced the collaboration required for urban development projects. He wrote, “*Ici le travail de l’ingénieur, de l’architecte et de l’édile se mêle à celui du paysagiste. Cette question est l’une des plus complexes de l’art des jardins*” (Here the work of the engineer, the architect and the politician blend with that of the landscapist. This question is one of the most complex in all of garden art).¹⁰⁰ The landscape architect thereby gave up the creative independence of the artist, André explained, but gained a new set of important design opportunities.¹⁰¹ André’s treatise included a taxonomy of garden types in which he identified as many sorts of *public* parks and gardens as *private* ones, reflecting a reorientation of the professional field that was well underway. He even elevated the status of the diminutive urban square to the “*premier rang des jardins*

⁹⁹ Robinson, *Parks, Promenades*, xvii.

¹⁰⁰ Édouard André, *L’Art des jardins* (Paris: G. Masson, 1879), 188.

¹⁰¹ *Ibid.*

publics d'agrément” (first rank among public pleasure gardens).¹⁰² By the time of this publication, Haussmann had been out of office for a decade, but Alphand remained more powerful than ever as director of public works in Paris.

Ernouf and Alphand joined forces to author a treatise published by Rothschild in 1886, *L'art des jardins*.¹⁰³ The name of Alphand, the more illustriously renowned of the two, was printed in slightly larger font. Some historians who quote this text have attributed the writing to Alphand, but this is likely mistaken. The title page identifies it as the third edition of Ernouf's text, “*entièrement refondue, avec le concours de A. Alphand*” (entirely worked with the assistance of A. Alphand). The editor's preface states much the same.¹⁰⁴ The chapter on design technique—*Tracé des jardins irréguliers ou paysagers*—is taken from Alphand's *Les Promenades de Paris*, and perhaps Alphand wrote the section on *Le Service des Promenades à Paris*. Most of the history and theory, however, is Ernouf's, as a comparison with Ernouf's 1868 treatise confirms.

Ernouf's key insight was simple: “*On a été longtemps à le comprendre, mais aujourd'hui la démonstration en est faite, le tracé d'une ville doit comprendre des jardins publics*” (We took a long time to understand, but today it has been demonstrated, the layout of a city must include public gardens).¹⁰⁵

¹⁰² *Ibid.*, 194.

¹⁰³ Alfred-Auguste Ernouf and Adolphe Alphand, *L'art des jardins*. Paris: Rothschild, 1886.

¹⁰⁴ *Ibid.*, IX. “*Pour ce travail, entièrement refondu, nous avons obtenu le précieux concours de M. Alphand qui a bien voulu nous autoriser à reproduire les préceptes formulés dans l'introduction de son grand ouvrage sur les Promenades de Paris.*”

¹⁰⁵ Ernouf, *L'art des jardins* (1886), 352.

Treatise and tome: *Les Promenades de Paris*

In 1868, the Paris-based publisher Jules Rothschild published the first installments of Alphand's treatise, *Les promenades de Paris: Bois de Boulogne, Bois de Vincennes, parcs, squares, boulevards*. The publisher promoted this work as more than just an illustrated description of the celebrated projects accomplished in Paris. According to an advertisement published in another of Rothschild's titles on garden art, *Les Promenades de Paris* constituted: "*un traité complet, théorique et pratique, de L'ART DES JARDINS PUBLICS, branche spéciale et, en grande partie, nouvelle de l'horticulture d'agrément; c'est un oeuvre d'actualité sur un sujet moderne*" (a complete theoretical and practical treatise on THE ART OF PUBLIC GARDENS, a special and largely new branch of pleasure gardening; it is a contemporary work on a modern subject [caps original]).¹⁰⁶ Unlike conventional gardening treatises marketed to amateurs, Alphand's *Promenades* was addressed primarily to professionals and institutions.¹⁰⁷ The publisher recommended this "*ouvrage de luxe*" (luxurious work) to engineers, architects, horticulturists, amateurs, libraries, and "*surtout aux administrations publiques*" (especially to public administrations). The publication was subsidized by the municipal administration, which recognized a chance to celebrate an achievement and further

¹⁰⁶ The advertisement for *Les Promenades de Paris* appeared in the publisher's catalogue included at the end of Ernouf's *L'art des jardins* of 1868. It was also reprinted verbatim in a laudatory review signed M.V. (Maxime Vauvert?), "Les Promenades de Paris," *Le Monde illustré*, 24 Oct. 1868, 267.

¹⁰⁷ Chiara Santini, "*Les promenades de Paris* de Charles-Adolphe Alphand, in *Projets de paysage* 10 July 2011. http://www.projetsdepaysage.fr/fr/_les_promenades_de_paris_de_charles_adolphe_alphand_ (accessed 3 Nov 2015)

Parisian influence. The timing of publication capitalized upon the triumph of the 1867 World's Fair, which had begun with the Emperor's inauguration of the Parc des Buttes-Chaumont in the newly annexed 19th arrondissement.

The treatise was offered for purchase in two separate *livraisons* (shipments) or installments, *grand in-folio*, unbound. Each *livraison* cost 5 Francs, or 10 Francs for an edition printed on finer paper.¹⁰⁸ Recipients were responsible for binding the pages themselves if they wished. Surviving copies are found in differing states of completion and sometimes with different page or plate sequences. Typically the treatise consists of one volume of text and another of plates, but it is also possible to find versions bound in three or even five volumes. A bibliographic listing in the *Revue Générale d'Architecture* of 1869 lists the "1^{re} livraison" (first section) of *Les Promenades de Paris* as consisting of just 12 pages and one plate. According to several library catalogues, Alphand's treatise was "issued in 96 parts," each part probably corresponding with one or more folded *in-folio* sheet, representing up to four pages of double-sided text, and any number of single-sided plates.¹⁰⁹ By 1870, a reviewer in the London-based *Athenaeum* wrote, "the work is issued in two parts," indicating a more consolidated version.¹¹⁰ But these two parts seem

¹⁰⁸ Advertisement for *Les Promenades de Paris* in Ernouf's *L'art des jardins*, 1868.

¹⁰⁹ Both the University of Pennsylvania and Yale University library catalogues state, "Issued in 96 parts," as of 6 Nov. 2015.

¹¹⁰ "*Les Promenades de Paris, &c, Par A. Alphand,*" *The Athenaeum*, No. 2243 22 Oct 1870, 526.

to have included just the text and plates pertaining to the Bois de Boulogne and Bois de Vincennes.¹¹¹

Measuring 66 cm tall, the bound tomes of *Les Promenades de Paris* are imposing objects to hold and behold. The *Athenaeum* deemed Alphand's treatise "the grandest work devoted to the subject of ornamental gardening that has ever been published, to our knowledge," despite criticizing the modern French style of landscape gardening as "frittered, meaningless, and overladen with details," plus costly to maintain.¹¹² The journal explained, "We have in these pages minute details of the operations of engineers, landscape-gardeners, planters, road-makers, well-sinkers, architects, iron-founders,—of all, in fact, whose services were called into requisition in carrying out these magnificent projects." British readers could apparently purchase a copy from the London-based publisher Hardwicke.¹¹³

The international list of subscribers, printed in the book itself, is ranked into three categories, and includes over 800 names.¹¹⁴ Royalty and high officials occupy most of the premier category. Overall the list is heavily skewed toward institutions, government agencies, libraries, horticultural societies, farm schools, botanical gardens, and other

¹¹¹ The *Athenaeum* had apparently received both text and plates in 1870, and added that the parts already published, "complete the history of the Bois de Boulogne and of Vincennes, and in so far are complete" (*Ibid.*). Furthermore, it is in the text pertaining to the *voie publique* of the city that Alphand refers to the destruction wrought by the siege and Commune of 1870-71, indicating that it was written (or edited) at a later stage (Alphand, *Promenades*, 246)

¹¹² *Les Promenades*, "The *Athenaeum*, 526.

¹¹³ *Ibid.*, 525.

¹¹⁴ The three lists of subscribers, unpaginated, are often bound at the beginning of the first volume, though not always.

professionals for whom *Les Promenades de Paris* could serve as a useful and authoritative resource. Its stature in the literature of garden art in the second half of the nineteenth century is comparable to that of earlier works by Dezalier d'Argenville, the Marquis de Girardin, or Morel in their own time. The difference is that *Les Promenades de Paris*, buoyed by a tide of urbanization, transcended the traditional disciplinary boundaries of garden art to become an essential source on modern urbanism and planning.¹¹⁵ While most subscribers resided in France, the list indicates that the book was shipped to many other cities in Western and Eastern Europe and to Russia, South America (Argentina, Brazil, Cuba), North America (Chicago, Boston, New York, Philadelphia), and Algeria.

In 1873, Rothschild offered a full, two-volume set for sale, even more lavish than the inaugural edition. “*C'est un panorama gigantesque et féerique que l'auteur nous offre en deux beaux volumes in-folio*” (It is a gigantic and fairylike panorama that the author offers us in two handsome volumes in-folio), gushed a reviewer, who like many Parisians held Alphand in highest esteem despite Haussmann's fall from grace in 1869.¹¹⁶ On this occasion the publisher added a new title and a new title page. The title became: *Les*

¹¹⁵ According to Grumbach, “This book can be considered as the essential treatise on urban art for the second half of the nineteenth century, as influential for architecture as Durand's was in the first half.” See Grumbach, “The Promenades of Paris,” *Oppositions* 8 (Spring 1977), trans. Barsoum and Lipstadt, 51. A few years later, the Editor-in-Chief of Princeton Architectural Press introduced a facsimile reprint of the treatise by declaring it “the most widely read treatise on urban art in the nineteenth century.” See Kevin C. Lippert, “About this Book,” *Les Promenades de Paris* (Princeton, N.J.: Princeton Architectural Press: 1980), np. An even finer facsimile edition appeared in 2002 from the French publisher, Connaissances & Mémoires, with prefatory essays by Alain Frèrejean, Philippe Thiébaud, and Georges Pédro. In 2010, Alphand's treatise was digitized by the Bibliothèque de l'Institut National d'Histoire de l'Art (INHA), and in 2013 by the Bibliothèque nationale de France.

¹¹⁶ F. Ricard, “Les Promenades de Paris,” *L'Univers illustré*, 3 May 1873, 278.

Promenades de Paris, histoire, description des embellissements, dépenses de création et d'entretien des bois de Boulogne et de Vincennes, Champs-Élysées, parcs, squares, boulevards, places plantées. Etudes sur l'art des jardins et Arboretum. The addition of words such as *histoire* (history), *dépenses* (expenses), and *Arboretum* suggest a refocused drive to appeal to a professional readership. The new title page was dated 1867-73, despite the fact that the original was dated 1868. I have not found any explanation for this discrepancy. Perhaps Rothschild was simply correcting the record, if in fact they had begun issuing parts of the treatise in 1867. It is certainly possible that most of the text and artwork, at least those pertaining to the two *bois*, were ready by 1867. The adjusted date also might reflect an effort to emphasize continuity with the gaiety and glory of the World's Fair of 1867.

The first volume, in complete form, contains three parts: (1) a 59-page historical and theoretical introduction to the art of gardens since antiquity, illustrated with 105 wood engravings, (2) a 246-page description of the works accomplished in Paris, illustrated with around 400 wood engravings; and (3) tabulated horticultural data pertaining to all the species of trees and plants used in the promenades of Paris, organized into seven botanical categories (evergreen and deciduous trees and shrubs, climbing vines, flowers, etc.).

The second volume, sometimes called the “atlas,” contains 126 plates exclusively. Eighty of these plates are printed from steel engravings; the better to show off the fine draughtsmanship of delicately shaded architectural plans, sections, elevations, and details—surely one of the strongest aspects of the treatise. Twenty-two

chromolithographs illustrate the ornamental flora newly introduced to the public gardens of Paris. An additional chromolithograph enables a topographic plan of the Buttes-Chaumont, in which the “before” elevation contours appear in black, while the “after” contours appear as a vivid red overlay (fig. 1.20). The remaining twenty-three plates are perspective views printed from wood engravings, similar to the several hundred engravings that illustrate the text. Three “fold-out” spreads contain enlarged plans of the overall promenades of Paris, the Bois de Boulogne, and the Bois de Vincennes. Many of the drawings are by the talented Émile Hochereau, an architect who ranked as an *Inspecteur des Promenades de Paris* in Haussmann’s municipal works department. Auguste Bry, Jules Claye, Émile Dardoize, Gabriel Davioud, Joseph Durond, Jules Gaildrau, Auguste-Dieudonné Lancelot, and François Stroobant also signed their names to various plates.

Despite the publisher’s savvy marketing pitch of a treatise on the art of public gardens, Alphand devotes strikingly few words to the subject of public parks and gardens in his introductory essay. Surprisingly, this essay contains only a page devoted to “*Parcs et promenades des villes*,” compared with 10 pages devoted to laying out rustic country gardens. Similarly, in describing the works accomplished in Paris, Alphand’s treatment of the intramural *promenades intérieurs* (55 pages total for all of the parcs, squares, avenues, plazas combined) is dwarfed by his comparatively lavish descriptions of the Bois de Boulogne (148 pages) and, to a lesser extent, the Bois de Vincennes (37 pages). These large parks were more easily recognizable within the tradition of picturesque garden art, analogous to country estates. What Alphand does address in the opening essay

are the artistic merits of several millennia's worth of gardens, as well as design techniques for both regular and irregular gardens. Few of his ideas are groundbreaking, but he succeeds in establishing a point of view that frames and illuminates the more descriptive content of the following sections. A recurring theme is the influence of climate in shaping the possibilities of landscape design in any given region. Alphand consistently seeks to release the artist from any binding rules of design. Instead, he favors the development and exercise of what he calls *goût* (good taste), which equates less to pure aesthetic judgment and more to *discernment* in dealing creatively with real-world sites. The design of an irregular garden or park, he says, must begin with the study and shaping of the *relief*, or lay of the land, which encompasses hydrology and viewsheds. Plants come second, and paths come last.¹¹⁷

The next and more voluminous sections of the book approximate the descriptive format of a public works report: complete with neatly itemized tabulations of expenses, dimensions, components, and the like, they evoke, as Grumbach wrote, “an arithmetic of beauty” and a “calculus of sumptuousness.”¹¹⁸ Notably, Alphand includes a brief site history for each project he discusses. His technical operations are colored by a knowledge of the past. Alphand presents the Bois de Boulogne according to seven categories: (1) overview, (2) earthworks (ha-ha), (3) roads and paths, (4) forced and channeled water, (5) lakes, streams, and cascades, (6) forestry, planting, and horticulture, (7) works of architecture, (8) private concessions, (9) artesian well, (10) flower nursery. The reader is

¹¹⁷ Alphand, *Promenades*, XLVIII.

¹¹⁸ Antoine Grumbach, “The Promenades of Paris,” trans. Marlene Barsoum and Helene Lipstadt, *Oppositions* 8 (Spring 1977), 51-52.

left with a deep sense of topography and an understanding of the park renovation as half experiment, half plan.

The section on inner-city promenades is relatively short, but rich in its descriptive details. The design and execution of the squares, parks, and planted thoroughfares as a class also seem to owe as much to the legacy of public works such as roads and bridges, the bread and butter of the *ponts et chaussées*. Garden design practices of arranging perspectives and compositions take their cue from changes in elevation and the surrounding urban context. Alphand's terse writing, together with the well-rendered architectural drawings and perspective views, reveal a garden art attuned to the vicissitudes of urban space and culture. Amidst the mundane requirements of infrastructure utilities, property development, and security, the reader frequently finds something in excess of what is required—an excess that reflects an effort to ennoble the public realm with art.

Toward a continuum of urban landscape types

Alphand dispels the possibility of universal laws of garden art on the first page of his introduction to *Les Promenades de Paris*. He writes, “*L'art des jardins, doit différer dans des contrées différentes de climat, de relief; de même que les types humains diffèrent d'aspect et d'aptitudes, suivant les régions diverses où ils se développent*” (Garden art must differ in regions of different climate or terrain; just as human types differ in

appearance and capabilities, according to the different regions where they evolve).¹¹⁹ 46

Environmental factors, he argues, result in regional differences in the practice of garden art. He makes an analogy with the variability of human “types,” understood as races or civilizations, which would be interesting if not marred by the hierarchies of nineteenth-century anthropology and its exploitative colonial context. *Type* here signifies an irreducible category—whether in garden culture or human culture. In any case, this line of reasoning begins a long process of drawing distinctions among different historical and modern gardens from Egypt to Britain. Ultimately Alphand reduces all of garden art to a choice between to “*styles*”: regular (defined by orthogonal geometries) and rustic or irregular, as in a landscape garden.¹²⁰

The problem of classification is not confined to the historical-theoretical part of Alphand’s treatise, but arises again in the expository part. What he calls the *promenades* of Paris include a wide range of urban landscapes that must be organized for purposes of presentation. The division of chapters indicates a preliminary distinction between the large forest-parks located outside the city walls on the one hand, and on the other hand the smaller parks and walks inside the walls, called *promenades intérieures*. Among the latter, Alphand distinguishes between (1) *les parcs* (parks), (2) *les squares* (squares or small gardens), (3) *les places plantées* (plazas with vegetation), (4) *voies publiques plantées* (the most luxuriantly planted of the new avenues and boulevards, plus smaller plazas decorated with trees, and (5) *les plantations d’alignement* (the numerous *allées* of

¹¹⁹ Alphand, *Promenades*, I.

¹²⁰ *Ibid.*, XXXVIII.

trees and benches along the avenues and boulevards). This classification schema would seem straightforward enough, but it constitutes perhaps the first typological division of public urban landscapes.

The definition of genres and types was a serious topic in French garden art and architecture since the Enlightenment, reflecting a need to order and systematize knowledge. French garden theorists diverged in the 1770s on the appropriate way to classify gardens. Morel, an important predecessor for Alphand, identified four *genres* of landscape in his treatise of 1776: *Le pays* (countryside), characterized by variety of natural forms and processes; *le parc*, characterized by seigniorial nobility; *le Jardin proprement dit*, characterized by decorative elegance; and *la ferme*, characterized by economy and simplicity.¹²¹ These four genres are determined by the social status of the patron, but the landscape architect can only achieve the desired effect if the underlying qualities of the site permit such an intervention. As Disponzio notes, the categories begin to merge at their extremities, encompassing the entire cultural landscape and forming “a seamless transition from house to horizon.”¹²² The other eighteenth-century approach to classification was based on the affective qualities of a designed landscape, exemplified in Watelet’s enumeration of various “*caractères*” (characters): *Noble*, *Rustique*, *Agréable*, *Riant* (laughing or delightful), *Sérieux* (serious), *Triste* (sad).¹²³ Alphand accused Watelet

¹²¹ See Morel, 1776, chap. 3, “Division des Jardins,” analyzed by Joseph Disponzio, “Jean-Marie Morel and the Invention of Landscape Architecture,” in Hunt and Conan (eds.), *Tradition and Innovation in French Garden Art* (Philadelphia: University of Pennsylvania Press, 2002), 144-145.

¹²² Disponzio, “Morel and the Invention of Landscape Architecture,” 145.

¹²³ Watelet, *Essai sur les jardins*, 75-77.

and his followers, without naming them, of misapplying the rational “*esprit systématique*” (systematic spirit) of the Enlightenment to the ends of sentimental romanticism, with superficial results.¹²⁴ He was suspicious of designer-imposed classifications according to physiognomy, type, or character.¹²⁵

Alphand just as vigorously denounced the elaborate classification offered in Gabriel Thouin’s popular book of 1820, *Les Plans Raisonnés de toutes les espèces de jardins*. Thouin intended an all-encompassing system of classification, as suggested in the wording of his title, which translates roughly to, *Reasoned plans of all kinds of gardens*. He proposed a complex hierarchy of four *genres*, seven *sections*, and 25 *sortes* of gardens. As Michel Conan notes, Thouin’s book “was meant from the start as a source book for the largest possible number of rural owners starting with the humblest countrymen, up to the most wealthy owners, as well as for pleasure gardens built around townhouses.”¹²⁶ Thouin’s classification schema “emulates a botanical system,” Conan continues, “but fails to establish itself upon a hierarchical set of principles.”¹²⁷ Alphand partially reproduced Thouin’s classification in order to illustrate the shallow “*préoccupations*” of garden designers who would attempt to create “*un caractère particulier*” (a particular character) on any given piece of land, regardless of its existing

¹²⁴ Alphand, *Promenades*, XXXIII.

¹²⁵ *Ibid.*

¹²⁶ Michel Conan, “The Coming of Age of the Bourgeois Garden,” in Hunt and Conan (eds.), *Tradition and Innovation in French Garden Art*, 160.

¹²⁷ *Ibid.*, 160.

character.¹²⁸ Conversely, Alphand praised eighteenth-century landscape parks such as those at Méréville (designed by Bélanger with Hubert Robert for the Marquis de Laborde) and Ermenonville (by Morel with the Marquis de Girardin) for showing that “*l’intelligence de la nature simple et vraie suffit pour obtenir les effets les meilleurs*” (the simple and true intelligence of nature suffices to obtain the best effects).¹²⁹

The praise of simplicity—in classification schemes as well as in the landscape itself—was conventional by the 1860s in France, even if British observers often found the results overwrought. The 1859 edition of Boitard and Audot reviewed previous classification schemes from Whately to Morel to Thouin, and reduced them via two basic oppositions: regular versus irregular, and useful versus pleasure gardens.¹³⁰ In 1862, Théodore Bona’s commercially successful *Guide pratique du trace et de l’ornementation des jardins d’agrément* rejected “*la classification ridicule*” (ridiculous classification) into genres of moods in favor of three broad divisions: (1) *paysager* (irregular landscape), (2) *symétrique* (symmetrical), and (3) *mixte* (mixed regular and irregular).¹³¹ Alphand did not take up the “mixed” category, but his junior associate Edouard André later would.

Other important ideas about *type* and *genre* came from theories of architecture. In the writings of Quatremère de Quincy, the word *type* signified the most elemental

¹²⁸ Alphand, *Promenades*, XXXVII.

¹²⁹ *Ibid.*, XXXVIII.

¹³⁰ Audot and Boitard, *Traité la composition et l’ornement des jardins*, 1859, 7-9.

¹³¹ Théodore Bona, *Guide pratique du trace et de l’ornementation des jardins d’agrément* 4th ed. (Paris: Lacroix, 1865), II, 8. Bona identified himself as “Ancien architecte, directeur de l’école de dessin industriel de Verviers.” His book went into a fourth edition in 1865, only three years after the first edition.

expression of a given genre: an origin or archetype. *Type* did not imply a pre-determined formula or a model to be copied. Instead, for Quatremère, it signified an unseen essence that could inspire various artistic manifestations and interpretations.¹³² Meanwhile, an influential concept of *genre* was developed by Quatremère's contemporary, the architect and teacher Jean-Nicolas-Louis Durand. When Alphand entered the École Polytechnique as an engineering cadet in 1835, the architecture course still bore Durand's imprint; the latter had just retired in 1833 after a celebrated 37-year tenure. Durand's life's work was to systematize architectural knowledge in an attempt to streamline and rationalize the design process.¹³³ He reduced all possible architectural forms to a few elements that could be recombined with infinite variety, depending on the requirements and *genre* of the project. In this respect he continued a radical shift in the concept of form that began in the eighteenth century. Instead of expressing a unique essence, form came to represent a mere instance in a typology, like individual plant specimens belonging to a single species.¹³⁴ *Type* for Quatremère was a locus of artistic creativity; *genre* for Durand was a generator of design solutions. A hinge between the two notions of form can be found in the series of 60 toll gates designed by the neoclassical architect Claude-Nicolas Ledoux in the 1780s. These severe pavilions, which briefly marked all of the city's entrances, share a strong familial resemblance, though no

¹³² Quatremère, *Dictionnaire*, 629-30.

¹³³ See Leandro Madrazo, "Durand and the Science of Architecture," *Journal of Architectural Education* Vol. 48, No. 1 (Sept. 1994), 12-24.

¹³⁴ See François Dagognet, *Pour une théorie générale des formes* (Paris: Vrin, 1975), referenced by Michel Conan in "The Coming of Age of the Bourgeois Garden," in *Tradition and Innovation*, 160.

two are exactly alike. They are split in character between mundane public service and artistic ideals, just like Alphand's squares of the Second Empire.

In part, the work of Alphand's office (and more broadly Haussmann's public works department) reflects Durand's reductive and abstract design methods. The 12 *types* of sewers illustrate a typology, though they vary in breadth and shape (fig. 1.21).¹³⁵ The sectional views of the different boulevards differ only in the particulars (fig. 4.23). More relevant to the urbanization of garden art, however, are the squares. Designed and executed in rapid succession, the squares share a common set of components and forms, despite differing sizes, configurations, and details (fig. 2.3). Like Durand's analytical studies of hospitals or houses, they appear as members of a given species, elements in a series, or instances of a typology.

However, whereas Durand had identified the "elements of buildings" in the pure realm of geometry and drawing, Alphand insisted on sectional, topographic, and perspective studies to understand each site. He criticized landscape architects who relied too heavily on planimetric geometries and birds-eye perspective, without adequately taking into account slope gradients and relative distances as perceived by an embodied viewer on the ground.¹³⁶ Alphand, like Morel before him, believed that any attempt to enhance a site had to proceed from an understanding of flow of water, the composition of

¹³⁵ The engineering of the sewer system was overseen not by Alphand, but by Belgrand. Despite the impressive diversity of the typology, a caption above the modest 12th type reads, "*construit sous la presque totalité des rues de Paris*" (constructed underneath almost all the streets in Paris), indicating a degree of standardization.

¹³⁶ Alphand, *Promenades*, XLV.

the soil, the regional climate, and other environmental factors. In the case of the urban *milieu*, the surroundings of a site held a similar importance. Hence Alphand's plans of the squares include the surrounding streets and even a hint of the surrounding buildings, which are shaded darker in case of public buildings such as town halls, theaters, or churches. Although all of the squares and parks were fenced in with a grille, they surpassed those boundaries in forging connections with streets, buildings, cafés, and communities.¹³⁷

Returning to Alphand's classification of the promenades of Paris (large *bois*, parks, squares, plazas, and two groups of planted avenues and boulevards), it is clear that he did not adhere to the genres as formulated by his predecessors. He saw little need to distinguish between regular and irregular designs, and no possibility of distinguishing between the useful and the pleasurable. Instead, his division suggests a hierarchy based principally upon scale, intensity of use, and porosity with the city. The largest and least urban are the two *bois* at the opposite edges of the city. They contain the remnants of older forests as well as new roads, water systems, guardhouses, and stylized park and garden areas. Inside the city walls, the medium-size parks, also enclosed, are connected to the city center by new or remade avenues and boulevards. The numerous squares are significantly smaller in extent, and more closely affiliated with thoroughfares and buildings, but still enclosed to separate them from common traffic. Most urban of all are the promenades overlaid upon the *voie publique*, or public right-of-way. Plazas are

¹³⁷ Andrea Kahn has distinguished the physical limits of a site from its "operational" or working limits, which include "co-present, but not necessarily spatially coincident fields of influence and effect." See Kahn, "Defining Urban Sites," in *Site Matters: Design Concepts, Histories, and Strategies*, ed. Carol J. Burns and Andrea Kahn (New York: Routledge, 2005), 285.

similar in proportion to squares, but they are mostly paved and open to traffic; their vegetation is restricted to a few trees and shrubs. The remaining promenades have a linear configuration. Contiguous with avenues and boulevards, they are planted, shaded, illuminated, watered, drained, and furnished for the comfort of pedestrians.

The distinctions between Alphand's five categories blur at the edges. His categorical distinction between the Boulevard Richard-Lenoir, with its green median built atop the canal, and common tree-lined walks along the boulevards, would be lost on many *promeneurs*. At the same time, the middle part of the Boulevard Richard-Lenoir could be seen as a succession of 16 miniature "squares," as Daly called them.¹³⁸ André stuck with the term *jardin*, but specified: "*une serie de rectangles plantés d'arbustes et de fleurs, coupés aux intersections des rues, et reliés ensemble par de belles avenues de Platanes*" (a series of rectangles planted with shrubs and flowers, cut by the intersecting streets, and linked together by beautiful avenues of plane trees). Another project that defies easy classification is the renovated Champs-Élysées, which Alphand includes among the three *parcs*. The Champs-Élysées is better known for its avenue, which belongs to the *voie publique*, but Alphand wanted to emphasize the newly designed gardens set back from the tree-lined avenue. These gardens, interspersed with theaters and other attractions, resemble the squares individually, but collectively add up to a park.

By grouping the projects according to scale and urban density, generalizing from the single to the many, Alphand allows them to be read as part of a single continuum. The term *promenade* links all the genres together. His use of the term proposes an interesting

¹³⁸ Daly, "Promenades et Plantations," 248.

bridge between spatial design and spatial practice, and between the art of walking and the more quotidian needs of the urban public. Just as importantly, it announces the need for a catch-all term for everything from a landscape park to a small public square or a tree-lined boulevard. The older term *aire* (open ground) might have done, but it had fallen out of use.¹³⁹ The name of the new meta-category of urban landscape would ultimately become the more prosaic *greenspace*. The change is evident in Haussmann's memoirs written in the 1880s-90s, in which he freely uses the term *promenades*, but also slips in a few generic alternatives. He speaks of "*espaces plantés*" spread across the entire surface of the city,"¹⁴⁰ and calls the squares "*enclos verdoyants*."¹⁴¹ Most tellingly, he used the term "*espaces verdoyants*" (green spaces), a forerunner to the modern French *espace vert*.¹⁴²

Napoléon III, Haussmann wrote, had bestowed upon the entire population of Paris, "*tous ces espaces verdoyants, dispensateurs de salubrité, défenseurs de la vie humaine que leur influence bienfaisante prolonge, offrant par surcroît, des lieux de repos et de plaisance aux travailleurs et à leurs familles*" (all these green spaces, providers of health, protectors of human life, which their beneficent influence extends, and offering,

¹³⁹ d'Argenville defined this term as, "*un terrain plein & uni sur lequel on se promene, tel que seroit la place d'un parterre, d'un potager, le fond d'un boulingrin, & autres.*" See Antoine-Joseph Dezallier d'Argenville, "Open ground," *The Encyclopedia of Diderot & d'Alembert Collaborative Translation Project*, trans. Ann-Marie Thornton (Ann Arbor: Michigan Publishing, University of Michigan Library), 2013. <http://hdl.handle.net/2027/spo.did2222.0001.730> (accessed 12 Aug. 2015). Originally published as "Aire," *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers*, 1:238 (Paris, 1751).

¹⁴⁰ Haussmann, *Mémoires*, 226.

¹⁴¹ *Ibid.*, 239.

¹⁴² *Ibid.*, 173.

moreover, places of rest and pleasure to workers and their families).¹⁴³ The previous usage of *espace vert* pertained to agriculture and agronomy, not to urban pleasure gardens. For example, an agricultural report from 1849 mentioned “*vastes espaces verdoyants qui ressortent agréablement aux yeux de l'agronome, sur les guérets et les chaumes*” (vast green spaces that stand out nicely in the eyes of the agronomist, on fallow land and stubble).¹⁴⁴ In another conventional usage, an oasis in the Saharan desert was said to contain clusters of palm trees and “*de grands espaces verdoyants qui sont couverts d'orge et de blé*” (large green areas covered with barley and wheat).¹⁴⁵ In Haussmann’s diction, *green space* is the new meta-garden. This banal über-type seems to encompass any space marked by vegetation, in implicit contrast with urban pavement. It vaguely alludes to the pursuit of health and pleasure, but lacks the cultural associations of *promenade* and *jardin*.

Systematization, differentiation, and accommodation

Louis Audot considered the new garden squares as all but interchangeable, horticulturally speaking, with the Parc Monceau, the Pré-Catelan, and the side gardens of the Champs-Élysées. He wrote in 1865, “*Tous ces jardins sont sous la même main, sous la même direction; les mêmes plantes peuvent servir à tous et être transportées des cultures*

¹⁴³ *Ibid.*, 173.

¹⁴⁴ “Séance public du 18 Sept 1849,” *Bulletin de la Société libre d'agriculture, sciences et arts de Provins* [Seine et Marne] (Provins: Lebeau, 1849), 12.

¹⁴⁵ “Lettres d’Algerie,” *Le Temps* 12 Apr. 1873.

générales de Passy successivement, pour contribuer à la variété de chaque jardin, de chaque scène” (All these gardens are under the same hand, the same management; the same plants can be used in all of them, transported successively from the conservatories of Passy, to contribute to the variety of each garden, of each scene).¹⁴⁶ Audot praised the diverse combinations achieved with a recurring series of plants.

But other observers mocked or objected to the self-similarity of the Second Empire promenades. For example, the satirist Laborieu complained of Alphand:

*La nature d'Alphand se compose d'une grotte, d'un ruisseau, d'un arbre et d'un kiosque, et il répète partout, — du bois de Vincennes au bois de Boulogne, — la même grotte, le même ruisseau, le même banc, le même kiosque et le même arbre de squares. J'aime mieux les forêts vierges.*¹⁴⁷

(The nature of Alphand is composed of a grotto, a stream, a tree, and a kiosk, and he repeats it everywhere—from the Bois de Vincennes to the Bois de Boulogne—the same grotto, the same stream, the same bench, the same kiosk, and the same tree for the squares. I prefer virgin forests.)

The appeal to virgin forests, though totally irrelevant with respect to the urban landscape, pointed out the fabricated quality of the promenades, and their seeming lack of spontaneous variety. What Labourieu remarked in the passage above, was the systematization of the urban landscape. The parks embodied the “synthetic modern

¹⁴⁶ Audot, *Les nouveaux jardins*, 16.

¹⁴⁷ Théodore Labourieu, *Le Petit Vapereau, lanterne biographique et satirique* (Paris: Walder, c.1880), 11-12.

style”—adaptable to any project or site, following Durand’s method— associated with ⁵⁷ nineteenth-century polytechnicians.¹⁴⁸ The serial reproduction of landscape in the form of urban gardens could therefore appear banal as well as marvelous. The progressive idea of integrating landscape architecture with the city was somewhat obscured by the aesthetic reproduction of the style of Barillet-Deschamps, as his Parisian designs were imitated not only in other cities’ public gardens and parks, but also in many private gardens in France. This “Second Empire” garden style paradoxically came to stand for something interchangeable and divorced from its cultural and environmental milieu, as Limido has argued.¹⁴⁹

Alphand himself was aware of the pitfall of repetition—which is why he withheld the details from his description of most of the parks and squares, after having first enumerated them with respect to the Bois de Boulogne. He wanted to spare the reader from “*une répétition fastidieuse*” (a tedious repetition), he wrote.¹⁵⁰ André, in his own treatise of 1879, castigated garden designs that appeared “stereotyped” (referring to Capability Brown) or “cast in a uniform mold” (the plantings along French rail lines).¹⁵¹ Part of the impetus to repetition came from the scale of the municipal endeavor. Building so many squares and parks in so short a time strongly encouraged a tendency toward standardization that mirrored industrial production techniques. The “technological

¹⁴⁸ Michael Lewis, conference paper, Architecture Education Goes Outside Itself: Crossing Borders, Breaking Barriers, University of Pennsylvania, 8 Feb. 2013.

¹⁴⁹ Limido, *Barillet-Deschamps*, 252-253.

¹⁵⁰ Alphand, *Promenades*, I.

¹⁵¹ André, *L’art des jardins*, 75, 195.

reproducibility” of the modern garden, to retool a phrase from Walter Benjamin, posed ⁵⁸ conceptual and methodological challenges both to those who created and those who used these public spaces, eroding the singularity of each given landscape.¹⁵² It was a challenge to which Alphand, Barillet-Deschamps and Davioud could not hope to fully resolve, but to which they responded with admirable gumption amidst the pressures of building so much, so fast.

A standard set of available urban landscape components or “ingredients,” as Grumbach observed, could be variably combined, as in cooking, to yield many different dishes.¹⁵³ Horticulture was only one ingredient among others such as earthworks, roads, water, rocks, grilles, pavilions, and furniture. Luisa Limido has characterized the design style of Barillet-Deschamps as, “the repetition of different elements, always combined in a different and original manner.”¹⁵⁴ David Jordan concurs, “Repetition of the major elements, subtle variation of the detail is the architectural language of Haussmann’s Paris.”¹⁵⁵ The garden artist as well as the engineer and the architect embraced large-scale, industrial methods of production. They saw reproducibility—of plants, of grilles, of gaslights, even of designs—as a virtue and necessity of their time, validated not only by economy but also by the democratization of art (read: for a wider bourgeois audience, not

¹⁵² Walter Benjamin, “The Work of Art in the Age of Its Technological Reproducibility,” trans. Michael W. Jennings, in Jennings, ed., *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media*. Cambridge, Mass.: Harvard/Belknap, 2008. Benjamin published three versions of this essay in the 1930s under the title, “*Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit*.”

¹⁵³ Grumbach, “Promenades,” 52, 55.

¹⁵⁴ Limido, *Barillet-Deschamps*, 244 (translation mine).

¹⁵⁵ Jordan, *Transforming Paris*, 162.

just an aristocratic one). The *Service des Promenades et Plantations* did not replicate designs verbatim from one site to another, but developed a recurring—and ever-expanding—family of components to be recombined in myriad ways. Serial public works demanded not blind repetition, but the capacity for subtle differentiation, to reflect and enhance the use and identity of each place.

Gabriel Davioud similarly combined systematic with artistic methods in designing street furniture and fixtures for the promenades. These included benches, lamps, gates, boat launches, urinals, vendor kiosks and poster columns. Each wrought-iron fence or *grille* around the perimeter of a square or park had a distinctive design (fig. 1.22), despite having a standard height (one meter) and mass (100kg per linear meter).¹⁵⁶ For example, the grille of the Square des Innocents had delicate botanical motifs, while the three-tiered pattern of grille of the Square Louvois was “perhaps the most beautiful in Paris,” according to the trade journal, *Album pratique de l’art industriel*.¹⁵⁷ Streetlamps or “candelabras” came in freestanding and building-mounted versions, with variable numbers of lamps per pole. Public urinals appeared in multiple configurations, none of which, regrettably, had facilities for women. All of this equipment served to mediate between the scale of the human body and the scale of the modern city.

¹⁵⁶ See “Grille en fer forgé du square Louvois,” *Album pratique de l’art industriel*, July-August 1862, 37.

¹⁵⁷ *Ibid.*

Alphand frequently used the word “*système*” to signify a *method* of one or another operation.¹⁵⁸ The broader notion of an overall “system of green spaces” and a systematization of the urban landscape is the retrospective contribution of historians such as Choay and Marceca. This reading is certainly warranted by the evidence. However, the conception of the urban landscape of Paris as a system should not be misconstrued with the execution of an *a priori* masterplan or an autonomous regime of technological elements. Alphand and his team continually modified and adjusted their designs in response to particular constraints and opportunities. As Picon, historian of engineering, has noted, Alphand’s work and monograph “reflect an alliance between the design of grand ensembles and particular solutions, as well as technical logics and aesthetic preoccupations.”¹⁵⁹

The systematic approach of the Service des Promenades et Plantations can be seen, for example, in the horticultural factories that they opened in order to make vegetation as prevalent throughout the urban landscape of Paris as sidewalks and gaslights. Barillet-Deschamps established five municipal nurseries and arboreta over the course of several years, which together constituted “*la plus vaste usine de plantes qui existe*” (the largest factory of plants that exists), in César Daly’s words.¹⁶⁰ Two nurseries, dedicated to growing perennial plants and street trees, respectively, were sited adjacent to the Bois de Vincennes. Three more facilities were located in or around the Bois de

¹⁵⁸ The Gallica web interface of the Bibliothèque nationale de France enables a full-text search by word, though it probably does not recognize every single instance.

¹⁵⁹ Picon, “Modèles de la Ville,” 146.

¹⁶⁰ Daly, “Promenades et Plantations,” 131.

Boulogne: one for deciduous trees, one for evergreens and ericaceous plants, and one, known as la Fleuriste de la Muette, for germinating and raising flowers and other “*cultures de luxe*,” (luxury cultivation).¹⁶¹ In 1860, at the age of 20, André was appointed director of this “*grand laboratoire horticole*” (great horticultural laboratory), as he later put it, expanding to encompass over 30 conservatories.¹⁶²

A staff of 80-100 workers tended hundreds of thousands of plants at a given time, producing three million plants per year (figs. 1.23-1.24).¹⁶³ An elaborate steam-heat system controlled temperature and humidity levels year-round, allowing for different biomes in different enclosures. Heated brick platforms warmed the soil from below.¹⁶⁴ Tropical specimens were trundled out in the spring and returned for winter in gas-heated cellars.¹⁶⁵ A specially built fleet of carts, equipped with winches and gears, transported mature trees of up to 20m in height from the facilities in the bois to central urban plazas, or wherever they were needed.¹⁶⁶ Fresh flowering plants replaced those that had already bloomed at mid-summer. Off-limits to the general public, the plant factories were

¹⁶¹ André, “Jardins de Paris,” 1215.

¹⁶² *Ibid.*. See also André, “La nouveau fleuriste de la ville de Paris,” *Revue Horticole* 71 (c.1899), 576. Max Kolb directed the Fleuriste de la Muette from 1855 to 1859, at which point André assumed the leadership just in time to oversee a major expansion, “*un des meilleurs souvenirs de ma carrière*,” (one of the best memories of my career), he recalled. The city added large new conservatories for palms, camellias, ferns, ficus, and other plants; as well underground caves.

¹⁶³ André, “Jardins de Paris,” 1215-1216. In his later memoir in *Revue Horticole* (above), he estimates the number of employees as 120.

¹⁶⁴ Sand, “Rêverie,” 1199.

¹⁶⁵ Alphand, *Promenades*, 126-141.

¹⁶⁶ *Ibid.*, 46. The largest of the carts, built of iron, was pulled by a team of seven to nine horses, and could carry trees with a root ball 2.5m in diameter. Mature chestnuts, for example, were planted in the Place de la Bourse and Place du Châtelet.

indispensible to the systematization of horticulture, and thus the urbanization of garden art in Paris. The industrial scale and efficiency with which the Service des Promenades et Plantations cultivated plants was not unlike the manufacture of the glass panels and iron parts of the conservatories themselves.

Not all horticultural operations went seamlessly, however. The *Service des Promenades et Plantations* had to invent remedies, calling upon a combination of horticultural, agronomical, and civil engineering techniques. For example, unfavorable soil and drainage conditions stymied the establishment of an arboretum on low-lying terrain in the Bois de Boulogne. The first remedy, raising the ground with one meter of fill, failed to make the saplings thrive. Then arborists implemented a drainage system, but with little effect. Finally, at significant expense, they dug up the whole site again and put the old topsoil on top of the newer fill, and at last the trees began to grow.¹⁶⁷ Another source of difficulty was the lush new lawns of the Bois de Boulogne. Fine grass did not thrive in the siliceous soils of the Bois, nor even in the topsoil derived from the excavated lakebeds.¹⁶⁸ Alphand and Barillet-Deschamps mixed alluvial soil with *terreau de ville*, or compost, to create a new, three-centimeter-thick layer of topsoil around the lakes.¹⁶⁹ But beetle larvae devoured the lawns of highly visible areas like the Butte Mortemart and La Muette.¹⁷⁰

¹⁶⁷ Alphand, *Promenades*, 143.

¹⁶⁸ *Ibid.*, 51.

¹⁶⁹ *Ibid.*, 52.

¹⁷⁰ *Ibid.*

Beyond organizing mass horticulture, the *Service des Promenades et Plantations* had to solve other systematic challenges, like irrigation. Alphanth experimented with various methods, and reported their costs and benefits in *Les Promenades de Paris*. Not only lawns and plants, but also the dirt roads in the two bois and three parks had to be watered every few hours, in the summer, to keep down the dust. One hose design—before the age of rubber—used an articulated series of tubes (fig. 1.25). Another “ingenious” approach, according to a trade journal, was pioneered at the Parc Monceau, consisting of hoses punctured with of “imperceptible holes... from which the water sprays in fine molecules to fall upon the surrounding lawns in the state of rain.”¹⁷¹ The thousands of wood benches installed along the promenades had to be repainted every year, and repaired as necessary.

On a technical level, the *Service des Promenades et Plantations* made vast quantities of soil more permeable by mixing in sand, and more fertile with nutrient-rich topsoil. Where there were no sewers to provide drainage, they dug sump pits. In the Bois de Boulogne, they would space these sumps regularly, around every 200 meters, but would sometimes substitute cubical for cylindrical models so as not to destroy the roots of nearby trees. They sealed newly dug lakebeds with concrete as necessary, depending on the porosity of the ground (of the two main lakes in the Bois de Boulogne, only the larger and lower one required a liner). As a branch of public administration, Alphanth’s office received and processed a large volume of public enquiries, complaints, and requests for special permits or design modifications. The bureau employed thousands of

¹⁷¹ “Promenades et Plantations,” *Album Pratique de l’ Art Industriel*, Nov-Dec. 1862, 54.

staff, from laborers and guards to architects and engineers. Human resources and public communications factors thus further distinguished the practice of urban landscape architecture from garden art as hitherto known.

Laugier wrote in 1753 that architects should not hesitate to incorporate the features of irregular building sites into their designs for houses and “*petites appartements*” in the city. Rather than insist on regularly shaped and proportioned sites, “*il tirera grand parti des irrégularités même*” (he will take inspiration from the irregularities themselves).¹⁷² Similarly, Alphand and his collaborators had to make the most of often irregular and sometimes infertile, poorly drained, or awkwardly positioned sites. This reality diverged from the inherited wisdom of the *Encyclopédie*, which advised that a successful garden required a careful selection of site, or “*situation du terrain*” (situation of the terrain), as measured by good soil, sunlight, water, views, and relative convenience.¹⁷³ Early on, in 1856, Alphand’s park service converted the pit from which they had extracted gravel to form the roads of the Bois de Boulogne, into the lush gardens of the Pré-Catelan. From 1864 to 1867, they converted a much larger site of extraction, the gypsum quarry and dump once known as *Chauve-mont*, or bare hill, into the celebrated park of Buttes-Chaumont. Several squares, such as the Square Montholon (1862) and Square des Ménages (1869) were carved out of irregular, residual parcels of

¹⁷² Marc-Antoine Laugier, *Essai sur l'Architecture* (Paris: Duschesne, 1753), 174.

¹⁷³ "Site." *The Encyclopedia of Diderot & d'Alembert Collaborative Translation Project*, trans. Ann-Marie Thornton (Ann Arbor: Michigan Publishing, University of Michigan Library), 2013. <http://hdl.handle.net/2027/spo.did2222.0002.421> (accessed [1 Aug. 2015]). Originally published as "Situation du terrain," *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers*, 15:232–233 (Paris, 1765).

land appropriated for the construction of boulevards.¹⁷⁴ Alphand excelled in “the accommodation of leftovers,” to borrow a felicitous phrase from Grumbach.¹⁷⁵

The transplantation of mature trees up to 15 meters tall—enabled by and signifying the artifice of urban forestry—was an endless source of admiration and derision alike (figs. 1.26-1.28). However, Alphand urged discretion in its use. Although the service had mastered the technique to the point where they could expect survival of nine-tenths of transplanted trees, these had to be selected and handled carefully, he noted, and the advantage of providing immediate shade was offset in the long run by the fact that they seldom grew robustly in their new soil.¹⁷⁶ Alphand concluded, “*Ces arbres restent toujours chétifs, pendant plusieurs années, et ne valent jamais, dans la suite, ceux qui ont été transplanté dans leur jeune âge*” (These trees remain stunted for many years, and in the end are never worth as much as those transplanted at a young age).¹⁷⁷ When transplantation was necessary (or demanded by the client), Alphand counseled a range of special measures required to keep the tree in health, from wrapping the trunk to tending the roots and recalibrating the soil.¹⁷⁸ Here Alphand’s hesitation to use extravagant techniques contradicts the image of a technology-happy engineer eager to conquer nature with mechanical means.

¹⁷⁴ Haussmann, *Mémoires*, 244, 248.

¹⁷⁵ Grumbach, “Promenades,” 54.

¹⁷⁶ Alphand, *Promenades*, 245.

¹⁷⁷ *Ibid.*

¹⁷⁸ *Ibid.*, 49-50.

It is in the moderation of technique, as much as in the perfection of technique, that Alphand's contribution to urban landscape architecture comes into focus. Some of the challenges faced by the park service defied systematic solutions—or at least standard or universal ones. The promenades of Paris demonstrate a versatile response to diverse sites, scales, and programs, as well as variations in environmental conditions. Although *Les Promenades de Paris* presents an collection of projects constituting a systematic approach to urban landscape architecture, the resolution of individual sites tells a more nuanced story. Alphand did not conceive of the whole ensemble, network, or system of projects at once; nor did his staff design it as a seamless whole. In many cases they were thrust into action or stymied by legislative maneuvers between Haussmann and the municipal council. Their systematic approach permitted variation as necessary, while still defining a recognizable language of forms and materials.

Some adjustments were intended to accommodate specific users and programs. For example, Alphand's office specified the grade and consistency of the sand used to cover the paths of the squares to be comfortable (not too abrasive) to children's skin.¹⁷⁹ In response to the requests of neighborhood residents, the bureau sometimes installed additional street entrances to the squares.¹⁸⁰ They considered requests to plant additional trees to shade private concessions, and, conversely, to remove trees to make space for concerts and other events. Even André, who self-identified as an artist, emphasized that

¹⁷⁹ *Ibid.*, 291.

¹⁸⁰ Richard Stephen Hopkins, Jr., *Engineering Nature: Public Greenspaces in Nineteenth-century Paris*. Phd Dissertation, Arizona State University (Ann Arbor: ProQuest/UMI, 2008, Publication No. 3339528), 252.

urban landscape design ultimately depended upon the requirements of convenience, usefulness, climate, financial resources, and time.¹⁸¹ Avoiding a rigid adherence either to pure naturalism or pure geometry, the Service des Promenades et Plantations engaged systematically with the imperfections and the contingencies of the urban environment and the urban public.

¹⁸¹ André, *L'art des jardins*, 140.

2. Squares, or Gardens at the Crossroads

“The future belongs to gardeners”

“*L’avenir est aux jardiniers*” (The future belongs to gardeners), Émile Zola predicted, much to his chagrin, in 1867.¹⁸² Although Zola admired the countryside and large pastoral parks, he was irked by the new Parisian *squares*, small public gardens introduced during the years of the Second Empire, which he ridiculed as, “*des lambeaux de prairie dans les carrefours*” (scraps of meadow in the crossroads).¹⁸³ The young author confessed in the pages of the daily *Figaro* that he detested these fenced-in “*parcs microscopiques*” (microscopic parks) in which grass and flowers were “*en étalage comme dans les vitrines d’un magasin*” (on display as in shop windows). He complained of narrow pathways, noisy surroundings, and chatty crowds occupying the benches, all of which left him with the impression of a “*lambeau de campagne violemment trainé dans la boue d’une ville*” (shred of countryside dragged violently into the mud of a city.)¹⁸⁴ Most of all, he resented the squares’ synthetic construction and their close connection to urban development. These landscapes had little to do with bucolic nature as he liked to think of it:

¹⁸² Émile Zola, “Les Squares (Dans Paris),” *Le Figaro*, 18 June 1867, 2.

¹⁸³ *Ibid.*

¹⁸⁴ *Ibid.*

*De temps à autre, Paris, aveuglé de poussière, jette un îlot de verdure dans l'océan grisâtre de ses maisons. Dès que la pioche des démolisseurs a changé tout un quartier en une vaste place nue et blanche de plâtre, des jardiniers arrivent avec de la terre grasse et des molles de gazon dans de brouettes; on apporte quelques arbres et quelques rochers, on creuse une mare, on trace des allées que l'on borde de pots de fleurs enfoncés dans le sol et, huit jours après, on livre aux passants un jardin étroit qui ressemble vaguement à un décor d'opéra-comique.*¹⁸⁵

(From time to time, Paris, blinded by dust, throws an island of greenery into the grayish ocean of its houses. No sooner have the demolition crew's pickaxes turned an entire neighborhood into a vast, bare, stucco-white place, than gardeners arrive with loam and sod in wheelbarrows; they bring some trees and rocks, dig a pond, lay out walkways lined with flower pots embedded in the ground and, eight days later, they deliver to passersby a cramped little garden that vaguely resembles a set of comic opera.)

Zola could certainly be counted among “those Parisians who did not want the ambiguous moments of *rus in urbe*,” as John Dixon Hunt wrote of artists who were troubled by the mixing of town and country in Haussmann-era Paris.¹⁸⁶ Zola's diatribe inveighs against just this ambiguity. It reflects the strangeness of a new kind of urban landscape architecture encompassing the entire city, one that historian Françoise Choay

¹⁸⁵ *Ibid.*

¹⁸⁶ Hunt, *Gardens and the Picturesque*, 250.

has described as the first modern “system of green spaces.”¹⁸⁷ If the new squares, parks, and street plantings and furniture seemed to undermine long-held distinctions between town and country, they also hailed a new correspondence between garden art and town planning: the urbanization of garden art. By 1867, even Zola could see that the new urban landscape architecture was there to stay. Counting roughly 20 garden squares opened in Paris within the previous decade, he braced himself for a new era of urban greenery, predicting, sardonically, that all the sidewalks would one day have a border of boxwood.¹⁸⁸

In retrospect, Zola’s words serve not to discredit the well-used squares, but rather to indicate historical tensions in city-dwellers’ conceptions and uses of landscape. His view forms a useful prism through which to examine the sometimes-contradictory project of bringing landscape architecture into the confines of the urban environment. Indeed, one of the innovative—and to some observers, inappropriate—aspects of the urbanization of garden art in Paris was the synthesis of several historically distinct spatial types, notably the *place* (plaza), the *jardin public* (public garden), and the *jardin paysager* (landscape garden), infused with something of the *jardin botanique* (botanical garden). The Alphanthian *squares* and, to some extent, the larger *parcs* borrowed elements from these various types. These landscapes introduced a more generic kind of garden that, in retrospect, is called simply *espaces vert* or *greenspace*, the de facto unit of modern urban landscape.

¹⁸⁷ Choay, “Système des espaces verts.”

¹⁸⁸ Zola, “Les Squares,” 2.

The name *square* evokes the fenced-in green spaces of London, which the Emperor Napoléon III admired during his years in residence there. And the Parisian square, like its London namesake, was an enclosed garden, not necessarily square or even rectangular in shape. But unlike those London squares that were reserved for the exclusive use of surrounding property owners, the Parisian squares were open to the general public—at least during opening hours, and at the discretion of the attending guard. Edouard André, principal *jardinier* under Barillet-Deschamps, insisted, “*Les squares anglais et les nôtres sont deux choses des plus distinctes*” (English squares and ours are two entirely distinct things).¹⁸⁹ André shunned the official nomenclature of *square* in favor of *jardin intérieur*, or simply *jardin*.¹⁹⁰ The word *square* also irritated those Parisians who resented a tide of so-called Anglomania, the trendy adoption of English words and manners by the Parisian bourgeoisie, from *toast* and *pudding* to the *jockey club* and *king-charles* toy dogs.¹⁹¹ André, searching for a more fitting name for the squares, later proposed *oases*.¹⁹² While the name never caught on, it aptly evokes the performative identity of the squares in relation to the urban environment, as they provided havens of shade, sunlight, flora, benches, and running water.

André, a consummate horticulturist who directed the municipal nurseries, also described the squares and parks in terms strongly reminiscent of a *jardin botanique* (botanical garden), guided by a mission of scientific research as well as public

¹⁸⁹ André, “Jardins de Paris,” 1205.

¹⁹⁰ *Ibid.*

¹⁹¹ Barthélémy, “L’Anglomanie,” *Le Figaro*, 11 Aug 1861, 1.

¹⁹² Edouard André, *L’Art des jardins* (Paris: G. Masson, 1879), 194.

entertainment. The squares and public gardens, he wrote in 1867, not only offered air and space to an ever-growing population, but also boasted horticultural richness, “*une réunion plus complète et plus variée de circonstances favorables à l'étude, à la propagation des plantes nouvellement introduites*” (a more complete and more varied gathering of circumstances favorable for the study and propagation of newly introduced plants).¹⁹³ From this perspective the squares appear as outposts of the Jardin des Plantes, the royal botanical garden attached to the museum of natural history.¹⁹⁴ For practitioners and critics alike, the science of horticulture also provided a more rigorous way to frame what might otherwise appear to be an essentially decorative art of garden design. The elaborate horticultural program of the public squares of Paris suggested that everyone might share in the wonders of science as well as a love for nature and a taste for artful compositions.

Attempting to explain the newfangled genre of the *square* to visitors to the 1867 *Exposition Universelle*, the writer Jules Clarétie compared it to a splinter of an expansive landscape garden: “*Le square est le jardin fractionné, la promenade mise à la portée de tout le monde, et quelque chose comme le bois de Boulogne offert à domicile*” (The square is a fragmentary garden, the promenade put within reach of everyone, and something like the Bois de Boulogne offered at home).¹⁹⁵ The squares domesticated the noble pleasure garden into a quotidian nicety for everyone. George Sand proclaimed that

¹⁹³ André, “Jardins de Paris,” 1204.

¹⁹⁴ Zola, “Les Squares,” 2.

¹⁹⁵ Jules Claretie, “Les places publiques, les quais et les squares de Paris,” in *Paris-Guide*, 1410.

the squares provided “*le luxe pour tous*” (luxury for everyone) by democratizing a privileged landscape aesthetic for a public audience.¹⁹⁶ In this sense, each square gestured beyond itself, not to the agricultural landscape of the countryside, but to the pleasures of a picturesque park. Whether these small parks succeeded in transcending their constrained settings to evoke larger landscapes remains open to debate.

Whether or not visitors thought about these landscapes, they certainly used them. Children played in the sand, retirees basked in the sun, workers rested on benches, and soldiers flirted with nannies. Clarétie’s explanation appealed to populist values and to the domestic realm, the scene of everyday life. Despite the squares’ provenance under the regime of Napoléon III, they did not so much manifest state power as suggest a widespread right to landscape, as a casual extension of the foyer and the street. Ernouf saw the squares as “*de vrais salons de verdure pour la plus grande partie de la population*” (true salons of greenery for the majority of the population), at least in summer.¹⁹⁷

Hausmann recalled that the Emperor had ordered him to build as many squares as possible in every part of the city so as to offer, “*des lieux de délassement et de recreation à toutes les familles, à tous les enfants, riches ou pauvres*” (places of relaxation and recreation for all families, for all children, rich or poor).¹⁹⁸ This goal was met at least in cursory fashion by the end of the Second Empire, though Paris was hardly

¹⁹⁶ Sand, “Rêverie,” 1202.

¹⁹⁷ Ernouf, *L’art des jardins* (1886), 347.

¹⁹⁸ Hausmann, 240.

saturated with squares. In day-to-day use, however, the squares were the subject of unforeseen frictions between visitors and guards, guards and supervisors, and others, who had to negotiate the terms of use of this particular kind of public urban space. Questions of behavior and oversight, and of appropriate closing hours, occupied the attention of residents and park administrators in Alphan's Service des Promenades et Plantations.¹⁹⁹

The twin rationale of public health and public morality—articulated earlier by Alberti—also characterized proponents of the nineteenth-century Parisian squares. For example, Alphonse Karr claimed in 1867 that the squares would help restore social coherence and moral order to neighborhoods, by attracting residents (especially young people and women) to a common place where family and neighbors could keep an eye on them.²⁰⁰ Wishfully, he speculated that increasingly mobile Parisians would stay close to home, rather than go wandering on the boulevards. He also supposed that beautiful flowers would divert the attention of pretty young girls from the unwholesome distractions of shop windows.²⁰¹

The squares were geographically distributed throughout the residential *quartiers*, including seven examples in the outer zones that were annexed to Paris in 1860. The working-class neighborhoods in the east of the city, however, received fewer squares than the more prosperous neighborhoods in the west. The squares were built serially and in

¹⁹⁹ Daly pointed out in 1863 that workingmen frequently did not return from work in time to eat dinner and enjoy a stroll in their local square before it closed by 8:00 pm, though the closing times varied. See Daly, "Promenades et plantations," 129; See also Hopkins, *Engineering Nature*, 257-259.

²⁰⁰ Alphonse Karr, "Les Fleurs à Paris," in *Paris-Guide*, 1226-1227.

²⁰¹ *Ibid.*, 1227.

rapid succession, in systematic fashion. According to one exaggerated account, “*Le soir, on se couchait à l'entre-sol dans une petite rue étroite; le lendemain, on se réveillait au troisième étage, par suite des nivellements de chaussée, et l'on se trouvait en face d'un grand square tout planté*” (In the evening, you fell asleep in the entresol [second floor] in a narrow little street; the next morning, you woke up on the third floor, due to road leveling operations, and you found yourself faced with a big square, completely planted).²⁰²

Opened in former public *places* and odd parcels remaining from the construction of boulevards, they assumed some of the character of a neighborhood plaza, filled with everyday comings and goings. Like the paved *quais* (embankments) along the Seine, they created a kind of occupiable edge zone, distinct from yet part of the urban fabric. They were luxurious in their plantings, like a private landscape garden or a botanical garden; yet popular in character, like a public garden or the street itself. The most expensive element in constructing most of the squares was not their vegetation, according to Alphand's accounts, but the perimeter iron fence with stone base enclosing each square from surrounding streets. The enclosure must therefore be seen as a constitutive, even defining element of the squares, reflecting a systematic treatment of the edge. Physically and symbolically, the grille mediated between the idyll of the public garden and the fracas of the public street.

²⁰² Touchatout, *Histoire tintamarresque de Napoléon III. Seconde Partie: La dégringolade impériale* (Paris, 1878), 78.

If gardens now appeared in the literal “crossroads” of the city, as Zola lamented, so too did the tradition of garden art find itself at a figurative crossroads. Landscape theory and practice crossed paths with engineering and town planning. The garden began to break out of its old limits—spatially, socially, and stylistically. The advent of the garden *squares* encapsulated the metamorphosis of the garden and of garden art. Collectively, these rather diminutive, quotidian landscapes embodied a new versatility of landscape architecture in the city, and a perplexing blend of different spatial types. Yet the squares have traditionally received less descriptive and theoretical attention compared with their larger and more sumptuous cousins, the parks and *bois*.

The classical *place*, an opening at the crossroads

Leon Battista Alberti suggested (via reference to Plato) that urban intersections should have a place for children to play, not only to “strengthen the children in the fresh air,” but also to improve the decorum of their caretakers by exposing them to the public eye.²⁰³

The fifteenth-century architect and theorist emphasized the civic and commercial importance of the junctures and open spaces where streets crossed. Chief of among these was the central forum, the heart of civic life; but even smaller intersections were important because, he wrote “A forum is but an enlarged crossroad,” and “a crossroad is but a small forum.”²⁰⁴ Any public open space at the crossing of streets, in other words,

²⁰³ Leon Battista Alberti, *On the Art of Building in Ten Books*, trans. Joseph Rykwert, Neil Leach, and Robert Tavernor (Cambridge, Mass.: The MIT Press, 1988), 263.

²⁰⁴ *Ibid.*, 262-263. This reciprocity recalls Alberti’s characterization of the city as like a large house (23).

belonged to the same type of urban space, the plaza or *place*, in French. Crossroads would also serve as marketplaces of various kinds, Alberti wrote.²⁰⁵ Such was the case in seventeenth-century Paris, where markets commonly appeared in the open spaces that Poëte called, “*la place-carrefour*” (plaza-intersection).²⁰⁶ Turning to a different set of land uses, Alberti also suggested that a city provide, “pleasant areas and open spaces set aside as ornament and for recreation, *away from* the cares of civic business: race courses, gardens, ambulatories, swimming pools, and so on” [italics added].²⁰⁷ Groves and pools would dignify and ornament a city, he wrote, but these were not contiguous with the city’s important streets and edifices.²⁰⁸ The open spaces found at the crossing of streets inside the city had nothing to do with gardens, lawns, groves, or fields, all of which would be located outside the city gates. In short, classical theory conceived of urban public space and vegetated pleasure grounds as two entirely separate entities.

Echoing Alberti, the eighteenth-century French theorist Marc-Antoine Laugier called for opening spacious *places* at the crossing of city streets to bring air and light into cramped quarters, and to help drain water (and bad smells) from the streets.²⁰⁹ “*Plus la Ville est grande, plus il faut multiplier les places, comme on multiplie les découverts dans un parc, à proportion de son étendue*” (The bigger the city is, the more *places* it must have, just as we increase the number of open spaces in a park in proportion to its size), he

²⁰⁵ *Ibid.*, 263.

²⁰⁶ Marcel Poëte, *La promenade à Paris au XVIIe siècle* (Paris: Armand Colin, 1913), 11-14.

²⁰⁷ *Ibid.*, 101.

²⁰⁸ Alberti, *Art of Building*, 286.

²⁰⁹ Marc-Antoine Laugier, *Observations sur l’architecture* (The Hague: Desaint, 1765), 168.

wrote in *Observations sur l'Architecture* of 1765.²¹⁰ Similarly, in *Essai sur l'Architecture* of 1753, Laugier asserted that a true *place* must have many streets leading to it, just like the routes of a forest converging upon a radial crossroads or *étoile*.²¹¹ The example of Baroque Rome, with its majestic axes leading to various churches and monuments set in open plazas, may have inspired the Jesuit theorist's vision for a new Paris. Among Parisian examples, he approved only of Mansart's Place des Victoires, a circular plaza served by radiating streets and bordered by elegant architectural facades.²¹²

Laugier's analogies between a city and a park or forest referred not to vegetation, but strictly to the organization of openings and circulation. Greenery had no place in his concept of urban plazas. Indeed, Laugier protested the comingling of urban and rural landscapes almost as vociferously as Zola later would. He criticized the Place Louis XV (Concorde), sited on the urban fringes between the Tuileries gardens and fields of the Champs-Élysées, for lacking suitable urban enclosure and definition.²¹³

Although Laugier praised the king's desire not to displace thousands of residents by clearing an older section of the city, he found the vast plaza—designed by Ange-Jacques Gabriel and constructed in the 1750s-60s—inappropriately rural: “*C'est une place au milieu des champs, et cette réflexion suffit pour jeter du ridicule sur le projet*”

²¹⁰ *Ibid.*

²¹¹ Laugier, *Essai*, 189.

²¹² Laugier, *Essai*, 188. Laugier also called for greater variety in the planning of *places royales*, including hexagonal, octagonal, and other forms (*Observations*, 195). For an extended discussion of these issues see Richard L. Cleary, *The Place Royale and Urban Design in the Ancien Régime* (Cambridge, UK: Cambridge University Press, 1999).

²¹³ *Ibid.*, 193.

(It is a plaza in the middle of the fields, and this thought is enough to throw ridicule upon the project).²¹⁴ Over a decade later, Laugier again took up his cause, arguing that the Place Louis XV was too peripheral and vegetal to belong to the city proper, and hence did not deserve the name of *place*. He wrote, “*Entourée de jardins et de bosquets, elle ne présente que l'image d'une Esplanade embellie au milieu d'une campagne riante, et d'où l'on aperçoit divers Palais dans l'éloignement*” (Surrounded by gardens and groves, it presents only the image of a spruced-up esplanade in the middle of a cheerful countryside, from which you can see various palaces in the distance).²¹⁵

Laugier also criticized the venerable Place Royale (Vosges), despite its perfectly square geometry and its elegant frame of residential buildings, united by coordinated façade designs and a continuous loggia at street level. The problem, he wrote, was that it this *place* felt like a secluded courtyard or garden.²¹⁶ Indeed, the Place Royale was the original *place-jardin*. Commissioned in 1605 by Henri IV and inaugurated in 1612 by Louis XIII, the *place* received its geometric lawns, enclosing grille, and royal equestrian statue later in the seventeenth century, as seen in the Turgot plan of 1739 (fig. 2.1).²¹⁷ Only pedestrians had access to the simple garden in the center, while carriage traffic skirted the perimeter lanes between the fence and the buildings (fig. 2.2), a configuration which still exists today. Laugier found the parterre and its enclosure out of place in a

²¹⁴ *Ibid.*

²¹⁵ Laugier, *Observations*, 172.

²¹⁶ Laugier, *Essai*, 188.

²¹⁷ See Hilary Ballon, *The Paris of Henri IV*. Cambridge, Mass.: The MIT Press, 1994. The Place Dauphine, located at the tip of the Île de la Cité, also commissioned by Henry IV, also demonstrates a rather secluded kind of *place*, surrounded by houses.

public *place*, and he disliked the way that the residential pavilions seemed to isolate the Place from the surrounding streets, which in any case were too small.²¹⁸ In subsequent years, the appropriate role of vegetation was the subject of some debate and experimentation, resulting in a double-row of trees around the perimeter.²¹⁹

Laugier did not hate greenery; he appreciated private gardens in the city as, “*une grande ressource*” (a great resource) for those who could afford them, because they offered fresh air and greenery in contrast to the fetid streets.²²⁰ The best part of having a garden hidden behind the residence was, “*pour avoir chez soi une promenade qu’il ne faut point aller chercher*,” (to have at one’s house a promenade without needing to leave), foregoing the hassle of dressing up and going out in public.²²¹ But such niceties had nothing to do with civic space, which had to symbolize and represent the majesty of the sovereign and the dignity of a city. Gardens were for pleasure—and on this account he derided the park and gardens of Versailles as boring and monotonous. He awaited the day when French garden artists would devise an “*ingénieux mélange des idées Chinoises avec les notres*” (an ingenious mix of Chinese ideas and ours), with the ultimate goal being to surprise, please, and enchant visitors with the play of nature and art.²²² He did not discuss the question of public gardens in the city; the forest and park were only

²¹⁸ Laugier, *Essai*, 188.

²¹⁹ Ernouf lamented the loss of “*son encadrement d’arbres seculaires*” (its border of mature trees) in the time of Louis XVI (*L’art des jardins*, 1886, 267); Haussmann wrote that the trees were planted in 1783 (Haussmann, *Mémoires*, 250). The Girard plan of 1830 shows a double-ring of trees along the perimeter of the garden, though it does not show the four fountains installed in 1830.

²²⁰ Laugier, *Essai*, 162.

²²¹ *Ibid.*

²²² *Ibid.*, 281-282, 293.

metaphors for the urban fabric. There is little connection between Laugier's ideas on garden art and urban art, aside from a wish for balancing regularity and variety.

In the early nineteenth century, Quatremère de Quincy reiterated and elaborated the classical notion of an open urban space, first in the *Encyclopédie méthodique* (1825) and then in his *Dictionnaire historique d'architecture* (1832). One important sense of *place* referred to an open space in front of an important building, or surrounding it, in which the main challenge was to match the scale of the plaza to that of the edifice.²²³ Another sense of the term signified an all-purpose open space at a crossroads, as Alberti recommended. The most exalted kind of *place*, according to Quatremère, was itself a civic monument and a work of architectural art. It was distinguished by a perfectly regular design, surrounded by unified architectural facades, and likely a monument or fountain in the center.²²⁴ Among Parisian examples, Quatremère cited the places Royale, Vendôme, and Victoires, though he differed with Laugier with respect to the success of this last, due to the visibility of “*boutiques et de maisons de commerce*” (shops and commercial establishments) that degraded the monumental aspect of the plaza.²²⁵

²²³ Antoine Chrysostôme Quatremère de Quincy, *Encyclopédie méthodique. Architecture. T. 3* (Paris: Agasse, 1825), 135-136. “*Cet art ne consiste qu'en rapports*” (This art consists purely in relations).

²²⁴ *Ibid.*, 136. “*Une place est elle-même un monument.*” Also discussed in Quatremère, *Dictionnaire*, 251.

²²⁵ Quatremère, *Dictionnaire*, 251.

London squares: *place* or *jardin*?

The most general kind of *place* that Quatremère discussed, and the kind least governed by strict aesthetic rules, was simply an open space inside of a city in which residents could come together or stroll in the fresh air.²²⁶ At best, such plazas could function at the same time as markets, fairs, promenades, and amphitheaters. Quatremère deemed the Piazza San Marco in Venice a particularly beautiful example. The Piazza Navona in Rome, he added, could relieve the summer heat by turning into a sort of lake, used both for naval spectacles and bathing.²²⁷ But along with these canonical Italian examples, he grouped a British type of incongruous character, the garden squares of London. These modest green spaces, Quatremère wrote, distributed the “*luxe*” (luxury) of airy plazas throughout the city:

*D'espace en espace on y a ménagé des ces vastes places carrées, qu'on appelle squares. Leur milieu est assez volontiers occupé par de petites plantations ordinairement enceintes d'une grille. On continue d'en pratiquer de semblables dans les quartiers nouveaux... et ils en forment le principal embellissement.*²²⁸

(In various spaces they have formed these large four-sided *places*, called *squares*. Their center is readily enough occupied by small plants ordinarily enclosed by grillwork. They continue to make similar ones in the new neighborhoods... of which they form the main embellishment).

²²⁶ *Ibid.*

²²⁷ *Ibid.*

²²⁸ *Ibid.* Quatremère noted that the Great Fire of 1666 created open space for squares in the city.

These fenced-in squares of London were surrounded by rows of townhouses, typically developed privately for the exclusive use of neighboring property owners. Some of the oldest, like Bloomsbury Square and Hoxton Square, can be traced to the seventeenth century, and many more appeared in later years. It is a little surprising that Quatremère classed the London squares among *places*, because their enclosure and (typically) private use makes them quite unlike an urban plaza. Certainly he was stretching the definition, by his own rigorous standards of classification.²²⁹ If his enthusiasm was simply so strong that he had to include the squares somewhere in the dictionary (*square* not being a French word, at least not until 1856, when Paris opened its first one) he might otherwise have chosen to discuss them in his entry on *jardin* or *jardinage*. After all, Quatremère defined *jardin* as a vegetated enclosure: “*un espace de terrain déterminé, le plus souvent clos de murs, orné d'arbres, arbustes et plantes de toute espèce, lequel dépend ordinairement d'un palais ou d'une maison de campagne*” (A defined space of terrain, usually enclosed by walls, ornamented with trees, shrubs, and plants of all species, and which is dependent upon a palace or a country house).²³⁰ The catch is the last part of the definition, regarding the dependence upon architecture. Most London squares relate not to a single building, but more generally to the surrounding blocks of houses and streets. And indeed Quatremère claimed only to have included the

²²⁹ Quatremère, *Encyclopédie*, 157. At the end of the entry on *place*, he explicitly excluded from consideration the many *places* in Europe defined simply by blocks of private dwellings, but lacking coordinated façades. These spaces might be pleasant and beautiful, he wrote, but they had nothing to do with the art of architecture. This note was omitted from the *Dictionnaire*.

²³⁰ Quatremère, *Dictionnaire*, 34.

term *jardin* in his *Dictionary* precisely by virtue of gardens' assumed relationship to architecture.²³¹

Quatremère might have contemplated expanding his definition of gardens to encompass the encircled squares, just as he expanded his definition of *places* to include both those that relate to a building and those that do not. But no, the term *jardin* does not even enter into his discussion of the squares; he sticks with the more prosaic term *plantations*, meaning simply vegetation or plantings. *Jardin* carried its own social, technical, spatial, and ontological associations. For example, in the entry on *jardinage*, Quatremère began by imposing a firm distinction between gardens of *utilité* (usefulness) and those of *agrément* (leisure).²³² By contrast, his discussion of *place* allows function and pleasure to coexist together, as in the garden squares of London. His use of the word *luxe*, quoted above, evokes an aspect of pleasure along with the task of facilitating the circulation of air. But again, the distinction is artificial. Gardening also commonly combines utility with pleasure, as Quatremère himself noted elsewhere.²³³

Parisian developers experimented with the London model of private squares in the first half of the nineteenth century, in the well-to-do northwestern fringes of Paris. One

²³¹ *Ibid.* “C'est en vue de cette dépendance et par le fait du rapport qui existe naturellement entre la maison et son jardin, que l'art du jardinage s'est trouvé associé à l'art et au goût de l'architecture. C'est aussi sous ce seul aspect que jardin, ainsi considéré dans tous les temps, peut trouver place dans ce Dictionnaire.” It is also worth noting that the earlier volume of the *Encyclopédie méthodique* dedicated to the arts had defined gardening as a branch of agriculture, not architecture. Claude-Henri Watelet and Pierre-Charles Levesque, *Encyclopédie méthodique. Beaux-arts. Vol. 1* (Paris: Panckoucke, 1788), XIX, XX.

²³² Quatremère, *Dictionnaire*, 36.

²³³ Quatremère, *Encyclopédie méthodique*, 588. “L'agréable et l'utile sont si tellement liés entr'eux; l'un résulte si naturellement de l'autre” (The pleasurable and the useful are so closely linked together; the one results so naturally from the other...).

such example occupied the site of the current Place de l'Europe. The entrepreneurs Hagerman and Mignon were reportedly authorized in 1826 to establish an octagonal *place*, 180 meters in diameter, in the center of which they were obliged to establish a *jardin* closed with grilles. The city, however, retained the right to take over the garden as public property and assume the costs of maintenance.²³⁴ The little garden was soon doomed by the construction of railroad infrastructure in the area of the Gare Saint-Lazare.²³⁵ The Cité de Trévis and the place Saint-Georges, decorated with small islands of greenery in the early or mid-nineteenth century, could also be seen as preliminary gestures toward London-style squares.²³⁶ Another garden-in-plaza was opened (or rather, enclosed) in the middle of the Place Vintimille (today called the Square Hector-Berlioz, inside the Place Adolphe-Max) in the 9th arrondissement. Its original creators were private developers seeking to build the framework for a new residential quarter on the grounds of the former Tivoli pleasure gardens. By 1841 they obtained permission to build five streets and a plaza, in the center of which they established an enclosed garden, the Square Saint-Hélène, a reference to the burial place of the elder Napoléon. The garden inserted a leafy pedestrian refuge in the middle of traffic circulation and commerce.

²³⁴ Félix Lazare, *Dictionnaire administratif et historique des rues de Paris et de ses monuments* (Paris, Vinchon, 1844-49), 210. Ernouf later wrote, “*Il est à remarquer qu'autrefois sur la place de l'Europe, aujourd'hui supprimée, on avait planté un jardin entouré de grilles, mais accessible seulement à quelques privilégiés.*” See Ernouf, *L'art des jardins* (1886), 348.

²³⁵ In the 1860s, the city built a new version of the plaza on top of a massive viaduct or “*Pont-Carrefour*,” as Haussmann called it, allowing the railway to pass beneath. See Haussmann, *Mémoires*, 71.

²³⁶ Louis de Vermont mentioned, following the opening of the Tour Saint-Jacques several older, would-be squares: “*la cité Trévis, la place Saint-Georges, la place Vintimille ou la place de l'Europe, perdue à un bout de Paris. Ce ne sont là que de faibles commencements d'une grande chose.*” Louis de Vermont (pseudonym of Louis Enault), “*Paris Nouveau: La Tour St Jacques*,” *Le Figaro*, 12 Jul 1856, 5-6.

Access to this garden was supposedly restricted in the manner of a London square—until the municipality of Paris won a court judgment to take possession of it, renovate it, and turn it over to public use in 1859 as the “Square Vintimille,” following the opening of several other public squares.²³⁷ The Square Vintimille remained a modest patch of greenery, under 1000 square meters in area, marooned in the center of a wide plaza and traffic circle (fig. 2.3). Nevertheless it provided a place of repose for its habitués, as the early-twentieth-century paintings of Vuillard depict (fig. 2.4).

From *place* to *square* around the Tour Saint-Jacques

The first so-called *square* in Paris, inaugurated in the spring of 1856, was initially conceived as a *place* encircling a historic architectural fragment. A presidential decree from the Tuileries Palace dated July 26, 1852 authorized “*la formation d’une place aux abords de la tour Saint Jacques*” (the formation of a plaza around the Saint-Jacques tower), as well as widening and alignment of part of the adjacent Rue Saint-Martin near the Seine.²³⁸ The decree assured the public utility of these works and authorized the prefect of the Seine (Berger, not yet Haussmann) to acquire the necessary property, either amicably or by forcible expropriation. The plaza-to-be was an adjunct to Louis-Napoléon’s first important urban project, extending the stately Rue de Rivoli (begun by

²³⁷ Alphand, *Promenades*, 225. Haussmann gives a similar account in *Mémoires*, 244.

²³⁸ “Rue Saint Martin” – (26 juillet 1852)” *Recueil des lettres patentes, ordonnances royales, décrets et arrêtés préfectoraux concernant les voies publiques / ville de Paris*, Adolphe Alphand et Hochereau, eds., 265-266. The order makes reference to a plan showing contours of the new *place* and street alignments, as well as the area of authorized expropriations. I was unable to find such a plan in the Archives de Paris; presumably it was lost in the fire of 1871.

Napoléon) eastward through the heart of the old city. Just a few meters off the enlarged street axis, however, rose the 57-meter (171-foot)-tall Tour Saint-Jacques, a late Gothic remnant of a church long since destroyed.

By 1855, the administration had demolished the jumble of houses and alleys that formerly surrounded the fire-damaged tower, and carefully restored the architecture and sculptural ornament of the tower itself.²³⁹ These operations made of the old tower a freestanding monument, a decorative object, and a carrier of civic memory and image (fig. 2.5). Comparing the newly disengaged tower to an ancient cult image or sacred landmark, the journalist Fournier, wrote, “*C'est le palladium de l'ancienne ville, resté debout pour la rappeler au milieu des splendeurs de la nouvelle; au sein du Paris reconstruit, c'est le Panthéon du Paris disparu*” (It is the *palladium* of the old city, standing in the middle of the splendors of the new one; in the heart of the rebuilt Paris, it is the Panthéon of vanished Paris).²⁴⁰

Only after the *place* around the tower was cleared, according to Alphand, did someone in the administration—whether it was the Emperor, Haussmann, Alphand, or someone else remains unclear—conceive of disposing this open space as a garden, and an irregular one at that (fig 2.6).²⁴¹ A number of factors may have made this decision more

²³⁹ Alphand, *Promenades*, 212. Alphand credits the restoration of the tower to the architects Ballu and Roguet, and the sculptors Cavalier, Dantan, Protet, Cordier et Froget.

²⁴⁰ Edouard Fournier, “*Promenade dans Paris*,” *Paris dans sa splendeur : Monuments, vues, scènes historiques, descriptions et histoire*. Part 1, Vol. 2, (Paris: H. Charpentier, 1861), 52. Republished the following year, 1862, under the title, *Paris dans sa splendeur sous Napoléon III*.

²⁴¹ *Ibid.* Haussmann’s *Mémoires* attests that a decree of the Conseil d’État dated June 29, 1854, authorized the creation of “*un square d’isolement de l’Édifice repris en sous-oeuvre*,” though it is not clear whether

plausible, though none fully explains the stark break with Parisian precedent. The open space did not conform to the demands of a traditional architectural *place* because 1) its boundaries did not form a regular rectangle, 2) the structures around its edges did not form a cohesive enclosure, and, 3) perhaps most jarringly, the tower itself was positioned far off center, next to the Rue de Rivoli, as evident in the plan (though in his prose, Alphand described the tower as centered, a discrepancy that Grumbach attributes to a naming and signifying impulse).²⁴² Here it is useful to invoke Alphand's observation that irregular garden layouts, more than regular ones, permitted a useful "*élasticité*" (elasticity) of design, well suited to limited or odd-shaped spaces.²⁴³ A curving and asymmetrical design also allowed for a combination of moments of seclusion with open views outside the garden, or as Ernouf put it, *ce double besoin de retraite ou d'expansion*" (this double-need of retreat and expansion), which is certainly evident in the Square du Tour Saint-Jacques.²⁴⁴ The best view of all was to be found at the top of the tower, accessible via a tortuous staircase.²⁴⁵

the term *square* was actually used at this point, nor whether it signaled a garden. Haussmann, *Memoires*, 241.

²⁴² Alphand, *Promenades*, 212. See also Grumbach, "*Promenades*," 56.

²⁴³ Alphand, *Promenades*, XL. "*Aussi le jardin agreste se prête mieux à des compositions d'une étendue restreinte; ses lignes sont plus souples, d'une distribution plus facile; l'élasticité de son tracé se prête, avec la même facilité, aux dispositions les plus réduites, comme aux conceptions les plus larges.*" By contrast, he wrote, regular garden layouts were best suited to larger, sloping sites favoring terracing and perspective views, especially when adjacent to a classical architectural façade.

²⁴⁴ Ernouf, *L'art des jardins* (1886), 132, "*Tous les jardins irréguliers, grands et petits, doivent être disposés de manière à satisfaire ce double besoin de retraite ou d'expansion.*"

²⁴⁵ "On monte à la plate-forte par deux cent quatrevingt-onze degrés, et de là, comme le dit Sauvai, en promenant ses regards sur la ville, 'on voit la distribution et le cours de toutes les rues, comme les veines du corps humain.'" In Décembre-Alonnier, *Les Merveilles*, 100.

The constitutive materials of the garden or Square du Tour Saint-Jacques were all imported, including the ground itself: over one hundred thousand cubic feet of rubble and earth were excavated and filled with one hundred fifty thousand cubic feet of fresh topsoil, at an average depth of two-and-a-half feet. The bright reddish sand for the paths was quarried from Versailles, evoking the textures and colors of the royal gardens. A couple of mature pines were transplanted from the Bois de Boulogne, as Edouard André fondly recalled, drawing gasps of “astonishment” as they crossed the city on carts and provided shade to the garden the very next day.²⁴⁶ The square encompassed an area of roughly 6,015 square meters (64,745 square feet), two-thirds of which was planted with trees, grass, flowers and shrubs; the other third of which consisted of sanded paths. A cast iron fence, equipped with gates at all four corners, screened the garden from the surrounding sidewalks, two of which were planted with rows of trees.

In the pages of the daily *Le Figaro*, Louis Enault extolled the new square as “*la campagne à la ville*” (the country in the city).²⁴⁷ He saw it as the first serious Parisian counterpart to the squares of London, where children could frolic in urban meadows and groves. He continued:

Les squares sont la joie, la grâce et la parure des villes; ils donnent au pauvre ce que le riche va chercher bien loin, l'air, la lumière, l'espace, le soleil, un peu de

²⁴⁶ André, “Jardins de Paris,” 1206. “*Pour la première fois, Paris étonné fut traversé par des arbres centenaires, portés sur des chariots, et, du jour au lendemain, couvrant de leur ombre seigneuriale ces nouveaux jardins.*”

²⁴⁷ Vermont, “Tour St Jacques,” 5.

*verdure pour reposer ses yeux, et le parfum des fleurs pour embaumer
l'atmosphère qu'il respire.*²⁴⁸

(Squares are the joy, the grace, and the adornment of cities; they give to the poor that which the rich go far to seek: air, light, space, sun, a little greenery to rest their eyes, and the perfume of flowers to anoint the atmosphere that they breathe).

Departing from the simple plantings of traditional public gardens, the lush verdure evoked private pleasure gardens or even the variety of botanical gardens. The square boasted magnolia, silver linden, Canadian firs, Japanese creptomeria, and Himalayan cedars mixed with shrubs from Brazil, Austria, and Algeria.²⁴⁹ Exotic species such as banana trees, palms, and Wigandias, which had previously appeared in Paris only in conservatories, now grew in the open air of the square. To survive the winter, many of these plants had to be uprooted and moved under glass until the following spring. Zola, unimpressed, guessed that the “meager lawns” of the Square du Tour Saint-Jacques, “*suffiraient à peine au déjeuner d'un troupeau de moutons*” (would barely suffice for the lunch of a flock of sheep).²⁵⁰

What was truly urban about the Square du Tour Saint-Jacques was not just the lavishness of its horticulture, but also its conspicuous siting at one of the most prominent intersections in all of Paris. Bordered on its northern side by the newly extended Rue de Rivoli, and on its western side by the new Boulevard de Sébastopol, the square occupied

²⁴⁸ *Ibid.*

²⁴⁹ Fournier, *Paris dans sa splendeur*, 52.

²⁵⁰ Zola, “Les Squares,” 2.

one corner of the enlarged *grande croisée*, the crossing that traditionally defined the center of the capital, near the Seine and the Hôtel de Ville. The square became part of a new urban ensemble that included not only the enlarged thoroughfares but also the enlarged Place du Châtelet, planted with trees; two large theaters designed by Gabriel Davioud (1860-62); a new base for the Napoleonic Fontaine du Palmier (1858), also designed by Davioud; a new version of the Pont au Change crossing the Seine (1858-60), and a widened *place Saint-Michel* across the Seine, punctuated by Davioud's new fountain visible from the bridge (fig. 4.17). The Square du Tour Saint-Jacques, therefore, offered the shade and leisure of a public garden, the site and monument of an urban *place*, the layout of an irregular landscape garden, and the horticultural richness of a botanical garden. It was an ambitious start.

Square as versatile urban garden

Enault saw in the Square du Tour Saint-Jacques a kind of prototype, “*un heureux essai que nous espérons bien voir se multiplier dans Paris*” (a successful experiment that we hope to see multiplied in Paris).²⁵¹ And multiplied it was indeed. The next decade and more saw a proliferation of squares across the French capital. By the time Haussmann was forced from power in 1869, there were 24 new or reworked squares in place or in progress, along with the five larger and more celebrated parks. Luisa Limido has observed that the garden squares of the Second Empire fulfilled a novel urban function:

²⁵¹ Vermont, “Tour St Jacques,” 5.

that of filling or occupying voids, assuaging a collective *horror vacui* evident in decorative arts of the period.²⁵²

The squares, dispensing with the conventional requirements of both the *jardin public* (straight *allées* and open parterres) and the regular *place*, soon proved that urban landscape architecture could accommodate a wide range of sites and scales. Most of the squares were free of dependence on any particular building. That did not, however, make them autonomous works of art. They were instead dependent upon the urban fabric of streets, boulevards, monuments, utilities, and apartment blocks. Acknowledged as, “*l’annexe indispensable de la voirie urbaine*” (the indispensable annex of urban roads), they frequently occupied irregularly-shaped sites leftover from new street alignments.²⁵³

The remarkable thing about the squares, from a design point of view, was their sheer versatility. The squares effectively assumed the various functions of *place* previously enumerated by Quatremère, but within a frame of decorative nature. In 1868, the Baron Ernouf defined the *square* without regard to style, specifying only its urban setting: “*tout espace réservé dans une place publique à des plantations*” (any green space enclosed in a public plaza).²⁵⁴ Often the squares contributed to new agglomerations of institutions, commerce, and culture. But in replacing former markets and plazas with enclosures of greenery, the squares signaled an increasingly regimented use of urban

²⁵² Limido, *Barillet-Deschamps*, 110.

²⁵³ Ernouf, *L’art des jardins* (1886), 352.

²⁵⁴ *Ibid.*, 229.

space according to different uses: markets housed in purpose-built structures, plazas organized for traffic circulation, and enclosed garden squares designated for relaxation.

The Square du Temple (1857) brought the new urban garden to the “popular” or working-class area near the old Boulevard du Temple and the new Place de la République. It occupied a *place* of sorts, which had recently served as a secondhand clothing market. A few trees remained from the renowned gardens of the medieval monastery of the Knights Templar, more often remembered for its prison towers in which Louis XVI and Marie-Antoinette were imprisoned before being executed. Invoking the old temple gardens, Alphand suggested that the new *jardin public* restored the site to its original use.²⁵⁵ However, the nineteenth-century Square du Temple contributed to an urban ensemble, together with a new market hall and a new *mairie* (town hall) of the 3rd arrondissement (fig. 2.7). It was here that Napoléon III had established the first modern public laundry in Paris in 1855, equipped with running hot water, steam, and hot-air drying.²⁵⁶ The new *mairie*, designed by Victor Calliat and finished by Eugène-Alexandre

²⁵⁵ Alphand, *Promenades*, 217. “*C'était lui rendre sa destination primitive, puisque l'on peut encore y voir quelques arbres séculaires.*” From the Middle Ages the site belonged to the old monastery of the Knights Templar, otherwise known as *le Temple*, famous for the prison tower in which the unlucky Louis XVI and Marie-Antoinette were held before being executed. The elder Napoléon ordered the tower demolished, and the younger Napoléon commissioned the landscape garden on this site in 1857.

²⁵⁶ “Histoire de la mairie du 3e,” *Site officiel de la Mairie du 3e arrondissement de Paris*, published under the direction of Pierre Aidenbaum. http://x03-mairie03.apps.paris.fr/mairie03/jsp/site/Portal.jsp?page_id=454 (accessed Jun 18, 2015). The public laundry was supposed to be the first of 12 such facilities, but no others were established, and this one closed in 1861, apparently due to lack of maintenance.

Chat, was built on the site of the failed laundry from 1864-67, oriented to face the new garden.²⁵⁷

The square du Temple reads both as a gift to a popular quarter, and as part of an effort to elevate the class character and the value of real estate in the neighborhood. The irregular garden itself—encompassing an area of 7,533 square meters, a little larger than that of the Tour Saint-Jacques—includes a trio of lawns studded with colorful foliage, and a small pond containing a boulder with a trickling *source*. It helped define an urban crossroads and at the same time provided a respite from the commotion of commerce and traffic. But those who judged the new squares only on the basis of garden art and horticulture were bound to be disappointed, like Jules Caretie: “*Ces demi-jardins ont bien l'air souvent souffreteux, bourgeonnent timidement et fleurissent avec modestie. Les petits arbres ressemblent à ces enfants malingres qui s'élèvent dans les villes et n'ont jamais couru dans la rosée*” (These semi-gardens have an air of feebleness, grow tentatively, and flower modestly. The little trees resemble those sickly children who have grown up in cities and have never run in the dew).²⁵⁸

In 1859, Alphand and his collaborators turned the *marché des Innocents*, a marketplace on the site of a vanished churchyard and cemetery, into a fenced-in square. The transformation was prompted by the construction of Victor Baltard's iron-and-glass Halles Centrales, a new market hall occupying part of the old open-air marketplace, and absorbing its activities. The remaining, irregular part of the place became a square

²⁵⁷ *Ibid.*

²⁵⁸ Claretie, “Les places publiques,” 1410.

distinguished less by its smattering of greenery, than by the historic relic lovingly restored and transposed into the center of an elliptical lawn: the Nymph fountain designed by the architect Pierre Lescot and the sculptor Jean Goujon, completed in 1550.²⁵⁹ This fountain, like the tower of Saint-Jacques, was originally attached to a church building. It was redesigned as a freestanding fountain around 1787 and moved, stone by stone, to the center of the new marketplace, where it served as a public water source. In 1859, Alphand moved it again to serve as the center of the new Square des Innocents, adding a few sculptural embellishments designed to further dramatize the cascade (fig. 2.9).²⁶⁰

The *Service des Promenades et Plantations* opened several of the largest squares in the newly annexed towns outside the former tax boundary. The most expansive and acclaimed of the squares, at least from the point of view of horticulture and garden art of the day, was undoubtedly the Square des Batignolles, opened in 1862 on the site of a churchyard in the newly annexed commune of Batignolles. Ernouf lauded the achievement of an enchanting *jardin paysager* bursting with artfully disposed foliage on a restricted site of 1.43 hectares.²⁶¹ The play of water made the garden exceptionally delightful: a stream gushed from the bottom of a pile of rocks, meandering through gentle

²⁵⁹ Alphand, *Promenades*, 214.

²⁶⁰ *Ibid.* “Demontée de nouveau, piece à piece, la fontaine fut réédifiée telle qu'elle était auparavant, à l'exception du socle, des gradins et de la vasque, auxquels on substitua des degrés sur lesquels l'eau s'épand en nappes, jusqu'à un bassin circulaire, qui forme la base de la fontaine. Les lions du soubassement n'ont pas été conservés.”

²⁶¹ Ernouf, *L'art des jardins* (1868), 230-234. He went so far as to enumerate the composition of the 16 *massifs*, 10 *corbeilles*, and 11 *isolé* (isolated) plants. André, too, celebrated this square primarily as a horticultural achievement. (“Jardins de Paris,” 1207).

curves and miniature cascades, into a pool at the lower end of the park (fig. 2.10).

Alphand, in a typical juxtaposition of before-and-after (reminiscent of Repton, but lacking the visual counterpoint), characterized the old churchyard as an arid expanse littered with debris from nearby construction, where a few trees languished miserably; the completed square, he wrote, was one of the most picturesque and verdant in the capital.²⁶²

Zola conceded that it offered some of the allures of a country garden, from interesting greenery to running water and rustic bridges. However, he complained, even when wandering amidst the curving paths and rich foliage, “*on entend le roulement des fiacres et les cris des marchands des rues, on voit les façades blafardes des maisons qui entourent le jardin. On dirait un coin de la nature qui s'est mal conduit, et qu'on a mis en prison*” (One hears the rolling of cabs and cries of street vendors, one sees the pale walls of the houses surrounding the garden. You might call it a corner of nature that misbehaved, and got sent to prison.)²⁶³ Perhaps he was partly missing the point, in negating the possibility of enjoying landscape *in* the city. In any case, the square was a far cry from the open space it had been, and even from the expanded plaza envisioned in 1855.²⁶⁴ In the context of the recent annexation of working-class Batignolles, the park impressed visitors not only with its lush greenery but also with its recognizably urbane, Parisian character.

²⁶² Alphand, *Promenades*, 220.

²⁶³ Zola, “Les Squares,” 2.

²⁶⁴ “Place des Batignolles” – (22 Oct. 1855) in *Recueil*, 293. The project envisioned enlarging the “Place des Batignolles” or “*la place publique à Batignolles-Monceaux*.”

One of the most interesting aspects of the Square des Batignolles was quite outside the scope of garden art *per se*: the square borders and overlooks the wide trench of rail tracks behind the Gare Saint-Lazare (fig. 2.11). Alphand and his professional contemporaries said not a word about the tracks, though they figure prominently in the aerial perspective (fig. 2.12). The *naturalesque* garden abutted this space of infrastructure, screened by a double row of trees outside the grille. The adjacency, however, was not lost on visitors. A journalist made the startling claim that the garden's "principal attraction" was not its internal spectacle of nature, but the view it offered of trains approaching and departing from the station—a technological spectacle best observed from the shaded *allée* along the edge of the garden.²⁶⁵ Similarly, Manet's *The Railway (Gare Saint-Lazare)* of 1873 (fig. 2.13), shows a girl looking through an iron railing at trains passing below, in a scene that could just as well have been set on the esplanade by the Square des Batignolles (it was painted only a few blocks away, closer to the Place de l'Europe).

The design of the Square des Batignolles seems basically to ignore the juxtaposition, neither framing views of the railway tracks nor attempting to suppress them. But the garden and railroad both defined aspects of the *landscape* of modern Paris. Both provided opportunities to contemplate the image of the city, with reference either to the world of machinery or to the realm of plants. Water gurgled from a mysterious boulder in the garden; locomotives surged into view from beneath the viaduct of the Boulevard des Batignolles or that of the Place de l'Europe. Whether or not Alphand and

²⁶⁵ Benjamin Gastineau, "Le Pourtour de Paris," in *Paris-Guide par les principaux écrivains et artistes de la France, Vol. 2—La Vie* (Paris: Librairie Internationale, 1867), 1446.

Barillet-Deschamps foresaw the pleasure that some visitors would take in watching trains from the edge of the park, the fact that people *did* suggests that the somewhat generic design of the square could accommodate “unscripted” or unforeseen events, to borrow a concept from Leatherbarrow, outside the official bounds and scope of the garden itself.²⁶⁶

Across town, in newly annexed Belleville, Barillet-Deschamps transformed the middle of the existing Place des Fêtes into a gently rolling lawn dotted with shrubs and flowers, and crossed by curving paths, encircled by existing rows of trees (fig. 2.14). This Square de la Place Saint-Geneviève, since destroyed, was in the eyes of Alphand, “*un des plus gracieux specimens des modifications que l'on peut apporter aux vastes surfaces nues*” (one of the most graceful examples of modifications that one can bring to large expanses of bare ground).²⁶⁷ It was also economical, costing a mere 20,000 francs, compared with a cost of approximately 150,000 francs each for the Squares of the Temple and Batignolles. At Belleville, the new space dedicated to the passive enjoyment of landscape replaced not only the open plaza, but also represented part of an administrative and political effort to contain popular street culture. “The aim was to transform popular players into passive spectators,” Harvey asserts, with regard to the

²⁶⁶ David Leatherbarrow, “Architecture’s Unscripted Performance,” in *Performative Architecture: Beyond Instrumentality*, eds. Branko Kolarevic and Ali Malkawi (New York: Spon/ Taylor & Francis, 2005), 16.

²⁶⁷ Alphand, *Promenades*, 227. The *place* was totally reconfigured in the 1970s.

suppression of the uproarious Mardi Gras festival of Belleville, *la descente de la Courtille*, which formerly passed through the Place des Fêtes.²⁶⁸

Perhaps the only square not to be enclosed was the Square Victor (1865-67, partly congruent with today's Square Carlo Sarrabezolles), a wedge-shaped space between the fortifications and the belt railway on the Left Bank (fig. 2.15). The long narrow, not-very-usable space, contained an area of 26,000 meters, twice that of the Square des Batignolles.²⁶⁹ The Service des Promenades et Plantations also made the most of a pair of irregular spaces marooned between the edge of the gardens and the esplanade of the l'Hôtel des Invalides to create the Square des Invalides (d'Ajaccio). Part of it comprises lawns and paths, the other part is more like a refuge surrounded by trees in the middle of traffic (fig. 2.16).²⁷⁰

Among Alphand's most ambitious attempts to turn a neglected space into a public garden square was the Square de Montmartre (subsequently called Saint-Pierre, Willette, and today Louise-Michel), occupying steep slopes that had been mined for gypsum. The top of butte Montmartre, occupied by the Basilica of Sacré-Coeur since the 1870s, was associated with religious worship since the pre-Christian era. As early as 1866, a journalist speculated that the once-rustic taverns of Montmartre would soon give way to “*des squares ornés de grilles dorées, avec des becs de gaz galvanisés, avec des gazons dorlotés par des infirmiers jardiniers*” (squares decorated with gilded gates, with

²⁶⁸ David Harvey, *Paris, Capital of Modernity* (New York: Routledge, 2006), 211-212.

²⁶⁹ Alphand, *Promenades*, 227.

²⁷⁰ *Ibid.*, 228.

galvanized gas lamps, and with lawns pampered by murse-gardeners).²⁷¹ In 1867, the administration declared the public utility of “*diverses opérations de voirie à exécuter sur le plateau et le revers de la Butte Montmartre*” (various road operations to be executed upon the plateau and side of the Butte Montmartre), setting the stage for property acquisitions and public improvements in the newly annexed village.²⁷² In 1868, the city built a new iron-and-glass market hall, the *Halle Saint-Pierre*, at the foot of the hill, signaling further municipal improvements to come. Alphand anticipated the new square—covering the slope directly above the new markethall—in his Plan Général in *Les Promenades de Paris*, first drafted in 1867 (figs. 1.1, 2.17). But he did not mention the square anywhere else in the treatise, reflecting its provisional status. By 1870-71, the existing *place* and Solferino tower near the top of the butte, adjacent to the old Saint-Peter’s church, served as strategic military points during the Prussian siege and the Commune.²⁷³

It was not until the 1870s, after the fall of the Second Empire, that the project for the square began to proceed, albeit extremely slowly.²⁷⁴ Alphand wanted to reclaim the entire slope with a designed landscape reminiscent of the Buttes-Chaumont, and he attempted to link this project to the construction of the enormous Basilica of Sacré-Coeur

²⁷¹ Pierre Véron, “Courrier de Paris,” *Le Monde illustré*, 1 Sept. 1866, 131.

²⁷² Decree of 11 Aug. 1867, Bull. 1525, no. 15,440. Referenced in Napoléon Bacqua de Labarthes and Paul Dupont, *Bulletin annoté des lois, décrets, arrêtés, avis du conseil d’état, etc.* (Paris: Paul Dupont, 1867), 395.

²⁷³ Théophile Gautier, *Tableaux de siège : Paris, 1870-1871* (Paris: Charpentier, 1871) 39.

²⁷⁴ Jacques Benoist, *Le Sacré-Cœur de Montmartre* (Paris: Editions de l’Atelier / Ouvrières, 1992), 340-341, 452-453.

on top of the butte.²⁷⁵ Even before the architectural design of the monument was decided in 1874, engineers embarked on a difficult operation to fill in the labyrinth of subterranean cavities left by mining operations, in order to stabilize the ground.²⁷⁶ By 1885, Square Montmartre was still “nothing but a hill of clay mixed with stones,” according to newspaper report.²⁷⁷ A limited portion of the projected square above the Rue Ronsard opened by 1891, designed by Laforcade under Alphand, offering paths, lawns, clumps, and flowers along the slope supported by retaining walls; still to come were the rocks, stream, cascades, and rustic footbride.²⁷⁸ Alphand did not live to see the transformation of this highly “disturbed site,” to borrow a term from Elizabeth Meyer.²⁷⁹ The project was delayed into the 1920s due to a combination of funding problems, administrative permissions, and physical difficulties in firming up the loose slope.²⁸⁰ The eastern part of the square recalls the Buttes-Chaumont, while the southern part, facing the basilica and bordered by the funicular, is disposed in regular ramps and terraces.

The place Louvois, former site of the theater of the Opéra, received a gardenlike makeover in 1859. Alphand and Barillet-Deschamps conserved the central fountain and

²⁷⁵ *Ibid.*, 306, 452-453.

²⁷⁶ Théodore de Langeac, “Bulletin,” *L'Univers illustré*, 9 May 1874, 294.

²⁷⁷ Canalis, “Le Square de Montmartre,” *Le XIX Siècle*, 6 Jun. 1885, p.3.

²⁷⁸ “Nouvelles Diverses: Le Square de la butte Montmartre,” *Le Figaro* 29 Mar. 1891, 2.

²⁷⁹ Elizabeth Meyer, “Uncertain Parks: Disturbed Sites, Citizens, and Risk Society,” in Julia Czerniak and George Hargreaves, eds., *Large Parks* (New York: Princeton Architectural Press, 2007), 58-85.

²⁸⁰ See Jacques Benoist, *Le Sacré-Cœur de Montmartre* (Paris: Editions de l'Atelier / Ouvrières, 1992), 452-453. See also “Square Louise Michel,” Les Parcs et Jardins, Mairie de Paris (<http://equipement.paris.fr/square-louise-michel-1762>). Archival accounts of the various starts and delays can be found, for example, in the pages of *Le Figaro*: “A Travers Paris,” 2 May 1900, 1; and 22 Aug 1911, 3.

some existing trees. But they added a lawn, vegetation, perimeter gaslights, and perhaps most importantly, a low perimeter grille to create a *square* (fig. 2.18).²⁸¹ Similarly, they remodeled the early-nineteenth-century Place de la Réunion with greenery, lighting, drainage, and a grille in 1862 (fig. 2.18); and in 1867 they created the Square de Laborde (today Marcel Pagnol) in a former marketplace adjacent to the existing barracks and the newly completed church of Saint-Augustin (fig. 2.3). The 4,500-square-meter Square Montholon, opened in 1863, was conceived as an appendage of the newly opened rue Lafayette, with which it shared infrastructures of water, sewer, and gas lines (fig. 2.19).²⁸² The Square Popincourt (later Parmentier, today Maurice-Gardette) reclaimed the site of the former abattoirs of Ménilmontant, rendered obsolete by the new abattoirs at La Villette in 1867 (fig. 2.14). Here the working landscape of food production ceded to a more pacific, ornamental version of nature. It not only reflected the ascendance of decorative landscape architecture in the city, but also the recession of the urban periphery, for it had been considered peripheral half a century earlier, when Napoléon I established the slaughterhouse there. The square did not open until the early 1870s, after the fall of the Empire, demonstrating the continuation of Alphand's urban landscape projects after Haussmann's departure.

²⁸¹ Alphand, *Promenades*, 221.

²⁸² Alphand, *Promenades*, 217.

Square as public court or foyer

A handful of the 24 squares are designed with clear deference to a neighboring building. They therefore evoked the traditionally close relationship between garden art and architecture, or alternately, the customary use of a *place* as an open area before an important building. But instead of echoing the planar geometry of the façade, as in a traditional *jardin régulier*, the modern squares simply echo the buildings' massing and orientation.

The most prominent of these urban foyers was the Square des Arts-et-Métiers (Émile-Chautemps), positioned before the Conservatoire national des arts et métiers, the elite school for research and scientific and industrial arts. The square took the simple form of a grid of 112 chestnut trees and sanded paths, its wide central *allée* forming an avenue to the school's main entrance (figs. 1.18-1.19). Planned since 1858, it was an adjunct to the construction of the Boulevard de Sébastopol, which formed its western border.²⁸³ Alphand justified its regular design by the high volume of visitors it received: not only people coming and going to the conservatory, but also children from the neighborhood and throngs entering or exiting the Théâtre de la Gaîté, which opened in 1862 on the south side of the square.²⁸⁴ “*Ce square, du matin au soir, a l'air d'une cour de college a l'heure de la recreation*” (This square, from morning till evening, has the air

²⁸³ An act of 23 Aug. 1858 authorized, “*La formation d'un square de quatre mille mètres environ de superficie, au-devant de l'entrée principale du Conservatoire, entre la rue Saint Martin et le boulevard de Sébastopol*” See “Rue de Turbigo, etc., etc. — (23 août 1858),” in *Receuil*, 308.

²⁸⁴ Alphand, *Promenades*, LIX.

of a schoolyard at recess), wrote Jules Claretie.²⁸⁵ Only 20 to 25 percent of the square's total cost went to landscape operations of leveling and horticulture; the limestone balustrade, bronze statues, and fountains consumed most of the budget.²⁸⁶ The square seems to have opened in 1860 or 1861, but it was not completely furnished and decorated until 1863. Ernouf found the regular layout of the Square des Arts-et-Métiers so well-suited to its urban surroundings that he thought it should have been employed elsewhere, as at the foot of the Tour Saint-Jacques and the Place du Carrousel.²⁸⁷

In 1859, the *Service des Promenades et Plantations* had established a modest square in the open space before the Basilica of Saint-Clotilde, where custom would have dictated a courtyard, not a garden. Despite Alphand's claim that the trees and plants were disposed so as not to obstruct views of the basilica's neo-Gothic façade, the perspective view drawn by Hochereau in *Les Promenades de Paris* suggests otherwise.²⁸⁸ In 1867, an even smaller green space formed a foyer in front of the newly completed Church of la Sainte-Trinité, designed by the architect Théodore Ballu (fig. 2.19). In this case, the enclosed garden square, complete with elaborate stonework and fountains attached to the church, was planned *in addition to* a more traditional plaza. In 1860, the administration authorized the construction of the church and its surrounding streets, which included "*la formation d'un square*" (the formation of a square) as well as the enlargement of the Rue

²⁸⁵ Claretie, "Les places publiques," 1411.

²⁸⁶ Alphand, *Promenades*, 213.

²⁸⁷ Ernouf, *L'art des jardins* (1868), 226.

²⁸⁸ *Ibid.*, 218.

Saint-Lazare into a *carrefour*, a paved crossroads, a little further away from the edifice.²⁸⁹ The surrounding streets also connected to a lane passing beneath the portico of the church, in the manner of a porte-cochère. It pained Haussmann to admit, he wrote, that this square cost 426,000 francs—more than the much larger squares of Batignolles, the Temple, and even the limestone-heavy square of Arts-et-Métiers—the vast majority of which went towards the architectural fountain and sculpture.²⁹⁰

In 1862, a simple green square replaced the former plaza in front of *mairie* of the newly annexed 14th arrondissement. Alphand described this square of Montrouge (today Ferdinand-Brunot) as “*un jardin proprement dit*” (a garden properly considered), consisting of 3,887 square meters of lawns transected by curving paths and punctuated by clumps of vegetation and sculpture.²⁹¹ Given the clear relationship to a specific adjacent building, Alphand and Barillet-Deschamps laid out the garden to address the architecture of the town hall, albeit in a highly understated way (fig. 2.3). The bilateral symmetry of the curving paths reflects the general hierarchy of the building’s massing. There is no attempt to mirror the lines of the façade in the garden geometry, as Alphand remarked would be appropriate for gardens situated before grand façades.²⁹² In any case, the trees and clumps inside the square partially screen the façade from view, reducing the relationship between architecture and garden design to one of general orientation, not aesthetic continuity. The square still asserted the primacy of its own gardenlike nature.

²⁸⁹ “Rues Morlot, Cheverus, etc. — (19 décembre 1860),” in *Receuil*, 323.

²⁹⁰ “*J’ai peine à dire...*” Haussmann wrote of the cost in his *Mémoires*, 246.

²⁹¹ Alphand, *Promenades*, 224.

²⁹² *Ibid.*, XXXIX.

The jardin Monceau, squared

The Parc Monceau (1861) was arguably the largest *square*. The journalist Charles Friès called it a *square*, but also used the terms *parc* and *jardin* in the same sentence.²⁹³

Another decided that the former *park* had been remade into a *square*.²⁹⁴ The redesigned park was considerably diminished from Carmontelle's original garden on this site, opened in 1778. But the new incarnation was still much larger than even the largest of the squares (that of Batignolles, for example, was under 1.5 hectares). Covering 8.5 hectares, it did not meet the threshold of 10 hectares that Edouard André defined as the minimum for a *parc paysager*, which meant that it could only be a *jardin paysager*.²⁹⁵ The only sure thing is that the renovated Parc Monceau exemplified the nebulous blend of *jardin public*, *jardin paysager*, *jardin botanique*, and *place* that constituted the new urban greenspace.

What really made the park *square-like* was its integration with the urban development of its formerly suburban site. The park formed, in effect, the heart of a posh new residential neighborhood at the junction of the new Boulevard Malesherbes and the Boulevard de Courcelles, at the border of the old tax boundary. Haussmann had

²⁹³ Charles Friès, "Le Parc de Monceaux," *Le Papillon: arts, lettres, industrie* 25 Feb. 1861, 89-90. One sentence used all three terms: "*La même baguette magique qui a fait surgir de terre ces charmants centres de végétation, ces squares accueillis avec une faveur unanime par la population parisienne, va bientôt toucher le parc Monceaux et ajouter de nouveau charmes à ce jardin...*" (89).

²⁹⁴ H. de l'E., "L'Eglise de Saint-Denis" (book review), *Bibliothèque de l'École des Chartes, Revue d'Érudition* (Paris: A. Franck, 1868), 87. "*Le parc, aujourd'hui square, de Monceaux*" (the park, today square, of Monceaux).

²⁹⁵ André, *L'art des jardins*, 185, 189.

contemplated the Boulevard Malesherbes, connecting with Place de la Madeleine, as early as 1854.²⁹⁶ The park—or rather, the sale of apartments around the park—helped to finance the construction of the boulevard. The site of the Parc Monceau might just have easily constituted a majestic new *place* at an important new crossroads, if not for the fact that it was already a garden. After all, the renovated Place de l'Étoile, not far away, was also surrounded by mansions with regulated facades and garden grilles.²⁹⁷ Private dwellings enclosed the renovated Parc Monceau on three sides, in the manner of a London square; but here the residents did not have a special key, and had to enter by one of the four public gates. No cafés, restaurants, balls, or the like were to be permitted.

Park and boulevard, two aspects of the same urban development process, were inaugurated together in a pompous ceremony on August 13, 1861 (fig. 2.20). The *London Globe* reported, “At the entrance of the Parc de Monceaux a triumphal arch was erected, bearing in letters of gold on one side, the words ‘*Urbs Renovata*’ (the City Renewed) and on the other, ‘*Paris Assaini, Embelli, Agrandi*’ (Paris Sanitized, Embellished, Enlarged).”²⁹⁸ The boulevard was decorated with garlands of flowers, flags, banners, and even “wooden or pasteboard columns painted to imitate gold and marble;” troops lined the road where the Emperor’s procession passed; and the scaffolding of the Church of

²⁹⁶ See “Boulevard Malesherbes — (14 mars 1854),” in *Receuil*, 281; and “Parc de Monceau — (14 janvier 1861),” in *Ibid.*, 323. The park project was approved by the municipal council on 17 Aug. 1860, and supposed to be completed on 1 July 1861, though in fact it took another six weeks, still incredibly fast.

²⁹⁷ The legal requirements dictating the setbacks, facades, entrances, grillwork, and other details of the residences around the Parc Monceau were similar to the requirements drafted a few years earlier for the residences around the renovated Place de l'Étoile.

²⁹⁸ “What the Empire Does For Paris; Speech of the Emperor Napoleon at the Opening of the Boulevard Malesherbes,” *London Globe*, reprinted in *New York Times* 31 Aug. 1861.

Saint-Augustin, still under construction, was disguised as “a mass of verdure and flowers.”²⁹⁹ It was not quite a Potemkin village, but it certainly was a performance, recalling Alphand’s successful management of the décor on the occasion of the Emperor’s visit to Bordeaux in 1852. Haussmann said to the gathered crowd near the entrance to the Parc Monceau, “*Quant à la plaine de Monceaux, ce n’est pas un quartier nouveau, c’est une ville entière qui s’y fonde*” (As for the plain of Monceaux, it is not a new neighborhood, but an entire city that is being founded here.)³⁰⁰

Two large, perpendicular drives, 15 meters wide, crossed through the park, linking it with the streets outside. Sewers, water lines, and gas lines all linked to the buried utilities of the adjacent boulevard (figs. 2.21-2.22).³⁰¹ Applying a theory of Berrizbeitia and Pollack, this was a case in which infrastructure—elements of the *voie publique*, or public way, including buried utilities and surface elements—could “reveal unsuspected kinships between elements long known, but assumed to be incompatible with one another,” notably the park and the boulevard.³⁰² The one could be seen as an extension of the other. Of course, not everyone liked that idea. The street-like quality of the park’s drives raised concerns that the park would absorb too much of the hubbub of the city, losing its tranquil charm, even if existing trees were left intact as intended. A journalist sought to soothe public anxiety:

²⁹⁹ *Ibid.*

³⁰⁰ Amédée Gabourd, *Histoire de Paris depuis les temps les plus reculés jusqu’à nos jours* Vol. 5 (Paris: Gaume frères et J. Duprey, 1865), 167.

³⁰¹ Friès, “Le Parc de Monceaux,” 90.

³⁰² Berrizbeitia and Pollack, *Inside-Outside*, 152.

*Que les piétons se rassurent : si M. Alphand, l'heureux ingénieur des promenades parisiennes, a tracé de larges allées pour les voitures, il a dessiné aussi des sentiers pour les pédestres promeneurs. Si les enfants peuvent s'ébattre dans les éclaircies, il existe dans le parc de Monceaux des bosquets tranquilles où des vieillards pourront se souvenir, sans les regretter, les ascensions de Garnerin et des fêtes peu suivies du premier empire.*³⁰³

(Pedestrians rest assured: if Mr. Alphand, the proud engineer of the Parisian promenades, has laid out wide *allées* for cars, he also designed footpaths for walking. If children can frolic in the clearings, there are also quiet groves in the Parc de Monceaux where old folks can remember, without missing them, the [balloon] ascents of Garnerin and the unequalled parties of the first empire.)

Notwithstanding such facile assurances, the new Parc Monceau was open and urban beyond anything Carmontelle could likely have imagined, except perhaps in his diatribes against Capability Brown. He would hardly recognize the place in 1861, Fournier wrote, because “*tout ce qui reste n'est guère que débris*” (what remains is almost nothing but débris).³⁰⁴ Even Ernouf, an ally of Alphand, conceded, “*le tracé de l'avenue centrale côtoie de trop près les anciennes fabriques, pont, grotte et naumachie, qui gagneraient à être plus isolées*” (the path of the central avenue runs too close to the old *fabriques*, bridge, grotto and naumachia, which would be better off more isolated),

³⁰³ A. Arnaud, “Le parc de Monceaux,” *Le Monde Illustré*, 29 Dec. 1860.

³⁰⁴ Fournier, *Paris dans sa splendeur*, 8.

though he conceded this was an inevitable result of too little space.³⁰⁵ Even relics such as the naumachia lost much of its effect, he added, because of the proximity of the new enclosing grille.³⁰⁶ César Daly, however, avowed that the reduction in space was compensated by the gain of a public amenity.³⁰⁷

Remarkably, the most expensive components of the renovation were the perimeter cast-iron fence and the monumental, gilded entrance gates designed by Gabriel Davioud.³⁰⁸ Almost a quarter of the park's total area of 8.5 hectares was occupied by allées, again to the displeasure of visitors looking for rustic nature.³⁰⁹ The park was now closely associated, for better or worse, with its increasingly urban surroundings. It thus combined the traditional urban promenade type with the rustic landscape garden type, pairing the spectacle of urban society with the spectacle of scenic nature.

Leveling effect

The squares tended to level shades of significance into the common denominator of more or less comfortable greenspace. In a telling example, both the place where Louis XVI and Marie-Antoinette were imprisoned (Square du Temple), *and* the place where their heirs

³⁰⁵ Ernouf, *L'art des jardins* (1886), 318.

³⁰⁶ *Ibid.*

³⁰⁷ Daly, "Promenades et plantations," 173. He noted further that the new masonry bridge, replacing an old wood bridge, is the first time that Pierre d'Echaillon (from Grenoble) was used in Paris.

³⁰⁸ Alphand, *Promenades*, 197-198. The entrance gates cost 282,000 francs, over 20 percent of the park's total cost of 1,190,000. The perimeter fence cost nearly as much.

³⁰⁹ *Ibid.* As Alphand noted in his introduction, public gardens usually required more and wider paths than private gardens (LVIII).

later erected an exculpatory expiatory chapel in their honor (Square Louis XVI), received a similar landscape treatment by the *Service des Promenades et Plantations*. Both, at last, were greenspaces in the modern city. Ernouf claimed that the design of different squares expressed differing character. The garden surrounding the expiatory monument to Louis XVI, he wrote, was distinguished by the solemnity of evergreens symbolizing life eternal (and, he might have added, tiny fleur-de-lis motifs on the iron grillwork); whereas the Square des Batignolles was designed to inspire sheer delight.³¹⁰

One could question, however, whether a less erudite eye would appreciate the distinctions. For everyday visitors, both squares offered, in the most reductive sense, the same basic formula of a tranquil, fenced-in garden furnished with benches in the shade. The square, no matter its décor, could be said to erode the chapel's original character of penitent severity. Commissioned by the surviving brothers of the late king during the Bourbon Restoration, the neoclassical chapel was designed by Percier and Fontaine, and constructed between 1815 and 1826.³¹¹ Needless to say, this counter-revolutionary monument elicited mixed responses since its inception. When, in 1865, the administration created, in Alphand's words, "*une promenade nouvelle*" (a new promenade) around the chapel, it smoothed over some of the iconographic significance with a marginally distinct infusion of pleasant greenery and benches.³¹² Thanks to the similarities in the design of the various squares, the Square dedicated to Louis XVI could even begin to blur,

³¹⁰ Ernouf, *L'art des jardins* (1868), 229.

³¹¹ The chapel occupies the former Madeleine cemetery, where the remains of Louis XIV and Marie Antoinette were interred in 1793, then exhumed and re-interred at the Basilica of Saint-Denis.

³¹² Alphand, 222.

superficially, with its political antithesis: the Square du Temple, where revolutionaries imprisoned the unlucky royals in 1792.

A similar smoothing-over describes Alphand's renovation of the Place Royale (Vosges). Napoléon III authorized "*le nivellement de la place Royale*" (the leveling of the Place Royale) in 1855.³¹³ The Service des promenades et plantations conserved the traditional layout but replanted the perimeter rings of lindens and added flower beds, "*en rapport avec le dessin monumental qui leur de cadre*" (in relation to the monumental architecture that frames the place), as Haussmann explained.³¹⁴ The surprise intervention was in the center, where Alphand added a grove of lindens around Dupaty's equestrian statue of Louis XIII, all but shrouding the monument from view (fig. 2.16). "*Les feuilles, croirait-on, voudraient dérober au public l'oeuvre de Dupaty. Ces feuilles ont du gout*" (The leaves, it seems, would rob the public of Dupaty's work. These leaves have taste), quipped Jules Claretie in 1867, who mocked the statue as "deplorable," showing the king coiffed and combed as if fresh from his barber, with zero expression or character.³¹⁵

Regardless of the merits of the statue, to shroud it was an almost iconoclastic move—and quite opposite to the aggrandizing treatment accorded to Napoleonic monuments such as the Arc de Triomphe, the Vendôme column, and the palm fountain in the Place du Châtelet. Perhaps Napoléon III had no love for the fallen Bourbon dynasty,

³¹³ "Place Royale — (20 janvier 1855)," in *Recueil*, 290.

³¹⁴ Haussmann, *Mémoires*, 250.

³¹⁵ Claretie, "Les places publiques," 1398. "*Le roi, régulièrement peigné, semble sortir des mains de son perruquier, ses moustaches se redressent géométriquement sur sa lèvre supérieure. Nulle expression. Point de caractère.*"

though he did restore the name Place Royale (which reverted again to Vosges in 1870).³¹⁶ It is also possible that Alphand's professed distaste for garden iconography other than that of nature itself guided these design decisions. As Claretie wrote:

*Les militaires et les petits bourgeois, les nourrices et les rentières ont, pour s'asseoir, pour prendre le soleil, les bancs du jardin. Ici, comme partout où il y a du ciel et de l'herbe, on rencontre des enfants et des vieillards. Ceux qui ne connaissent pas la vie et ceux qui la connaissent trop se réunissent dans un même sentiment.*³¹⁷

(Military and petty bourgeois, nurses and renters can avail themselves of benches to sit and take sun in the garden. Here, as everywhere there is sky and grass, we find children and the elderly. Those who do not know life and those who know it too well come together in the same sentiment.)

The Place Royale thus became, in essence, a square, if not in name. With the figure of the monarch mostly obscured, the only remaining significant figure was that of the square itself, a marker of the virtues of vegetation, light, and fresh air in the middle of the city. That was not necessarily a bad thing. Why shouldn't everyone have easy access to the basic, humble yet worthwhile amenities found in the squares? Parents seeking a place for their children to play, passerby looking to rest, read, or have a drink of water, can find what they need in almost any of the Second Empire squares. Later squares added

³¹⁶ The order to restore the Republican name, "Vosges," was signed by Etienne Arago on Sept 16, 1870. See "Place des Vosges" in Alphand, *Receuil*, 395.

³¹⁷ Claretie, "Les places publiques," 1397.

more active recreation spaces, ball courts, children's play equipment, wading pools, and micro-agriculture. Still, it is worth noting the diminished power of signification in these urban landscapes, and a possible concomitant loss of participation in reading, writing, acting, seeing, and thinking the city.

A Unified Metropolis?

The promenades of Paris were caught between the promise of an egalitarian metropolis in which landscape architecture was a near-universal right, like the infrastructure of streets and water lines; and the social reality of a divided public. In particular the squares, as already mentioned, embodied the democratization of promenade and picturesque landscape. But the nature of that democratization did not result in the social equality envisioned by republicans, nor in the Napoleonic idea of Paris as a spiritually united family. There was considerable debate as to the social character of the promenades, and more broadly of the public works of Paris. The ambiguity was captured by Arsène Houssaye in 1856, in an introduction to a piece on the Champs-Élysées:

*S'il me fallait faire la géographie de Paris, je diviserais la grande ville en plusieurs pays : Paris ancien et Paris nouveau, Paris passé et Paris futur, Paris qui dort et Paris qui veille, Paris infernal et le Paris élyséen, le Paris qui travaille et le Paris qui s'amuse, le Paris qui pleure et le Paris qui chante.*³¹⁸

³¹⁸ Arsène Houssaye, "Les Champs Élysées," in *Paris et les parisiens au XIXe siècle : moeurs, arts et monuments* (Paris: Morizot, 1856), 1-2.

(If I had to draw the geography of Paris, I would divide the great city into several areas: old and new Paris, Paris past and Paris future, Paris that sleeps Paris and Paris that stays awake, infernal Paris and Elysian Paris, the Paris that works and the Paris the plays, the Paris that weeps and the Paris that sings.)

In the rosiest reading, the changes to the city's form under Haussmann had leveled class distinctions. "Now all these [old] distinctions no longer exist... there is only one Paris," the novelist Paul de Kock proclaimed in 1867, with an egalitarian fervor.³¹⁹ An expanded network of boulevards linked formerly disparate quarters, and new public green spaces appeared, as Zola observed, in places that had previously lacked "a single blade of grass."³²⁰ Not only were the Bois de Boulogne and Bois de Vincennes located at opposite ends of the city, but the parks and squares were distributed relatively evenly—or at least not terribly unevenly—including several in the working-class *arrondissements* annexed in 1860. Edouard André wrote with satisfaction, "the zeal and the care that presides over the gardens are the same everywhere. That of the poor and that of the rich are identical. In the sharing of this agreeable luxury, there is no distinction."³²¹

Nonetheless, André recognized the varying class character of public gardens in different neighborhoods. "The [Square du] Temple and the Tuileries are frequented by very different types of enthusiasts," he remarked, adding, "Leisure and labor, the

³¹⁹ Paul de Kock, "Les Boulevards," in *Paris-Guide*, 1286.

³²⁰ Zola, "Les squares," 2.

³²¹ André, "Jardins de Paris," 1206.

[common] blouse and the [expensive] dress each have their own garden.”³²² The Bois de Boulogne was the scene of high fashion and opulent carriages, whereas the Bois de Vincennes was the place where working families took Sunday picnics or “a bath of air and light.”³²³ André also suggested a connection between physical landscape improvements and a *change* in class character, or at least social behavioral norms. With regard to the planning of the Parc Buttes-Chaumont, he wrote, “*La ville de Paris savait que les améliorations matérielles influent beaucoup sur les mœurs, et qu’en nettoyant ces parages elle en transformerait la population ou la contraindrait de quitter la place*” (The city of Paris knew that material improvements have a large influence on morals, and in cleaning up these areas it would transform the population or oblige it to leave).³²⁴ Here the mention of morals or manners evokes efforts to curb criminal activity, real or imagined, backed by an intention to gentrify the neighborhood with an influx of middle-class residents.

The enclosure and policing of the squares, many of them formerly open marketplaces, allowed guards to screen visitors for “appropriate” decorum and dress that reflected middle-class norms. Long working hours preemptively excluded many working men and women from visiting the fenced-in squares, but people petitioned the administration in this regard. The *Service des Promenades et Plantations* was drawn into the administration and politics of balancing multiple constituencies, receiving many

³²² *Ibid.*, 1206

³²³ Amedée Achard, “Le Bois de Boulogne, les Champs-Élysées, le Bois et le Château de Vincennes,” in *Paris-Guide*, 1251.

³²⁴ André, “Jardins de Paris,” 1213.

requests for permission to hold concerts, carnivals, field sports, fishing, and concessions in the various parks and squares.³²⁵ One of the effects of these petitions was to challenge the traditional genteel distinction between pleasure gardens and useful gardens.

Ultimately, public gardens could not resolve social and economic disparities that undermined the image of gay Paris. “Just around the corner from the most magnificent square, the most elegant street, the most dazzling boulevard, poverty grabs you by the collar,” wrote the travel journalist Eugene Woestyn, referring indirectly to Paris and other European capitals.³²⁶ Such inequalities would contribute to the popular backlash that boiled over in the Commune of 1871. Victor Hugo, from exile, also remarked a tale of two cities, and cast a sinister light on the festivities planned for the *Exposition universelle* of 1867. “When Paris is angry, it puts on a mask. What kind of mask? A costume ball mask,” he wrote in the introduction to the *Paris-Guide*.³²⁷ Hugo warned, “Whoever digs up old Paris meets its past,” conflating the city’s physical fabric with its violent, revolutionary history.³²⁸ The author was not alone in wondering if the great reshaping of the city’s ground during the Second Empire might threaten its identity—or perhaps provoke a rebellion.

³²⁵ See Hopkins, *Planning the Greenspaces*, ch. 6-7.

³²⁶ Eugene Woestyn “Souvenir de voyage,” *Le Figaro*, 9 Sept. 1854, 2.

³²⁷ Victor Hugo, “Paris,” Introduction to *Paris-Guide par les principaux écrivains et artistes de la France* vol. 1 (Paris: Librairie Internationale, 1867), XXX.

³²⁸ *Ibid.*, XVII.

A significant number of Parisians were priced out of the renovated city altogether, and wound up settling in shantytowns outside the city wall—a form of modern urbanism without public works and landscape architecture. Just inside the wall, similar conditions persisted for a few decades in the poorest neighborhoods (fig. 2.23). Émile Zola was dismayed to observe workers relaxing on the ramparts on their day off, facing toward the busy city rather than the calmer country: “*Ils étalent leur mouchoir, et s'asseyent, en tournant le dos à la campagne, en regardant Paris qui hurle et fume devant eux. Cet horizon sale leur plait*” (They spread their towel and sit, turning their back to the countryside, and watch Paris howling and smoking in front of them. This foul horizon pleases them).³²⁹ Many working-class families could not afford to live in the city, despite its expansion; shantytowns sprang up just outside the fortifications—a sign that planners and landscape architects did not fully control the process of urbanization, and that not everyone had access to the benefits of the public works.

³²⁹ Zola, “Les Squares,” 2.

3. Paths of Water in the Bois de Boulogne

Water played the crucial role in transforming the Bois de Boulogne from a dry forest into a lush park between 1852 and 1858. The entire project, in a sense, turned on hydrology, from idyllic lakes and cascades and sprawling irrigation systems. The many aspects of the renovation—reshaping the ground, adding and eliminating roads, enriching the soil, cultivating plants and trees, building fences and pavilions, installing rockwork, and leasing out private concessions—all presupposed or depended upon an elaborate new hydrography. So, too, did the colorful social life for which the park became renowned. Water was the prism through which the overall project was conceived, and through which the major features of the park come into focus. Water in the Bois de Boulogne structured two main things: a cultural encounter with landscape, and the material sustenance of that landscape. If the Bois de Boulogne offered visitors a memorable experience of *place*, as Berrizbeitia has suggested, it is partly because of its water system, which enables both scenic and programmatic aspects of the landscape.³³⁰ Of the three main kinds of landscape process outlined by Berrizbeitia—self-sustaining ecologies, seasonal changes,

³³⁰ For a discussion of the relationship between process and place in large parks, including the Bois de Boulogne, see Anita Berrizbeitia, “Re-Placing Process,” in Czerniak and Hargreaves, eds., *Large Parks* (New York: Princeton Architectural Press, 2007), 174-197.

and changes in social use—the design of the Bois de Boulogne originally accommodated little of the first, very much of the second, and some of the third.³³¹

The project began with Louis- Napoléon's dream of a placid river lined with verdant paths and lawns, a Parisian counterpart to the Serpentine River in London's Hyde Park. Elaborate engineering and earthworks were required to physically realize this Arcadian landscape on the dry, porous, sloping ground of the bois. Basins had to be dug and lined; pipes had to be laid. This work was begun under the designer Louis-Sulpice Varé and continued under Alphand, with important contributions from the engineer Belgrand and the landscape architect Barillet-Deschamps, as well as thousands of laborers. To organize the movement of water throughout the site required collaboration between landscape designers and engineers. Here garden art and infrastructural design were two sides of a single endeavor, one that Alphand approached methodically, like a public works project, but with the ulterior motive of creating a landscape of pleasure and a work of art. In fulfilling the Emperor's demand for a conventionally charming landscape, the revolving cast of designers and engineers forged their way toward a more thoroughgoing engagement with systems of groundwater, surface water, soil, drainage, and irrigation.

Despite the veneer of a perfectly controlled landscape and water system, the redesign of the Bois involved significant contingencies and variables behind the scene—and beneath the surface of the ground. The park's hydrographic design was cobbled together incrementally, eventually comprising three networks from different sources. It

³³¹ Ibid., 177.

was not initially a seamless network, but rather a collection of courses along which water flowed sometimes invisibly, sometimes visibly, either underground or on the surface, whether forced or by gravity. Paths of water united the instrumental and the ornamental aspects of landscape. In taking a systematic—though by no means inflexible—approach to hydrography, the Service des Promenades et Plantations simultaneously engaged the environment of the wider territory and pursued picturesque design ends. The modified hydrology of the park revealed the landscape as a cultural construct as well as a physically dynamic system.

In focusing on hydrography, the present chapter is intended to provide something of an alternative frame of analysis for a familiar landscape. Since the 1850s, the Bois de Boulogne has been represented as a picturesque playground for the privileged. Yet few accounts have attempted to examine both the visible and invisible *paths of water* that allowed the bois to become a modern park. I attempt here to trace the bifurcation and convergence of superficial and subsurface waters, and thus to reveal a tension between seen and unseen phenomena that runs through many of the public landscapes of the Second Empire. A similar hydrographic analysis could be performed just as fruitfully on the Bois de Vincennes, which features lakes, elevation changes, irrigated lawns, and an impressive steam-powered pump to lift water from the Marne up to the lake-reservoir on the plateau of Gravelle.³³² I have chosen to focus here on the Bois de Boulogne simply because of its more extensive documentation and representation in the period of the

³³² Alphand, *Promenades*, 167-70.

Second Empire. Rather than simply adding to the luster of this celebrated park, my intention is to show it from a different point of view, refracted through its water.

My purpose here is not to provide a complete description of the hydrography of the Bois, as Alphand himself provides in *Les Promenades de Paris*. This chapter focuses selectively on various paths of water to highlight their relationship with cultural, technological, and environmental processes in the landscape. The following pages discuss 1) the primacy of hydrography to the conception of the park, and the relationship between instrumental and ornamental uses of water, beginning with the pair of lakes or *rivière*; 2) the plight of Varé, the original *paysagiste* appointed by the Emperor, famously accused by Haussmann of incompetence, but more importantly lacking in methodical process; 3) cascades and streams as both theatrical effects and an expression of topography, and 4) contingencies involved in implementing and maintaining the water system, with particular respect to the misadventures of the artesian well at Passy. Following the paths of water through this designed landscape reveals interesting reciprocities as well as frictions between picturesque and utilitarian intentions.

Water as ends and means

As early as 1849, within a year of being elected President of the Second Republic, Louis-Napoléon spoke of overhauling the Bois de Boulogne. What the “Prince-President” envisioned, above all, were picturesque bodies of water, according to the memoirs of a

former functionary, Charles Merruau.³³³ Louis-Napoléon reportedly looked over the straight and dusty *allées* of the bois and remarked, “*Il faudra une rivière ici, comme à Hyde-Park, pour vivifier cette aride promenade*” (We must have a river here, like at Hyde Park, to revitalize this arid promenade).³³⁴ The idea sounded ambitious and perhaps unrealistic to those who heard it. Merruau recalled that it seemed a fantasy, a pipe dream, *une rêve chimérique*.³³⁵ In place of sun-scorched, dust-choked *allées* cutting through a stunted wood, there would be lakes and lawns as well as brooks and paths shaded by vegetation. It was another coup d’état, Merruau wrote, but this time the goal was to overthrow the established order of the landscape, not the order of government.³³⁶

The project would have to wait a few years to move forward, until after Louis-Napoléon completed his coup d’état and rechristened himself Napoléon III on December 2, 1852. During the interim, he had pressed and accomplished seemingly more utilitarian projects in Paris, such as the extension of the Rue de Rivoli and the construction of new market halls. By July of 1852, following the legal path of earlier public landscape projects, the state ceded the Bois de Boulogne to the municipality in 1852, with the caveat that Paris would maintain the Bois as a public amenity and would invest two million francs in beautifying and modernizing it.³³⁷ The renovation of the Bois de Boulogne became at once a personal and a public project for Louis-Napoléon. He had

³³³ Charles Merruau, *Souvenirs de l’hôtel de ville de Paris. 1848-1852* (Paris: E. Plon, 1875), 367.

³³⁴ *Ibid.*.

³³⁵ *Ibid.*

³³⁶ *Ibid.* 489.

³³⁷ Alphand, 3.

enjoyed and admired London's green spaces (as well as its horse racing, finance, and industry) during his years of exile from France, and he took to sketching plans and frequently visiting the construction site of the Bois.³³⁸ To one-up the Serpentine, the Emperor's *rivière* would have the added attraction of the two islands, reachable only by boat.

The languid watercourse in the Bois, surrounded by rich verdure, would meander between the two radial intersections known as the Rond Mortemart and Rond Royal, replacing the old straight road lined with rough woods. It was not only a new vision of the Bois, but also a more modern (and romantic) vision of nature, based on almost a century's worth of picturesque practice and theory in France, and even longer in England. Lakes in the late eighteenth-century parks of Morfontaine and Ermenonville, for example, appear at least as influential as British precedents in the redesigned Bois. Laborde's landscape park of Méréville in northern France is also an important precedent, particularly with its "Île Natalie," a serene island set off by a river (fig. 3.1). The new nature was a voluptuous idyll—docile and unabashedly formed and maintained by human care.

The term *rivière* did not denote a river per se, but something closer to an elongated lake designed to look like a river. A widely known treatise by Boitard, reprinted in six editions between 1825 and 1859, recommends a *rivière anglaise* for sites where water is lacking, and where the soil is compact enough to retain water conveyed

³³⁸ G. D. (Chef de Bureau à la Préfecture de la Seine), *Notice pittoresque et historique sur le Bois de Boulogne et ses environs* (Paris: Librairie d'Auguste Fontaine, 1855), 34-35. See also Merruau, *Souvenirs*, 367; and Haussmann, *Mémoires*, 122.

from afar.³³⁹ Boitard, former editor of *Le Bon Jardinier*, added the seemingly obvious point that such a lake should be dug in the lowest part of a garden, so that the water will not run elsewhere. But Louis-Napoléon was unconcerned with such caveats when he ordered a wide and majestic *rivière* to be dug on high ground in the eastern part of the Bois de Boulogne, conveniently accessible from the gates of Paris. Not only did the site lack the necessary water, but also it lacked the impermeable soil and the flat, low-lying ground recommended by Boitard for a *rivière anglaise*. Of course, the Emperor had greater means at his disposal than other would-be gardeners; he could hire enough engineers and laborers to more or less impress his will upon the landscape.

But for those charged with developing the concept in detail and bringing the designs to fruition, the water problem took on two aspects: water as the end, and water as the means. If a beautiful lake was the goal, it would need hidden infrastructure to supply and maintain it. In *Les Promenades de Paris*, Alphand divided his account of the water system of the Bois de Boulogne into two separate chapters, one devoted to variable subsurface systems of piping, irrigation, and drainage equipment; the other dedicated to carefully modulated aesthetic features such as surface lakes and streams. This two-tiered approach to hydrography would eventually extend beyond the initial *rivière* to encompass the entire Bois de Boulogne, and other parks and gardens of the Second Empire. Surface water was to animate the landscape and delight the senses: wind-rippled lakes, cascades falling over rocks and moss, calm sheets reflecting the trees and sky, and curving brooks leading the eyes and feet through the landscape. The new water features quickly became

³³⁹ Boitard, *L'art de composer*, 125.

the main attractions of the bois, along with special concessions like the Longchamp racetrack, the Pré-Catelan, and the Jardin d'Acclimatization. Surface water in the Bois was not limited to inducing pleasure, however. The lakes were stocked with salmon and trout, eventually to be eaten. The Bois contained ice-harvesting facilities, in which workers stockpiled the winter's bounty in underground caverns. A frozen pond also served as an ice-skating rink.

Alphand and his fellow engineers also developed a parallel but mostly concealed infrastructure of water supply and control. Sixty-six kilometers of underground piping brought water from the Seine and the Ourcq to the new lakes and cascades, and irrigated the lawns and shrubs via spigots and hoses. This piped water found its way onto wagons that continuously sprinkled the *allées* in summer to keep them from becoming too dusty. Dams and retention devices allowed engineers to modulate the flow of surface water. Sewers and sump pits provided drainage along the roads. Alphand built a floodbank along the Seine to separate it from the newly annexed plain of Longchamps, which lay in the floodplain but was scheduled for development. All these operations presumed significant capital to build them, a staff of laborers to operate them, and engineers to design and maintain them. Interestingly, the visible and invisible water works in the park cost approximately equal amounts.³⁴⁰

³⁴⁰ Alphand, *Promenades*, 26. The infrastructure of pressurized water cost around 1.5 million Francs, plus perhaps another million to dig the troublesome artesian well of Passy. The cost of building the lakes, streams and cascades, was roughly one million Francs; the cost of excavating the two lakes (600,000 cubic meters of earth) cost another million. (*Ibid.*, 8, 36). The artesian well of Passy, which was commissioned to supply the Bois de Boulogne, far exceeded its initial budget of 350,000 Francs. Alphand gives the costs of the first two phases, totaling over 600,000 Francs, but does not list the costs of the third and fourth phases,

An engineering manual from 1855 conceived of the movement of fluids in two basic ways: either it was contained in a pipe or canal, or it escaped from a container into the open.³⁴¹ The author, Regnault, further distinguished between “*mouvement permanente*,” characterized by steady flow and an unchanging sectional profile on the one hand, and “*mouvement varié*,” characterized by an uneven course and a variable speed of flow.³⁴² The first kind of flow could be induced, predicted, and measured with accuracy. By contrast, Regnault noted, the speed of water flowing in the beds of streams and rivers is “*infiniment variable*” (infinitely variable), due to differences in slope, depth, width, and friction along the banks.³⁴³ There is no evidence to suggest that Alphand possessed a copy of this particular manual, which was addressed to aspiring engineers rather than established professionals. But his training as an engineer in the 1830s no doubt introduced him to the concept of managing and quantifying the movement of water, if only with respect to the construction of sewers, canals, and potable water networks. Transferring these methods to the stream leading to the Grande Cascade, he referred to “*la masse liquide nécessaire à son développement*” (the mass of liquid necessary for its development).³⁴⁴

which involved extensive repairs and reinforcements to the underground tubes and columns (*Ibid.*, 118, 120).

³⁴¹ Jules Regnault, *Manuel des aspirants au grade d'ingénieur des ponts et chaussées ... rédigé d'après le nouveau programme officiel* Vol. 2 (Paris: Mallet-Bachelier, 1855), 391.

³⁴² *Ibid.*

³⁴³ *Ibid.*, 422.

³⁴⁴ Alphand, *Promenades*, 28.

For Alphand, the remade landscape of the Bois de Boulogne was inconceivable apart from its new water system. So crucial is hydrology that Alphand makes it the most conspicuous feature on the full-spread plan of the renovated park in *Les Promenades de Paris* (fig. 3.2), one of only three such spreads in the volume. The three networks of underground water pipes are vividly indicated with red dots and dashes over the grayscale drawing. It becomes impossible to miss the connection between the buried infrastructure, the new *allées*, and the naturalistic scenery illustrated in subsequent views. The Bois de Boulogne is by far the most extensively documented project in *Les Promenades de Paris*, and its surface and subsurface water features are among the most extensively documented components. Remarkably, Alphand's treatise contains no plan of the renovated Bois that does *not* show the network of forced-water pipes (such a plan can be found in Vacquer's *Bois de Boulogne Architecturale* of 1860.³⁴⁵) The demonstration of cartographic knowledge of geology, resources and flows suggests complete mastery of the landscape as a system.³⁴⁶ However, the clear graphic and textual representation of water systems in the book runs contrary to the total suppression of any sign of that system in the space of the designed landscape. In the park, underlying processes are written out of the representation of nature. Or they are left ambiguously implicit, just like the mechanisms lurking between the scenery of an extravagant opera. Seen another way, the ornamental water effects in the park, like a series of urban fountains, gave public

³⁴⁵ Théodore Vacquer, draftsman, under the direction of Alphand and Davioud, *Le Bois de Boulogne Architecturale* (Paris: Caudrilier, 1860).

³⁴⁶ For more discussion of this theme see Antoine Picon, "Nineteenth-Century Urban Cartography and the Scientific Ideal: The Case of Paris," *Osiris*, 2nd Series, Vol. 18, Science and the City (2003), 135-149, esp. p. 40.

expression to the utilitarian works being undertaken in the city of Paris to provide fresh drinking water and a modern sewer system.

The geological and historic disposition of the site did not suggest a landscape park. High and dry, its soil was full of sand and rocks, Alphand observed, and did not receive or retain much rainwater. Hence the old Bois supported hardy trees and scrub, not delicate and profuse greenery. In the early 1800s, Napoléon I had ordered the trees and roads upgraded. But swaths of the forest were soon cleared or burned by occupying Allied armies when they took Paris from him in 1814-1815. A replanting campaign during the subsequent Restoration period increased the diversity of tree species, but the Bois still remained naturally arid. The pride of the Bois was its limited stock of old-growth oaks concentrated in a few groves in the Southeastern section, plus a handful of quiet ponds that partially dried up in the summer. For Napoléon III, there was no question of working within the existing environmental limits. He wanted a fundamental change of landscape character, which required a change of underlying biome. Only an abundance of imported water could transform the site from a scrappy woodland to a verdant landscape park. And then, even if water could be brought in, presumably at large expense, there remained the problem of preventing it from dissipating into the porous ground.

An obvious precedent could be found in the seventeenth-century gardens of Versailles, in which, Baridon observes, “water was precisely the problem.”³⁴⁷ As work in the Bois de Boulogne raced ahead in 1853, the *Revue des Beaux Arts* looked back two

³⁴⁷ Michel Baridon, *A History of the Gardens of Versailles*, trans. Adrienne Mason (Philadelphia: University of Pennsylvania Press, 2008), 98.

centuries, toasting the triumph of Le Nôtre and the engineers working for King Louis XIV in bringing “torrents” of dancing water and rich plantings to what was once a “dry and sad hill.”³⁴⁸ There was no mention of how the great aqueducts and the *Machine de Marly* were plagued by numerous setbacks and never quite fulfilled the insatiable demand for water at Versailles.³⁴⁹ But such difficulties, too, would have accurately foreshadowed things to come in the Bois de Boulogne.

Despite the fact that Alphand, Belgrand, and other engineers succeeded in bringing water to the bois, they encountered difficulties along the way. They developed the elaborate subterranean supply system not from a single, cohesive masterplan but by incremental additions and adjustments. The system proceeded rather provisionally, piece by piece, according to Alphand’s own account, as the water needs of the park increased along with the size and features of the park itself.³⁵⁰ This history belies the image of engineers who conceived logically of a system, drafted neat plans, and had them flawlessly executed in iron and earth. Contingencies in administration and the physical site affected the development of the hydrography and the park. For one, the scope of the project was dramatically expanded in 1855, as the plain of Longchamp was annexed to the Bois. One of Alphand’s strengths was an ability to adapt to changing conditions, allowing him to oversee the successful redesign of the Bois despite unforeseen

³⁴⁸ Eugène Vavin, “Le Bois de Boulogne: Travaux de M. Varé,” *Revue des beaux-arts : Tribune des artistes* Tome 4, No. 12 (1853), 199. “Une question assez importante a été soulevée: l’eau amenée à grands frais ne sera-t-elle pas absorbée par les sables?” Ce qu’on peut répondre, c’est que le même travail a été exécuté avec succès dans le parc de Versailles où le sol est aride et mouvant, et l’art y a fait couler l’eau par torrents à travers les plus charmants ombrages.... la nature entière a été asservie par Le Nôtre.

³⁴⁹ Baridon, *Gardens of Versailles*, 103-105.

³⁵⁰ Alphand, *Promenades*, 15.

challenges. Alphand's versatile know-how and tact ultimately helped him to outlast the administration of Haussmann and the collapse of Second Empire.

Three different water systems supported the new Bois de Boulogne.³⁵¹ The first, established in 1854, carried the water of the Seine. It relied on the old steam-powered machine at Chaillot to pump water to the existing reservoir at Passy. A new cast iron main, 40 centimeters in diameter, was installed along the Avenue d'Eylau and entered the park at la Muette.³⁵² Once inside the park, it followed the new allées around the lakes to the butte Mortemart, where it discharged into the upper lake. En route to this pinnacle, however, it released water for irrigation and also released a cascade into the lower lake. Demand swiftly increased beyond the originally anticipated volumes, as new roads and lawns required regular sprinkling. Secondary pipes (made not of cast iron but of less expensive sheet metal) were grafted on to the main, taxing the system, especially on summer days when the roads quickly grew dry under the sun. In 1855, Alphand and Belgrand—the engineer appointed by Haussmann to develop the city's water and sewer system—established a second main carrying the water of the Seine, this time along the newly completed Avenue de l'Impératrice (today Avenue Foch) with its thirsty grass and trees, entering the Bois de Boulogne at the Porte Dauphine.³⁵³ Between the two

³⁵¹ Compare Alphand's plates in *Les Promenades de Paris* showing the plan of the Bois de Boulogne, *État ancien* and *État actuel*. Although the various systems operated completely separately and at different pressures, they could be combined in case of emergency.

³⁵² Alphand, *Promenades*, 15. The diameter of the pipe is given in Édouard Gourdon, *Le Bois de Boulogne, histoire, types, moeurs*, 2nd ed. (Paris: Coulon-Pineau, 1854), 104.

³⁵³ Alphand, *Promenades*, 15.

interconnected mains, the Seine circuit furnished up to 240 liters of water per second.³⁵⁴ But this would not be enough.

The artesian well at Passy, conceived in 1854 for the sole purpose of watering the bois, ended up running years behind schedule. It did not draw water until the end of 1861, by which time the park was even thirstier than expected. Concessions like the Pré-Catelan, the Longchamp hippodrome, and the Jardin d'Acclimatization required plenty of water of their own. In the interim, Alphand and Belgrand built a third network to bring water from the Canal de l'Ourcq, via the Monceau reservoir, to the lower, Eastern parts of the bois. The supply line slipped into the Bois at its Northeast corner and, buried underground, cut straight through the woods along the erased path of the former *Allée royale*.³⁵⁵ Alphand planted over the old route (rendered obsolete by a series of new, gently curving paths), but not before using it to conveniently bury a water line.

Varé and the question of method

By the time Alphand was summoned to Paris by Haussmann in November of 1854, construction on the Emperor's *rivière* was well underway. It is widely acknowledged that the initial design work—adapted more or less from the Emperor's ideas—was undertaken by Louis-Sulpice Varé, a landscape designer and horticulturist who enjoyed connections

³⁵⁴ *Ibid.*, 16.

³⁵⁵ The location of the old Monceau Reservoir, established under Napoleon I, was near the intersection of the Rue de Constantinople and the Boulevard des Batignolles. See Hippolyte Bonnardot, *Monographie du VIII^e arrondissement de Paris: étude archéologique et historique* (Paris: A. Quantin, 1880), 59.

to the Bonaparte family. However, the circumstances surrounding Varé's dismissal remain a little murky. Many historians have been content simply to accept Haussmann's account of the matter, which is that he had to fire Varé for committing an error of gross incompetence. The often-repeated tale finds Haussmann arriving on the scene of massive excavations in the Bois de Boulogne sometime after he took office as Prefect in June of 1853.³⁵⁶ He sees an army of laborers at Varé's disposal cutting down trees and digging up the earth pell-mell to lay the course of the future *rivière*.³⁵⁷ Haussmann becomes suspicious when Varé shows him a plan lacking any contour elevation markings. Determined to wrest order from chaos, Haussmann immediately orders longitudinal and transverse section drawings from an engineer, Baudard. These reveal a problem: the change in ground level to be traveled by the waterway is too great, portending the disaster of a river dry at the top and inundated at the bottom. Haussmann takes credit for proposing the remedial solution that was actually built: dividing the river into two lakes at different levels, separated by a dam topped with a large path, allowing water to cascade from one into the other.³⁵⁸

Archival evidence shows that Haussmann was not the first to propose this idea. In April 1853, two months before Haussmann took office, the *Revue des Beaux Arts*

³⁵⁶ The dates are found in Jordan, *Transforming Paris*, 168. According to Jordan, Haussmann received a telegraph notifying him of his appointment to the office of Prefect of the Seine on June 24, 1853; and took the oath of office before the Emperor at the Palace of Saint-Cloud on June 29, 1853.

³⁵⁷ Haussmann, *Mémoires*, 122-123.

³⁵⁸ *Ibid.*, 124.

outlined the major features of a plan for the Bois de Boulogne, recently approved by the municipal council:

*Une rivière artificielle formée de deux bassins, dont l'un, plus élevé, déversera ses eaux dans l'autre au moyen de cascades, coulera entre le rond-point Mortemart et le rond-point du Roi. Des îles et des ponts accidenteront ce cours d'eau, auquel mèneront, sur la droite du bois de Boulogne, des allées sinueuses et des bouquets de verdure en manière de jardins anglais.*³⁵⁹

(An artificial river made of two basins, one of which, higher than the other, will pour its waters into the other by means of waterfalls, will flow between the rond Mortemart and the rond du Roi. The water course will feature islands and bridges, and will be approached by winding alleys and clumps of greenery in the manner of English gardens).

The author of this plan was none other than Varé, whom the Emperor (via Haussmann's predecessor, Berger) had appointed to redesign the Bois together with the architect Jacques-Ignace Hittorff in 1852. The proposed two-lake solution shows that Varé did indeed take account of the sloping ground, at least to some extent. This evidence basically invalidates Haussmann's famous accusation of Varé—"Dès le début, il avait commis une erreur, sinon un complet oubli de nivellement" (From the beginning, he had made a mistake in leveling, or overlooked it entirely). As other scholars have pointed out,

³⁵⁹ Georges Guénot, "Le Monde Artistique," *Revue des Beaux-Arts*, April 14, 1853, (vol. 4, no. 8), 134. The report further specified, "Le total des dépenses est évalué à environ un million et demi : cinq cent mille francs seront dépensés cette année."

Haussmann's memoirs, written several decades after the events in question, contain numerous self-serving embellishments and omissions, and should be taken with a grain of salt, despite their overall usefulness.³⁶⁰

On the eve of Haussmann's arrival, Varé was hailed as a visionary artist and master horticulturist. The landscape painter Vavin, writing in the *Revue des Beaux-Arts*, suggested that Varé so thoroughly understood plants and visual effects that his "art" sometimes surpassed the beauty of nature.³⁶¹ Varé came from a family of landscape gardeners in Val d'Oise who had served the Bonaparte nobility: his grandfather, known as Marcellin, had redesigned the gardens of Saint-Leu-Taverny (Saint-Leu-la-Forêt) and Morfontaine for Louis-Napoléon's father and brother, respectively.³⁶² According to a variety of second-hand accounts, the Emperor was personally fond of and familiar with Varé; he visited the work site daily, smoked cigarettes, and chatted over design details with his landscape architect.³⁶³ By the spring of 1854, the upper lake was complete, and attention turned to finishing the lower and larger lake—the *rivière* proper, containing the two sculpted islands. The Emperor publicly displayed his esteem for Varé at the opening ceremony of the upper lake on Saturday, April 8, 1854, by bestowing upon him the

³⁶⁰ See, for example, Jordan, *Transforming Paris*, 84, 107, 123.

³⁶¹ Vavin, "Bois de Boulogne," 198.

³⁶² *Ibid.*, 198.

³⁶³ Édouard Gourdon, *Le Bois de Boulogne, histoire, types, moeurs*, 2nd ed. (Paris: Coulon-Pineau, 1854), 97-98. Elaborated in Édouard Gourdon, *Le Bois de Boulogne* (Paris: A. Bourdilliat et Cie, 1861), 94. A poem by A. Barthélémy, *Le Bois de Boulogne* (1857), portrays the two men working together. See also "Courrier des arts: un oublié à l'honneur," *Le Figaro*, 20 Dec. 1932, 5.

Legion of Honor.³⁶⁴ A plan of the Bois de Boulogne dated June 10, 1854 was signed by *Varé, architecte paysagiste*, printed in Paris, and annotated two weeks later by the Emperor from the Château de Saint-Cloud (fig. 3.3).

Still, Varé may have neglected certain professional drawing and planning techniques in forming his overall design or *parti*. On his very first visit to the Bois, he reportedly experienced a flash of inspiration by going to the highest part of the site, the Mortemart circle, and climbing up the cedar tree that stood in the center.³⁶⁵ He visually apprehended the perspectives, the vegetation, and the lay of the land. When he came down, “*tout son projet était dans sa tête*” (his whole project was in his head), explained a guidebook from 1854, the first edition of which lacked a map or plan of the new lakes and paths.³⁶⁶ Varé’s climb to the top of the tree can be contrasted with Haussmann’s survey teams who mounted temporary towers all across Paris to complete a triangulated map of the capital, *le plan de Paris*, which became the basis for all the subsequent redevelopment projects.³⁶⁷ But where the artist supposedly appraised the landscape pictorially and generated his project in his mind, the surveyors working on *le plan de*

³⁶⁴ “Un Illustre Inconnue. Le Créateur du Bois de Boulogne,” *La Presse*, Sept. 20, 1922, 2. See also a letter to the editor from Varé’s grandson in *Le Figaro*, 16 Jan. 1899, 1.

³⁶⁵ Gourdon, *Bois de Boulogne* (1854), 100-101.

³⁶⁶ *Ibid.* A second edition of Gourdon’s guide, undated but possibly from later in 1854 or 1855, contained a plan showing the new lakes and surrounding paths.

³⁶⁷ Jordan, *Transforming Paris*, 173. Regarding the origins of the department of the Plan of Paris under the July Monarchy, see

Alice Thomine-Berrada, “Histoire des politiques d’urbanisme à Paris (XVIe-XXe siècles),” in: *École pratique des hautes études. Section des sciences historiques et philologiques. Livret-Annuaire 21. 2005-2006*. (2007), 315.

Paris under the architect Eugène Deschamps used empirical methods to draw a detailed map that was used over and over again by many different project teams.

Varé described his own design method in 1840 as one of intuitive visual composition, based on the givens of the site:

*Les règles qu'il faut observer se réduisent à peu de chose... c'est la situation qui commande... Lorsque je suis appelé à créer un jardin, je débute par étudier le terrain en le parcourant en tous sens, et en profitant de tous les points culminants pour mieux en saisir l'ensemble.*³⁶⁸

(The rules to be observed are few ... It is the situation that governs... When I am called to create a garden, I begin by studying the ground by traversing it in every direction, and ascending all of its highest points to gain a better understanding of the whole.)

Only after making this preliminary visual survey, and after conferring with the property owner, would Varé (or Varée, as he was named by the author of this article, who extolled his brilliance), draw a plan.³⁶⁹ Varé seems to have used drawing mostly to record decisions already taken, or to advertise projects already built, as evidenced by a collection of drawings he made in the early 1850s of previously completed projects.³⁷⁰

³⁶⁸ H. Rousselon, "Horticulture: Observations sur la composition des jardins," *Annales de flore et de pomone: ou journal des jardins et des champs* (April 1840), 208-209.

³⁶⁹ *Ibid.*, 209.

³⁷⁰ Florence Collette, "Louis-Sulpice Varé," in *Jardins en Val d'Oise* (Val d'Oise, France: Conseil Général du Val d'Oise, 1993), 184-185.

Such a conclusion is also supported by the fact that the plan mentioned above was produced and approved two months *after* the opening of the first lake. Unlike trained architects or engineers, Varé did not necessarily use drawing as a design tool. (It is worth noting, Alphand cautioned against designing only in plan, and urged the garden artist to make frequent site visits and take many perspectival views.) Varé probably relied on visual judgments on site, which he would indicate by setting stakes in the ground, to refine the contours of paths, waterways, and islands of the Bois de Boulogne. According to the guidebook author Gourdon, this method better allowed Varé to approximate the spontaneous charm of nature and conserve happy accidents of terrain.³⁷¹ For example, he adjusted the path of *allées* or lakebeds to conserve old trees. Varé was described as unpretentious and modest, unlike a courtier, a fame-seeker, or an erudite man of the salons. His powers as an artist resembled those of a magician: with a stroke of his wand, he could transform a piece of poor ground into a lush paradise.³⁷²

Varé nonetheless took pains to test his ideas. According to historian Florence Collette, Varé created smaller-scaled versions of the projected lakes of the Bois on his family's property in Val d'Oise, perhaps to refine their relative elevations as well as contours.³⁷³ He had previous experience with slopes, drainage, and other technical

³⁷¹ Gourdon, *Bois de Boulogne* (1854), 99-100.

³⁷² *Ibid.*, 99. “Il vous prend un petit coin de terre... et, d'un coup de baguette, le magicien vous le transforme si bien que vous ne le reconnaissez plus! Le bois est frais, une large rivière y coule, un grand lac y reflète de superbes massifs; des îles, ou plutôt d'immenses corbeilles de fleurs, sortent des ondes; les lointains brumeux se perdent au bout des longues perspectives... M. Varé y a mis la main, il l'a signée de son nom, le poème est fait!”

³⁷³ Collette, “Varé,” 183.

challenges.³⁷⁴ And he seems to have valued economy of material and labor on site.

According once again to Gourdon, the 1200 workers digging the *rivière* wasted “not a single pickaxe stroke.”³⁷⁵ Varé had them set aside rocks, gravel, and sand that turned up in the excavations, recycling them for constructing roads or other works.³⁷⁶

Most of the fill from these massive lake excavations, totaling some 600,000 cubic meters, was piled upon the clearing of the old *rond* Mortemart to form a new hillock, the *butte* Mortemarte, offering commanding views in all directions. Three hundred horses and a temporary railroad helped haul the debris to higher ground. From this elevated vantage, all visitors could freely enjoy the view that Varé had first beheld from the top of the cedar tree. In addition, the presence of this *monticule* overlooking the lakes manifest the cut-and-fill operation behind the new landscape of water and views. In short, the modified relief signified its own transformation, though today it is barely perceptible. Meanwhile, the cedar that Varé had climbed was transplanted to the top of the new hill, 10 or 12 meters higher than its original location. It became a monument to technologized nature, marked on Alphand’s plan (fig. 3.2 detail). There were precedents to using a cedar as a landmark: in Paris, a large specimen grew in the Jardin des Plantes from about 1734, becoming a favorite destination and the subject of drawings and paintings.³⁷⁷

³⁷⁴ *Ibid.*, 182.

³⁷⁵ Gourdon, *Bois de Boulogne* (1854), 103.

³⁷⁶ *Ibid.*

³⁷⁷ See, for example, the oil painting by Jean-Pierre Houel, “Le Cèdre du Liban au Jardin des Plantes,” Musée de la Ville de Paris, Musée Carnavalet, Paris, France (undated). Four cedars of Lebanon had already formed an attraction as early as 1683 at Chelsea Physic Garden in London, according to Catherine de Bourgoing, *Jardins Romantiques Français: Du jardin des Lumières au parc romantique, 1770-1840*. Musée de la vie romantique (Paris: Paris musées, 2011), Pl. 60.

Hausmann's office congratulated itself for replicating the awesome powers of nature's "cataclysms" in creating the "mountain" of the butte Mortemart, crowned at its summit by an cedar that it said was nearly a century old.³⁷⁸

But some observers were less impressed. Even if the view was marvelous, the hill itself was nothing special in an age when industrial technology was remaking the landscape at an astonishing scale, wrote the engineer J. Lobet in Hachette's guide to the new Bois.³⁷⁹ One critic complained that the mound actually *blocked* his favorite view, to the southwestern suburb of Meudon.³⁸⁰ And the replanted cedar, despite its heightened perch, remained "just as puny as before," Joanne remarked.³⁸¹ It is impossible to assess the butte today, as it was leveled to accommodate the Hippodrome d'Auteuil from 1873.

Regardless of the mixed reception of the mound and the tree, the butte Mortemart had an uncontested significance with regard to hydrography. As the highest point in the park, it served as the source for one author called, "the new Seine," a water course comprising cascades, lakes, and streams, fed initially by Seine water (later by the artesian well of Passy).³⁸² It is worth noting that the "new Seine" appeared at a time when the future of Paris's drinking water supply was up for debate. Hausmann correctly believed

³⁷⁸ G. D., *Notice pittoresque et historique*, 35.

³⁷⁹ J. Lobet, *Le nouveau Bois de Boulogne et ses alentours: histoire, description et souvenirs* (Paris: Hachette, 1856), 44.

³⁸⁰ Victor Reytier, "Embellissements du Bois de Boulogne" *Revue générale de l'architecture et des travaux publics* (1855), 190.

³⁸¹ A. Laurent Joanne, *Les Environs de Paris illustrés: itinéraire descriptif et historique* (Paris: Hachette, 1856), 18. "Il est aussi chétif qu'auparavant."

³⁸² Lobet, *Le nouveau Bois*, 47, 49.

the river's water to be contaminated and wanted to establish alternative sources, but he encountered staunch opposition from politicians who insisted that it was clean and at any rate inseparable from Parisian identity. He finally prevailed in 1862: Belgrand identified a suitable source in the Dhuis spring, and the Emperor, always keen to draw parallels with the Roman caesars, approved the construction of an aqueduct.³⁸³ The elaborate waterworks of the Bois de Boulogne might have seemed a distraction from the important work of supplying potable water to Paris residents, but in fact they provided a symbolic representation of the re-engineering of the Paris water system, drawing upon distant sources.

Technical difficulties accompanied the opening of the lower lake and larger lake, inaugurated in July of 1854. Whereas the upper lake had a naturally impermeable bottom of clay and sand, the lower lake, containing five times the volume of water, was excavated from porous limestone.³⁸⁴ It immediately began losing around 12 centimeters per day, translating to about 8000 cubic meters, which stressed the supply system. Baudard attempted to solve the problem by spreading earth, sand, and clay over the lakebed, which slowed but did not stop the daily losses. By December they had drained the lake and replaced the original rocky embankment with a continuous layer of concrete and mortar over the lakebed and banks.

³⁸³ Jordan, *Transforming Paris*, 267-273.

³⁸⁴ Reytier, "Embellissements du Bois," 188-189. The upper lake contained about 30,000 cubic meters of water; the lower lake contained around 150,000 cubic meters.

Varé may or may not have committed the leveling error that Haussmann alleged. He clearly succeeded, with the aid of Baudard, in realizing the Emperor's *rivière*. But Varé left himself vulnerable to accusations of ineptitude, by failing to make a detailed study of the ground's contours and elevation. He further exposed himself to attack by failing to keep careful track of expenditures and future costs on the project. According to one of Varé's contemporaries, this lack of budget documentation is what finally gave Haussmann the ammunition to force Varé to resign.³⁸⁵ In addition, Haussmann may have seen Varé as a rival for the Emperor's trust and attention, since Varé owed his position directly to the Bonaparte family and to Haussmann's predecessor, Berger. A reputation for artistic genius was no guarantee of survival. Haussmann praised Belgrand as a man of science—a first-rate geologist and hydrologist. But he famously denigrated Varé, the self-taught gardener, as “*à peu près illettré*” (virtually illiterate).³⁸⁶

Haussmann's problem with Varé was fundamentally about method, process, and accountability. Thorough documentation was fundamental to Haussmann's political style and to the methods of the engineers whom Haussmann favored. Moreover, survey and elevation techniques were widely known and practiced in this period, even on lesser sites than the Bois de Boulogne.³⁸⁷ By late 1854, with the two lakes and their encircling paths and greenery mostly complete, Haussmann secured the dismissal or forced resignation of Varé. Collette notes that the circumstances of his dismissal remain obscure, but that he

³⁸⁵ Lecoq, *Le Paysagiste, nouveau traité d'architecture de Parcs et Jardins* (Paris: chez l'auteur, 1860), II.

³⁸⁶ Haussmann, *Mémoires*, 125.

³⁸⁷ See, for example, Boitard, *Traité la composition et l'ornement des jardins* 6th ed; Lecoq, *Le Paysagiste*; And A. de Cérès, *Parcs et Jardins* (Paris: Librairie agricole de la maison rustique, 1865).

could not compete with younger, professionally trained men.³⁸⁸ Varé's grandson later claimed, not convincingly, that Varé had resigned voluntarily.³⁸⁹ Varé enjoyed a brief spurt of private commissions in the mid-1850s, which slowed to a trickle in subsequent decades as he retired to his native Val d'Oise.³⁹⁰

Hittorff apparently lasted until early 1855, having submitted designs for structures in the Bois including guardhouses, a pavilion, and the hippodrome and tribunes, before Haussmann dismissed him and appointed Davioud in his place.³⁹¹ It was just one in a repeating series of clashes and embarrassments for Hittorff at the hands of the prefect.³⁹² Yet Haussmann was not content to entrust design responsibility to the engineers upon whom he generally relied for executing public works. He did not simply promote Baudard—the engineer whose site profiles he had used to discredit Varé—to take over

³⁸⁸ Collette, "Varé," 184.

³⁸⁹ E. Varé, Letter to the Editor, *Le Figaro* 16 Jan. 1899, 1.

³⁹⁰ Collette, "Varé," 181-187. Other landscape parks designed by Varé include examples at Herblay, Beaumont-sur-Oise, Châtenay, Saint-Martin-du-Tertre, and probably Bouffémont, Coucelles, and Méry-sur-Oise, among others.

³⁹¹ Thomas von Joest, "Les projets pour le bois de Boulogne," in *Hittorff, un architecte du XIXème : Musée Carnavalet 20 octobre 1986-4 janvier 1987*, ed. von Joest (Paris: Musées de la ville de Paris, 1986), 213-215. Some of Hittorff's drawings for structures in the Bois are dated 1855, according to this catalogue.

³⁹² Hittorff initially enjoyed the favor of the Emperor, but was apparently too steeped in the academic culture of the Beaux-Arts for Haussmann's taste. He clashed repeatedly with Haussmann over plans to update the Place de l'Etoile and the Place de la Concorde, which he had previously worked on. Haussmann also scrapped Hittorff's plans for the Avenue de l'Impératrice, demolished his Panorama des Champs-Élysées, and remodeled his Champs-Élysées gardens. See *Ibid.* and M. Christine Boyer, *The City of Collective Memory: Its Historical Imagery and Architectural Entertainments* (Cambridge, Mass.: The MIT Press, 1996), 38-40.

design responsibility for the Bois de Boulogne. He recognized that Baudard was out of¹⁴⁴
his element in the aesthetic side of landscape architecture.³⁹³

What Haussmann needed was someone capable of fulfilling the “*double fonctions*” of engineer and landscapist.³⁹⁴ He summoned Alphand to Paris in November 1854, confident in the technical and artistic prowess of this engineer whom he had known and relied upon in Bordeaux in 1852. He appointed the landscape architect Barillet-Deschamps (also from Bordeaux) and the architect Davioud as Alphand’s chief collaborators and deputies. Alphand was not exactly replacing Varé, but rather pioneering a new leadership role conceived by Haussmann, one based on a novel interface of infrastructure and garden art. It was Barillet-Deschamps who replaced Varé, while Davioud replaced Hittorff. But from now on, these designers would report to an engineer, Alphand, who in turn reported to Haussmann, who reported to the Emperor.

The “double functions” suggested by Haussmann would correspond generally with means and ends, process and finish, substrata and surface, or construction and representation. Alphand embraced both the instrumental and the aesthetic aspects of design. Unlike Varé, Alphand tirelessly documented, surveyed, and tabulated everything. And unlike Baudard, he had an eye and a hand for the pursuit of beauty. He advised meticulous field surveys and studies on paper (plans and sections) as a prerequisite for physical intervention in the landscape.³⁹⁵ But also, no doubt inspired by the methods of

³⁹³ Haussmann, *Mémoires*, 125.

³⁹⁴ *Ibid.*

³⁹⁵ Alphand, *Promenades*, L.

Barillet-Deschamps, he emphasized the necessity of visiting the site many times to take perspectival sketches and put stakes in the ground to outline contours and levels.³⁹⁶

Water effects and topography

In Alphand's theoretical commentary in the introduction to *Les Promenades de Paris*, he cautions against attempting to create water features at odds with the terrain. It would be worse than fruitless, for example, to try to install a placid *rivière* or gentle prairie stream on a sloping site.³⁹⁷ An incline of any significance would quickly empty the water and leave only a muddy bed, especially if the stream were fed by a limited and artificial source. The solution is to hold the water back by means of retention devices, then let it fall suddenly in cascades or a succession of smaller chutes, *cascatelles*, or rapids studded with rocks. Such features not only modulate the flow of water, Alphand writes, they also *register a change in level*.³⁹⁸ In other words, the articulation or expression of topography can happen simultaneously with water control. This dual game of physical logic on the one hand, and legible disclosure on the other, encompasses the two kinds of performance inherent in the hydrography of the Bois de Boulogne.

Alphand's notion of articulating a change in level contains considerable room for interpretation. There is a tension between revealing a latent condition, and augmenting

³⁹⁶ *Ibid.*

³⁹⁷ *Ibid.*

³⁹⁸ *Ibid.*, “une chute rachetant une grande différence de niveau...”

that condition for dramatic effect. This tension abides both in the works as built, and in the way that they were discussed by the designers and broader public. In *Les Promenades de Paris*, Alphand argues somewhat convincingly that the cascades of the Bois de Boulogne were required by various parameters. However, it is plain to see that “*effets d’eau*” (water effects) were also staged and stylized. Like the fountains of the urban squares, the cascades offered the refreshing sight, sound, and feel of falling water, but with a more rustic aspect. Cascades appeared first in the Bois de Boulogne, then in the other new parks and larger squares around Paris. By the end of the Second Empire, Paris had at least a dozen naturalesque cascades, plus the many smaller *cascatelles*, dams, and rapids placed intermittently along the new streams.

The long path of water into and through the Bois de Boulogne was punctuated by cascades. The first, completed in 1854, marked the transition from underground to overground, at the point where a concealed pipe launched several rivulets down the side of the butte Mortemart. The water crashed through some rocks and landed in the upper lake. A similar series of stepped chutes and pools, set amidst moss-and ivy-covered rocks, animated the north bank of the lower, larger lake. This apparent cliff was in fact a dam covered with boulders and plants. One of the lower lake’s waterfalls came from the overflow of the upper lake; a second waterfall, a little to the side, emanated directly from the underground supply lines. Each of these first three cascades (one into the upper lake,

two into the lower lake) released on average about 70 liters per second, according to Alphand.³⁹⁹

The best place to appreciate the water falling into the lower lake was from directly above, along the wide drive and terrace laid conveniently atop the dam separating one lake from the other. Known as the *rond des Cascades* or the *carrefour des Cascades*, this well-frequented crossroads formed a delectable stopping place—“*l’escale de prédilection*” (the preferred stopover), as one author wrote.⁴⁰⁰ It combined the functions of plaza, road, and belvedere. Many of the main routes of the Bois, including the one to the Longchamp hippodrome, crossed here. Café tables and chairs shaded by trees tempted passers-by to linger to savor the view or make conversation. The plateau offered choice vistas over the lake, the islands and, far in the distance, the village of St. Denis. A small overlook ensconced with shrubs and rocks offered a place to contemplate the play of water splashing down the slope below. From here, Gabourd observed, *On ne se lasse point d’admirer cette oeuvre de l’industrie qui affecte d’une manière étonnante les accidents de la nature. On se croirait à une immense distance de Paris.* (One never ceases to admire this work of industry that affects in an astonishing manner the accidents of nature. One would think oneself at a great distance from Paris.)⁴⁰¹

For many visitors, the staged spectacle of nature was overshadowed by the participatory spectacle of society. The plateau of the *rond des cascades*, often bustling

³⁹⁹ Alphand, *Promenades*, 32.

⁴⁰⁰ J. Lobet, *Le nouveau Bois*, 50.

⁴⁰¹ Gabourd, *Histoire de Paris*, 210.

with traffic, formed a shortcut across the loop drive encircling the two lakes. This macadamized loop, ten meters wide, bordered by a three-meter wide sidewalk, was wider than most of the streets of old Paris. Closer to the water's edge, a rustic footpath weaved among boulders and flowers to reach points of embarkation for the islands. The eight-kilometer circuit, known as the *tour du lac*, became a fashionable and almost obligatory daily ritual among a privileged subset of Parisian society. A sense of the colorful jam of fancy carriages, pampered ladies, vain dandies, actresses, courtesans, and tourists can be gleaned, for example, from the opening passage of Emile Zola's *La Curée*, in which the scene is bathed in "an air of adorable falsity"; or from Victor Fournel's sardonic quips about nouveau-riche men and crinoline-bedecked ladies who seemed to care less about nature than their public image.⁴⁰² For some regulars and would-be visitors, the drive around the lake and the *rond des Cascades* constituted the entirety of the Bois de Boulogne.⁴⁰³ A special epithet, *la dame du lac*, came to designate the society women who made it a point to be seen driving or promenading around the lake every afternoon, where they could also keep an eye on the wardrobe, toilette, and companions of their contemporaries, before heading to the theaters in the evening.⁴⁰⁴ This particular

⁴⁰² The Zola passage has been analyzed by Schenker in *Melodramatic Landscapes*, 25-27. Victor Fournel wrote caustically, "la route du lac contient tout ce qu'il faut de nature pour les chevaux de notre jeunesse dorée, et les crinolines à la mode trouvent un théâtre digne d'elles dans le *rond des Cascades*." Fournel, *Paris nouveau*, 117-118.

⁴⁰³ Gabourd, *Histoire de Paris*, 221. "Le bois de Boulogne est tout entier, pour la plupart de ses habitués, au carrefour des Cascades et dans l'allée de ceinture des lacs."

⁴⁰⁴ Jean René Klein, *Le vocabulaire des mœurs de la vie parisienne sous le Second empire : introduction à l'étude du langage boulevardier* (Louvain : Bibliothèque de l'Université, Bureau du recueil, 1976), 96. Klein offers an example from Jules Noriac, *Journal d'un flâneur* (Paris: C. Lévy, 1879), 279: "Ce qui distingue la dame du lac des autres dames, c'est sa voiture. Tous les jours que Dieu fait, elle monte dans sa chaise ou dans sa victoria, à trois heures, et va faire le tour du lac, qu'il pleuve ou qu'il vente;... Pendant ces trois heures de promenade, elle ne parle à personne; mais on la voit, c'est tout ce qu'il faut. Elle

promenade earned a representation in Flaubert's *Madame Bovary*: Emma, the protagonist, a bored provincial housewife, yearns to visit Paris not only to frequent the most fashionable tailors and the opera, but also to tour the lakes of the Bois de Boulogne.⁴⁰⁵

Since the lakes cut lengthwise along a natural hill, the height of their banks above the water line rises precipitously—and certainly unnaturally, according to William Robinson, who remarked in 1869, “The banks which fall to the water are in some parts a little too suggestive of a railway embankment.”⁴⁰⁶ Yet if Robinson perceived an unwelcome transgression of engineering, or more broadly of the human hand and its technological extensions, into the picturesque landscape, he also praised the Bois de Boulogne as “far above our London [parks] in point of design.”⁴⁰⁷ Robinson lavished particular praise upon the horticulture of the two islands, with their “varied collection of the finest shrubs and trees tastefully disposed,” presenting a changing tableau of colors and forms from season to season, even “week to week.”⁴⁰⁸ As for the cascades at the head

s'ennuie; mais c'est bon genre. Le soir, elle encombre les avant-scènes des théâtres. De même que l'idée de se promener ailleurs qu'autour du lac ne lui est jamais venue, elle ne saurait voir le spectacle ailleurs qu'aux avant-scènes. Depuis deux ans, toutes les dames du lac sont blondes; c'est la mode.” A variation of the term, *demoiselles du lac*, appears in Xavier Aubryet, “La Chaussée d'Antin,” *Paris-Guide*, 1346.

⁴⁰⁵ Gustave Flaubert, *Madame Bovary: moeurs de province* (Paris: Charpentier, 1879), 62.

⁴⁰⁶ Robinson, *Parks, Promenades*, 20.

⁴⁰⁷ *Ibid.*

⁴⁰⁸ *Ibid.*, 21-22. Variety, for Robinson, was “the most important point in the whole art of gardening” (22).

of the lake, Robinson preferred these “less pretentious” falls to the grander cascade of Longchamp.⁴⁰⁹

The paths of falling water in the Bois de Boulogne did not terminate in the lower lake, but branched out and continued their descent. Alphand and his team elaborated the park’s hydrography after Haussmann arranged for the expansion of the Bois de Boulogne in 1855, reaching all the way to the Seine and subsuming the plain of Longchamp. The big lake (Alphand largely abandoned the term *rivière*) discharged into a trio of meandering streams, bordered by paths, running in different directions. These rivulets pooled in a handful of ponds and tumbled through a series of chutes and barriers, designed to look like natural rocks, on their way through the site.

One stream ran north and then swung west to the northwest corner of the park; along the way it filled a pond next to the Armenonville pavilion, encircled the “isle of cedars,” watered the Jardin d’Acclimatization and finally formed a pool at the porte de Neuilly.⁴¹⁰ The second stream meandered northwest through the ice skating rink, terminating in the Mare St. James. And the third, the *Ruisseau de Longchamp*, ran 3.9 kilometers west toward the Seine. This principal stream pooled, cascaded, and branched several times before finally reaching the Seine. After falling down the Grande Cascade into a basin at the former Porte de Longchamp, it reappeared on the other side of two major roads, windings its way around the historic windmill of the Abbey of Longchamp, and forming three more lakes in annexed plain. Two tiny streams around the gardens of

⁴⁰⁹ *Ibid.*, 20.

⁴¹⁰ Alphand, *Promenades*, 29.

the former abbey had to be fed by a forced-water pipe, since their elevation was a little higher.⁴¹¹

Alphand's *profil de ruisseau* (cross-section of a stream) reveals the concrete-lined watercourses of the Bois de Boulogne to resemble troughs or canals, despite their irregular aspect (fig. 3.4). They share a kinship with what earlier garden artists called a *canal en cascade*, or cascading canal, in which a stretch of water is broken by falls, following the drop of the terrain.⁴¹² The main stream of Longchamp had a more or less fixed width of three meters at its surface, while the other streams varied from three to ten meters in width.⁴¹³ Alphand was initially reluctant to line the artificial streambeds with concrete, but the soil was too permeable to hold water on its own. He experimented with a clay lining—just as engineers who built Louis XIV's gardens at Versailles had used clay to line the basins.⁴¹⁴ But the clay liner was repeatedly punctured by water rats and floating debris, causing water to leak, and ultimately leading to Alphand to apply a coat of concrete.⁴¹⁵ Walking paths snaked along the sides, and rustic wood bridges crossed over the boulders at the twenty or so *barrages* or dams (figs. 3.5-3.6).

Several pre-existing ponds were incorporated into the itineraries of newly laid rivulets. One of these was the *Mare aux biches* (Doe's pond), a melancholy spot

⁴¹¹ *Ibid.*

⁴¹² "Canal (en cascade)," *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers*, 2:583 (Paris, 1752).

⁴¹³ Alphand, *Promenades*, 29-30.

⁴¹⁴ Baridon, *Gardens of Versailles*, 91.

⁴¹⁵ *Ibid.*, 28.

associated with stories of murder, suicide, and ghosts.⁴¹⁶ Alphand and his team wanted to conserve the quiet pond, “*avec les beaux arbres qui se mirent dans ses eaux*” (with the beautiful trees mirrored in the water).⁴¹⁷ Set deep in the Bois, the old pond abounded with salamanders and frogs and damselflies in moist weather, but typically dried up for much of the summer. This seasonal cycle changed in 1855, when the new Longchamp stream began feeding it year-round. The stream dropped into the pond via a newly constructed grotto made of boulders from Fontainebleau, half-shrouded in climbing vines. The 2.5-meter cascade spewed from the mouth of the grotto, bounced upon protruding rocks, and landed in a swirl of bubbles and foam. Reflections of willow, dogwood, and spindle could be seen in the still water away from the cascade.⁴¹⁸ Charles Marville photographed the secluded *Mare* with its cascade around 1858, showing a near-seamless combination of found and designed landscape elements (figs. 3.7-3.8).

Here the traditional distinction between “artificial” and “natural” waters became basically moot: both the constructed cascade and the preexisting pond facilitated the movement of water toward the Seine.⁴¹⁹ The Mare aux biches continued to collect runoff from the surrounding land while also serving a representational agenda. Just as Berrizbeitia asserts with regard to Le Nôtre’s Grand Canal at Vaux-le-Vicomte, “it is simultaneously connected to the larger territory in ecological terms and to the formal

⁴¹⁶ Gourdon, *Bois de Boulogne* (1861), 191. The author went on to joke that in more recent times, the desolate pond was the preferred spot for unlucky financial speculators to hang themselves (p. 104).

⁴¹⁷ Alphand, *Promenades*, 29.

⁴¹⁸ *Ibid.*, 191. See also Lobet, *Le nouveau Bois*, 66.

⁴¹⁹ Boitard and Audot’s treatise of 1859, for example, reinforced the traditional distinction between artificial and traditional water features. *Traité de la composition et de l’ornement*, 118.

structure of the garden.”⁴²⁰ After the artesian well of Passy was completed in 1862, the stream of Longchamp became virtually self-sustaining, requiring no additional input of energy. However, one transformative consequence of the intervention was that the pond no longer dried up for part of the year. Now the water level stood more or less constant within the regularized banks lined with footpaths and delicate ground cover. Pundits applauded, “*une eau courante et pur a remplacé l'eau stagnante et bourbeuse des infiltrations et des pluies*” (pure, running water has replaced the stagnant and muddy water of seepage and rainfall).⁴²¹ Notwithstanding the absurdity of calling the water of the Seine “pure” at a time when it was dangerously polluted (prior to the activation of the Passy well), the pond was seen as vaguely cleaner and more healthful due to the stream that now replenished it.

Varé, Alphan, and Barillet-Deschamps evidently did not consider the pond’s muddy banks and fluctuating water levels worthy of conservation. They did not recognize value in what today’s practitioners would call the pond’s seasonal ecosystem, which accommodated a range of amphibious flora and fauna. The term *ökologie* (ecology), indicating the science of relationships between living organisms and their environment, first appeared in 1866 in the German biologist Ernst Haeckel’s *Generelle Morphologie der Organismen*. Although Haeckel and other scientists were beginning to extrapolate from the theories of Charles Darwin, garden art and landscape architecture did not yet

⁴²⁰ Anita Berrizbeitia, “Scales of Undecidability,” in *CASE: Downsview Park Toronto*, ed. Julia Czerniak (Munich: Prestel, Harvard Design School, 2001), 117-118.

⁴²¹ Gourdon, *Bois de Boulogne* (1861), 191-192. The seasonal dryness is also mentioned in G. D., *Notice pittoresque*, 55.

reflect ecological thinking. Still, Alphand's conception of the urban landscape as a system contained the possibility of an ecological conception. For ecology itself consists in systematic relationships and interactions. According to Berrizbeitia, modern systems theory can help landscape architects distinguish between aspects that are open to change, and those that remain fixed in spite of external stimuli. This distinction, she adds, "provides a framework for addressing environmental and ecological scales in a project while articulating issues of meaning, artistic expression, and language."⁴²² In the Bois de Boulogne, however, the concrete embankments of the Mare aux Biches and most of the the lakes shows a stronger regard for stable imagery than for open-ended environmental processes. The kind of process that Alphand and his collaborators did attend to was rather the unfolding sensory experience of variegated spaces, colors, textures, speeds, scales, and seasonal change.

The dynamic process of moving water through the park, based on a deep knowledge of terrain and infrastructure, was largely restricted to the engineers' own negotiation with the site. Contingencies largely recede from view—except when something went wrong. The steady, predictable flow of water (*mouvement permanente*, in Regnault's jargon, noted above) was an engineering virtue transferred to a putative landscape virtue. But Alphand might have regarded such continuous movement as a manifestation of greater natural equilibrium. Like the engineers who had brought water to Versailles two centuries earlier, following the Enlightenment philosophers of their time, he might well have believed that, "the natural state of things was not in rest but in motion

⁴²² Berrizbeitia, "Scales of Undecidability," 123-124.

and that knowledge of the world would come from the study of that movement or, in other words, mechanical science,” as Baridon puts it.⁴²³

Beyond the *Mare aux Biches*, other parts of the Bois remained intact or recognizable in modified form. Even the critic Fournel noted, wistfully, the conservation of the *mare d’Auteuil*, a quiet old pond surrounded by weeping willows; and the nearby *rond des Chênes*, an ancient grove of oaks in the southern part of the park. It seemed to him a miracle that Alphand had “left these corners of nature totally naked,” while giving a polished character to the more prominent areas.⁴²⁴ Alphand was in fact pleased to conserve these mature oaks, up to three hundred years old, but noted that such old growth was rare in the Bois de Boulogne—owing mostly to its poor soil, and also to the occupying armies that chopped or burned down many trees in 1814-15.⁴²⁵ The stately oaks appealed to those who came to admire the landscape, “rather than to give a performance themselves,” as another guidebook quipped.⁴²⁶

The conservation of the Mare d’Auteuil was more complicated. The old pond—which lent its name to the title of an 1852 novel by Paul de Kock, in which the Bois was the setting for seduction and intrigue—was modernized in a similar way to the Mare aux

⁴²³ Baridon, *Gardens of Versailles*, 74.

⁴²⁴ *Ibid.*, 116. He asked, “Is it forgetfulness on the part of the architect? Is it love of antithesis? Is it condescendence to the vulgar tastes of archaeologists of nature?”

⁴²⁵ Alphand, *Promenades*, 2, 27.

⁴²⁶ Joanne, *Environs de Paris*, 18. “...la partie la plus belle du bois pour les promeneurs qui viennent la voir, au lieu de s’y donner eux-mêmes en spectacle.” Lefevre added, “Le Rond des chênes, voisin de la Mare d’Auteuil, est l’un des plus beaux restes des plantations de Francois I^{er}, les arbres seculaires... répandant encore sur les gourmets de la promenade un calme, une fraicheur qui rappellent les plus nobles futaies de Fontainebleau” (Lefèvre, 1867, 295).

Biches. It was slightly enlarged, its banks “regularized,” and its water level held steady, even in the drier months, by a steady trickle of water from a pipe disguised by a rock.⁴²⁷

The Grand Cascade of Longchamp

The largest of all the falls, until the completion of the Buttes-Chaumont in 1867, was the Grande Cascade of Longchamp in the Bois de Boulogne. This artificial cataract first “played” to the public on an autumn Sunday in 1856.⁴²⁸ A stream 10 meters across, when released periodically from the reservoir, plunged down 7.5 meters against a monumental rockface, augmented by smaller streams tumbling down the sides (fig. 3.9). The basin below accommodates spectators around its conspicuously close perimeter, as from the prized first gallery or *premières loges* surrounding a theater (fig. 3.10). Spectators could originally approach even closer to the action of the cascade by exploring the caverns built into the rocks behind and above the falls.

From inside these two superposed grottoes, connected by an internal rock staircase, the promenader of the nineteenth century could take a privileged glimpse behind the scene, so to speak. As Alphand pointed out, they could enjoy the “fracas” of water gushing through the upper cavern on its way to the chute, and from the lower

⁴²⁷ Alphand, 31.

⁴²⁸ “*Les eaux de la grande cascade de Longchamp, au bois de Boulogne, ont joué dimanche pour la première fois.*” See “Nouvelles Diverses: Cascade de Longchamp,” *La Lumière, journal non-politique: beaux-arts, héliographie, sciences*, 11 Oct. 1856, 159 [reprinted from *Le Siècle*, source not found].

cavern, a view behind the curtain of falling water (figs. 3.11-3.12).⁴²⁹ This rock formation towers above and astride the falls, forming something like a proscenium frame as well as a commanding lookout point over the plain of Longchamp and the Seine. Measuring 15 meters tall and 60 meters wide, it is crowned by a stand of cedars. One large specimen was laboriously transplanted here before the inauguration of the falls.⁴³⁰

The Grande Cascade was inspired by a combination of physical and cultural topography. Alphand portrayed the falls as a consequence of a drop in elevation at the edge of the plain of Longchamp: “*une pente rapide et brusque, motivant naturellement un effet d'eau*” (a steep and sudden slope, naturally motivating a water effect), visible in his sectional drawing (fig. 3.13).⁴³¹ The subtext is that the falls were not constructed for dramatic effect alone. He even made the surprising claim that the various cascades in the park, though prompted by elevation changes, diminished the charm of the languid rivers: *Ces chutes, commandées par le relief du terrain... ont toutefois l'inconvénient d'encaisser le ruisseau dans une partie de son parcours, et de lui enlever ainsi beaucoup de son charme* (These falls, necessitated by the relief of the terrain... nonetheless have the disadvantage of confining the stream in part of its course, thereby robbing it of much of its charm).⁴³² Rather than imposing a decorative program, the cascades, in this view, embody an articulation and amplification of preexisting conditions.

⁴²⁹ Alphand, *Promenades*, 34-35.

⁴³⁰ *Ibid.*, 46.

⁴³¹ *Ibid.*, 34

⁴³² *Ibid.*, 29.

However, if the physical contours of the site lent themselves to building an elaborate waterfall, so did the social and programmatic qualities of the site. Indeed, the cascade crowns an important cluster of attractions in the most remote part of the expanded park. It sits at the head of the large intersection of the Allée de Longchamp and the Route de Sèvres à Neuilly. This crossroads, though renovated with sinuous edges, occupies the prominent Longchamp entrance to the old Bois. The cascade was assured a sizable audience with the impending opening of the adjacent Longchamp hippodrome (1857), a space dedicated to spectacles of equestrian speed and sartorial finery. A restaurant named after the cascade was opened just South of the falls, and the former Route de Longchamps was renamed the Route de la Grande Cascade. These attractions exercised a considerable pull on Parisians, especially those possessed of a horse or carriage. The falls offered a spectacle of nature while providing a decorative backdrop to all of this social activity. The convenience of the basin's being seamlessly on grade with the adjacent roads and ground is no accident; Alphand oversaw the earthworks connecting of the edges of the cascade with the floor of the plain in 1857-58, at the same time that the opposite edge of the plain, the Seine waterfront, was built up to preclude seasonal flooding.⁴³³

In effect, the Grande Cascade of the Bois de Boulogne nullified d'Argenville's old distinction between natural and artificial cascades. If a "natural" cascade was "*occasionnée par l'inégalité du terrain*" (occasioned by the unevenness of the terrain),

⁴³³ *Ibid.*, 5.

and an artificial one was shaped by human hands to fall in desired forms,⁴³⁴ the cascade at Longchamp was a bit of both. It was the result of a change in elevation and it was a work of evident human artifice. One example of a precedent from the French picturesque would be the Grande Cascade at the eighteenth-century park of the Château de Méréville, fed by an underground aqueduct (fig. 3.14). A Baroque precedent may be found in the celebrated Grande Cascade of the Parc of Saint-Cloud (1660-65), designed by Le Pautre in the park laid out by Le Nôtre as the culminating feature along a water course stretching 1.1 kilometers and dropping 76 meters in elevation (fig. 3.15).⁴³⁵ Although this latter is utterly regular and architectural in design, it precedes the Longchamp cascade in forming the climactic *jeux d'eau* near the end of the water's journey from an upper lake. A visitor described it in 1706 as, "*un vaste et superbe théâtre de cristal jaillissant*" (a wide and superb theater of gushing crystal).⁴³⁶ Viewed from head-on, the cascades of Saint-Cloud and the Bois de Boulogne are comparable in proportion, if not in disposition (regular vs. irregular). Both installations are backed by tall stands of trees, and both allowed visitors to climb to an advantageous view above the falls.

⁴³⁴ Antoine-Joseph Dezallier d'Argenville, "Cascade," *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers*, 2:739 (Paris, 1752).

⁴³⁵ Centre des monuments nationaux, "Le Centre des monuments nationaux présente au Domaine national de Saint-Cloud" (Jan. 2012), <http://claire.desmonts.net/wp-content/uploads/2012/05/DP-Saint-Cloud-CJE-2012.pdf>

⁴³⁶ Harcouet de Longeville, "Description...." (Paris: Vaugon, 1706), in Maurice Fleury, *Le Palais de Saint-Cloud. Ses origines, ses hôtes, ses fastes, ses ruines* (Paris: Henri Laurens, 1901), 68. The full quote reads: "*La distribution de ces eaux est si bien entendue qu'on prendrait aisément cette cascade pour un vaste et superbe théâtre de cristal jaillissant par l'arrangement et la disposition des flots, des chutes, des nappes, des lances, des boillillons, des jets, des tortues, des grenouilles, des dauphins, et des masques dont elle est embellie.*"

As for the monumental rockface of the Grande Cascade, Alphand admitted that it was contrary to the local geology, “*contre-sens géologique.*”⁴³⁷ In other words, it was unwarranted by any naturally occurring, exposed rock in the vicinity. Which is why André Lefèvre remarked of the cascades in 1867, “*Elles sont construites avec soin, leurs rochers sont authentiques; mais, quel que soit leur mérite propre, elles ne sont point à leur place*” (They are constructed with care, their rocks are authentic; but whatever their merit, they are out of place).⁴³⁸ The construction of the immense rock pile around the falls took only four months, but it was labor-intensive. Around 1600 cubic meters’ worth of sandstone boulders were quarried from the Fontainebleau forest, transported by barge along the Seine, and unloaded by crane at the Pont de Suresnes, a convenient 800 meters from the site by road. With the aid of cement and scaffolding, the team of *rocailleurs* overseen by Davioud and Barillet-Deschamps erected the pile of boulders into a kind of habitable mound-building (in future rockwork projects, the *Service des Promenades et Plantations* would save costs by fabricating their own boulders from rubble and mortar coated with cement.⁴³⁹)

Like a theater show, the *jeu de cascade* played only at certain times. The volume of falling water in the Longchamp cascade—roughly 800 liters per second, or 3000 cubic meters per hour—could only be sustained for several hours a day, given the finite amount of water pumped from the Seine and, from 1862, conveyed from the artesian well at

⁴³⁷ Alphand, *Promenades*, 31.

⁴³⁸ Lefèvre, *Parcs et jardins*, 290.

⁴³⁹ *Ibid.*, 35.

Passy.⁴⁴⁰ The limited hours of the falling water, timed to coincide with the customary mid-to-late afternoon hours of promenade, only accentuated its *performed* quality.⁴⁴¹ In the slippage between the theatrical representation of the ideal cascade and the material limits of water supply lay an interesting truth about landscape architecture. To make the landscape real required an intentional act of staging, but also through the physical action of water in response to gravity, pressure, and a mechanical retention device. A theater of nature, the cascade fell silent from evening through morning, during which time its reservoir was gradually replenished. On a Friday afternoon in May, 2015, the cascade spumed impressively for about ten minutes before the valve below the reservoir shut off the flow, changing the cascade into the mouth of a cave (figs. 3.16).

This reservoir, sited behind the falls, presented the aspect of a picturesque lake in its own right (fig. 3.17). Little excavation was required; Alphand resourcefully adapted a former sand and gravel quarry to serve as the retention lake. The floor and banks were sealed with concrete up to the water line. Evidence of this construction, however, was concealed with a veneer of naturalistic décor. Alphand wrote that the top of the reinforced banks, as in all of the new lakes and streams, “carry a layer of topsoil 25 centimeters thick, which totally covers the concrete. This upper layer is planted in seed grass, in such a way that the water bathes the edge of the turf, and the concrete is never

⁴⁴⁰ *Ibid.*, 34. A newspaper article from 1856 lists the volume of falling water as significantly higher, 4200 cubic meters per hour. “Cascade,” *La Lumière*, 11 Oct. 1856, 159.

⁴⁴¹ Guidebook author Joanne wrote that the Bois would start to fill up around two o’clock in the afternoon, and between the hours of four and five was in full *éclat* (*Environs de Paris*, 14).

visible.”⁴⁴² The use of grassy berms to conceal retaining walls was as old as the gardens of Marly-le-Roi, built in the early 1680s by King Louis XIV as a bucolic retreat from the pomp of Versailles.⁴⁴³ But the berms alone could not do the job at the retention lake, where the *jeu de cascade* caused the water level to fall and rise by approximately one meter over the course of every day. To hide the portion of the banks revealed during this ebb, according to Alphand, they were planted in aquatic plants such as cattails and reeds. Such plantings are not visible at present.

The evident tensions between means and ends, instrumental and ornamental qualities, within the potentials and limits of topography, make the Grande Cascade more interesting than just a decorative set piece.

The gushing column

Initially, Alphand relied upon the steam-powered pump at Chaillot to send water from the Seine up to the dry plateau of the Bois de Boulogne. But he and Haussmann foresaw replacing this costly method with a dedicated artesian well, which would allow aquifer water to surge to the surface by its own pressure. The establishment of such a well was a pure engineering task, in contrast to the ornamental design of the lakes and streams. Yet the technical work turned out to be anything but efficient. The ground did not behave as expected. Drilling the well of Passy became a long and excruciating encounter with the

⁴⁴² Alphand, *Promenades*, 28.

⁴⁴³ Henrik Harpsoe, “Pourquoi Marly?,” *Bulletin du Centre de recherche du château de Versailles* (July 2012), <http://crcv.revues.org/11901>. Accessed 7 Nov. 2014.

sometimes unpredictable flows of water, clay, and sand deep underground. Scheduled to take less than a year, it unfolded as a saga of trial and error stretching almost seven years, from which the engineers would eventually emerge with their goals only partly accomplished. The project became the object of discussion in the salons, according to an author and librettist, who added that the artesian well “*a eu presque autant de peine à percer qu'un auteur dramatique*” (had almost as much trouble breaking through as a playwright).⁴⁴⁴

The Passy well would be the second artesian well in Paris, after that of Grenelle, which had required eight years to build, from 1833 to 1841, and another decade to repair.⁴⁴⁵ The lessons learned at Grenelle were supposed to speed things along at Passy. In late 1854 a municipal “scientific commission” was formed to consider options for digging a new artesian well for the express purpose of supplying the increasingly lush Bois. On May 7, 1855, the city authorized a contract with the Saxon engineer Charles Gosshelf Kind, giving him one year and a maximum of 350,000 francs to complete the work under the supervision of Alphand. His incentive for staying within budget was the fact that his fee would come out of the difference between the maximum allotment and the actual cost of work—provided he finished on time.⁴⁴⁶ Kind set up a steam engine to drive his patented boring device, known as a trepan, with a mass of 1800 kilograms that

⁴⁴⁴ Pierre Véron, “La Comédie de la Santé,” *Le Monde Illustré*, 8 June 1861, 359.

⁴⁴⁵ Alphand, *Promenades*, 114.

⁴⁴⁶ *Ibid.*, 114.

would bear inexorably down toward the aquifer (fig. 3.18). The plan was to drill a 1.10m-diameter shaft, to be lined internally with an oak casing.⁴⁴⁷

After penetrating the first layer of chalk sediment without incident, the drilling faltered in a layer of loose sand. Kind therefore reinforced the walls with sheet metal tubes.⁴⁴⁸ The rate of excavation varied from one to five meters per day depending on the composition of the clay or rock.⁴⁴⁹ The steel teeth of the trepan—its cutting surface—had to be replaced up to several times per day while drilling through flint.⁴⁵⁰ Then, in May of 1856, a series of “rather serious accidents,” according to Alphand, halted the drilling at 366 meters below ground, more than halfway to its expected total depth.⁴⁵¹ The machinery inside the hole broke apart and dropped to the bottom, like a cork stuck inside a wine bottle. After losing several months to repairs, the team resumed work and continued drilling down through layers of clay and stone (and embedded machine parts), until, by the spring of 1857, the well was within only a few dozen meters of where the aquifer supposedly lay, 550 meters underground. At this point, however, a disaster occurred in the form of a subterranean landslide or “movement of clays” that deformed the sheet-metal tube that was supposed to hold the well intact during drilling.⁴⁵² A series of would-be replacement tubes ended up equally useless after either bending or falling

⁴⁴⁷ Alphand, “Note sur le puits artésien de Passy,” in *Bulletin de la Société de l’Industrie Minérale* Vol. 1 Book 3 (1856), 413.

⁴⁴⁸ *Ibid.*, 413.

⁴⁴⁹ *Ibid.* 416.

⁴⁵⁰ *Ibid.* 416.

⁴⁵¹ Alphand, *Promenades*, 117.

⁴⁵² *Ibid.*, 118.

down the shaft. Meanwhile a strange 20-meter-diameter hole was opening in the layer of sand beneath the chalky surface stratum. Nevertheless, in October 1857 a journalist ventured to anticipate that very soon the well would give access to “the gushing column so laboriously conquered and so impatiently awaited.”⁴⁵³

Despite the technical nature of the project, and the fact that its only visible presence was the massive drilling shed belching black smoke, it captured the public imagination. It represented a daring and high-tech adventure into a geological frontier lying right below the streets, undertaken in the name of the public good. The same summer that the Bisson brothers undertook the first photographic expedition to Mont Blanc in the Alps, Alphan’s team published a geological section in *Le Monde Illustré* showing the layers of clay, sand, and stone through which the well was attempting to penetrate in pursuit of an aquifer running some half a kilometer beneath the surface (fig. 3.19). The water of the aquifer took on a mythological allure; its purity, supposedly, “cannot be suspected even by the chemists,” wrote journalist Léo de Bernard.⁴⁵⁴ The well that had not yet drawn water nevertheless had the power to “draw, in the dark depths where it takes place, a mysterious interest for the layman, at the same time as precious concepts for the scientific world.”⁴⁵⁵ And like the legend of Ponce de Léon doggedly pursuing the fountain of youth against all odds, and perhaps against better judgment, the engineers would not be deterred from their elusive prize. The municipal oversight

⁴⁵³ G. Randon, “Colonne monumentale du puits artésien de Passy,” *Le Monde Illustré*, 3 Oct. 1857, 16.

⁴⁵⁴ Léo de Bernard, “Les travaux actuels du puits artésien de Passy,” *Le Monde Illustré*, 8 June 1861, 368.

⁴⁵⁵ *Ibid.*

committee considered abandoning the project. But Kind and Alphand apparently convinced Haussmann, who convinced the municipal Oversight Commission, to give them a chance to repair the ruined shaft and finish the well.⁴⁵⁶

Alphand and “the engineers of the bois de Boulogne” took charge of the rescue mission. They proceeded by enlarging the upper part of the shaft to a gaping three meters in diameter. They spent six months gradually inserting a colossal, cast iron pipe, 53 meters tall and three meters in diameter, into the widened shaft, but had to stop short at a depth of 45 meters. Weakened by the pressure applied to it mechanically from above, and by the pressure exerted by the movement of clays below, this new pipe was broken in several places. Workers attempted to patch and reinforce it from the inside, but the leaks could not be stopped. So the engineers inserted yet another sheet metal tube measuring 2.5 meters in diameter in the upper part of the shaft where the accident had occurred. Now the workers could descend into the shaft and tear out the useless shards that were obstructing further progress.⁴⁵⁷ Still, the force of unstable clays tended to pull apart joints of the iron column, putting workers in mortal danger. They inserted a framework of carpentry and reinforced it with masonry and cement measuring up to half a meter thick.⁴⁵⁸

The engineers did not give up, but grew increasingly prudent. Before continuing to drill into the final layers of clay, the engineers took the precaution of sinking yet

⁴⁵⁶ Alphand, *Promenades*, 118.

⁴⁵⁷ *Ibid.*, 119.

⁴⁵⁸ *Ibid.*, 119.

another sheet metal column down the entire length of the shaft. This one measured 1.7¹⁶⁷ meters in diameter, and was reinforced on the outside, just to be safe, with a coat of Portland cement.⁴⁵⁹ By December of 1859, after two years of repairs, the engineers and laborers could descend in safety all the way to the bottom to make inspections and prepare to drill the final stretch. A would-be final casing, 78 centimeters in diameter, was lowered down the tube, at the end of which hung a bronze “lantern” perforated with holes to accept incoming water. But the aquifer was not where it was expected to be; evidently it changed depth between here and the older well at Grenelle, some three kilometers away. More drilling was necessary. This time, however, the engineers preemptively shielded the equipment from potential landslides by means of yet another metal tube, 70 centimeters in diameter, at the bottom of the well, and used an additional wood probe only 30 centimeters in diameter.

In September of 1861 they hit water. It proved a premature success, yielding only a meager trickle. A municipal council suggested that the proximity of the two artesian wells diminished the yields of both.⁴⁶⁰ Finally, after drilling to a depth of 586 meters below ground, the engineers truly and substantially tapped the aquifer (fig. 3.20). Water gushed forth in abundance. Yet there still remained the problem, never surmounted, of elevating the water to 24 meters above the ground level (77 meters above sea level), high enough to supply the entire Bois de Boulogne. Instead, Alphand settled for an elevation 19 meters lower, sufficient at least to feed the lakes and rivers. And repairs and

⁴⁵⁹ *Ibid.*, 120.

⁴⁶⁰ *Rapport de la Commission Speciale des Puits Artésiens*, (Paris: Prefecture de la Seine, 1861), 1-2.

reinforcements of the well, by means of more tubes and more cement, continued through 1862.⁴⁶¹ If Alphand admired the aesthetic spectacle of skies “constantly modified by unexpected effects,”⁴⁶² then he and his collaborators also had to reckon with the equally unexpected, but highly inconvenient, effects of constantly shifting layers of earth and water.

At an earlier phase in the project, *Le Monde illustré* had published a most interesting proposal in 1857 for a cast iron “monumental column,” 31.6 meters tall to be erected on top of the well upon its completion (fig. 3.21).⁴⁶³ “Despite its enormous weight of 227,000 kilograms, this building rises with an airy lightness,” the author wrote optimistically. He added that it promised to become “one of the most curious monuments of Paris,” although he accused its “excessive profusion” of ornamentation.⁴⁶⁴ The tower, designed by Alphand and the hydraulic engineer Jean Darcel, was meant to serve technical and ornamental functions at the same time, just as a similar tower atop the well at Grenelle did. On the one hand it would work as a standpipe, regulating the flow and release of water rising up and from the aquifer. It would discharge the water at a sufficient height to be transmitted by gravity all the way to the top of the Bois de Boulogne. On the other hand the tower would give visible expression to the hidden infrastructure below, making legible the “gushing column” of water and the engineering that brought it to the surface. Here engineering would cross over into architecture and

⁴⁶¹ Alphand, *Promenades*, 120-124.

⁴⁶² *Ibid.*, XXIX.

⁴⁶³ Randon, “Colonne monumentale,” 16.

⁴⁶⁴ *Ibid.*

urban décor. Wrapped in a spiral staircase and surmounted by a domed lantern, the tower would rest upon a pile of boulders. A watercolor and gouache rendering in the collection of the Musée d'Orsay, also from 1857, shows a slightly different design, in which the dome decoration is less fussy and a smaller quantity of boulders rest upon a foundation of dressed stone (fig. 3.22). This foundation, as the museum catalog entry points out, resembles a classical nymphaeum and releases water from circular openings similar to those at Ledoux's Saltworks at Arc et Senans.⁴⁶⁵

Never intended to dramatize the play of nature, the construction of the artesian well of Passy did so in a startling way. The project, delayed by the volatile dynamism of the ground and its subterranean movements, inadvertently exposed the physical and political contingencies associated with constructing an idealized nature and claiming territory through engineering.⁴⁶⁶ Luckily for Alphan, alternate water sources (from the Seine and the Ourcq) were available to make up the deficit left by the underperforming well at Passy. That eventual success did not change the fact that the whole endeavor had been temporarily called into question by the obstinate materiality of the ground—a materiality characterized by the complex dynamism of layered strata that refused to hold still.

⁴⁶⁵ *Projet de tour en fonte pour le puits artésien de Passy*, 1857. Musée d'Orsay, Paris. http://www.musee-orsay.fr/fr/collections/oeuvres-commentees/architecture/commentaire_id/projet-de-puits-artisien-a-passy-11.html?tx_commentaire_pi1%5BpidLi%5D=850&tx_commentaire_pi1%5Bfrom%5D=849&cHash=a1cd366bc5 (accessed 29 Feb. 2015).

⁴⁶⁶ The idea of territory with regard to survey and engineering techniques is explored by Antoine Picon in, "What Has Happened to Territory?" *Architectural Design* 80 (2010), 94-99.

4. Promenade, City, and Periphery

The administration “owed” Parisians the new public parks and squares, a journalist wrote in 1867, because the expansion of the city boundaries in 1860 had deprived them of their customary suburban promenades.⁴⁶⁷ It suddenly seemed as if, “*toutes les campagnes qui l’avoisinaient se sont trouvées englobées et supprimées*” (all the surrounding countryside was subsumed and erased).⁴⁶⁸ In truth the frontier of the countryside had been receding long before the annexation of 1860, as the peripheral villages or *faubourgs* had grown rapidly into urban towns. And calls to “aerate” and “sanitize” the city with open space had been a recurring theme of architectural and planning discourse since the eighteenth century.

But by the middle of the nineteenth century, many Parisians sensed they were losing their countryside, just as they sensed that the localized, *quartier*-based city they knew and loved was vanishing before the disorienting forces of modernity. In this context, the introduction of open spaces and vegetal elements into the city evoked something of the suburbs, countryside, or even more distant locales. On the other hand, the new landscape architecture was a thoroughly urbanizing force that made Paris more unified and more metropolitan.

⁴⁶⁷ Karr, “Les Fleurs à Paris,” 1225.

⁴⁶⁸ *Ibid.*

Urbanization under Haussmann invited an incursive form of *rus in urbe*. As the capital annexed surrounding villages and farms for urban development in 1860, it also reproduced peripheral elements such as tree-lined boulevards and landscape gardens inside the urban precincts. After a century of focusing on country estates, garden art turned toward a new frontier, the modern metropolis, where it served a growing constituency, the urban middle class. The new landscape architecture embodied a superimposition of public gardens, subsurface infrastructure, and real estate speculation. It proposed a certain “ruralization” of the city, but also an adaptation or urbanization of the rustic landscape garden to the conditions of the modern city—its physical rigors, its administrative requirements, and the cultural expectations of its inhabitants. At the same time, this urban landscape architecture also built upon a thoroughly *urbane* tradition of public promenades, such as the Tuileries and Luxembourg gardens, long frequented by Parisian city’s elites.

The first sections of this chapter provide historical and theoretical context for the changing relationship between promenade, city, and country. They trace the historical association of promenade with the urban periphery, the articulation of the “city-as-forest” metaphor by Laugier in the eighteenth century, and the dialectical view of interpenetration of city and country in the nineteenth century. The once-peripheral culture of the boulevards and suburban amusements entered the city precincts not only via shopping arcades but also via the Champs-Élysées, in its evolution from a rustic wood in the seventeenth century to an urban park in the nineteenth century. The following sections of this chapter trace the advent of inner-city boulevards and avenues. These

emblematic spaces of Haussmannian urbanism achieved some of Laugier's agenda, but with an unforeseen role for landscape architecture.

The forest became not only a metaphor for the city, but increasingly, an arboricultural fact. The Service des Promenades et Plantations planted thousands of street trees, forming a veritable urban forest to shade the *allées* and carriageways, and to bloom in the spring. Alphand adapted roadside tree-planting protocols from exurban national roads (and the older boulevards) to the expanded *voies publiques*, or public ways, of the city. They thus initiated the practice of urban forestry on an unprecedented scale. In this context vegetation became just one part of the equipment of the public way, along with furniture, kiosks, gaslamps, urinals, curbs, sidewalks, and of course the roadway itself.

The art and space of *promenade*

The distinctly French term *promenade* captures both a cultural ritual of strolling and the space or setting in which that stroll occurs. Anthony Vidler has observed, with respect to Second Empire Paris:

The activity “promenade” was the slow strolling of the crowd; it was also the special weekend excursion to the great parks of Boulogne and Vincennes, the picnic by the artificial lakes. The space “promenade” represented these leisure

activities inserted into the city and rapidly becoming the daily environments of business and labor.⁴⁶⁹

Alphand, in *Les Promenades de Paris*, uses the term in both senses, though principally to designate the parks, gardens, and planted walks that he helped to create. This latter sense of *promenade* superseded an older term, *promenoir*, which had all but disappeared by his time. Alphand embraced the spectacle of society—the essence of the traditional promenade as *procession*—when he noted, “*il faut compter, parmi les agréments d'un parc, l'animation que produisent les groupes des promeneurs*” (One must count, among the pleasures of a park, the animation produced by groups of promeneurs).⁴⁷⁰ He added that public gardens required wider and more numerous paths than private ones.⁴⁷¹ In these respects Alphand’s prescriptions recall conventional sources such as Schelle’s *Die Promenade als Kunstwerk* (The Art of Walking, 1802), which stated that public promenades should have wide paths, and were most enjoyable when populated by a crowd of medium density, neither too thick nor too thin.⁴⁷² Alphand took the aesthetics of promenade seriously, so much so that he wanted to conceal the bare surface of the garden paths, in order to highlight only the people and the garden landscape. He recommended sinking the paths slightly below the level of the lawns, so

⁴⁶⁹ Anthony Vidler, “Promenades for Leisure,” *Oppositions* 8 (Spring 1977), 49.

⁴⁷⁰ Alphand, *Promenades*, LVIII.

⁴⁷¹ *Ibid.*

⁴⁷² Referenced in Frédéric Gros, *A Philosophy of Walking*, trans. John Howe (London: Verso, 2015) 165, first published as *Marcher, une philosophie* (Paris: Flammarion, 2011). 164.

that promeneurs might appear, from certain angles, to be walking on the (prohibited) grass.⁴⁷³

Promenade as a practice has a cultural and practical specificity. As the garden historian and theorist Jean-Pierre Le Dantec warns, “To confuse gardening with the art of gardens is an error. To reduce the promenade to walking is a blunder of equal importance.”⁴⁷⁴ Promenade, in French culture, does not merely describe an itinerary or the physical action of putting one foot in front of the next, despite Louis Aragon’s sardonic characterization of it as, “*cette complication du jeu de saute-mouton*” (that complicated version of leapfrog).⁴⁷⁵ Promenade is a practice conditioned by social, aesthetic, and potentially philosophical and political dimensions. It constitutes an art of walking. The art of promenade can be practiced happily in a city street, in open meadows, across rugged mountains, along the seashore, or in a garden, according to Le Dantec.⁴⁷⁶ In the words of Frédéric Gros, “The secret of the promenade is that availability of the mind, so rare in our busy, polarized lives, imprisoned in our own stubbornness.”⁴⁷⁷

Promenade is commonly translated into English as *stroll*, which is adequate for the most part. But *stroll* as opposed to what? Hunt has identified three modes of pedestrian movement in the garden: the procession, the stroll, and the ramble, in

⁴⁷³ *Ibid.*

⁴⁷⁴ Jean-Pierre Le Dantec, *Poétique des jardins* (Arles: Actes Sud, 2011), 161.

⁴⁷⁵ Louis Aragon, *Le Paysan de Paris* (Paris: Gallimard, 1926), 223.

⁴⁷⁶ Le Dantec, *Poétique des jardins*, 161.

⁴⁷⁷ Gros, *Philosophy of Walking*, 165.

descending order of physical and social formality.⁴⁷⁸ When transposed to the context of Second Empire Paris, these categories evoke on the one hand the axial *procession* of the boulevards and the daily parade of carriages around the lakes of the Bois de Boulogne; and on the other hand the social or solitary *strolls* through the meandering paths of the parks, punctuated with opportunities to pause and admire the scenery. It seems appropriate to qualify the Parisian *promenade* as potentially a procession as much as a stroll, or perhaps it defines a middle between the two.⁴⁷⁹ Hunt's third term, the *ramble*, lies basically outside the scope of the designed landscapes of Second Empire Paris, which contain little provision for indeterminate and spontaneous drift.

Let us situate the practice and space of promenade historically, for it has changed over time. Promenade arose in a context in which Parisians generally had to exit the cramped streets of their city to find fresh air, vegetation, and space to roam. The traditional locus of promenade was the periphery and exterior of the city. Outlying farms, villages, and the sprawling grounds of villas and palaces became destinations for city dwellers to explore beyond the ring of fortifications.⁴⁸⁰ The open areas around the ramparts themselves hosted ball games, raquet sports, archery, *jeu de paume*, and equestrian sports as well as military exercises and fairs.⁴⁸¹

⁴⁷⁸ John Dixon Hunt, "Lordship of the Feet: Toward a Poetics of Movement in the Garden," in Michel Conan, ed. *Landscape Design And The Experience Of Motion* (Washington, D.C.: Dumbarton Oaks, 2003), 187-213.

⁴⁷⁹ My thanks to David Leatherbarrow for suggesting this formulation.

⁴⁸⁰ *Ibid.*, 331.

⁴⁸¹ *Ibid.*, 19-22.

Inside the walled precincts of Paris, private intramural gardens—flower gardens, kitchen gardens, and shade trees—flourished in the sixteenth and seventeenth centuries, according to the historian Marcel Poëte, as reflected in a verse by Nicolas Boileau: “*Paris est pour un Riche un pays de Cocagne / Sans sortir de la ville, il trouve la campagne*” (Paris for a rich man is a paradise on earth / Without leaving the city, he finds the country).⁴⁸² The meadows and mudflats of the Pré-aux-Clercs on the Left Bank served as a convenient, if somewhat unruly, promenade from the late Middle Ages.⁴⁸³ On top of the vaults of the Roman ruins of Cluny, a parterre with roses and boxwood formed a *jardin suspendu* (hanging garden).⁴⁸⁴ However, the increasing density of the city caused urban gardens gradually to shrink and disappear, especially after the turn of the seventeenth century.⁴⁸⁵ Much of the Seine waterfront was overwhelmed with chaotic and unsanitary development, though some of the quays offered open space for strolling, and even public shade trees, as along the Quai aux Ormes (Celestins).⁴⁸⁶ The most elite version of the promenade was to be found at the Jardin des Tuileries, from 1564. The garden lay just inside the fortifications, which were soon extended to permit the garden to

⁴⁸² Poëte, *Promenade au XVIIe siècle*, 17.

⁴⁸³ Frédéric de Courcy, “Promenades de Paris,” in *Les rues de Paris: Paris ancien et moderne*, ed. Lurine (Paris: G. Kugelmann, 1843), 237-238.

⁴⁸⁴ Poëte, *Promenade au XVIIe siècle*, 19.

⁴⁸⁵ *Ibid.*, 19-20.

⁴⁸⁶ *Ibid.*, 4-8.

grow. In 1695, a comedic play entitled *Les Promenades de Paris* portrayed the social maneuverings of aristocrats in the Tuileries and the Bois de Boulogne.⁴⁸⁷

In the first half of the seventeenth century, the state established a series of new open spaces, changing the physiognomy of Paris. Inside the city enclosure there appeared a series of new *places*: Royale, Dauphine, Vendome, and des Victoires. Outside the walls, the crown established new *jardins*. The Jardin du Luxembourg, established in 1612 by Queen Marie de Medicis; and the scientific Jardin des Plantes (originally Jardin du Roi, opened to the public 1634) lay outside the medieval wall of Philip II on the Left Bank, in the *faubourg Saint-Victor* (fig. 4.1). On the Right Bank, the linear Cours-la-Reine (from 1616) lay outside the Charles V wall to the west of the Tuileries. The gardens of the Palais Royale (from 1633) were ambiguously urban, for they occupied ground newly liberated by the demolition of the Charles V wall. Overall, promenade remained a mostly peripheral activity. The extra-mural gardens differed typologically from the intramural plazas; there could be no confusing the two.

A huge new swath of peripheral space for promenade opened in the 1660s-70s as Louis XIV demolished the combined fortifications of Philip II, Charles V, and Louis XIII. The royal architects Bullet and Blondel planned the conversion of these open spaces into a ring of new boulevards, a term that evokes both *bulwark* (rampart) and *boules verds* (ball-greens).⁴⁸⁸ Far wider than any city street, the boulevards were planted with up

⁴⁸⁷ Mongin, *Les promenades de Paris. Comédie en trois actes*. Paris: Hôtel de Bourgogne, 1695.

⁴⁸⁸ The possible etymological connection to *boules verds* is more apocryphal than the more standard military etymology, but still intriguing. “Ces jeux de boules se trouvaient disposés dans de longs espaces verdoyants sur les remparts des villes, qu'on désignait communément par le nom de *boules verds*, nom

to four rows of trees to provide shade and organize carriage circulation. These *Grands Boulevards*, as yet unpaved and ungraded, occupied a liminal space between town and country, turning the urban periphery into a destination.

In the eighteenth century, the old elite rituals of promenade gave way—along the ring of the boulevards—to a more heterogeneous culture that included theater, amusements, food and drink, and social mixing among different classes, as Yoann Brault has shown.⁴⁸⁹ Here the Parisian *beau monde* shared space with less privileged populations. The boulevards in the northeastern part of the city, in particular, those took on the liberal atmosphere of a fair, infused with the carnivalesque amusements of the peasants and tradesmen who lived outside the city walls. “*C’est une promenade vaste, magnifique, commode, qui ceint pour ainsi dire la ville*” (It is a wide, magnificent, convenient promenade, that girds the city), wrote Louis-Sébastien Mercier in his 12-volume *Tableau de Paris* (1781-1788).⁴⁹⁰ Mercier’s *Tableau* revealed the city’s people more than its physical aspects.⁴⁹¹ His brand of promenade was that of a solitary walker fascinated by the society around him; but promenade often evoked some kind of social intercourse (figs. 4.2-4.3). The motley culture of the boulevards made inroads to the city

qui... s’est transmis aux *boulevards*, sortes de promenades plantées d’arbres tout le long des remparts des villes.” Frederic Dillaye, “Les jeux de boules,” *Le Journal de la jeunesse. Nouveau recueil hebdomadaire illustré* (Jan.-Jun. 1881), 88.

⁴⁸⁹ Yoann Brault, “Une régénération de la promenade au milieu du XVIIIe siècle?” in Loir and Turcot, eds., *La promenade au tournant des XVIIIe et XIXe siècles* (2011), 23-39.

⁴⁹⁰ Louis-Sébastien Mercier, *Tableau de Paris* Vol. 1. revised et augmented (Amsterdam, 1783), 98.

⁴⁹¹ For a contextual discussion of promenade in this period, see Laurent Turcot, “The rise of the promeneur: walking the city in eighteenth-century Paris,” *Historical Research* 88 (Feb. 2015), 67-99.

center via the advent of covered shopping passages or arcades around the turn of the nineteenth century.

Venturing further afield, a Parisian of the eighteenth century might seek out the hills of Suresnes, the heights of Montmartre, or the taverns and *guinguettes* of Belleville. From these outlying hills, promeneurs could actually perceive the city as an entity, together with its surrounding farms and *faubourgs* (fig. 4.4). Jean-Jacques Rousseau preferred to roam the fields at the edges of the city, philosophizing or botanizing along the way. The Bois de Boulogne and Bois de Vincennes in this era offered not only shaded woodland drives, but also special attractions such as romantic ponds and vocal concerts by a retired opera singer at the Abbey of Longchamps. After the Revolution, the demolition of the *octroi* tax wall opened up a whole second ring of boulevards, multiplying the culture of promenade and reaffirming its association with the urban periphery. The Champs de Mars, a military ground on the edge of the city, became the site of important public festivals, like that of Supreme Being organized by Robespierre in 1794.

Public engineering works could also create opportunities for promenade, at least initially. For example, the series of canals ordered by Napoléon in 1802 resulted in the construction of tree-lined quays along the Bassin de la Villette, opened in 1808 (fig. 4.5). The basin of La Villette and the Canal Saint-Martin lost their attraction as promenades as industrial uses overwhelmingly took over their vicinity within only a few decades.⁴⁹²

⁴⁹² Regarding the development of shipping and industry along the canal, see Isabelle Backouche, “Mesurer le changement urbain à la périphérie parisienne: Les usages du Bassin de La Villette au xixe siècle,” *Histoire et Mesure* XXV-1 (2010) Les mesures de la ville (2), 47-86.

Between 1860 and 1862, Alphand built a vault over a portion of the canal, permitting the creation of a tree-lined boulevard (Richard-Lenoir) with gardens in the center (figs. 1.11-1.12). And in the twenty-first century, the borders of the Canal Saint-Martin and especially the Bassin de la Villette have become favorite places to gather, stroll, and play (fig. 4.6).

While Napoléon I was building his canal system in the northern fringes of Paris, promenaders were enticed by private parks and gardens along the western outskirts of the city— Beaujon, Marbeuf, Tivoli, and Monceau, as well as the ballroom-gardens of Mabile and Ranelagh (fig. 4.7). These attractions of the late eighteenth and early nineteenth centuries were clustered in the vicinity of the Champs-Élysées (discussed below) and the Place de l'Étoile, which was a significant crossroad and rendezvous even before the Arc de Triomphe was finally opened in 1836. They responded to an urban demand for the pleasures of landscape and promenade that was not fulfilled by public gardens, which remained limited to the seventeenth-century examples (fig. 4.8). By the 1840s, most of the amusement gardens had closed, in many cases giving way to residential development. Lamenting the lack of open-air gardens, Frédéric de Courcy proposed a scheme to cover the entire Palais-Royale in a glass shell, converting it into a winter garden.⁴⁹³ Moreover, he predicted (in jest) that the inexorable tide of development would eventually lead to the laying of parquet flooring upon the boulevard surfaces.⁴⁹⁴

⁴⁹³ Courcy, *Les Rues de Paris*, 250.

⁴⁹⁴ *Ibid.*

The heterogeneous culture of the boulevards, infused with commerce and entertainment, gave rise to a new kind of urban promenade that had little to do with fresh air, exercise, or picturesque nature. The vitality of the trees was beside the point, according to Louis Lurine in 1843: “*Les arbres y périssent chaque jour, faute d'air et de soleil; mais, en revanche, les hommes, le gaz, la mode, le luxe et l'industrie s'y trouvent à merveille*” (the trees perish constantly for lack of air and sunshine, but on the contrary, people, gas, fashion, luxury and the industry flourish wonderfully).⁴⁹⁵ Thriving culture made the ring of boulevards something like a city in itself, where even difficult personalities could dwell in a state of “*ivresse continuelle*” (continual drunkenness).⁴⁹⁶ Wandering the city, searching for curiosities, flirting with vice and crime, became a Parisian pastime, especially for men, encapsulated in the well-known literature of the *flâneur*.

Compared with this freewheeling, modern *flânerie*, the more traditional (and healthfully virtuous) sense of promenade could be mocked as boring, as in an 1846 Daumier cartoon (fig. 4.9). The poetry of Baudelaire, *flâneur* extraordinaire, turns landscape imagery on its head. Baudelaire was a “great despiser of the countryside, of greenery and fields,” as Walter Benjamin observed, yet he frequently invoked landscape features and effects in relation to his experience of the modern city and city life.⁴⁹⁷ Baudelaire’s forests, mists, chasms, and twilights conjure the strangeness of the modern

⁴⁹⁵ Louis Lurine, “Les Boulevarts,” in *Les rues de Paris*, 343.

⁴⁹⁶ *Ibid.*, 363.

⁴⁹⁷ Benjamin, *Arcades Project*, 385.

city, the labyrinth of the divided self, and the fields of fleeting memory, as in the poems grouped under the heading, after Mercier, “Tableaux Parisiens.”⁴⁹⁸

Whereas a *promeneur* like Rousseau would philosophize along rustic walks, the *flâneur*, according to Benjamin, “goes botanizing on the asphalt.”⁴⁹⁹ The city furnished an endless supply of cultural specimens and events with which to contemplate the mysteries of the self, the other, the collective, and the city itself. The term *promenade* could still apply to these urban explorations, as attested by Charles Nodier’s *Paris Historique: Promenade dans les rues de Paris* (1838), which reads the city as an unfolding historical drama. By the mid-nineteenth century, the notion of *promenade* could apply to an excursion on foot, on horseback, in a carriage, or in a boat.⁵⁰⁰ However, for veteran promenaders like George Sand, no vehicle was worth as much as “two healthy, obedient legs,” to induce the reverie of moving and looking.⁵⁰¹

It was into this context that Alphand and his Service des Promenades et Plantations embarked, from the mid-1850s, on a series of coordinated efforts to implant new promenades *inside* the expanding city. As Alphand wrote retrospectively, “*La*

⁴⁹⁸ For example, in the celebrated poem, “Le Cygne” (the Swan)—best known for comparing the changing form of Paris to the vicissitudes of the human heart—Baudelaire also writes of a “forest” in which his soul withdraws, only to be confronted by the blast of old memories: *Ainsi dans la forêt où mon esprit s'exile / Un vieux Souvenir sonne à plein souffle du cor!*” See Charles Baudelaire, “Le Cygne,” in *Les fleurs du mal* (Paris: Poulet Malassis et de Broise, 1861), 202.

⁴⁹⁹ Walter Benjamin, “Paris in Baudelaire,” *Walter Benjamin: Selected Writings, Volume 4: 1938-1940*, ed. Howard Eiland & Michael W. Jennings (Cambridge, Mass: Belknap / Harvard University Press, 2006), 19. See also his remark on how the flâneur “depart[s] from the ideal of the philosopher out for a stroll” in Benjamin, “The Return of the Flâneur,” *Selected Works, Volume 2: Part 1: 1927-1930* (2005), 265.

⁵⁰⁰ Maurice La Châtre, *Nouveau dictionnaire universel* (Paris: Docks de la Librairie, 1865-70), 1153.

⁵⁰¹ Sand, “Rêverie,” 1196.

capitale, outre de nombreux squares, boulevards et avenues, serait comprise entre quatre grandes promenades publiques” (the capital, beside the numerous squares, boulevards and avenues, would be encircled by four large public promenades), one at each compass point: the Bois de Boulogne and Bois de Vincennes to the west and east, respectively; the Parc des Buttes-Chaumont to the north, and the Parc de Montsouris to the south.⁵⁰² The two forests, bequeathed from the state to the municipality in the 1850s, lay outside the fortifications, and formed the most extensive landscapes for strolling and riding. The parks of Buttes-Chaumont and Montsouris lay inside the fortifications, but outside the old wall of the *fermiers-généraux* that had stood until 1860. Deeper inside the city, however, Alphand oversaw the creation of smaller public gardens or *squares*, which, together with tree-lined ways, constituted a series of innovative *promenades intérieures*.

Like the traditional garden walk or landscape stroll on the edge of the city, the new promenades combined social rites and vegetal scenery. But they also connected seamlessly with the city of apartments, commerce, work, theaters, and street life. By the late 1860s, a promenade was just as likely to take a person *through* the city as outside of it.

The “implosion-explosion” of urban and rural space

In the period of the Second Empire, the physical limits of Paris no longer corresponded to the limits of its culture and economy. Urban capital and society transformed the

⁵⁰² Alphand, *Promenades*, 204.

countryside, while the city itself included fragments of bucolic landscape in the form of public parks. In 1861, Edouard Fournier remarked a certain irony in watching Parisians exit the city on tightly crowded trains bound for weekend retreats such as Rueil, Chatou, and Mont Valérien. He wrote of watching trains depart Paris every 15 minutes, each one destined to deposit, “*des fourmilières de voyageurs sur ces agglomérations de villas*” (anthills of travelers upon agglomerations of villas).⁵⁰³ The suburban cottages of the burgeoning middle class, he continued, were “*pressées, entassées, et cependant chacune a la prétention d’être en son coin une solitude agreste. Mais on n’est plus à Paris, c’est là le grand point*” (squeezed, piled-up, and yet each one has the pretention of offering rustic solitude in its little corner. But one is no longer in Paris, that is the main point).⁵⁰⁴ A cartoon by Daumier makes a similar point (fig. 4.10).

Meanwhile, provincial migrants swelled the capital’s population and area. An “explosion of industry” in the *faubourgs* or villages outside Paris accelerated through the first half of the nineteenth century, according to Merriman.⁵⁰⁵ Workers produced textiles, bottles, roof tiles, construction stone, chemical acid, ammonium salts, cartons, glue, lead, and other products that competed with vineyards and vegetable farms.⁵⁰⁶ In the decades leading up to 1850, the population of the suburbs rose faster than that of Paris itself. While the capital’s population rose by 92 percent between 1800 and 1851, the

⁵⁰³ Fournier, *Paris dans sa splendeur*, 3.

⁵⁰⁴ *Ibid.*

⁵⁰⁵ Merriman, *Margins of City Life*, 42.

⁵⁰⁶ *Ibid.*, 42-43.

surrounding communes grew by 339 percent in the same period.⁵⁰⁷ The lower cost of living in these peripheral communities attracted low-paid workers and the poor.

The most impressive growth of all occurred in the near northern and northeastern suburbs, from Batignolles through Montmartre, La Villette, and Belleville. By 1856, four years before their annexation, they accounted for 55 percent of the suburban population of Paris.⁵⁰⁸ The population of La Villette alone increased roughly twentyfold to 30,287 between 1800 and 1856, transforming the once-quiet village known for its canal-side promenades and rustic taverns into a working-class bastion (or ghetto).⁵⁰⁹ Many inhabitants of the *faubourgs* commuted daily to Paris, either to work in shops or construction, to sell wares and services, or to look for work. “In the meantime,” Merriman writes, “gardens, foliage, and fields continued to recede with the inevitability of a balding man’s hairline.”⁵¹⁰

Henri Lefebvre abstracted from the case of nineteenth-century Paris to theorize a dialectical process of “implosion-explosion,” in which “the industrial city” concentrates people, activities, and resources while simultaneously shooting outwards in the form of suburbs, vacation homes, satellite towns, and transport and communications networks. He wrote in *La Révolution Urbaine*, “The non-city and the anti-city would conquer the city,

⁵⁰⁷ *Ibid.*, 43.

⁵⁰⁸ *Ibid.*, 44.

⁵⁰⁹ *Ibid.*

⁵¹⁰ *Ibid.*, 45.

penetrate it, break it apart, and in so doing extend it immeasurably.”⁵¹¹ Lefebvre claimed that nature was already reduced to a construct by the middle of the nineteenth century, as the development of industry multiplied humans’ ability to alter the face of the earth.⁵¹² The advent or expansion of new transport and communications technologies in the 1830s-40s seemed to compress space and time (fig. 4.11).⁵¹³ Railroads, telegraphs, and daily newspapers made brought distant places into closer contact than ever before. Landscape imagery proliferated through inexpensive media such as lithographs, photographs, and popular journals and travelogues. This process of implosion-explosion had consequences not only for the shaping of urban and rural landscapes, but also for urban dwellers’ idea of nature: the Parisian bourgeoisie developed an increasing appetite for nature in consumable forms, as Nicholas Green chronicled.⁵¹⁴

The case of Paris under Haussmann’s administration helped inspire the Spanish engineer Ildefons Cerdá, who coined the term *urbanización* in 1861, to conceive of an interweaving of city and country. “Let us ruralize the cities just as we are urbanizing the countrysides,” Cerdá wrote in 1861.⁵¹⁵ His goal was to reconcile the purported

⁵¹¹ Henri Lefebvre, “From the City to Urban Society,” in *The Urban Revolution*, trans. Robert Bononno (Minneapolis: University of Minnesota, 2003), 13-14.

⁵¹² Lefebvre, in *La Révolution urbaine* (Paris: Gallimard, 1970) and *La Pensée marxiste et la ville* (Paris: Maupert, 1972), reinterprets Marx’s comments to this effect in *The German Ideology* and *Grundrisse*.

⁵¹³ Harvey, *Capital of Modernity*, 48, 115. As Harvey indicates, Marx used the concept of “space-time compression” to describe the revolutionary tendency in capitalism for geographical expansion and acceleration in the circulation of capital.

⁵¹⁴ See Nicholas Green, *The Spectacle of Nature: Landscape and Bourgeois Culture in Nineteenth-Century France* (Manchester, England: Manchester University Press), 1993.

⁵¹⁵ Ildefons Cerdá, “Teoría de la viabilidad urbana y reforma de la de Madrid,” 1861, para. 144; in Soria y Puig, *Cerdá*, 79-87.

healthfulness of the country environment with the transportation infrastructure and industrial technology found in and around cities. On the basis of etymology, Cerdá argued that farming and building were but two sides of the same process. “In a word, *to urbanize* means *to plough*, *to cultivate*, and *to cultivate* is the origin and the most fecund cause of civilization.”⁵¹⁶ Urbanization, thus conceived, is based on organizing and reshaping the ground to make it more habitable.⁵¹⁷ It implicates landscape from the outset. However, this cultural landscape corresponds to the classical idea of a “second nature,” what Cicero called *alteram naturam*, as distinguished from an implicit “first nature” of wilderness and myth.⁵¹⁸ There remains the question of “third nature,” in other words the art of gardens, first spoken of by Italian humanists in the sixteenth century.⁵¹⁹

Alphand’s mission was to bring a sense of third nature to the urbanization of Paris. In the context of the burgeoning city, Alphand’s use of the word *Promenade* in the title of his book manifests, as Grumbach noted, “a reversal of the values traditionally ascribed to nature on the one hand, and to the city on the other,” in which the pleasures of the rural walk are built into the fabric of the city.⁵²⁰ Public urban landscape architecture implied a critique of the city as previously known, and a vision for a more porous relationship with the countryside. The most radical agents of this reversal were the small

⁵¹⁶ Cerdá, *Teoría general de la urbanización*, Vol. I, 511; in Soria y Puig, *Cerdá*, 88.

⁵¹⁷ Arturo Soria y Puig adds, “After all, both in order to inhabit and in order to cultivate, it is necessary to open paths, channel water, mark out plots, and move earth.” Soria y Puig, *Cerdá*, 88.

⁵¹⁸ See John Dixon Hunt, *Greater Perfections: The Practice of Garden Theory* (London: Thames and Hudson, 2000), 33.

⁵¹⁹ *Ibid.*

⁵²⁰ Grumbach, “Promenades,” 52.

parks or *squares* that took the place of former plazas and leftover spaces in the city.

But more than simply reversing country and city—two sides of second nature—the promenades introduced third nature, the art of gardens, into the second nature of culture and building.

The larger parks of the Second Empire used garden art and urban transit paths to approximate suburban or rural experiences of picturesque landscape. For example, the redesigned Bois de Boulogne could serve as a proxy journey to the country, at least for those who enjoyed social nature as much as rustic nature. Thanks to a new branch of the rail line from Paris to Saint-Germain—the first segment of the *chemin de fer de ceinture*, or belt railway—Parisians could board a train at the Gare Saint-Lazare and arrive at the edge of the Bois de Boulogne, either at the Porte de la Muette or the Porte d’Auteuil, from 1854.⁵²¹ Upon disembarking at the Gare d’Auteuil, near the Bois, *promeneurs* could walk or take an omnibus to the head of the lakes, where they experienced a pleasant disjuncture of space and time as they boarded simple rowboats to ply the waters, observe the cascades, admire rich foliage, and visit the island chalet serving *glaces*.

Engineers played a special role in the interweaving of town and country. Already in the eighteenth century, engineers sought to render cities more “permeable” and connected by means of territorial systems of infrastructure, namely roads and canals.⁵²²

They dreamed of replacing the old model of the closed city, defined by fortifications,

⁵²¹ The line from Paris to Saint-Germain was authorized in 1835; the branch toward Auteuil, serving stops along the Bois, was authorized in 1851. “Chemin de fer de Paris à Auteuil — (18 août 1852),” in *Recueil*, 266.

⁵²² Picon, “Modèles de la métropole,” 139.

with a new model of the city of “provisional limits,” its boundaries subject to development and communicable with other cities throughout the “territory.”⁵²³ In this vein the technocratic and free-market followers of Henri de Saint-Simon sought to remove all obstacles to commerce and industry. In the 1820s, they proposed a new system of national roads to link Paris with other cities and also to improve circulation within the capital itself.⁵²⁴

The concept of the city as an open system contained the theoretical demise of the city as a bounded entity, and also the possibility of *rus in urbe*. A harbinger of an expanded role for engineers in the city was the creation of the post of director of public works of Paris in 1811, filled by the engineer Louis Bruyère.⁵²⁵ However, through the first half of the nineteenth century, the engineering corps of the Ponts et Chaussées made most of its progress in building exurban improvements, such as national roads and harbors, leaving aside the troublesome complexities of urban space. The great turning point came when Haussmann, empowered by the imperial regime, had Paris transformed by his chief engineers Alphand, Belgrand, and Darcel.

But still, Picon cautions, the engineers operated with “profound ambivalence” upon the city, which presented innumerable pitfalls compared with relatively surmountable, technical challenges of organizing exurban territory.⁵²⁶ Similarly, Anne

⁵²³ *Ibid.*, 138.

⁵²⁴ Nicholas Papayanis, *Planning Paris Before Haussmann* (Baltimore: Johns Hopkins University, 2004) 131.

⁵²⁵ Picon, “Modèles de la métropole,” 139.

⁵²⁶ *Ibid.*, 147.

Querrin found that French engineers did not believe themselves authorized to intervene in the urban landscape, Paris being the great exception.⁵²⁷

Even by the end of the Second Empire, country and city remained far from interchangeable, physically and socially. The ring of fortifications initiated by Adolphe Thiers in the 1840s still separated the city from its hinterland. The 1860 expansion of the capital only brought it up to that boundary, which is today marked by the *Péripherique* beltway—an equally effective impediment, in urbanistic if not defensive terms. And the work of Alphand's Service des Promenades et Plantations stopped firmly at the ring of planted, unpaved boulevards des Maréchaux, just inside the fortifications. The formerly closed city was becoming a far-reaching metropolitan growth machine, dotted with the trappings of rustic landscape, but still it remained delimited in important respects. It is also worth noting that the proponents of *rus in urbe* in the age of industrial technology excluded from consideration the exurban landscapes that did not exhibit idyllic qualities, such as quarries and sites of mineral and hydrocarbon extraction. Here the exploitation of natural resources to supply materials and energy for urban markets outstripped the image and rhetoric of the country as a *source* of health and pleasure.

⁵²⁷ Anne Querrien, "Les Ingénieurs du XIX^e Siècle," in *Les Créateurs de jardins et de paysage du XVI^e au XXI^e siècle Vol. 2*, ed. Michel Racine (Arles/Versailles: Actes Sud / Ecole nationale supérieure de paysage, 2002), 86.

City-as-forest, or the legacy of Laugier

The possibility of applying peripheral spatial practices to the urban core fascinated the Abbé Laugier. He argued that town planners could learn something from the layout of royal forests and parks—if only with respect to the organization of thoroughfares and openings. The rustic case provided a model for the urban one. “*Il faut regarder une ville comme une forêt. Les rues de celle-là font les routes de celle-ci; & doivent être percées de même*” (A city must be seen as a forest. The streets of the one are the roads of the other, and must be pierced in the same way), Laugier wrote in a celebrated passage of his *Essai sur l'architecture* of 1753.⁵²⁸ What he had in mind were wide, straight, easy-to-navigate roads that met in spacious clearings or radiating *étoile* intersections. If Laugier's prescriptions evoked something of the urban fabric of modern Rome, his concern was the center of Paris, which still consisted, he wrote, of “*petites rues étroites, tortueuses, qui ne respirent que la mal-propreté & l'ordure*” (narrow, crooked little streets, which breathe out nothing but uncleanness and filth).⁵²⁹

In the first place, according to Laugier, an important city should have a generous approach routes or *avenues* leading to its gates. Secondly, the gates or entrances should themselves have a majestic aspect. Third, the wide ways should continue through the city itself: “*Il ne suffit pas que l'avenue soit large, & autant qu'il est possible sans coude, & sans détour, il faut encore que la porte & la rue intérieure qui y répond ayent les mêmes avantages.*” (It is not enough that the avenue [leading to a city] be wide, and as much as

⁵²⁸ Laugier, *Essai*, 259.

⁵²⁹ *Ibid.*, 243.

possible without bends or detours; it is also necessary that the area around the gate and the interior street that continues it have the same benefits.)⁵³⁰ The fourth aspect, the opening of *places* inside the city, is discussed in the chapter on squares. The suggestion of a reciprocity between town and forest, in which grand axes give order and connection, derived from classical thought as formulated by Renaissance and Baroque theorists.⁵³¹ According to Poëte, this reciprocity was practiced in the art and architecture of castles, palaces, and *jardins à la française* in the seventeenth century, even before it could be implemented widely in urban space: “*Dans l'harmonie de belles lignes communes, droites et majestueuses, s'ordonnent la Ville et les Champs*” (In the harmony of shared beautiful lines, straight and majestic, the city and the fields are ordered).⁵³²

In envisioning a new paradigm for urban streets, Laugier prioritized visual harmony and the circulation of air and traffic. He was less concerned with fine-grained social interaction, and more interested in the broad strokes that would constitute a coherent ensemble. Most of the existing models he could find in France were situated on the grounds of royal or aristocratic properties, such as the Parc de St.-Cloud or perhaps the Bois de Boulogne. His theory could even be considered anti-urban in some respects, for attempting to refashion the city after parks and woods (in layout, not plantings). Laugier thought that the main streets of Paris, no less than the *allées* of the forest of Fontainebleau should balance, “*de l'ordre & de la bisarrerie, de la symmetrie et de la*

⁵³⁰ *Ibid.*, 247.

⁵³¹ Poëte, *Promenade au XVIIe siècle*, 346.

⁵³² *Ibid.*

variété.” (order and oddity, symmetry and variety).⁵³³ Indeed, his caveat to axial planning was that too much regularity would lead to monotony, a fault to be counteracted by permitting variation and placing distinctive landmarks. Inversely, Dezallier d’Argenville compared garden allées with city streets: “*Les allées d'un jardin sont comme les rues d'une ville, ce sont des chemins droits & paralleles, bordés d'arbres, d'arbrisseaux, de gason &c.*” (Allées in a garden resemble streets in a town: they are straight, parallel walks bordered with trees, shrubs, grass, etc.).⁵³⁴

In the century following Laugier’s exhortations, government planners began to implement some of his ideas in Paris. The 60 toll barriers designed by Claude Nicholas Ledoux, 50 of which were actually built between 1785-89, ennobled the entrances to the capital, as Laugier might have liked. The pavilions recombined a neoclassical architectural language in various configurations, demonstrating versatility as well as nobility.⁵³⁵ But these pavilions delineated the hated tax boundary of the *octroi*, and despite the great expense of their construction, many were destroyed during and after the Revolution. As for the extension of suburban “avenues” into Paris proper, Napoléon I initiated the construction of the wide and straight Rue de Rivoli from the Place de la

⁵³³ Alberti, for example, wrote that roads leading up to an important city should be “straight and very wide,” although he allowed that they should meander gently once inside the town, to confuse enemy invaders. See Alberti, *Art of Building*, 106.

⁵³⁴ Dezallier, “Allées, walks.” *The Encyclopedia of Diderot & d’Alembert Collaborative Translation Project*, trans. Ann-Marie Thornton (Ann Arbor: Michigan Publishing, University of Michigan Library, 2013), <http://hdl.handle.net/2027/spo.did2222.0001.144> (accessed 9 Sept. 2015). Originally published as “Allées de jardin,” *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers*, 1:278 (Paris, 1751).

⁵³⁵ Among other sources, this aspect is discussed in Natalie Nanton, “Architecture of the Periphery: Considering Claude-Nicolas Ledoux’s Barriers as Gateways Between the City and Countryside” (M.A. Thesis), Queens University, 2007.

Concorde to the Rue du Louvre. The city added another fragment of a modern roadway in 1838 with the opening of the 13-meter-wide Rue Rambuteau, a forerunner of Haussmannian thoroughfares. Rambuteau, Prefect of the Seine from 1833-1848, framed his mission in starkly environmental terms: *Donner aux parisiens de l'eau, de l'air, de l'ombre* (To give to Parisians water, air, and shade).⁵³⁶ This mission echoed and amplified concerns that Laugier, and before him Voltaire, had expressed about the healthfulness of city air. Concerns about fresh air and water increased as outbreaks of contagious disease—notably cholera in Paris in 1832 and 1849—drove support for sanitation reforms and urban *perceptions*.

After 1852, Haussmann and his engineers implemented Laugier's call for internal thoroughfares and plazas in a more widespread, systematic way. With the support of Louis-Napoléon and his imperial government, Haussmann had recourse to novel political and economic mechanisms that his predecessors lacked, to finance and execute such works.

The Champs-Élysées, from rustic wood to urban park

The transformation of the Champs-Élysées over the course of two centuries, from a rustic wood to an urban park, exemplifies the diminishing association of promenade with the urban periphery, and its increasingly popular and urban character. It also illustrates the dynamic of implosion-explosion, confounding urban and rural elements. The tree-lined

⁵³⁶ Claude-Philibert Barthelot Rambuteau, *Mémoires du comte de Rambuteau publiés par son petit-fils* (Paris: Calmann-Lévy, 1905), 269, in von Joest, *Hittorff*, 160.

route leading from the gardens of the palace of the Tuileries to the Place de l'Étoile was originally designed in 1667 by Le Nôtre as a wider and more luxuriant cousin to the older Cours-la-Reine, and known as *Le Grand Cours*. Like the avenues of country estates, it extended the promenade beyond the grounds of the Tuileries, and at the same time formed a noble approach to it. The Turgot plan of 1739 depicts this *Avenue des Tuileries* surrounded by a dense grid of trees, within which is a clearing labeled, *Champs-Elizée* (Elysian Fields) (fig. 4.12) Pleasure gardens and popular attractions sprang up in the vicinity of this rustic promenade in the eighteenth and early nineteenth centuries, connecting it with boulevard culture.

The Champs-Élysées thus formed a bridge between the city and the peripheral boulevards and commercial pleasure gardens. National festivals, military parades, and concerts were staged there. In the nineteenth century, the Champs-Élysées would move from the periphery to the center of Paris—metaphorically, as the place where the city could *see* itself through the prism of leisure, but also physically, as the city expanded past the Place de l'Étoile to encompass the Bois de Boulogne.

The crown donated the Champs-Élysées and the Place de la Concorde to the city of Paris in 1828, with the stipulation that the city would upgrade and maintain them (a formula that would be repeated for the Bois de Boulogne in 1852). From this point on, the wooded lanes of the Champs-Élysées increasingly took on the character of an urban park. This landscape of greenery and theaters became a metonym for the Parisian culture of gaiety. Between 1829 and 1834, Hittorff oversaw a series of renovations to the Champs-Élysées, transforming them into a “place of magic and a symbol of celebration,

good times, and Parisian elegance,” in the words of historian Thomas von Joest.⁵³⁷

Hittorff conserved the main features and alignments of Le Nôtre’s design while improving the roads and adding fountains, gaslamps, and a variety of theaters and amusements.⁵³⁸ There were numerous cafés, a circus, and a grand Panorama. All the activity sometimes made it difficult to keep the trees healthy. Pests and blights took their toll on the green *allées*, but the biggest menaces may have been leaky gas pipes and “*des promeneurs qui prennent les arbres pour des urinoirs*” (promeneurs who take the trees for urinals).⁵³⁹

Hittorff’s Champs-Élysées served as prototype for the urbanization of garden art in Paris. The ensemble of spaces combined functional landscape architecture with technical utilities and a dense concentration of urban programming or activities. No matter that the design hewed to the traditional *allées*, foregoing more modern, irregular forms. The Champs-Élysées combined the genre of the French *promenade publique*—shaded paths for strolling— with the type of amusement gardens seen at Vauxhall and Ranelagh in England. It was here that organizers of the 1855 *exposition universelle* built the Palace of Industry to welcome visitors from near and far. Only a few steps away, also during the summer of 1855, the composer Jacques Offenbach introduced the first of his smashingly popular, satirical musical plays, or operettas, in the tiny theater of the

⁵³⁷ von Joest, *Hittorff*, 153. See also Emile Bères, Dronsart et Hector Horeau, *Mémoire sur l’embellissement des Champs-Élysées et les avantages que le gouvernement et la population parisienne doivent en retirer* (Paris: Ducassois, 1836).

⁵³⁸ *Ibid.*, 153-161. Hittorff also designed fountains for the Place de la Concorde.

⁵³⁹ Louis Lazare, “Paris,” *Gazette municipale – Revue municipale*, 1 Nov. 1855, 1280.

Bouffes-Parisiens (later the *Folies-Marigny*). Just off the Champs-Élysées, on today's Avenue Montaigne, lay the Bal Mabille (also known as Jardins Mabille), a perennially popular, open-air dance establishment opened in 1831.

During the summer of 1858, Haussmann ordered Alphand to renovate the Champs-Élysées: “*Je fis établir des massifs d'arbustes et de fleurs dans les parties des anciens quinconces, dont les ormes étaient morts ou mourantes de vieillesse*” (I established clusters of shrubbery and flowers in the parts of the former quinconces, in which the elms were dead or dying of old age).⁵⁴⁰ Large trees still lined the avenue and allées, while the deeper groves were converted into irregular gardens dotted with attractions and amusements. Uncharacteristically, Haussmann went ahead without permission from the Emperor Napoleon III, who was then in Italy, leading French troops into the bloody battles of Magenta and Solferino. Haussmann seems to have reasoned that the Emperor could not fail to appreciate this makeover *à l'anglaise*, since he had approved of the conversion of so many other woods and open spaces into irregular gardens. But the Emperor appeared less than pleased by the surprise that awaited him upon his return; evidently he favored Hittorff's more classical rendition of the Champs-Élysées.⁵⁴¹ The renovation did not, in any case, alter the basic character of the Champs-Élysées as an urban park filled with attractions and split by a bustling avenue. The aesthetic rendering of the landscape surface was separate from its programming and its infrastructure of urban utilities.

⁵⁴⁰ Haussmann, *Mémoires*, 495.

⁵⁴¹ *Ibid.*

Alphand explained the logic of the design of the new Champs-Élysées as an attempt to give people a reason to linger, rather than passing hurriedly through. He claimed that the endless crowds had seldom paused to enjoy the landscape of the Champs-Élysées because it was too monotonous, too barren and dusty.⁵⁴² By contrast, the colorful and fragrant new gardens set along the margins of the avenue offered a change in scale and a respite for the senses (fig. 4.14). Designed by Barrillet-Deschamps, they resembled the squares that increasingly sprouted up in various open spaces and intersections. According to one favorable review, “*Le plaisir de la promenade n’y a rien perdu, le plaisir des yeux y a gagné. Les rhododendrons et les azalées, les balsamines et les géraniums ont conquis un large pan de l’espace qui appartenait autrefois à la poussière*” (It has not diminished the pleasure of the promenade at all, but it has increased the pleasure of the eyes. Rhododendrons and azaleas, geraniums have conquered a large part of the space that formerly overtaken by dust).⁵⁴³ Audot praised the diversity between one group of greenery and the next, and the diversity of shapes, colors, and tones within each group.⁵⁴⁴

Regardless of its augmented gardenlike aspect, the Champs-Élysées became more urban than ever. It contained additional café-concerts, amphitheatres, enclosed theaters, swings, children’s games, and gaslights. The Panorama National designed by Gabriel Davioud replaced the older panorama by Hittorff—another casualty, perhaps, of

⁵⁴² Alphand, *Promenades*, 208-209.

⁵⁴³ Achard, “Bois de Boulogne, Champs-Élysées,” 1246.

⁵⁴⁴ Audot, *Les nouveaux jardins*, 6-7.

Hausmann's animosity toward Hittorff (fig. 4.15). Here, in 1864, visitors could take in a 360-degree view of the siege of Sevastopol animated by "*effets d'optique*" (optical effects), and a few decades later, observe an ominous rendering of the "last day" of the Paris Commune.⁵⁴⁵ In the open *allées* and gardens, differing social and economic classes shared space, "*le millionnaire comme l'ouvrier*" (the millionaire like the worker), as the *Paris-Guide* claimed.⁵⁴⁶ On Sundays, especially, the central roadway "*disparaît sous une masse mouvante de voitures de toutes sortes*" (disappears beneath a moving mass of all kinds of cars).⁵⁴⁷ Along the shaded sidewalks "*une multitude faite des multitudes se promène ou s'assoit, se presse, s'entasse et regarde*" (a multitude made of multitudes strolls or sits down, hurries along, crowds together, and looks around).⁵⁴⁸ William Robinson accepted the little stands and merchant stalls as part of the scene: "If people will have their cigars and gingerbread they may as well be sold to them where they are strolling or playing. Besides, you have in this case got the gingerbread-keepers under control."⁵⁴⁹

On a more technical note, the Champs-Élysées served as the site of experiments in paving methods. There was a precedent for this: in the 1840s, engineers had paved half the width of the road with a new bituminous asphalt surface, leaving the other half with

⁵⁴⁵ Amédée Gayet de Cesena, *Le nouveau Paris : guide de l'étranger pratique, historique, descriptif et pittoresque* (Paris: Garnier frères, 1864), 182; P. Joanne, *Paris-diamant*, 1888, 163.

⁵⁴⁶ Achard, "Bois de Boulogne, Champs-Élysées," 1249.

⁵⁴⁷ *Ibid.*

⁵⁴⁸ *Ibid.*

⁵⁴⁹ Robinson, *Parks, Promenades*, 3.

traditional paving, demonstrating the superiority of the asphalt.⁵⁵⁰ Around 1862, Haussmann's chief engineers, led by Darcel if not Alphand, staged a new experiment on the Avenue de Montaigne, adjacent to the Champs-Élysées. The full width of the roadway was laid with an even coat of paving materials to be compressed. Half of the road was rolled with the customary horse-drawn cylinder, while the other half was rolled, simultaneously, by the steam-powered machine invented by Ballaisson, equipped with *two* rolling cylinders. The engineers compared their respective performances, and determined that the steamroller was not only twice as fast, owing in part to its ability to quickly reverse directions; but also less expensive to operate per square meter.⁵⁵¹

Alphand regarded the Champs-Élysées as a model of the modern *promenade publique*, combining practical needs with a whimsical atmosphere. In *Les Promenades de Paris*, he grouped the Champs-Élysées among the prized *parcs* of Monceau, Buttes-Chaumont, and Montsouris, rather than with the more quotidian *voies publiques plantées*, a category that included other planted avenues and boulevards. At a cost of 1.2 million francs, the renovation of the Champs-Élysées was roughly twice as expensive as the creation of the Avenue de l'Impératrice and the Parc Monceau (not including architecture).⁵⁵² In Alphand's description, a combination of landscape, architecture, program, and people fueled the unfettered pursuit of pleasure in public space:

⁵⁵⁰ von Joest, *Hittorff*, 158.

⁵⁵¹ Debauve, *Manuel de l'ingénieur*, 218-219.

⁵⁵² Alphand, *Promenades*, 197, 210, 238.

*Les Champs-Élysées... offrent, à la fois, de l'espace pour les promeneurs, et de grands arbres touffus pour les ombrager; les lignes de plantations régulières servent de cadres aux parties agrestes, et forment des avenues spacieuses; des fleurs, des massifs d'élégants arbustes, des pelouses vallonnées, ornées de plantes rares qui récréent les yeux, des café-concerts cachés dans la verdure, des jeux, des fontaines jaillissantes, y forment un décor harmonieux. Le soir, l'ensemble est largement illuminé. La foule qui se presse dans les bosquets, la musique, la voix des chanteurs, le murmure des eaux, donnent à cette charmante promenade un air féerique.*⁵⁵³

(The Champs-Elysees ... offer at the same time, space for walkers, and large leafy trees to shade them; the lines of regular plantings serve to frame the rustic parts, and form spacious avenues; flowers, elegant shrubs, rolling lawns adorned with rare plants that entertain the eyes, café-concerts hidden in the greenery, games, gushing fountains, all form a harmonious decor. In the evening, the ensemble is illuminated. The crowd milling about the groves, the music, the voices of singers, the murmur of running water, give this charming promenade a magical air.)

A boulevard through the center

Under Napoléon III, the term *boulevard* came to denote, for the first time, purpose-built thoroughfares cutting through the city. These internal boulevards were not reclaimed

⁵⁵³ *Ibid.*, LIX.

from the site of former ramparts, like the two older rings of boulevards, but rather created by “*percement*,” or tearing down a wide swath of expropriated houses and shops. By the time the Emperor ordered the stately old *allées* and *étoiles* of the Bois de Boulogne replaced with curving paths and landforms starting in 1853, he had already begun transposing those *allées* and *étoiles*, after a manner, inside Paris, where they became axial streets, avenues, and boulevards. The first internal boulevard was a north-south artery running through the historic center of Paris, parallel with the ancient north-south axes of the Rue Saint-Denis and the Rue Saint-Martin. Built in three sections, it bears three different names. The first northernmost section, the Boulevard de Strasbourg, opened in 1853, terminating at the railway station of Strasbourg (Gare de l’Est). The second part, the Boulevard du Centre (rechristened Boulevard de Sébastopol in 1855), cut through the densely built quarters nearer the Seine, and opened in 1858. The final length, continuing on the Left Bank under the name of the Boulevard Saint-Michel, opened a few years later. Marville’s photograph of the completed Boulevard de Sébastopol (fig. 4.16) provides a visual description of the components of this archetypal Haussmannian thoroughfare, with little to distinguish it from others of its kind.

The Boulevard de Sébastopol was said to supersede 39 “ignoble and unhealthy” back streets, bringing air and light to five *quartiers*.⁵⁵⁴ A supportive article in the merged *Gazette Municipale – Revue Municipale* also explained that the boulevard would forestall future insurrections by means of unobstructed lines for canon fire.⁵⁵⁵ Equipped with rows

⁵⁵⁴ Louis Lazare, “Project de prolongement du Boulevard de Strasbourg (Boulevard Louis-Napoléon) jusqu’au fleuve,” *Gazette Municipale – La Revue Municipale* (1 June 1853), 1009.

⁵⁵⁵ *Ibid.*

of trees, street furniture, and plenty of room to walk, ride, shop, or *flâner*; it reproduced something of the *Grands Boulevards* inside the urban core. Measuring 30 meters wide, this central boulevard nearly equaled the width of the outer boulevards. Even the width of its sidewalks, 16 meters including both sides, exceeded the total width of the Rue Saint-Denis and the Rue Saint-Martin, which Haussmann left intact.⁵⁵⁶ If nothing else, it would allow for easier shopping.⁵⁵⁷

The arrival of three theaters on the Boulevard de Sébastopol evoked the culture of the *Grands Boulevards*, though many Parisians regretted the destruction of the old “Boulevard du Crime”—the portion of the Boulevard du Temple that Haussmann cleared to form the modern Place de la République and its axes—which displaced the theaters in the first place. The boulevard opened directly into the Place du Châtelet, the site of two monumental new theaters designed by Gabriel Davioud, the Théâtre Lyrique (designed for opera, today Théâtre de la Ville) and the Théâtre du Châtelet (designed for large-scale scenography). The new theaters brought not only the performing arts to the center of town, but also the commerce of the boulevard: Davioud designed the ground-level galleries to house cafés and boutiques selling flowers, leather gloves, and other goods (figs. 4.19-4.20). According to Daly, these shops did not diminish the monumental character of the theaters, but instead were “essential elements” to improve street life,

⁵⁵⁶ For the dimensions of the boulevard, see Alphanand’s plate, “Profiles de voies publiques,” in *Les Promenades de Paris*.

⁵⁵⁷ Journalists hailed the new boulevard in 1856 as boon for commerce and as a means to relieve overcrowding of shops and ateliers along older, nearby streets. See, for example, Théophile Gautier, “Le Nouveau Paris,” *Paris et les parisiens au XIXe siècle : moeurs, arts et monuments* (Paris: Morizot, 1856), 53; or Fournier, *Paris dans sa splendeur*, 41.

illumination, safety, and revenue for the city.⁵⁵⁸ Another theater abutted the Boulevard de Sébastopol above the Rue Réaumur: the Théâtre de la Gaîté (today the Gaîté Lyrique) accessible via the new Square des Arts-et-Métiers (Emile Chautemps).²⁰⁴

The opening of the Boulevard de Sébastopol was in fact part of the modernization of the *la Grande Croisée*, the crossing of the city's historic east-west and north-south axes.⁵⁵⁹ The old main streets of Saint-Honoré, Saint-Antoine, Saint-Denis, and Saint-Jacques, were no more than 10-12 meters wide.⁵⁶⁰ As early as 1851, before Louis-Napoléon was Emperor (and before he nominated Haussmann to succeed Berger at Prefect of the Seine), he ordered the eastward extension of the Rue de Rivoli, together with its facades and arcades. The extended Rue de Rivoli passed by the Hôtel de Ville and the Place du Châtelet, another Napoleonic civic space sited at the *Croisée*. By advancing this long-discussed project, Louis-Napoléon simultaneously burnished the legacy of his uncle and created a strategic east-west corridor across the capital, traversing the dense old quarter of the Marais.⁵⁶¹ On the other side of the Seine, the Boulevard de Sébastopol opened into the new Place Saint-Michel, anchored by Daviod's fountain (fig. 4.17) The facades of the apartments around the place were uniformly designed by Davioud (fig. 4.18) to harmonize with the façade of the engaged fountain. Here classical urban design joined modern operations of the *voirie*, or public way.

⁵⁵⁸ César Daly, *Les théâtres de la Place du Châtelet* (Paris: Duchet, 1865), 42.

⁵⁵⁹ Jordan, *Transforming Paris*, 186-188.

⁵⁶⁰ Poëte, *Promenade au XVIIe siècle*, 12.

⁵⁶¹ *Ibid.*, 113.

The construction of the Boulevard de Sébastopol caused enormous physical upheaval, prompting the satirist Fontenay to compare the boulevard to its namesake, the battle of Sevastopol in the Crimean War.⁵⁶² The installation of the subterranean utilities did not always proceed smoothly, as when a single patch of sidewalk was reportedly torn up three consecutive occasions to install separate gas and sewer lines.⁵⁶³ The excavations uncovered 24 cartloads' worth of human bones that had to be removed to the catacombs, where they could be viewed as anonymous relics of old Paris.⁵⁶⁴ In their place lay new infrastructures for water, light, air, and arboriculture.

Avenues in the city

The *avenue*, like the boulevard and the landscape garden, was imported from outside the city. The seventeenth-century dictionary of Richelet defined *avenue* in the general sense of an approach route, but also as a tree-lined path leading to a country house.⁵⁶⁵ The nineteenth-century garden writer Audot conceived of the typical *avenue* in terms of its “dome” of tall trees meeting high overhead.⁵⁶⁶ Urban versions of the avenue initially

⁵⁶² Fontenay, *Boutades d'un promeneur*, 76. “Sébastopol se croit vengé, sans doute, / Car ce boulevard, en son nom, / A fait bien plus de ruines sur sa route / Qu'aux remparts Criméens n'en fit notre canon” (Sevastopol feels avenged, no doubt / For this boulevard, in its name / Has made many more ruins along its route / Than our cannon made on the Crimean ramparts).

⁵⁶³ Guénot, *Revue des Beaux-Arts* (1855), 306.

⁵⁶⁴ L. Tesson, “Séance du samedi 28 Oct 1916,” *Procès verbaux: Commission municipale du Vieux Paris* (Paris: Imprimerie municipale, 1916), 208.

⁵⁶⁵ Pierre Richelet, *Dictionnaire françois : contenant les mots et les choses* (Geneva: J.-H. Widerhold, 1680), 53.

⁵⁶⁶ L.-E. Audot, *Traité de la composition et de l'ornement des jardins*, 5th ed. (Paris : Audot, 1839), 54.

connected with important destinations on the edge of the city or beyond.⁵⁶⁷ The Avenue des Champs-Élysées, originally called the *Grand-Cours* or *Avenue des Tuileries*, was an appendage of the Tuileries palace and gardens before it eventually acquired a reputation as a destination in itself. The Avenue de l'Observatoire, which Napoléon decreed in 1807, formed a stately and tree-shaded approach from the Luxembourg palace south to the astronomical Observatory.

During the Second Empire, the avenue, like the boulevard, was brought into the city proper. For example, the Avenue de l'Opera, authorized in 1854, would lead from the Palais Royale to a new opera hall to be erected on the Boulevard des Capucines. This avenue—not completed until the 1870s, like the Garnier-designed hall itself—further deviated from its suburban and rural precedents by foregoing the customary canopy of trees. Napoléon III also commissioned a vast new avenue on the western outskirts of the capital: a majestic connection between the renovated Bois de Boulogne and the renovated Place de l'Étoile, previously known as the Promenoir de Chaillot. All three were conceived in 1853, forming an ensemble linking city and country. The Avenue de l'Impératrice (today Avenue Foch) was initially projected and financed in March, 1854 as a “*route départementale*,” a regional road that lay outside the city boundaries before the expansion of 1860.⁵⁶⁸ It briefly served as a grand approach road to the city gates at the Barrière de l'Étoile, but in a twist befitting the vision of Laugier, it soon became an avenue inside the expanded city. A few months after its initial approval in 1854, the State

⁵⁶⁷ Laugier discussed this sense of avenue in *Essai*, 145-147.

⁵⁶⁸ “Route Départementale no. 4 – (31 mars 1854),” in *Receuil*, 282.

transferred the Place de l'Étoile to City ownership, just as it had done with the Bois de Boulogne, stipulating required renovations and maintenance.

The city was charged to embellish the plaza around the triumphal arch, to establish a ring of mansions bounded by strict architectural guidelines around the periphery, and, linking it to the new avenue, “*De remplacer cet ancien promenoir par des promenades nouvellement établies... sur les parties latérales de la route départementale qui doit être ouverte...* ” (to replace this former *promenoir* with promenades newly established... along the lateral parts of the departmental road that will be opened...) ⁵⁶⁹ Place, avenue, and bois formed a continuous chain of promenades. The new avenue also had the effect of making the Champs-Élysées part of an extended approach route to the Bois de Boulogne.

The avenue was originally to be designed by Jacques-Ignace Hittorff, whom the Emperor had already engaged as architect of the Bois. His ink-and-watercolor drawing of 1853 shows the “avenue du Parc de Boulogne” as a straight *allée* bordered by undulating lawns or gardens along each side, matching the irregular lines projected for the Bois itself (fig. 4.21). According to Haussmann’s account, Hittorff came to him with a proposal for a 40-meter (131 feet)-wide avenue, including double-rows of trees and side paths for riders and pedestrians. ⁵⁷⁰ But in one of the recurring clashes between the bureaucrat and the architect, Haussmann excoriated Hittorff’s initial design. Forty meters’ width was far too

⁵⁶⁹ “Promenoir de Chaillot – (22 juin 1854),” in *Receuil*, 283. See also “Place de l’Étoile,” (13 août 1854), in *Receuil*, 284.

⁵⁷⁰ Haussmann, *Mémoires*, 496.

puny, Haussmann insisted, despite the fact that it exceeded that of the traditional boulevards. He ordered the avenue tripled to 120 meters (394 feet) wide. If this bombastic proportion surprised Hittorff, so did Haussmann's directive to eliminate the traditional rows of shade-giving trees. "*Pas d'arbres!... L'Empereur n'en veut pas!*" (No trees!... the Emperor doesn't want any!), the prefect exclaimed, according to his later recollections.⁵⁷¹

In the gargantuan avenue's finished state, a little over half of its width consisted of planted green space: lawns dotted with decorative clumps of trees (including a pair of magnolias) and shrubs, and the occasional sculptural group (fig. 4.22).⁵⁷² Its imposing width recalls and exceeds that of Louis XIV's Avenue de Paris, a monumental approach to the palace at Versailles. But the two planted medians of the Avenue de l'Impératrice, each measuring a generous 32 meters (105 feet) wide, did not offer shaded paths in the manner of traditional avenues and boulevards. Instead, they served a primarily decorative function. Alphand referred to them not as *promenades*, but more vaguely, as *zones gazonnées* (grass-covered areas), bordering the central carriageway and the designated pedestrian and riding paths.⁵⁷³ Like the islands in the main lake of the Bois de Boulogne,

⁵⁷¹ *Ibid.*, 496. Haussmann claims he was open to having trees dispersed in clumps: "*Je tâcherai que l'Empereur me permette de les faire planter de distance en distance de groupes d'arbres de toutes essences pour en faire une sorte d'Arboretum*" (I will try to gain the Emperor's permission to plant, at intervals, groups of trees of various species to make of [the avenue] a sort of Arboretum).

⁵⁷² Alexandre Jouanet, who worked in the *Service des Promenades et Plantations*, discussed the exotic magnolias in a letter to the editor dated 27 Dec. 1855. *Gazette municipale – Revue municipale*, 1 Jan. 1856, 1816.

⁵⁷³ Alphand, *Promenades*, 237. The central carriageway, measuring 16 meters (52 feet) across, was bordered by 12-meter (39-foot)-wide allées designated for the use of pedestrians and mounted riders, respectively. These in turn were bordered by the planted medians. The outer edge of the avenue consisted

the planted medians displayed horticultural richness best appreciated from across an intervening space of water or, in this case, traffic. The Avenue de l'Impératrice thus sacrificed the comfort of *promeneurs* to achieve the visual effect of perspective views toward the Bois de Boulogne or, in the other direction, the Arc de Triomphe. The avenue, whose perimeter is lined with a uniform grillwork and mansions set in gardens of their own, remains among the most vainglorious examples of planning and landscape architecture of the Second Empire. (A 2014 proposal endorsed by Mayor of Paris seeks to transform the Avenue Foch into a more pedestrian- and cyclist-friendly “green corridor” surrounded by mixed-use development.⁵⁷⁴)

Toward the end of the Second Empire, in 1867, Alphand oversaw the widening of the Avenue de l'Observatoire, a project that better served pedestrians and incorporated traditional forms. He moved vehicle circulation to two new perimeter lanes, bordered by sidewalks shaded by rows of trees. This freed the central part of the avenue to be converted into a pedestrian garden consisting of “*parterres à la française, de statues et d'objets d'art, de manière à la mettre en rapport avec le reste de la partie centrale du jardin du Luxembourg*” (parterres in the French style, statues and art objects, so as to make it accord with the rest of the central part of the Luxembourg gardens).⁵⁷⁵ The part

of narrow lanes for local traffic, beyond which lay the iron grillwork separating the gardens of the adjacent mansions.

⁵⁷⁴ “Paris: l'avenue Foch pourrait radicalement changer de visage,” *Le Figaro*, 19 Jan 2014. <http://www.lefigaro.fr/actualite-france/2014/01/19/01016-20140119ARTFIG00099-paris-l-avenue-foch-pourrait-radicalement-changer-de-visage.php>

⁵⁷⁵ Alphand, *Promenades*, 234.

of the Luxembourg gardens formerly occupied by a nursery now took the form of a *jardin anglais*.

Equipment of the *voie publique*

The design of the new *voies publiques* (public ways or public rights-of-way), including boulevards and avenues, reconciled the emerging functions of urban landscape architecture and modern urbanism. The best place to start is a plate from *Les Promenades de Paris*, entitled, “*Profils de voies publiques*” (figs. 4.23-4.24). It contains five profiles or cross-sectional drawings that share a set of essential components: underground cavities containing sewers and fresh water pipes, a graded carriageway with arched profile for drainage, sidewalks or *allées*, and gaslights. All except one, the Rue de Rivoli are planted with rows of trees. The street thus conceived and represented a vertical gradient of subterranean and surface elements. Horizontally, the surface is divided between the roadway(s), sidewalks, and in some cases a central median and side lanes. Alphand’s profile drawings—no doubt enriched by collaboration with his engineer colleagues Darcel and Belgrand, who were responsible for roads and sewers, respectively—recalls the hygienic design of Pierre Patte’s *Profil d’une rue* of 1769 (fig. 4.25), but with the added dimension of urban greenery and street furniture. Trees were not new to Paris, for example around the first ring of boulevards and the Champs-Élysées. But Alphand’s park service gave more scientific attention to urban arboriculture. They replanted the older *allées* where necessary, and the new avenues and boulevards presented an opportunity to plant trees en masse, in coordination with benches, gaslights, kiosks, and urinals.

The boulevard facilitated the circulation of people, horses, and vehicles and on the surface level; water, sewer, and gas utilities underground; and light and air (and the exhaust of gaslights) among the foliage above, as Choay noted.⁵⁷⁶ It also facilitated the circulation of capital, by catalyzing real estate development and providing for larger shops and businesses. In David Harvey's account, the metaphor of circulation did "double duty," emphasizing not only sanitation and fresh air but also "the free circulation of money, people, and commodities throughout the city, as if these were also entirely natural functions."⁵⁷⁷ Marshall Berman noted, with reference to the boulevards of the Second Empire, "The new force that the boulevards have brought into being... is modern *traffic*."⁵⁷⁸ But unlike the motorways of the twentieth-century, as Berman also noted, the boulevards of the nineteenth century attempted to accommodate vehicular traffic as only one of numerous spatial uses. The space of the boulevard brought people together, though the scale and constant movement induced anonymity rather than community. The architecture and furniture of the boulevards made them habitable, not just traversable. Ample public benches and kiosks, as well as the ubiquitous cafés, invited passersby to pause to rest or to *read* the city and its inhabitants, as Parisians were so fond of doing.

Looking again at Alphand's street profiles, shades of variation emerge among the different examples. The roadways, 12 to 16 meters wide, usually bisect the overall right-of-way, but occasionally, as in the Boulevard des Batignolles, they run on either side of a

⁵⁷⁶ Choay, "Système des espaces verts," 93.

⁵⁷⁷ Harvey, *Capital of Modernity*, 252.

⁵⁷⁸ Berman, *All that is Solid*, 158.

central pedestrian median. Relatively narrow ways, like the Boulevard de Sébastopol, have only a single line of trees on each side (two rows total), but the more ample avenues and boulevards have four or even five rows of trees across their width. Both the Avenue de la Grande Armée and the Boulevard d'Italie (Boulevard Auguste-Blanqui) measure 70 meters in overall width, over half of which for pedestrians, but they have different layouts. The former divides traffic between a central road and a pair of smaller side lanes, with six rows of gaslights; while the latter provides two traffic lanes, one in each direction, requiring four rows of gaslights. Daly praised the government for reserving the full width of the outer ring of boulevards for circulation and trees and promenade, declining an opportunity to generate income by selling off the edges for development.⁵⁷⁹ Even the older ring of *Grands Boulevards* was replanted with trees, with different species assigned to different boulevards, enhancing the distinction between one and the next.⁵⁸⁰

All of the *voies* have sewers and fresh water supplies running beneath them, but the Boulevard des Batignolles also carries a buried aqueduct down its center. Gaslights abut the main roadways, but trees and furniture are set back somewhat. Carriageways and most pedestrian surfaces are paved, but in some cases the allée between two rows of trees is left unpaved, perhaps for mounted riders. Trees are spaced a minimum of five meters apart (the same distance from the buildings), as along the Avenue de la Reine Hortense (Hoche), but sometimes over 12 meters apart. Toolsheds and sump pits are buried beneath some of the sidewalks.

⁵⁷⁹ Daly, "Promenades et plantations," 246.

⁵⁸⁰ *Ibid.*, 248. The six species listed by Daly are the maple, plane, Japanese lacquer, elm, chestnut, and catalpa.

Another plate in *Les Promenades de Paris*, “Voie publique – Détails” (fig. 4.26) reveals additional nuances in the interface among mineral, vegetal, hydrological, metallic, and gaseous components. For example, the foliage of the street trees begins no lower than 3.5 meters above the ground surface, so as not to block the light of the candelabras or perhaps catch fire. A network of underground pipes served either to drain or irrigate tree roots as needed, while cast iron grilles prevent soil compaction on the surface.⁵⁸¹ Wheel guards protect street trees from errant carriage wheels crossing the sidewalk en route to a private courtyard. The macadam of the main road gives way to stone pavers near the granite curb, and a layer of sand underlies the pavements. These rigorously conceived details furnish the backdrop of everyday life in Paris, as Caillebotte seems to have appreciated in his painting of 1880, *Boulevard Seen from Above* (fig. 4.27).

The continuous tree canopy formed a kind of vegetal portico, fulfilling Alberti’s recommendation to provide a place to sit or stroll in the shade alongside a street.⁵⁸² But street trees required a lot of maintenance and planning to ensure their survival in the condensed, impermeable ground surrounded by traffic and the toxic gas of streetlamps. The gas coursing in huge volumes beneath the pavements and leaked not infrequently into the soil and air, to say nothing of the exhaust from the lamps. But the horticulturists reduced the overall exposure of tree roots to leaking gas by requiring the gas company to encase their pipes in gravel and to provide regular outlets to the air.⁵⁸³

⁵⁸¹ Alphand, *Promenades*, 244.

⁵⁸² Alberti, *Art of Building*, 263.

⁵⁸³ Alphand, *Promenades*, 244.

Of all the equipment of the *voie publique*, aside from the roadway itself, the trees speak most profoundly of the application of exurban engineering practices into the space of the city. The planting and maintenance of trees along a roadway was a standard part of roadway engineering, quite apart from the considerations of garden art. The 1835 *Annales des ponts et chaussées*, for example, included instructions for planting trees at regular intervals along suburban or country roads.⁵⁸⁴ A circular addressed to the prefects of all departments on August 9, 1850 directed the engineering corps to plant trees along all national roads at least 10 meters in width.⁵⁸⁵ The purposes of roadside trees were to prevent gravel roads from becoming excessively dry, to help guide travelers in the dark or the snow, and to grow usable lumber for government use or for sale.⁵⁸⁶ Only roads in humid or shaded areas should *not* receive trees along their borders.⁵⁸⁷ The engineers saw the trees as equipment belonging to the engineering of the road, not as representatives of a kingdom of nature. Reflecting both the ravages of Dutch elm disease and the enthusiasm of engineers for technical solutions, the 1873 *Manuel de l'ingénieur des ponts*

⁵⁸⁴ Vauvilliers, “No. CCXXXV. Instruction sur la construction des routes en Prusse,” in *Annales des ponts et chaussées: Partie technique. Mémoires et documents relatifs à l'art des constructions et au service de l'ingénieur* (Paris: Carilian-Goeury and Dalmont, 1835), 28-30.

⁵⁸⁵ P. Magne, “Instruction pour les plantations à faire sur les routes nationales,” Circular No. 41, 17 June 1851, in *Annales des ponts et chaussées 3rd Series* Vol. 1, Part 2 (Paris: Carilian-Goeury and Dalmont, 1851), 121. Some engineers sought permission to plant trees on roads of only eight or nine meters in width, especially in the sun-drenched South.

⁵⁸⁶ Debaue, *Manuel de l'ingénieur*, 251-252. See also Magne, “Instruction pour les plantations,” 138-139. Roadside planting financed by entrepreneurs but fully overseen by government engineers, who guaranteed the interests of the state in providing shade for the roads and ultimately harvesting the wood when the trees reached maturity.

⁵⁸⁷ Debaue, *Manuel de l'ingénieur*, 251-252.

et chaussées suggested that the only way to save elm trees from the ravages of insects was to strip away their bark and coat the trunk in tar.⁵⁸⁸

The procedures outlined in the 1851 instructions for planting along national roads closely resemble those that Alphand would use in planting the boulevards and avenues of Paris. The plantings along the national roads were supposed to consist in a single row of trees on each side, for roads between 10 and 16 meters wide. In the case of wider roads, there would be two rows of trees along each side, split by a small lane, or *contre-allée*.⁵⁸⁹ The trees had to be at least two meters from the line of private property and, it was recommended, at least half a meter away from the drainage ditches.⁵⁹⁰ Pits to receive the trees were dug in advance, and sometimes equipped with a small pipe or bed of rocks for drainage.⁵⁹¹

In dry soil, a small depression around the trunk was supposed to collect rainwater, while the soil around trees planted in moist areas was piled into a small mound to repel excess water.⁵⁹² The final step was to garnish the sapling with hawthorn or other thorny plants, and to install a vertical metal treeguard around each trunk.⁵⁹³ But the planting regulations did not apply in certain special cases, “*telles que les traverses des villes et des*

⁵⁸⁸ *Ibid.*, 263.

⁵⁸⁹ Magne, “Instruction pour les plantations,” 122.

⁵⁹⁰ *Ibid.*.

⁵⁹¹ *Ibid.*, 131.

⁵⁹² *Ibid.*, 117.

⁵⁹³ *Ibid.*, 131-132.

villages” (such as where [the road] traverses towns and villages).⁵⁹⁴ The city constituted the exception to the practice of public works; here the engineered, clearly delineated space of the *route* gave way to the chaos and cultural density of the *rue*.

But to return to Lefebvre’s comment regarding nineteenth-century Paris, “the non-city... would conquer the city... and in so doing extend it immeasurably.” Thus Haussmann brought the order of the *route* into the city, displacing the *rue* with urban boulevards and avenues. And Alphand made sure they were planted with even greater care and precision than their rural counterparts. Alphand regarded street trees as indispensable for cleaning the air and providing shade as well as making the city more attractive, despite an average cost of 180 francs for each tree and its necessary infrastructure, plus possible additional costs for transplantation by chariot in the case of mature specimens.⁵⁹⁵ By the end of the Second Empire, the Office of Promenades had settled on a set of protocols for urban forestry: any street wider than 26m received two rows of trees; any thoroughfare wider than 36m received four rows of trees, sometimes split between a central median and the sidewalks along the edges.⁵⁹⁶ Planting would commence by digging a continuous trench, three meters wide and one meter deep, to be filled with planting soil. Trees were spaced five meters from each other and five meters away from the buildings.⁵⁹⁷ In establishing tree farms in the Bois de Boulogne and

⁵⁹⁴ *Ibid.*, 122.

⁵⁹⁵ Alphand, *Promenades*, 243-245.

⁵⁹⁶ *Ibid.*

⁵⁹⁷ *Ibid.*

Vincennes, Alphand fulfilled the 1851 call to establish government-owned nurseries to improve quality control and economies of scale.⁵⁹⁸

In other respects, Alphand's *Service des Promenades et Plantations* departed from roadside tree culture on national roads as practiced by engineers. The state regularly harvested the trees along its national roads for lumber, and replaced them each generation. This manner of exploitation affected the choice of species. Elms, poplars, and plane trees fulfilled the double criteria of hardiness and quality of wood. The engineer's manual admonished engineers to reject certain species, "*de pur agrément et de mauvais produit*" (of pure enjoyment and poor product), such as the linden or chestnut.⁵⁹⁹ The fact that Alphand used precisely these species in Paris shows that he considered the urban plantations as fulfilling a different requirement than exurban trees, namely ornament instead of exploitation.

Alphand also did not follow the standard engineering dictate to plant trees within the autumn period between November 1 and December 15, or in the spring before March 15.⁶⁰⁰ William Robinson claimed to have seen "miles of trees planted in the course of a single week," evoking an engineer's efficiency, but he was surprised to observe laborers planting large trees in the Buttes-Chaumont on a dry and warm day in June—totally out of step with general arboricultural practice.⁶⁰¹ He asked the workmen, "Do you plant after

⁵⁹⁸ Magne, "Instruction pour les plantations," 139.

⁵⁹⁹ Debauve, *Manuel de l'ingénieur*, 256.

⁶⁰⁰ Magne, "Instruction pour les plantations," 115.

⁶⁰¹ Robinson, *Parks, Promenades*, 60.

this date?” They replied, reportedly, “Every day in the year!” Robinson took this as folly. He wrote, “Of the larger trees some seem not to take well, and doubtless in consequence of summer planting, for which there seems little excuse.”⁶⁰² Here Alphand’s divergence from rural planting practices reflects a motive totally different from the utilitarian shading of national roads. Ornamental, symbolic, and theatrical demands—characteristics of distinctly urban space—seem to have driven project management decisions more than sound horticulture.

Among roughly 150,000 street trees in Paris in 1860, according to Daly, the most common species was the elm, followed by the Japanese lacquer, chestnut and plane.⁶⁰³ Alphand preferred the plane and the chestnut because they were hardy, fast-growing, and gave good shade; whereas the elm was vulnerable to pests and the linden could be accidentally damaged by people attempting to harvest its blossoms.⁶⁰⁴ Haussmann favored chestnuts and elms, but cautioned against the plane tree, the leaves of which he said could not be composted as fertilizer, and which he said spread its branches too wide.⁶⁰⁵ By 1873, Alphand listed the Parisian street tree population at 102,154, taking into account the many trees chopped down by residents for firewood during the siege of 1870, and destroyed during the ensuing battles.⁶⁰⁶ Ernouf noted, “*Ces arbres, parisiens aussi, ont rempli, dans ces jours d'épreuve, un office patriotique. Leur sacrifice nous a*

⁶⁰² *Ibid.*

⁶⁰³ Daly, “Promenades et plantations,” 129.

⁶⁰⁴ Alphand, *Promenades*, 245.

⁶⁰⁵ Haussmann, *Mémoires*, 251

⁶⁰⁶ Alphand, *Promenades*, 246.

permis de supporter les plus rudes froids de cet hiver néfaste” (These trees, as Parisians, fulfilled a patriotic duty during those trying days. Their sacrifice permitted us to endure the harshest cold of that hard winter).⁶⁰⁷

Hausmann claimed to have faced some resistance from the municipal engineers, with the exception of Alphand and Darcel, in executing the large-scale planting of trees in Paris. While the public loved the shade and greenery, Hausmann recalled, some of the engineers thought that the shade of trees would prevent the roads from drying out quickly after a rain.⁶⁰⁸ He also claimed that he had to work hard to convince the Emperor to allow him to plant trees along otherwise open axes.⁶⁰⁹ It is hard to know what to make of these claims in light of official manuals of the *ponts et chaussées*, cited above, full of directives and instructions for planting trees along national roads. Even so, trees retained their identity as equipment of the road, even as they also took on cultural significance as part of the naturalistic greening of the city.

Trees and furniture likewise appeared in and around busy plazas. The main difference between these *places plantées* and “*squares proprement dits*” (squares properly considered), as Hausmann noted, was that the former were enclosed by grillwork. The green plazas, lined with trees, were open to traffic. Raised islands and pedestrian refuges in the middle of the plaza were also planted with trees. In other respects, the resemblance between squares and place was “*à peu près complète*” (almost

⁶⁰⁷ Baron Ernouf, “Les Promenades Publiques de Paris, en 1870 et 1873,” *Musée universel : revue illustrée hebdomadaire* (1873), 110.

⁶⁰⁸ Hausmann, *Mémoires*, 255.

⁶⁰⁹ *Ibid.*

total).⁶¹⁰ An example of the *place plantée* is the Place du Prince Eugène (today Place Léon Blum), a 5-way intersection where Haussmann's new Boulevard Voltaire crossed the Avenue Parmentier and the Rue de la Roquette. Alphand planted grids of trees in three wedge-shaped areas, providing a respite from the flow of traffic even while structuring its flow (fig. 2.16). The northwestern corner of the *place* is occupied by the *mairie* (town hall) of the 11th arrondissement, opened in 1865. Whereas as the *mairie* of the 3rd arrondissement overlooks a irregular garden square (Temple), this one overlooks a busy *place*, but nonetheless has its vegetal embellishment. Victor Baltard's grandiose scheme for the "carrefour du Prince-Eugène" of 1862 was not implemented (fig. 4.28) leaving basically an open space relieved by clumps and rows of trees (fig. 4.29). Alphand similarly embellished the wedge-shaped spaces around the crossing of the Boulevard Malesherbes and the Avenue de Neuilly with shade trees and shrubs, the Place Malesherbes (Général Catroux).

Coda to the metaphor of the urban forest

Laugier's metaphor of the city-as-forest took on other meanings as the new boulevards, avenues, and streets cut through old and new quarters. In many formulations, the "forest" now represented the organic old city, conquered by an outside force. For example, the Paris-based correspondent for the *New York Times* reported in 1861, "The City Engineer draws great broad lines through the dense forest of houses just as the surveyors of

⁶¹⁰ *Ibid.*, 252.

Western cities used to do through the forests in land speculation times.”⁶¹¹ Victor Fournel, nostalgic for the old Paris, compared the urban renovations to a kind of hatchet job performed upon a sacred grove. He invoked not only the imagery of a wild forest, but also the rectilinear parterres and straight allées of Versailles, evoked by the new boulevards and avenues:

*La forêt touffue du vieux Paris a été émondée, taillée, rognée, peignée et lissée... comme le parc de Versailles par le Nôtre et la Quintinie. L'édilité moderne... a fauché à tour de bras la sombre forêt, pleine de ronces et de broussailles; puis elle l'a proprement taillée en losanges, en pyramides, en quinconces et en plates-bandes.*⁶¹²

(The dense forest of old Paris has been pruned, clipped, trimmed, combed and smoothed... like the park of Versailles by Le Nôtre and Quintinie. The modern administration... has eagerly mowed down the dark forest, full of brambles and undergrowth; then they pruned it neatly into diamonds, pyramids, quinconces, and flower beds.)

⁶¹¹ William Edward Johnston (known as ‘Malakoff’), “Metropolitan Improvements, Vast Expenses Thereon, The Boulevards,” *New York Times*, Sept 16, 1861. Similar wording was again used half a century later by the French critics Dubech and D’Espezel, “Haussmann lays out an artificial city, like something in Canada or the Far West... Most [of his thoroughfares] are astonishing architectural intrusions that begin just about anywhere and end up nowhere, while destroying everything in their path.” Dubech and d’Espezel, *Histoire de Paris* (Paris, 1926), 424-425, in Benjamin, *Arcades Project*, 132.

⁶¹² Fournel, *Paris nouveau*, 43.

In this rendering of the “forest” metaphor, the city reverts to the status of conquered *territory*, as Picon has discussed the term.⁶¹³ Devoid of signs of agency, it appears available for operations guided by some external rationale. Indeed, Haussmann implemented a rather abstract approach to operating on Paris, relying mostly upon the huge map in his office, which he commissioned upon taking office and distributed to all the chiefs of the municipal services.⁶¹⁴ The satirical *Histoire tintamarresque de Napoléon III*, published eight years after the fall of the empire, characterized the Haussmannian boulevard as nothing more than a firing range flanked by oppressively monotonous buildings, seen in the bleak illustration by Georges Lafosse (fig. 4.30). Here it is worth recalling that the straight roads of old royal hunting forests not only eased passage through the wood and symbolized sovereign power over wild nature, but also they facilitated the hunt. A straight road served the function of clear shooting gallery. A hunter could shoot his quarry from a long distance when it wandered, unsuspectingly, into the line of fire.⁶¹⁵ Similarly, the intramural boulevards could facilitate a potential urban “hunt,” that is, the shelling of potential barricades by the army in the event of insurrection. The test of this strategic aspect came in 1871, when the Communards barricaded some of the new boulevards and avenues, as well as many of the older streets. After a week of bloody fighting and mass executions, remembered as “*la semaine sanglante*” of May 1871, the Versailles troops ultimately re-conquered the city.

⁶¹³ This definition of territory is outlined in Antoine Picon, “What Has Happened to Territory?” *Architectural Design* 80, Issue 3 (May/June 2010), 94-99.

⁶¹⁴ Jordan, *Transforming Paris*, 173-174.

⁶¹⁵ There is a reference to “*la chasse et la promenade*” in Poëte, *Promenade au XVIIe siècle*, 336-337.

But the military purpose of the boulevards should not be overstated. The majority of the new boulevards and avenues of the Second Empire appeared in the more prosperous western quarters of the city, where they formed the basis for new property development. The more politically restive, working-class districts in the East—understood as the potential source of insurrection—received only a few new axes, such as the Boulevard du Prince-Eugène (Voltaire) and Boulevard Richard Lenoir. These did not so much destroy the old neighborhoods as surround them, in the manner of quarantine. As the American historian David Jordan has argued, martial strategy was only one aspect of the authorities' more general quest to organize and beautify the capital, and not necessarily a dominant one.⁶¹⁶ Haussmann seems to have created axial boulevards, as much to create perspectival views and connect civic monuments and plazas, as to enable swift troop movements. Still, the new axes reflected the imprimatur of state power and distant evocation of the rational planning associated with royal domains.

For all that the wide "*perceptions*" (piercings) of new boulevards and avenues, as well as the parks and squares, superseded the old Paris of dense *quartiers* and pastoral fringes, they actually made the city visible in a quite unprecedented manner. Only in the Champs-Élysées and the Palais-Royale, perhaps, could old Paris really *see itself*. Critics such as Fournel had been bemoaning the disappearance of the old city since 1830, if not before, as T.J. Clark has observed, and their obsession with change and loss can also be read as a latent desire "to *visualize* that process, and have the modern city be an image"

⁶¹⁶ Jordan, *Transforming Paris*, 188-196. Neither Haussmann nor Louis-Napoléon were in present in Paris during the uprising of 1848, and both were deeply preoccupied with other issues such as traffic circulation, commercial growth, public health, and the overall image of the city.

(ital. original).⁶¹⁷ Haussmann succeeded in giving intelligible form to the city, to modernity, and to the capitalist economy that gave impulsion to the change in the first place.⁶¹⁸ The spaces of modern Paris were not only open, superficially reminiscent of country avenues, but also empty, controlled, and abstract.⁶¹⁹ The city of Paris thus came into view as a thing separate from the collective life of its inhabitants. Made for endless strolling and looking, the new open spaces also framed their more or less transient occupants as consumers, in the image of the rising middle class or bourgeoisie.⁶²⁰ That is not to say that the city or even its new spaces were *entirely* given over to consumer-friendly spectacle, but rather that they began a long process, lasting into our own time, of transforming urban spaces into carriers of imagery.

⁶¹⁷ Clark, *Painting of Modern Life*, 66.

⁶¹⁸ *Ibid.*, 66, 69.

⁶¹⁹ *Ibid.*, 75.

⁶²⁰ *Ibid.* See also the first chapter of Aaron Betsky, *Making it Modern* (New York: Actar, 2015), for an analysis of the essential abstraction and emptiness of late nineteenth-century urban public spaces.

5. Landscape décor and the representation of nature

Nothing but décor?

To complain about the artificiality of the new parks and gardens of Paris was to misunderstand them, the novelist and playwright George Sand asserted in 1867. The fragments of feigned nature proliferating across the city—cascades gushing from boulders, streams meandering through groves, ponds surrounded by undulating lawns, and lush compositions of colorful and exotic vegetation—should not be decried as “monstrous counterfeits,” she argued, but rather embraced as necessary mediators between the real and the conventional, aimed at the enjoyment and education of the public.⁶²¹ “Do not hope to find the charm of nature,” she cautioned, rejecting the category of *jardin paysager* for promising a false synthesis of culture and nature. “But if you want to see the *jardin décoratif* par excellence, you’ll find it in Paris, and let us agree that its invention is ravishing. It is décor, nothing else... but adorable and marvelous décor.”⁶²²

The term *décor* here suggests not only a surface treatment or general adornment but also the literal décor of a theater stage. Sand’s references to the world of theater grew more explicit as she continued in the pages of the *Paris Guide*. “Only through the fictions of our theaters and our gardens,” she wrote, would poorer folk ever glean a hint of the

⁶²¹ Sand, “Rêverie,” 1202.

⁶²² *Ibid.*, 1199.

picturesque sites available to those who possessed the means to travel.⁶²³ For Sand, designed landscapes were no less staged than a play or a museum exhibition. The promenader was a roving spectator who might take pleasure and knowledge from the show. The “fictions” of which she spoke did not necessarily imply falsehood; they might reflect or evoke something real. Sand, a tireless promenader and author who divided her time between town and country, still believed that something called *nature* could be found in the French countryside, in “the smallest cranny of rocks of Fontainebleau or the wooded hills of the Auvergne.”⁶²⁴ But she thought that the city, by contrast, was given over to staged performances. Nature in the city could only be *a performance of nature* in the city. Gardens, like theaters, were spaces of mimetic invention; and like the wide new boulevard walks, they invited peripatetic *rêverie*.⁶²⁵ To cement the analogy between the modern urban landscape and the theater, Sand guided her readers seamlessly from the public promenades to a hypothetical performance of opera or ballet:

Nous y verrons les fantastiques effets de la lumière électrique créer, sous nos yeux, une nature de convention bien autrement infidèle que celle des jardins éclairés, au moins, d'un vrai soleil ou d'une vraie lune. Est-ce à dire qu'il faille proscrire ces splendides illuminations de la peinture? je protesterais, je l'avoue. Cette lumière colorée si intense m'emporte plus loin encore que la vue des plantes exotiques. Elle me fait monter jusqu'à ces autres mondes où des astres,

⁶²³ *Ibid.*, 1202.

⁶²⁴ *Ibid.*, 1199.

⁶²⁵ *Ibid.*, 1197, 1202.

*éblouissants et en plus grand nombre que dans le nôtre, embrassent de leurs rayonnements des paysages indescriptibles.*⁶²⁶

(There we will see fantastic effects of electric light creating, before our eyes, an artificial nature far more unfaithful than that of gardens that are lit, at least, by a real sun or a real moon. Should we therefore prohibit these splendid illuminated paintings? I would protest it, I admit. This intense colored light carries me still further away than the view of exotic plants. It makes me rise up to other worlds where the stars, more dazzling and numerous than ours, caress, with their rays, indescribable landscapes).

Sand's account reflects the artifice of nature, and the nature of artifice, in her time. It is notable that Sand's starry-eyed spectator is a participant or even an actor in bringing the spectacle to life. She responds to the staged effects with a journey of her own as she discovers "other worlds" and "indescribable landscapes." It is equally worth noting that this spectator freely acknowledges the surficial nature of the *mise-en-scène*; she knows that hidden machinery behind the scene is driving the "fantastic effects" that move her mind and emotions. She embraces the stage as a zone of action (the English word *performance* translates as *représentation* in French), where value is vested in appearances that transcend themselves. Similarly, Sand strolls through the new landscapes of Paris with a notion that what she sees is a kind of representation. For it is precisely the most *naturalesque* moments of the parks and gardens that are the most carefully staged.

⁶²⁶ *Ibid.*, 1203.

In the present chapter I discuss the problem of the expression of nature in the public landscape architecture in the Second Empire. Following Sand's intriguing prompt, I wish to show that the surface of the landscape was received as *décor* and, in a limited sense, designed as *décor*, not unlike the facades of new public and private buildings. The importance of decoration and expression as functions of design does not mean that the landscape was *merely* decorative or representational. Unlike theatrical *décor*, the landscape surface was meant to be explored spatially by the mobile promenader. In addition, this habitable surface constituted only one stratum of a multi-strata ground. Indeed, the careful *décoration* of the public landscape did not preclude a deeper understanding of soil, minerals, water, and infrastructure beneath the surface.

It would be hard to overstate the importance of theater culture to Parisians in the Second Empire, and not just those of the privileged class. *Théâtromanie* (theater mania) and "*la religion du spectacle*" of this period probably exceeded even that of the eighteenth century, when the theater itself was arguably only a formalization of the theatricality of social life.⁶²⁷ According to Daly in 1865, theaters were indispensable to civilization, particularly to large cities, where they formed "*le complément monumental*" (the monumental complement) to churches, government halls, schools, courts, and rail

⁶²⁷ Marianne Roland Michel and Daniel Rabreau, *Les Arts du Théâtre, de Watteau à Fragonard* (Bordeaux: Galerie des beaux-arts, 1980) 31-33. See also F. J. W. Hemmings, *The Theatre Industry in Nineteenth Century France* (New York: Cambridge University Press, 1993), 68-69.

stations.⁶²⁸ The joys of art were as necessary to the soul, he added, as food for the body, education for the mind, and streets for circulation.⁶²⁹

Theater culture in its many manifestations helped to condition Parisians' response to their new parks and gardens. Heath Schenker has argued that the moral conventions of melodrama found their way into the design and reception of the nineteenth century parks, particularly New York's Central Park, but also the Bois de Boulogne, which preceded the Olmsted and Vaux project by a half-decade.⁶³⁰ In Paris the satirical frenzy of Offenbach's operettas marked the years of the Second Empire, but other forms continued to flourish as well. Whereas Schenker links the decorative quality of the Parisian landscapes to elite tastes and Napoléon III's political maneuvering, I argue for a more open-ended reading of décor, one that permits various shades of representation and participation. Theater culture bore a complex historic relationship to garden culture, as gardens often contained theaters or were themselves conceived as spaces of theatrical play. Strolling and going to theater constituted the two most popular forms of after-dinner leisure—even for “*les personnes peu fortunées*” (unprivileged persons), according to Mercier in 1783—and remained so into the nineteenth century, as gaslights only increased the options for nighttime excursions.⁶³¹

⁶²⁸ Daly, *Les théâtres*, 41.

⁶²⁹ *Ibid.*

⁶³⁰ Schenker, *Melodramatic Landscapes*.

⁶³¹ Mercier, *Tableau de Paris* Vol. 1, 132. Even “*les personnes peu fortunées*” (unprivileged persons), Mercier noted, liked to eat in cheap restaurants, after which, “*elles se répandent aux promenades & dans les spectacles*” (they disperse to stroll and go to theater).

Words like *décor* and *spectacle* were frequently used in connection with the new parks and promenades, with varying intentions. Some commentators used them in a simple, uncritical way, for example, in a description of the snow-covered paths and trees of Bois de Boulogne near the skating rink: “*Rien de plus charmant que ce spectacle; c’est un décor d’opéra peint par l’hiver* (There is nothing so charming as this spectacle; it is an opera set painted by winter).⁶³² The terms *décoration florale* and *décoration végétale* appear often in the writings of the horticulturist Edouard André, who began his career in the *Service des Promenades et Plantations* (working under Barillet-Deschamps), and viewed decoration as part of the garden artist’s work.⁶³³

In other cases, *décor* served as an insult. Émile Zola blasted the typical Alphandian *square* by comparing it with “*un décor d’opéra-comique.*”⁶³⁴ To drive the point home, he rebuked his fellow Parisians for embracing “*une nature en carton-pâte, peinte et vernie*” (a painted and varnished, cardboard nature) of the compact green plazas as a substitute for the open fields and big sky of the country.⁶³⁵ Similarly, Victor Fournel bitterly compared the redesigned Bois de Boulogne to a stage set decorated with “*des fabriques dans le fond, des moulins d’opéra comique, des pigeonniers crénelées et des cascades à grand spectacle*” (*fabriques* in the background, windmills from a comic opera scene, crenellated dovecotes and extravagant waterfalls).⁶³⁶ The rapidity with which

⁶³² Achard, “Bois de Boulogne, Champs-Élysées,” 1244.

⁶³³ See, for example, André, *L’art des jardins*, 86; and André, “*Jardins de Paris*,” 1214-1215.

⁶³⁴ Zola, “Les Squares,” 2.

⁶³⁵ *Ibid.*

⁶³⁶ Fournel, *Paris nouveau*, 114.

Alphand's work crews often transformed the city with greenery—"miles of trees planted in the course of a single week," according to William Robinson—suggested a theatrical change of scene, whether admirable or appalling.⁶³⁷

Theater offered a fraught analogy for landscape architecture in the mid-nineteenth century, just as it does today. Surface phenomena could be seen as deceptive or misleading, especially in the context of glitzy Second Empire society and its authoritarian ruler, the Emperor Napoleon III. The latter's pretension to the legacy of his uncle, Napoleon Bonaparte, was mocked as a sham. The fashions for puffed-up crinoline dresses and grandiose *coloratura* opera singing in this epoch likewise elicited suspicions of a lack of substance beneath highly wrought surfaces.⁶³⁸ Nonetheless, as we shall see, the surface aspect of the landscape is not easily reduced to a verdict of truth or falsity.

The American sociologist Erving Goffman advanced the intriguing argument that reality is not given but performed.⁶³⁹ I believe this view has some currency with regard to the reality of the urban landscape, particularly in the theater-saturated Paris. Urban public space in particular demands artifice of one kind or another, as Joseph Rykwert argued, in order to set the stage for "action" on the part of the public.⁶⁴⁰ Décor at worst may be a cynical veneer, but at best, it forms a screen that allows people to use, visualize,

⁶³⁷ Robinson, *Parks, Promenades*, 60.

⁶³⁸ Sean M. Parr discusses these themes in, "Dance and the Female Singer in Second Empire Opera," *19th-Century Music* Vol. 36, No. 2 (Fall 2012), 101-121.

⁶³⁹ Erving Goffman, *The Presentation of Self in Everyday Life* (New York: Doubleday, 1959), 36.

⁶⁴⁰ See Joseph Rykwert, "The Necessity of Artifice," in *The Necessity of Artifice: Ideas in Architecture* (New York: Rizzoli, 1982), 58.

make meaning, and take pleasure in a space. It is only an auxiliary to what *happens* on the stage, platform, or scene, or in the consciousness of the spectator.⁶⁴¹ But décor can catalyze movement, either physically or, as for Sand, metaphysically.

“A background without limits”

Stage décor—a metaphor for the naturalistic designs of the parks and gardens, according to George Sand—also described an actual commission for an amphitheater executed by Alphand’s Service des Promenades et Plantations inside the Bois de Boulogne. Toward the end of the renovation of the Bois, the municipal park service designed the open-air Théâtre des Fleurs (1857) to host light orchestral music and ballet performances during the summer months. The theater was the crown jewel of the Pré-Catelan, a privately run amusement park in the middle of the Bois.⁶⁴² The theater overflowed inside and outside with vegetation, such that the structure appeared to contain “more flowers than plaster,” according to a journalist (fig. 5.1).⁶⁴³ It accommodated 1,800 viewers in garden chairs set on a sloping lawn, surrounded by a ring of lodges styled like alpine chalets (fig. 5.2).

⁶⁴¹ The ancient Greek *skæna*, or scene, according to Hunt, did not require décor, but was the place where anything could happen. What mattered was the action being performed. Seminar at Harvard University, Graduate School of Design, Fall 2012.

⁶⁴² The entrepreneur Ernest Ber acquired the rights to the concession of the Pré-Catelan in 1856 from the former director of the Paris Opera, Nestor Roqueplan, who in turn had agreed in 1855 to pay the city of Paris 4000 francs per year in exchange for the rights to develop a commercial pleasure garden on this site. See “Petit courrier de l’Industrie,” *Gazette de l’industrie et du commerce*, 10 Apr. 1859, 4.

⁶⁴³ Adolphe Dupeuty, “Le Pré-Catelan,” *Le Figaro*, 10 May 1857, 8.

The theater, bursting with potted hydrangea, geraniums, verbena, petunias, azaleas, silenes, and anthemis, was designed to “*enveloppent [les spectateurs], pour ainsi dire, dans les fleurs et dans la verdure*” (envelop the spectators, so to speak, in flowers and greenery), without blocking their view of the auditorium, according to Alphand.⁶⁴⁴ The concept was not a new one, as the *Encyclopédie* of Diderot and d’Alembert discussed *théâtres de fleurs* as a subset of *théâtres de jardin*.⁶⁴⁵ The nineteenth-century Parisian version, however, included modern innovations. Clusters of gaslights, acquired for a total of 120,000 francs—more costly than the construction of the theater itself—sprang forth from clumps of shrubs planted between the amphitheater and lodges.⁶⁴⁶ Just before the stage, evergreen shrubs masked the pit where a 70-piece orchestra, led by the renowned conductor Auguste Pilati, played three times a week.⁶⁴⁷ Evenings ended in fireworks. A reporter swooned under the spell of “the pyrotechnic bouquet bursting through the air filled with sweet freshness, penetrating fragrances, melodies.”⁶⁴⁸

It was in the design of the stage, though, where Barillet-Deschamps and Alphand really challenged any distinction between landscape architecture and stage décor. The stage receded into a miniature landscape garden installed as a permanent backdrop. This rustic little scene had an oval lawn, a grotto with boulders and cascade, a pond with a

⁶⁴⁴ Alphand, *Promenades*, 93. See also Adolphe Dupeuty, “Le Pré-Catelan,” *Le Figaro*, 10 May 1857, 8.

⁶⁴⁵ Chevalier Louis de Jaucourt, “Tréâtre de jardin” [sic], *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers*, 16:237–238 (Paris, 1765).

⁶⁴⁶ The construction of the theater was estimated at 80,000 francs. Paul d’Ivoi, “Petit courrier de l’industrie,” *Gazette de l’industrie et du commerce*, April 10, 1859, 3-4, reprinted from *Le Messager* (original source not found).

⁶⁴⁷ Dupeuty, “Le Pré-Catelan,” 8.

⁶⁴⁸ Jules Lecompte, “Courrier de Paris,” *Le Monde Illustré*, 2 July 1859, 3.

stream, clumps of shrubs, and abundant flowers (fig. 5.3). The finishing touch was an undulating piece of ground planted with “*de grands arbres, dont le feuillage se relie à ceux de la forêt, de manière à donner à la scène comme un fond sans limites*” (tall trees whose foliage blends with that of the forest, imparting to the scenery the impression of a background without limits), as Alphand explained.⁶⁴⁹

The design of the Théâtre des Fleurs thus dissolves the spatial and conceptual frame that ordinarily limits the realm of performance, implying a seamless continuity between the space of the stage and the surrounding landscape. The *mise-en-scène* is presented as a bona fide garden, with real water emerging from real Fontainebleau rocks, just like certain areas of the park. On the other hand, this decorative little garden reveals the larger landscape of the Bois de Boulogne to be one vast décor, designed to immerse mobile spectators in a series of naturalistic scenes. Here is laid bare an ambiguity between representation and physical instantiation, which Alphand, Barillet-Deschamps, and Davioud evidently took in stride.

This perspectival trick of the “background without limits” reinterprets an old device known from Palladio’s Teatro Olimpico, Vicenza (1580-85), where the trompe-l’oeil scenery, designed by Scamozzi, appears to recede toward a distant horizon. Similarly, the bucolic stage décor of the Théâtre des Fleurs appeared to dissolve into a distant background. But in this case the background was not a painted illusion in the recesses of the theater, but the real vegetated space of the Bois de Boulogne. It was not

⁶⁴⁹ Alphand, *Promenades*, 95.

only in the confines of the actual garden theater, however, that Alphand borrowed from scenographic principles. For he referred to aspects of set design with regard to the composition of views in larger parks or gardens. In explaining how to set up visual contrasts by clustering plants of varying shades, shapes, and leaf sizes, he made an analogy with the layered succession of scrims or backdrops lining the stage:

*On appelle plan, dans un paysage, certaines zones dans le sens de la profondeur, où les objets composant le tableau sont disposés par groupes et paraissent, relativement à leur éloignement du spectateur, plus petits et moins colorés. On y détermine les plans par une succession de décors qui, en se détachant l'un sur l'autre, produisent une illusion qui agrandit la scène. C'est un effet analogue que l'on peut réaliser en plantant avec méthode.*⁶⁵⁰

(A *plane* in a landscape refers to zones of depth, where the objects composing the tableau are arranged in groups and appear, relative to their distance to the spectator, smaller and less vividly colored. These are the gradations that form the vanishing points in a theater. There one establishes the planes by a series of *décors* which, layered one beyond the next, produce an illusion that enlarges the scene. An analogical effect can be achieved by planting [a garden] with method.)

This concept was well known in French garden theory. In 1777 the Marquis de Girardin discussed setting up receding planes of perspective, and “*coulisses d'avant-*

⁶⁵⁰ Alphand, *Promenades*, LIII.

scène” to favor the best points of view.⁶⁵¹ Alphand, in the passage quoted above, was showing that he knew his garden theory. But whereas Girardin wanted to compose views from the privileged point of the house, Alphand was interested in unfolding a series of views over the course of a stroll. And, as we shall see below, he harbored grave reservations about comparing landscape with décor.

The stage scenery of the Théâtre des Fleurs, like the park into which it dissolved, concealed intricate operations from public view. Alphand, in describing this “magic theater,” noted the stairs, passages and caverns carved out of the earth *beneath the garden* to furnish discrete entrances and exits for actors and dancers.⁶⁵² A report from 1904, by which time the Théâtre des Fleurs was used only sporadically, mentions the hidden machinations beneath the “natural décor” of ponds, stream, and grass-covered proscenium. “Rocks frame the entrance to the subterranean passages that recall the underground chambers of Roman coliseums,” wrote Léo Claretie.⁶⁵³ Although lions and tigers were not hoisted up from below to do battle with gladiators, as in ancient Rome, other exciting creatures frequently appeared, such as acrobats and ballerinas, “who keep your attention focused for an hour upon the slightest palpitations of their wriggling legs,” the journalist Monnier marveled in 1859.⁶⁵⁴

⁶⁵¹ Girardin, *Composition des paysages*, 15-16, 87.

⁶⁵² Alphand, *Promenades*, 95.

⁶⁵³ Léo Claretie, “Théâtre des Fleurs,” *Le Figaro*, 20 June 1904, 2.

⁶⁵⁴ Albert Monnier, “Théâtres,” *Le Journal Amusant*, 3 July 1858, 6.

The discipline of the presentation of the dancing female body in ballet, in fact, serves as an apt metaphor for the discipline of the presentation of nature in Second Empire landscape architecture. Both require difficult technical work to achieve seemingly effortless and graceful surface effects. Just as ballet dancers dissimulate their musculature and frame in order to appear to float—expressing an stylized ideal of the body—landscape architects of the period styled the surface of the landscape to show an ideal of effortless richness and beauty in nature. In the most climactic and virtuosic moments of performance, however, performers step momentarily out of character as the full power of their talent and preparation shines through.⁶⁵⁵ In just this way, observers like George Sand could set aside questions of real versus false to enjoy the imaginative staging of nature as a kind of tour de force.

Beyond providing visual stimulation, landscape décor performed tangible environmental functions. Monnier described the Théâtre des Fleurs as “a theater where one can breathe, and for which the sky serves as the roof,” in contrast to the hot and stuffy atmosphere of enclosed theaters on summer evenings.⁶⁵⁶ Monnier continued, “There are cascades of flowing water, and the stage décor of foliage sways in the breeze; it is an intoxicating Eden.”⁶⁵⁷ If the theater seemed like a paradise, it was not only because of its visual charm, but also because it had running water, fresh air, and a

⁶⁵⁵ A similar argument is advanced in Parr, “Dance and the Female Singer,” 107, with regard to virtuosic *coloratura* singers of the period.

⁶⁵⁶ Albert Monnier, “Théâtres,” *Le Journal Amusant*, 9 July, 1859, 7.

⁶⁵⁷ *Ibid.*

“perfumed atmosphere” from scent of thousands of flowers.⁶⁵⁸ For the first few years, “Paris was crazy about the Théâtre des Fleurs,” according to a later account.⁶⁵⁹ However, the real climatic elements—the weather—proved incompatible with the demands of this artificially lush, capitalist Eden.

Rainstorms frequently interrupted performances, and performers were obliged to attempt to finish their parts beneath the cover of umbrellas.⁶⁶⁰ Bad weather combined with high operating costs appear to have led to the financial collapse of the theater and of the entire Pré-Catelan, which reverted to public ownership in 1861.⁶⁶¹ According to a historical marker presently posted at the theater, the original was destroyed in the violence of the Prussian siege and shelling of 1870, subsequently reconstructed and abandoned, and reopened as the *jardin Shakespeare*, which presently operates during the summer months on a stage inspired by the original.

Scenography and landscape

The cross-inspiration between garden design and scenic design in Europe dates back at least to sixteenth-century Italy, where the movement of visitors exploring a villa garden

⁶⁵⁸ Paul d’Ivoi, “Petit courrier de l’Industrie,” *Gazette de l’industrie et du commerce*, Paris, 10 Apr. 1859, 3-4.

⁶⁵⁹ Claretie, “Théâtre des Fleurs,” 2.

⁶⁶⁰ “Théâtres,” *Le Monde Illustré*, 26 Dec. 1857, 15; and “Petit Courrier des Théâtres,” *Le Figaro*, 26 Aug. 1868, 3.

⁶⁶¹ Alphand, *Les Promenades.*, 95. The Théâtre des Fleurs and adjacent facilities continued to host events and performances, but somewhat less regularly and with less panache. General admission to the Pré-Catelan was henceforth free to the public.

resembled the changing of scenery on stage. In the centuries since then, Hunt observes, “Gardens not only incorporated theaters, but came to be planned *in toto* as theaters, while gardens featured prominently as dramatic locations in intermezzi, operas, and plays.”⁶⁶² (A similar correspondence developed between theaters and towns, and between scenography and townscapes.) French stagecraft incorporated dramatic naturalistic scenery from the time of Molière: stage directions for *Psyché* call for “a rustic setting in the front, and in the back, a rock with an opening through which the sea is visible in the distance.”⁶⁶³ Soon after, “The scene is changed into fearsome rocks, and shows a frightful cave in the distance.”⁶⁶⁴ Such décor could almost serve as descriptions of the rockwork of the Buttes-Chaumont. But let us briefly peer into the culture of theater in mid-nineteenth-century Paris.

Opera, the most lavish form of theater, was changing in response to new modes of perception and the quickening of modern life. Producers exploited each new technical inventions in search of ever more marvelous aesthetic effects, which increasingly became the heart of the spectacle.⁶⁶⁵ “*La magie des décorations atteint les rêves de l'imagination la plus ardente et égale la nature, si même elle ne la dépasse, par la concentration de l'effet, les jeux de la perspective et de la lumière*” (The magic of scenery attains the

⁶⁶² John Dixon Hunt, “Theaters, Gardens, and Garden Theaters,” in *Gardens and the Picturesque*, 64.

⁶⁶³ Molière, “Psyché,” *Œuvres de Molière*, Volume 1 (Paris: Firmin Didot Frères, 1856), 585

⁶⁶⁴ *Ibid.*, 592. The quick changing of landscape scenes on stage was established by Inigo Jones in the seventeenth century, with the help of runners. See John Dixon Hunt, *Garden and Grove: The Italian Renaissance Garden in the English Imagination, 1600-1750* (Philadelphia: University of Pennsylvania Press, 1996), 112-118.

⁶⁶⁵ Gerhard, *Urbanization of Opera*, 9.

dreams of the most ardent imagination and equals nature, or even surpasses it, by the concentration of effects, tricks of perspective and light), Fournel wrote in 1862, offering the examples of a staged mountain sunrise, a ship tossed by stormy seas, a burning palace, or a fairy garden.⁶⁶⁶ However, the middle decades of the nineteenth century also saw a backlash against the “grand opera” conventions of lavish sets, sumptuous costumes, and illusory lighting techniques. In 1851 Richard Wagner attacked Giacomo Meyerbeer’s operas as seeking effects without causes—floating surface phenomena detached from any underlying motive.⁶⁶⁷

Some composers responded by creating simplified vocal parts. For example, Gounod’s *Faust* reigned in the ornamental *coloratura* singing, despite the fact that it starred the virtuosic Caroline Miolan-Carvalho.⁶⁶⁸ Other composers justified the use of increasingly extravagant effects by setting their plays in the realm of the fantastic. A new generation turned to mythical or prehistorical subject matter freighted with supernatural elements.⁶⁶⁹ Even the veteran playwright and librettist Eugène Scribe began to dabble in “ghosts, hauntings, and lurid coloration,” as Gerhard observes.⁶⁷⁰ The genre of *operetta*, or light opera, as perfected by Jacques Offenbach, emerged to offer a more candid pursuit

⁶⁶⁶ Victor Fournel, “Établissements de plaisir,” in *Paris dans sa splendeur sous Napoléon III: monuments, vues, scènes historiques, descriptions et histoire* (Paris: H. Charpentier, 1862), 7.

⁶⁶⁷ Wagner’s comments appeared in his book-length essay of 1851, *Oper und Drama*. See Richard Wagner, *Opera and Drama*, trans. William Ashton Ellis, (Lincoln, Neb.: University of Nebraska Press, 1996), 98. Originally published in *Richard Wagner’s Prose Works*. London: Kegan Paul, Trench, Trübner, 1900.

⁶⁶⁸ See T. J. Walsh, *Second Empire Opera: The Théâtre Lyrique, Paris 1851-70* (New York: Riverrun Press, 1981), 105.

⁶⁶⁹ Gerhard, *Urbanization of Opera*, 400.

⁶⁷⁰ *Ibid.*

of pleasure, dominated by satirical and erotic elements. If operettas came to represent the decadence of high society under the Second Empire, their relentless parody and buffoonery also posed a potential challenge to authority.⁶⁷¹

Meanwhile, the stages of Paris were bursting with garden and landscape scenes. The most ambitious of these included real rock, water, or plants. For example, in 1860, a chunk of seats was removed from the parterre of the Théâtre de la Porte-Saint-Martin to make room for rocks and fountains in Lockroy and Dumas's *Gentleman of the Mountain*, blurring the spaces of *scène* and *salle* (fig. 5.4).⁶⁷² A representation of the *Leatherstocking Tales* at the Théâtre de la Gaîté advertised a "natural water effect" to animate the scene of the Hudson River (fig. 5.5).⁶⁷³ On at least one occasion, Alphanand loaned a living tree from the municipal arboretum in the Bois de Boulogne for use as a stage prop at the Theatre-Lyrique.⁶⁷⁴ The opening scene of Scribe's 1858 comic opera *Les Trois Nicolas* was set in the new "Longchamp promenade" of the Bois de Boulogne (fig. 5.6). The same year, the finale of the first act of Halévy's opera *The Magician*, a "dance of the butterflies and dragonflies," was set in an enchanted wood near a placid

⁶⁷¹ The ambiguity of this "frivolous" form is explored by Siegfried Kracauer in *Jacques Offenbach and the Paris of His Time*, trans. Gwenda David and Eric Mosbacher (Cambridge, Mass.: The MIT Press, 2002), originally published in 1937.

⁶⁷² See engraving by Édouard Riou, Bibliothèque nationale de France, département Arts du spectacle, 4-ICO THE-3504.

⁶⁷³ Scene 8 of *Bas-de-Cuir* (1866) at the Théâtre de la Gaîté. Décor by Cheret, water effect by Delaportes. E. Roevens [sig.], Bibliothèque nationale de France, département Bibliothèque-musée de l'opéra, Estampes Scènes, Basdecur (1). Water effects on stage have a long history. In the 1650s, water from the garden appeared on stage in the Barberini Palace. See Hunt, *Garden and Grove*, 71.

⁶⁷⁴ Arnold Mortier, *Les soirées parisiennes de 1878, par un monsieur de l'orchestre* (Paris: Dentu, 1878), 222.

moonlit lake, not unlike the new lakes in the Bois de Boulogne (fig. 5.7).⁶⁷⁵ Many other operas and plays of the 1850s-60s, such as Gluck's *Orphée* and Barbier's *Gil Blas*, similarly relied on painted and sculpted scenes of craggy rocks, caves, and greenery. This was the literal décor to which Sand compared the promenades.

Reciprocally, the public gardens and parks developed by the *Service des Promenades et Plantations* catered to an appetite for naturalistic scenography. Cascades gushed, colorful plants bloomed, and majestic new perspectives appeared, frequently with the aid of new techniques and materials. A journalist's description of the newly completed Parc des Buttes-Chaumont in 1867 recalled a lavish opera set: "We have only word: splendid!... There you'll find gigantic cliffs bathing in a miniature ocean... Grottoes, waterfalls, the rock gate and the Needle of Étretat, natural grandeur, bridges thrown boldly over precipices, fairy-tale views, charming constructions."⁶⁷⁶ Landscape features served as décor, stage, and representation in one. The word *splendide*, the literary equivalent of yelling *bravo!* at theater, was used excessively by journalists of the period.⁶⁷⁷ William Robinson agreed that the park was striking, given its former use as a quarry, but judged it too extravagant; it would be better, he said, to furnish simple lawns and trees around the city to provide its residents with "pure air."⁶⁷⁸ Robinson had

⁶⁷⁵ Bibliothèque nationale de France, département Bibliothèque-musée de l'opéra, Estampes Scènes, Magicienne (4).

⁶⁷⁶ Alfred Litton, "Echoes," *Le Siècle*, 11 August 1868.

⁶⁷⁷ Klein, *Vocabulaire des mœurs*, 149.

⁶⁷⁸ Robinson, *Parks, Promenades*, 60.

particularly harsh words for the rockwork. “The plastering of the joints merely makes the ‘rocks’ look truly artificial, especially when it begins to drop out,” he wrote.⁶⁷⁹

Artificial rockwork constituted an entire branch of landscape décor. Alphand cautioned that it required careful preparations and experience to execute well.⁶⁸⁰ The *Service des Promenades et Plantations* began to experiment with crafting their own boulders around 1856, since the high costs of transporting massive chunks of limestone to build the Grande Cascade of the Bois de Boulogne proved untenable for future projects.⁶⁸¹ What was needed, Alphand explained, was a more economical and rapid method to fabricate and install rocks in the waters of the parks—without presenting a geological “anomalie” of arbitrary construction.⁶⁸² The fabrication method was simple enough. Craftsmen specialized in *rocaillage* would pile up rubble, held together with mortar, into rough blocks approximating the desired shapes and masses. Then they would apply a coat of wet cement, and immediately mold the surface with brushes to impart rustic surface texture. Finally, the horticulturists would clad (*revêtir*) the rocks with climbing plants, “*qui dissimulent les défauts, qui raccordent les lignes trop heurtées, et en fassent disparaître les maigreurs et la sécheresse*” (which conceal defects, reconcile clashing lines, and do away with meagerness and dryness).⁶⁸³

⁶⁷⁹ *Ibid.*, 61.

⁶⁸⁰ Alphand, *Promenades*, LV.

⁶⁸¹ *Ibid.*, 35. The first artificial rockwork was built by the streams surrounding the conserved windmill of the former abbey of Longchamps, part of the land annexed to the Bois de Boulogne in 1855.

⁶⁸² *Ibid.*

⁶⁸³ *Ibid.*, LV.

Rockwork thus involved a double-cladding: textured cement and vegetation over rough masonry. In the best scenario, according to Alphand, the expert *rocailleur* would begin by studying the striations and composition of the rocks to be transported or imitated, in order to impart a sense of geological integrity to the designed (re)construction.⁶⁸⁴ But the essence of this décor was in the sculpting and surface finishing of inexpensive masses. Michel Racine has identified a period of “exceptional” development in artificial rock building in French gardens from 1850, concurrently with the invention and refinement of cement and concrete manufacturing.⁶⁸⁵ A professional cohort of *rocailleurs*, also known as *rustiqueurs* and *cimenteurs*, straddled the worlds of gardening and building. The gardener and inventor Joseph Monier, among others, helped pioneer the techniques that would revolutionize artificial rockwork.⁶⁸⁶

Some historians have argued that the scenographic sleights-of-hand at the Buttes-Chaumont foist a false vision of reality on unsuspecting passersby, concealing the sordid past of the site and the vast amount of human labor required to transform it.⁶⁸⁷ On the other hand, Komara has argued that nineteenth-century visitors, “would have been aware of the fabricated elements of this picturesque landscape; this quality was especially

⁶⁸⁴ *Ibid.*

⁶⁸⁵ Michel Racine, “Les Rocailleurs (1845-1925),” in *Les Créateurs de jardins et de paysage du XVIe au XXIe siècle Vol. 2*, ed. Racine (Arles and Versailles: Actes Sud and Ecole nationale supérieure de paysage, 2002), 88-89.

⁶⁸⁶ *Ibid.*, 89-90.

⁶⁸⁷ Ulf Strohmayer, “Urban design and civic spaces: nature at the Parc des Buttes-Chaumont in Paris.” *Cultural Geographies* 13, no. 4 (October 1, 2006): 557-576.; and Mira Engler, “Waste Landscapes: Permissible Metaphors in Landscape Architecture.” *Landscape Journal* 14, no. 1 (March 20, 1995): 11-25.

present in the various applications of concrete.”⁶⁸⁸ Concrete served not only structural and hydrographic functions, but also decorative ones. In particular, it is the application of *stuc ciment*, a loose mix of cement, sand, and lime, that imparts the distinctly textured, worked surfaces of the rockwork and poured concrete features.⁶⁸⁹ The debate over the artifice of the Buttes-Chaumont usually hinges on the question of whether one feels deceived by the design, or invited to play a strange but open-ended game.

The *stuc ciment* signals the hand of the artist or craftsman in the landscape. It contributes to the ensemble of *décor*, which, as Merivale has suggested, allows visitors to inhabit and “become actors” in the landscape.⁶⁹⁰ The design of the park no doubt provides a loose script for such actors, but the script leaves plenty of room for interpretation. Visitors choose when and how to visit, alone or with company, where to go, what to do, what to look at or think about. The Surrealist writer Louis Aragon recorded an inventive use of landscape décor in *Le Paysan de Paris* of 1926. Although he professed scorn for what he considered the boring, conventional practice of promenade or strolling, he and his friends find a more unexpected way to enjoy the Parc des Buttes-Chaumont, one that made the familiar strange and produced “*une terrain d’expériences, où il n’était pas possible que nous n’eussions mille surprises*” (a field of experiments where it was unthinkable that we should not receive countless surprises).⁶⁹¹ Foregoing the

⁶⁸⁸ Ann Komara, “Concrete and the Engineered Picturesque the Parc des Buttes Chaumont, Paris, 1867” *Journal of Architectural Education* 58 (Sept. 2004), 6.

⁶⁸⁹ *Ibid.*, 7. Komara attributes much of the *stuc ciment* work to the craftsman Hilaire Muzard.

⁶⁹⁰ John Merivale, “Charles-Adolphe Alphand and the Parks of Paris.” *Landscape Design* 123 (August 1978), 37.

⁶⁹¹ Aragon, *Paysan de Paris*, 163.

visual effects available in the daylight, they wander the park at night, exploring its “volcan d’apparences” (volcano of appearances) in relation to various musings.⁶⁹² The lake becomes, “*une tasse de café noir*” (a cup of black coffee), the temple rotunda becomes, “*comme un plongeur au perchoir, un spectre blanc*” (like a diving-bird on its perch, a white spectre), and the banal engravings on a post-Second Empire monument become cuneiform symbols.⁶⁹³ This sense of wonder—subversive, avant-garde or otherwise—equates rather well with the centuries-long tradition of using one’s imagination to bring the delights of garden art to life.

The craze for effects in French theater culture was not based on deception *per se*. Spectators willingly suspended disbelief for the sake of their amusement, and relished the opportunity to have a glimpse behind the scenes. A widely accessible book, *L’envers du théâtre: machines et decorations*, appeared in 1873 to reveal this hidden world to all who cared to learn about it (fig. 5.8). The author’s premise was that spectators see, “*des changements à vue, des transformations, des effets magiques qui les étonnent ou les charment sans que la plupart d’entre eux se préoccupent beaucoup de ce qu’il a fallu d’invention, d, art, de science, de travail pour produire sur eux toutes ces illusions,*” (changing views, transformations, magical effects that astonish or charm them, without most of them giving a thought to what was necessary in the way of invention, art, science, and work to produce these illusions).⁶⁹⁴ To understand the hidden mechanism

⁶⁹² *Ibid.*, 193.

⁶⁹³ *Ibid.*, 204, 194.

⁶⁹⁴ M. J. Moynet, *L’envers du théâtre: machines et decorations* (Paris: Hachette, 1873), i.

was to gain a fuller appreciation for the effects, though without confusing the two.

Victor Fournel compared the zone of scrims or *coulisses* behind the theater stage to a kinetic jungle landscape of cables, pulleys, props, and trap-doors:

*Entrez dans le monde immense des coulisses de l'Opéra, si vous ne craignez de vous cogner aux portants, d'être transpercé par des arbres invisibles, de trébucher aux cordages ou de vous jeter dans quelque chausse-trappe béante... tâtez ces forêts en cartons, ces rochers en bois peint, cette mer en toile, ce tonnerre en tôle; parcourez en tous sens cet océan de poulies, de rouages, de câbles, de rideaux, de machines, si vous voulez avoir l'idée de l'univers que renferme un théâtre, de la multitude infinie de détails qu'il embrasse et de ressorts qu'il met en mouvement.*⁶⁹⁵

(Enter the immense world behind the scenes of the Opera, if you have no fear of bumping into the rigging, of being pierced by invisible trees, of tripping over the ropes, or of falling into some gaping trap-door... touch these cardboard forests, these rocks of painted wood, this sea of canvas, this sheet-metal thunder device of; see in all directions this ocean of pulleys, gears, cables, curtains, machinery, if you want to have an idea of the universe contained in a theater, its infinite multitude of details and the springs that it sets in motion.)

Baudelaire, in his own way, sought an escape from the tedium of everyday life in the secret reaches behind the scenes, so to speak, of surface reality. In the poem “La

⁶⁹⁵ Fournel, “Établissements de Plaisir,” 7.

Voix,” he wrote, “*Derrière les décors / De l'existence immense, au plus noir de l'abîme / Je vois distinctement des mondes singuliers*” (Behind the scenes / of immense existence, in the blackness of the abyss / I clearly see singular worlds).⁶⁹⁶

What I am attempting to suggest is that a widespread cultural embrace of décor and theatrical representation was shadowed or seconded by an equally widespread fascination with the workings of the *behind-the-scene*. The one reciprocated and validated the other as constituent aspects of reality. Returning to George Sand's characterization of the parks and gardens as “nothing but décor,” it is worth noting that she eagerly explored behind the scenes of this fabricated nature. That is to say, she guided her readers on a tour of the elaborate municipal nurseries whence came the plethora of exotic plants and copious flowers to decorate the city every spring (figs. 1.23-1.24). Sand, the lover of theater, knew that describing these spaces of production did not diminish the magic of the spectacle, but only enhanced it. She described how a small army of workers and horticulturists, with the aid of artificially warmed air, soil and water, tended this “world of marvels... where able scientists are initiated into the secrets of conservation and reproduction of each species.”⁶⁹⁷ Sand was apparently granted a tour by Edouard André, who receives favorable mention in Sand's essay (in the only two footnotes), and whose own essay directly proceeds that of Sand in the *Paris-Guide*.

⁶⁹⁶ Charles Baudelaire, “La Voix,” *Les Fleurs du Mal et Autres Poèmes* (Paris: Garnier-Flammarion, 1964), 184.

⁶⁹⁷ Sand, “Rêverie,” 1199-1200.

Between empirical and scenographic natures

An 1873 review of *Les Promenades de Paris*, published that year as an updated, two-volume set, noted that the treatise contains two separate and simultaneous levels of discourse: *le chiffre et le dessin*, meaning numerical figures on the one hand, and drawings on the other, “*ces deux langages compris par tous*” (these two languages understood by everyone).⁶⁹⁸ Alphand relentlessly tabulates exact volumes of earth and water, size and composition of flowerbeds, and exact unit costs for construction, horticulture, and maintenance. This kind of empirical, descriptive information is interspersed with alluring perspective views that beckon to the senses, and sumptuously rendered presentation plans.

It will be useful here to repeat an observation by Roland Barthes linking the plates of the *Encyclopédie* of Diderot et d’Alembert with the Universal Expositions of the nineteenth century: “*Il s’agit toujours dans les deux cas à la fois d’un bilan et d’un spectacle*” (In both cases it is always about, at the same time, an accounting and a spectacle).⁶⁹⁹ Here Barthes outlines a dual mode of looking and knowing, encompassing the fictional and the verifiable. The found, the made, and the made-up coexist simultaneously. Empirical measurement and theatrical spectacle: not at odds with one another, but two different ways of understanding reality, both involving perception and cognition. More recently, the Flemish dramaturge and essayist Marianne Van Kerkhoven asserted, “Dramaturgy is always concerned with the conversion of feeling into

⁶⁹⁸ V.-F. Maisonneuve, “Les Jardins de Paris,” *Le Monde illustré*, 28 June 1873, 414.

⁶⁹⁹ Roland Barthes, “Image, Raison, Dérailson,” in *Les Planches de l’Encyclopédie de Diderot et d’Alembert vues par Roland Barthes* (Paris: Marchand, 1989), n.p. [1].

knowledge, and vice versa. Dramaturgy is the twilight zone between art and science,”²⁵⁰
involving the “management of complexity.”⁷⁰⁰

An embrace of this dual register can be traced back even farther, to the time of Louis XIV: the enduring renown of his *Salle des Machines* in the Tuileries theater, and his grand *Machine de Marly* built to pump water to the fountains of Versailles, testify to a heritage of celebrating both the effects of performance and the putatively rational systems that enabled those effects. Indeed, the tradition of French rationalism not only tolerated but *embraced* the theatrical visualization of quantifiable phenomena. The two modes are not congruent, but concurrent. The duality is neither an equation nor a binary, but a simultaneity that sometimes takes the form of reciprocity. The same reciprocity can be seen of the plates of *Les Promenades de Paris*, and of many of the designed landscapes realized under Alphand. Pairing materialist rigor with theatrical élan, Alphand conceived of public landscape architecture as part data set and part spectacle.

Having already discussed the Bois de Boulogne and the Boulevard Richard-Lenoir, let us consider, at a different scale, the suspended footbridges linking the shore and two islands in the artificial Lac Daumesnil in the Bois de Vincennes. It is quite possible that Alphand himself had a hand in designing the bridges, which anyhow resemble bridge designs published in garden art manuals.⁷⁰¹ Hochereau’s etching shows

⁷⁰⁰ Matthias Sperling, “Performativity In The Public Realm,” *Theatrum Mundi* 1 Dec. 2012 (<http://theatrum-mundi.org/performativity-in-the-public-realm/>) Accessed 5 July 2015.

⁷⁰¹ Davioud does not seem to have designed the bridges in the Bois de Vincennes, according to the 1981 catalogue; though he designed the small stone bridge in the Parc Monceau. The choice of suspension bridge technology suggests the work of an engineer such as Alphand. There is no indication that Eiffel, who designed the suspension bridge of the Buttes-Chaumont around 1866, designed this earlier bridge in

wood deck, nearly flat, stretching some 22 meters (70 feet) across the water, suspended from steel cables (fig. 5.9). It meets the shore at what appears to be a tidy stone platform resting upon a mound of rough boulders and grassy berms. As the section drawing clearly shows, the green lawns and the rustic stones conceal substantial concrete anchorages underground. The forces of gravity, load and resistance are thus masked by the image of a carefree nature and lightweight construction. But the suspension cables are left out in the open. These cables declare the technological artifice and novelty of the bridge. This point where the cables reach the abutments, in Hochereau's drawing, is a magical juncture of rational intention and naturalistic décor.

There is no joint detail illustrated, but the cables seem to disappear mysteriously into the ground, down a hole in the rock. The décor hides the structure in the manner of a veil that announces itself, betraying the existence of unseen hardware. In real life, at least in present form, the detail is more prosaic, but its counterpart in the anchorage of the suspension bridge of the Buttes-Chaumont plays up the drama of the juncture. There, the artifice of structural technology is covered with another form of artifice, that of naturalistic décor (fig. 5.10). As Komara observes, artificial rocks conceal the structural bolts, but in a rather obvious way, betraying the seam between the found (quarried) rock and its human-made counterpart.⁷⁰² The design suggests the tectonic requirements of the bridge and, simultaneously, the desire to engage the viewer's imagination. The artifice is

Vincennes. Audot and Boitard published a series of bridge design on Pl. 138 of the 1859 (6th) edition of *Traité de la composition et de l'ornement des jardins*.

⁷⁰² Komara, "Engineered Picturesque," 8.

too bald to be sneaky, yet too subtle not to arouse some ontological tension. It causes the attentive viewer to remark upon the carefully fabricated nature of the landscape.

In Hochereau's drawing, mentioned above, poetic aspiration is concentrated upon the juncture between what appears to the senses and what is left to the imagination. The plate carefully describes both surface and subsurface elements, in plan as well as profile; but its logic builds toward a spell of imaginative *what-if*, the fiction of a perfectly synthetic nature. To attempt to isolate the ornamental from structural function of the bridge would miss the point. For the steel cables are not only structural elements, but also ornamental ones, performing an act of entente between modern technology and picturesque aesthetics. The bridge does not disguise or present itself as anything other than a bridge, but it does join its structural ("functional") purpose with a poetic proposition. A similar rational-poetic overlay can be seen in the project of previous engineers, as Picon's study of the *ingenieur-artiste* has shown, for example in Perronet's project for an elegant bridge containing a rough grotto beneath it.⁷⁰³

The theatrical, often romantic, combination of science and art in the promenades of Paris had roots in early-nineteenth-century French culture.⁷⁰⁴ Magic shows coexisted with scientific demonstrations, sometimes with little distinction. Early research into the properties of electricity or magnetism, for example, promised to open new spiritual and philosophical horizons. The Saint-Simonians envisioned unifying society through

⁷⁰³ Antoine Picon, *L'ingenieur artiste: Dessins anciens de l'Ecole des ponts et chaussées* (Presses de l'Ecole des ponts et chaussées, 1989).

⁷⁰⁴ Tresch, *Romantic Machine*, 1-26.

science, while the Positivist philosopher August Comte invented a Religion of Humanity infused with scientific lore. Nowhere was the zeal for social reform through technological advancement stronger than at the *École Polytechnique*, where Alphand was a student from 1835 to 1837.⁷⁰⁵ As old barriers to knowledge and production fell away, humanity seemed poised to enter a new era of ideas and action. In this cultural and intellectual milieu, there was little conflict between the real and the ideal. Faith in a better world was entirely compatible with rational endeavors in the production of knowledge and technical expertise.

The modern gospel of progress also had roots in Enlightenment thought, particularly in the French concept of *perfectibilité*, the idea that human nature and the environment could be continually improved through rational effort. Notable picturesque gardens of the eighteenth century reflect this notion of perfectibility, as Baridon has shown.⁷⁰⁶ The old dreams of *perfectibilité* and organic synthesis between nature and technology appeared in the designed landscapes of Second Empire Paris. Experiments in horticulture and zoological acclimatization, the rhetoric of public health and beautification, the embedding of industrial of technology beneath the surface of the landscape, all testify to a vision of an endlessly improvable habitat. The new Bois de Boulogne convinced some observers of the Parisian scene that humanity had finally succeeded in *perfecting* nature through landscape architecture. The first phase of the Bois

⁷⁰⁵ *Ibid.*, 174-175, 257-259, 278-281.

⁷⁰⁶ See Michel Baridon, "The Garden of the Perfectibilists: Méryville and the Désert de Retz," in *Tradition and Innovation in French Garden Art*, ed. John Dixon Hunt and Michel Conan (University of Pennsylvania: Philadelphia, 2002), 121-134.

was not even complete when Édouard Gourdon proclaimed in 1854, “*Partout l'art s'est inspiré de la nature pour perfectionner, — on peut le dire, — la nature elle-même*” (Everywhere art is inspired by nature to perfect—let us say it—nature itself).⁷⁰⁷

Everywhere he looked, his eye was charmed; everywhere he walked, the ground was fresh, vibrant, and pleasantly shaded. In this formulation, the medium of landscape is a vehicle for the realization of an ideal nature.

The nineteenth-century faith in progress also dovetailed with the capitalist logic of expansion, growth, and continuous revolution of the means of production. But industrial capitalism, with its division of labor and dehumanizing conditions of production, caused some artists and thinkers to become disenchanted with technology. These Romantics idealized wild and agrarian nature. Theodore Rousseau and the Barbizon painters, for example, hiked and painted the forests of Fontainebleau. Early photographers, such as Gustave Le Gray and Eugène Cuvelier, dragged their heavy equipment into the woods to make long-exposure views of sun-dappled forests and rock formations (figs. 5.11-5.12). Their paintings and prints seemed to offer a mythical antidote to anything urban, industrial, and modern. Paradoxically, this Romantic ideal of nature was all the more artificial for its denial of cultural and historical factors. It was train travel that made Fontainebleau increasingly accessible to day-trippers from Paris, including the artists themselves. And the market for such nature imagery was generally

⁷⁰⁷ Gourdon, *Bois de Boulogne* (1854), 117.

urban—for it was urban dwellers who were prone to feeling nostalgic for a supposedly lost nature.⁷⁰⁸

The entente between science and art grew increasingly strained toward the middle of the century, as romantics came to see modernity as the enemy of beauty. At the same time, the whole notion of the noble and sacred ideal came under attack by avant-garde skeptics who noticed that it often appeared scandalously close to the profane realm of indulgent fantasy and desire. This proximity mirrored the way in which the high-society or *monde* of Paris of the Second Empire increasingly overlapped with the shadier, more motley and bohemian *demi-monde*.⁷⁰⁹ A school of so-called Realist painters emerged to challenge the increasingly mannered idealism that dominated the official exhibitions and academic salons. Manet, Courbet, and others criticized the increasingly far-fetched fantasies wrapped in a cloak of mythology. The battle of real versus ideal was often waged on the ground of the representation of the female nude, as discussed by Clark and Farwell (was she a mythical goddess or an ordinary prostitute? was she ashamed of her nudity?).⁷¹⁰

The representation of landscape, too, came to reflect these debates. Scenography was a problematic metaphor for landscape in nineteenth-century France, but it was a common one. A literary scholar has called attention to Baudelaire's comments on the midcentury poems of Théodore de Banville, a disciple of Victor Hugo, in which, “le

⁷⁰⁸ See Green, *Spectacle of Nature*; and Limido, *Barillet-Deschamps*, 27-70.

⁷⁰⁹ Klein, *Vocabulaire des mœurs*, 103-104.

⁷¹⁰ See Beatrice Farwell, *Manet and the Nude*. New York: Garland, 1981; and Clark, *Painting of Modern Life*, 131-146.

paysage est revêtu, comme les figures, d'une magie hyperbolique ; il devient décor"

(the landscape is clad, like the figures, in a hyperbolic magic; it becomes décor).⁷¹¹ A

good example of this embellishment occurs in an 1842 poem, "The Milky Way," in

which Banville describes landscape as "*Ce théâtre vivant qui frissonne et respire*" (This

living theater that shudders and breathes).⁷¹² He imparts a somewhat exaggerated

theatricality to a series of landscape scenes: "*Les arbres sont d'un vert qui ferait mal aux*

yeux; Tout est très surprenant sans causer de surprises" (The trees are so green they

would hurt the eyes / Everything is very surprising without causing surprise).⁷¹³

Interspersing literary and mythological references with pure landscape scenery, he

conjures sun-dappled lakes, golden streams, cascades, trees, birds, and fragrant

meadows—a "*beau décor*" that anticipates, with purple excess, the soon-to-be-renovated

Bois de Boulogne.⁷¹⁴ In 1846 Baudelaire also noted the resurgence of popularity of

paintings in the genre of "fantasy landscapes," in the tradition of the theatrical landscape

scenes painted by Watteau.⁷¹⁵ The pictures featured "water courses clearer than is natural,

⁷¹¹ Charles Baudelaire, 'Theodore de Banville,' in *Oeuvres complètes, texte établi et annoté par Y.-G. Le Dantec* (Paris, Bibliothèque de la Pléiade, 1963), 736. Cited in Eileen Souffrin-Le Breton, "Banville et la poétique du décor," in *French 19th Century Painting and Literature*, ed. Ulrich Finke (Manchester: Manchester University Press, 1972), 65.

⁷¹² Théodore de Banville, "La Voie Lactée," in *Poésies de Théodore de Banville, 1839-1842* (Paris: Lemerre, 1877), 34.

⁷¹³ *Ibid.*, 39.

⁷¹⁴ *Ibid.*, 47. "*Ce sont des ruisseaux d'or, de larges horizons, / Des fruits divers donnés à toutes les saisons, / Des cascades, des fleurs, de grandes voûtes d'arbres, / Des cailloux anguleux plus brillants que des marbres, / Des oiseaux garrulants qui s'envolent troublés, / De gais coquelicots qui dansent dans les blés, / Des lacs aux flots unis où, sans cesse jetée, / La lumière dessine une moire argentée, / Des cieus pleins de blasons qui paradent au loin, / Et de vagues parfums qui s'exhalent du foin! / Et sur ce beau décor, un chœur immense, un monde...*" cited in Souffrin-Le Breton, "Banville," 66.

⁷¹⁵ Marianne Roland Michel and Daniel Rabreau, *Les Arts du Théâtre, de Watteau à Fragonard* (Bordeaux: Galerie des beaux-arts, 1980) 45.

and running in spite of the laws of topography, gigantic boulders constructed in ideal proportions, mists floating like a dream.”⁷¹⁶ Baudelaire called these pictures, “the miniature analogue of beautiful opera décor.”⁷¹⁷

Whereas Baudelaire regarded pictorial exaggerations or distortions of nature as theatrical fiction, the American Realist painter Thomas Eakins, two decades later, regarded them as a preposterous sham. Eakins rebuked idealism-cum-fantasy of the paintings in the Salon of 1867 not only for the profusion of faux-innocent yet erotic “smirking goddesses,” but also the disturbingly factitious natural backdrops of the compositions, “the delicious arsenic green trees and gentle wax flowers and purling streams a-running up and down hills, especially up. I hate affectation.”⁷¹⁸ If Baudelaire had regarded pictures of streams running uphill in 1846 as a strange fiction, Eakins, two decades later, regarded them as an offensive sham. Victor Fournel similarly criticized the markedly decorative quality of the new parks and gardens, with their incessant technopastoralism.⁷¹⁹ Unlike George Sand, he was bothered by the inescapable fact that the landscape was shaped largely by human hands. Extrapolating to the year 1965, he imagined, perhaps presciently, that Paris would become “*un objet de luxe et de curiosité plutôt que de l'usage, une ville d'exposition, placée sous verre*” (an object of luxury and

⁷¹⁶ Baudelaire, ‘Salon de 1846,’ in *Oeuvres complètes*, 936-7. Cited in Souffrin-Le Breton, “Banville,” 88.

⁷¹⁷ *Ibid.*

⁷¹⁸ Lloyd Goodrich, *Thomas Eakins, His Life and Work* (New York: 1933), 20, cited in Farwell, *Manet and the Nude*, 52.

⁷¹⁹ Fournel, *Paris nouveau*, 112-115. For example, he found the new Bois de Boulogne too coiffed, manicured, and correct in its naturalesque embellishment. Fournel exaggerated the degree to which the old bois was a dense and wild forest, ignoring the fact that Alphand actually replanted formerly denuded areas.

curiosity more than use, an exhibition city, placed under glass).⁷²⁰ With respect to the parks and gardens, this meant that the landscape would be admired with the eyes, rather than lived and explored in an open-ended way. But in the course of lamenting the fabricated quality of the new park, Fournel appealed to a different fiction, that of untrammelled nature.

The larger parks of the Second Empire tried to have it both ways: they played up fiction and fantasy while also claiming a rigorously scientific basis for everything. According to Grumbach in 1977, “The lesson of the Buttes-Chaumont is that the only true nature is the false one.”⁷²¹ The “truth” to which Grumbach refers is what Rykwert referred to as, “the necessity of artifice,” or the priority of cultural and social aspects in the urban public realm.⁷²² The term “false” here refers not to an untruth, but to fabricated, superficial elements that provide a legible and habitable screen. I would add that the Buttes-Chaumont denies the opposition between true and false. It posits fiction as part of the real. And it develops and enacts such fiction on the visible surface, the zone of *décor*.

Alphand and the spectacle of nature

Alphand voiced numerous objections to the association of landscape architecture with *décor*. In the first place, he rejected the idea and practice of treating the landscape as a

⁷²⁰ *Ibid*, 115. Fournel reserved his harshest critique, however, for the ascendant bourgeois culture of Paris, the rich young dandies and crinoline-wearing ladies, for whom he said the new Bois was perfectly suited (117-118).

⁷²¹ Grumbach, “Promenades,” 66.

⁷²² Rykwert, “Necessity of Artifice.”

completely malleable facade. He lambasted Thouin's *Plans raisonnées* of 1820 on this account:

*On retrouve là l'idée traditionnelle... qu'un jardin n'est qu'une sorte de décor disposé suivant la fantaisie du dessinateur, mais sans rapports, pour ainsi dire, avec le milieu; tandis que le milieu doit fournir la donnée principale, à laquelle l'artiste n'a plus à ajouter que ses corrections et ses développements.*⁷²³

(One finds there the traditional idea... that a garden is nothing but a kind of décor arranged according to the whim of the designer, but unrelated, so to speak, to the environment; while the environment must provide the basis, to which the artist has only to add his corrections and developments.)

In this context *décor* signals obliviousness or indifference to underlying site conditions. Alphand, on the contrary, professed the primacy of these conditions in guiding the designer's intervention. He represented his own design method as grounded in the existing site features. He defended the right of the garden artist to enhance the lay of the land, but not to alter its fundamental character:

“Remuer la terre pour composer un relief de fantaisie est un mauvais système qui aboutit, presque toujours, à une déception, après d'énormes dépenses. On peut, et souvent l'on doit retoucher le sol, mais sans modifier trop sensiblement le relief primitif” (To shift around the earth, composing a terrain of sheer fantasy, is a bad system that almost always leads to disappointment, after enormous expenses. One

⁷²³ Alphand, *Promenades*, XXXVII-XXXVIII.

can, and often one must, adjust the ground, but without drastically modifying the original terrain).⁷²⁴

The exercise of artifice had to be matched with discernment. Thus the steep hills and sculpted cliffs of the Parc des Buttes-Chaumont were justified because they were based on the topography of the old quarry—even if the earthworks required an army of laborers and a temporary railroad with 400 cars, and iron-reinforced-concrete stalactites sprouted from grotto ceilings.⁷²⁵ The modification of the site could only proceed from a deep understanding of its physical attributes and the processes that previously shaped it (fig. 1.20). Alphand thus recognized external limits on humans' ability to transform the environment, at least within the bounds of good taste and sound economy. He emphasized the importance of designing in accord with the climate of a given region, and with sound knowledge of the water systems and geology that helped shape the surface. In this respect he echoed Morel, the engineer-geographer who was the first to describe himself as *architecte-paysagiste* (landscape architect) in 1804, and whom Disponzio credits with establishing the “origins of the praxis of landscape architecture and of a modern environmental sensibility.”⁷²⁶ Alphand's statements also recall some of the ideas of August Comte, who spoke of the need to respect the physical limits of the environment

⁷²⁴ Alphand, *Promenades*, XLIX.

⁷²⁵ A full discussion of the survey and reshaping of the site can be found in Komara, “Measure and Map.” The rail cars used at the construction site are discussed in André, “Jardins de Paris,” 1214.

⁷²⁶ Disponzio, “Morel and the Invention of Landscape Architecture,” 135. For the origins of the term *architecte-paysagiste*, see Disponzio, “From Garden to Landscape: Jean-Marie Morel and the Transformation of Garden Design,” *AA Files* 44 (Autumn 2001), 6. Morel discusses the relation between terrain and *genres* in the revised edition of his *Théorie des Jardins* (Paris: Colas, 1806), 115-119.

even while pursuing a total fusion of organism, milieu, technology, and spirit.⁷²⁷ Thus far he shows little interest in any potential affinity between landscape architecture and décor.

Alphand rejected the theatrical analogy with regard to using nature as a backdrop for stories or myths. He had harsh words for the earlier French picturesque gardens embedded with literary, historical, or mythological references, in which the goal was to exercise visitors' moral sentiments or intellect. He took particular aim at the *anglo-chinois* tradition of irregular gardens from the late eighteenth and early nineteenth centuries, encumbered by an alleged excess of *fabriques* and markers. He disliked the broken obelisks, collapsed arches, and truncated columns of "romantic" gardens such as the Désert de Retz or the original Jardin Monceau.⁷²⁸ Here, he said, "A landscape was beautiful only insofar as it was mingled with some legend." Nature was only the scenery for some other story:

La nature était comme fardée d'une poésie précieuse et guindée. Elle était le décor, mais l'attrait principal s'attachait à la pierre, au bronze, au marbre, qui parlaient de l'homme... On venait méditer dans les bocages; mais sous les grands

⁷²⁷ Comte, increasingly relegated to the margins of the scientific community, nonetheless gave lectures for the *polytechniciens* and published his *Cours de philosophie positive* when Alphand was a student at the Ecole polytechnique during the mid-1830s. John Tresch provides an excellent discussion of Comte's theories in the ninth chapter of *The Romantic Machine: Utopian Science and Technology After Napoleon* (Chicago: University of Chicago Press, 2012). See page 282 for references to Comte's ideas of the "invincible limits" of nature.

⁷²⁸ Alphand, *Promenades.*, XXXIII.

*rameaux sombres, entre les taillis, on voyait passer les ombres gracieuses ou imposantes des personnages du drame, dont cette verdure n'était que le théâtre.*⁷²⁹

(Nature was rouged with precious and stilted poetry. It was the scenery, but the main attraction was in the stone, bronze, or marble [sculpture], which spoke of man... One came to meditate in the groves; but under the great dark boughs, amongst the thickets, one observed the graceful or imposing shadows of characters in a drama, of which this greenery was only the theater.)

Here Alphand basically reformulates an argument long since advanced by picturesque theorists who advocated a shift away from signifying *emblems* in the designed landscape, and toward *expressions* of nature, as Hunt has discussed.⁷³⁰ Taking another swipe at an earlier generation of picturesque gardens, Alphand criticized the spatial division of gardens into narrative scenes or poetic “chapters,” which inevitably detracted from the play of nature. He dismissed as “*fatras romantique*” (romantic nonsense) any attempt to lead visitors through an emotional or allegorical journey, as in a poem or play.⁷³¹ He continued:

Quelle poésie! Ce n'était pas assez de la beauté des arbres, de l'éclat des fleurs, du murmure des eaux, on essaya de donner au paysage, au moyen de combinaisons factices, tantôt un apparence mélancolique et desolée, tantôt un air

⁷²⁹ *Ibid.*

⁷³⁰ Hunt, “Emblem and Expression,” in *Gardens and the Picturesque*, 75-102.

⁷³¹ Alphand, *Promenades*, XXXIV, LV.

*de mystère ou un aspect bizarre. On inventa des contrastes, chers aux âmes sentimentales.*⁷³²

(What poetry! As if the beauty of trees, the brilliance of the flowers, the murmur of the water were not enough, they used artificial combinations to try to give the landscape either a melancholy and desolate appearance, or an air of mystery, or a bizarre appearance. They invented contrasts, dear to sentimental souls.)

Here he rejects the explicitly theatrical and affective architectural theory of Nicolas Le Camus de Mézières from the late eighteenth century, and its equivalent in landscape theory.⁷³³ Looking at landscape culture in Alphand's own time, a perfect illustration of what Alphand saw as excessive sentimentality is found in Flaubert's character of Madame Bovary, who loved the sea only for its storms: "*Elle rejetait comme inutile tout ce qui ne contribuait pas à la consommation immédiate de son coeur*" (She rejected as useless all that did not contribute to the immediate desires of her heart).⁷³⁴ Flaubert, who wrote *Madame Bovary* in the 1850s and became associated with literary realism and naturalism, seemingly ridiculed the framing of landscape as the prompt for an emotional journey. "*Elle n'aimait la mer qu'à cause de ses tempêtes*" (She loved the sea only for its storms), he wrote, again describing the title character.⁷³⁵

⁷³² *Ibid.*, XXXIII.

⁷³³ Nicolas Le Camus de Mézières, *Le génie de l'architecture, ou l'analogie de cet art avec nos sensations*. Paris: Benoît Morin, 1780.

⁷³⁴ Flaubert, *Madame Bovary*, 39.

⁷³⁵ *Ibid.*, 36.

Yet Alphand's declared refusal to indulge in the pursuit of *affect* did not indicate any strong aversion to theatrical *effects*. In some passages, Alphand uses the term *décor* without pejorative intent. For example, he describes the mist-laden landscape of the British Isles, naturally animated by the play of light and changing clouds, as “*un décor sans cesse modifié par des effets inattendu*” (a décor constantly modified by unexpected effects).⁷³⁶ He added that this climate-specific décor, indispensable to enlivening English gardens, would not necessarily translate to more Southerly latitudes.⁷³⁷ Elsewhere in his essay, Alphand uses the term *décor* in both a positive and negative way with regard to French Renaissance gardens. On the one hand, he saw the Renaissance manor garden at its best as “*un vaste et harmonieux décor*” (a vast and harmonious décor) that served to highlight the architecture of the house. On the other hand, he dismissed as mere “*décor inutile*” (useless decoration) any parts of the garden that appeared to lack some clear *raison d'être*.⁷³⁸ Finally he applies the term positively to very different type of landscape, the renovated promenade of the Champs-Élysées. The combination of flowers, trees, rolling lawns, clumps of shrubs, rare plants, café-concerts nestled in the verdure, games, and spurting fountains form, according to Alphand, *un harmonieux décor*.⁷³⁹

But if the landscape was décor, and the function of décor was to set a scene for action, what, then, was the action to be performed on stage? And who performed it? One

⁷³⁶ Alphand, *Promenades*, XXIX.

⁷³⁷ *Ibid.*, LVIII, XXIX. The idea of a link between garden form and latitude or climate was previously espoused by Morel and others. A broader and older precedent for the influence of climate on various aspects of culture may be found in the philosophy of Montesquieu.

⁷³⁸ *Ibid.*, XV.

⁷³⁹ *Ibid.*, LIX.

important part of the action was driven by the visitors or users who brought the public landscape to life with their movements, perceptions, activities, and interactions. Schenker has compared the rendering of nature in Alphand's parks to "stage sets" on which the middle class could perform their values and identity, as if in a melodrama.⁷⁴⁰ Also worth considering, though, is representation of nature itself upon the stage of the designed landscape. The meaning of the term *nature* shifted from *human nature* to, increasingly, a more Edenic concept of nature in itself.⁷⁴¹ Nature was a mythical and ideal construct, typically gendered as female, admired for her spontaneous charm, in need of just a little coaxing and adjustment to achieve her full beauty.⁷⁴² If this nature was not quite represented as a goddess, she was nonetheless "an amorphous but still all-powerful creative and shaping force," as Raymond Williams puts it with regard to the English language.⁷⁴³

In France, a new aesthetic of nature—concretized in garden art—can be traced to the rise of the life sciences founded in empirical observation, together with the rise of metaphysics based on sentiment and sensation.⁷⁴⁴ The comte de Buffon, director of the

⁷⁴⁰ Schenker, *Melodramatic Landscapes*, 60.

⁷⁴¹ The multiple and successive senses of the term *nature* as discussed in Raymond Williams, *Keywords* (New York: Oxford University Press, 1976) 219-224; Hunt discusses the relevance of this shift to picturesque theory and practice in, "Ut Pictura Poesis, Ut Pictura Hortus," in *Gardens and the Picturesque*, 123.

⁷⁴² Sylvia Lavin uncovers chauvinistic thinking behind the pastoral rendering of landscape in the late-eighteenth-century gardens of Watelet in France. See Lavin, "Sacrifice and the Garden: Watelet's 'Essai sur les jardins' and the Space of the Picturesque," *Assemblage* 28 (Dec. 1995), 16-33.

⁷⁴³ Williams, *Keywords*, 221. Williams is of course analyzing the changing sense of the English word *nature*, but much of his analysis also helps clarify French usage.

⁷⁴⁴ See Disponzio, "Morel and the Invention of Landscape Architecture," 141.

Jardin des Plantes in Paris from 1739 to 1788, interpreted nature as a living force that animated everything from within, as opposed to an external stimulus to be measured mathematically. His influential, forty-four volume *Histoire naturelle*, which first appeared in 1749, enjoyed numerous reeditions and translations. Antoine Pluche's widely circulated *Le Spectacle de la Nature* (1732-1750) made the natural sciences available to a larger audience. The author, not a scientist himself, promised to take readers "*dans le sein de la terre pour y découvrir ses trésors cachés*" (into the heart of the earth to discover its hidden treasures).⁷⁴⁵ Nature was a "spectacle," he explained, in the sense that it resembled, "*un miroir où l'on voit autre chose que le miroir même, ou à une énigme, qui, sous les traits des figures qu'elle nous présente, enveloppe d'autres connaissances qu'on se félicite d'y découvrir*" (a mirror in which we see something other than the mirror itself, or an enigma, which, in the guise of the figures it presents to us, envelops other knowledge that welcomes discovery).⁷⁴⁶ The key to unlocking the spectacle was the power of empirical observation: "*La religion et la raison concourent à nous rendre attentifs au langage des cieux, de la terre, et de l'univers entier*" (Religion and reason combine to make us attentive to the language of the heavens and the earth and the entire universe).⁷⁴⁷

Jean-Jacques Rousseau further popularized the notion of *le spectacle de la nature*.

The phrase referred to a manner of beholding and enjoying landscapes in connection with

⁷⁴⁵ Antoine Pluche, *Le spectacle de la nature Vol. III: La Terre et ses productions naturelles* (Bar-le-Duc: Célestins, 1875), i.

⁷⁴⁶ *Ibid.*, 566.

⁷⁴⁷ *Ibid.*

a sense of divine oneness and wonder. In his novel *La Nouvelle Héloïse*, first published in 1761, the phrase was uttered by the character Julie, who felt moved by some “striking and picturesque” view in the company of her beloved tutor. Whereas she and her tutor keenly appreciated the spiritual “spectacle” of nature, her fiancé Wolmar was apparently insensitive to it:

*Helas! dit-elle avec attendrissement, le spectacle de la nature, si vivant, si anime pour nous, est mort aux yeux de l'infortuné Wolmar, et, dans cette grande harmonie des êtres, où tout parle de Dieu d'une voix si douce, il n'aperçoit qu'un silence eternal.*⁷⁴⁸

(“Alas!” she said with tenderness, “the spectacle of nature, so vivid, so alive for us, is dead in the eyes of the unfortunate Wolmar, and in this great harmony of beings, where everything speaks of God in a voice so sweet. he perceives only an eternal silence.”)

Rousseau subsequently suggested, in his *Rêveries du promeneur solitaire*, that *le spectacle de la nature* was the only spectacle in the world of which the eyes and heart never tire.⁷⁴⁹ He described fixing his attention upon the objects surrounding him, and attempting to *detail* the spectacle of nature in its particular parts rather than its great impressive mass. His appreciation for the landscape encompassed sensual delights mixed with philosophical reflection and botanical study. He relished the scent of ancient groves

⁷⁴⁸ Jean-Jacques Rousseau, *La nouvelle Héloïse* (Paris: Firmin-Didot Frères, 1843), 545.

⁷⁴⁹ Jean-Jacques Rousseau, *Confessions, nouvelle édition... Les Rêveries du promeneur solitaire* (Paris: E. Gennequin fils, 1869), 142.

and the sparkling dance of sun upon water, but also lofty ideas of “natural rights” and quasi-scientific observations concerning into the structure of organisms.⁷⁵⁰ Nature for Rousseau represented a primeval, harmonious, and morally innocent realm to be appreciated through contemplative hikes in the countryside, reflective writing, and horticultural inquiry.

This idea of nature formed the basis not only for his decidedly liberal political theory, but also for his conservative views on gender roles, in which women were closely associated with the domestic realm. Rousseau contrasted the so-called “spectacle” of nature with staged theatrical spectacles, which he despised on account of their artifice. He derided actors and scene designers as frauds who sought to manipulate the hearts and minds of their audience. Indeed, he skewered theater and the cosmopolitan society that supported it as antithetical to sacred nature. Yet he fell back into cosmetic metaphors in describing trees and plants as “*la parure et le vêtement de la terre*” (the adornment and the clothing of the earth).⁷⁵¹

Alphand echoed Rousseau in glorifying primeval creation, with a theatrical twist. He wrote, “*La nature... raconte un drame bien plus mystérieux, plus imposant, plus magnifique que celui de la vie humaine, le grand drame de la Genèse*” (Nature... recounts a drama even more mysterious, more impressive, and more magnificent than

⁷⁵⁰ For a concise discussion of this part of Rousseau’s thinking, see Alexandra Cook, “Rousseau’s ‘Spectacle de la Nature’ as Counterpoint to the ‘Theatre du Monde’: A Consideration of the *Lettre à d’Alembert* from the Standpoint of Rousseau’s Botanical Enterprise,” in *Rousseau on Arts and Politics Around de la Lettre à d’Alembert*, No. 6 of *Pensee Libre*, ed. Melissa Butler (Ottawa: North American Association for the Study of Jean-Jacques Rousseau, 1997), 23-32.

⁷⁵¹ Rousseau, “*Réveries du promeneur*,” 142.

that of human life, the great drama of Genesis).⁷⁵² In other words, nothing should overshadow the play of nature in a landscape, to be made visible through a scenography of *relief*, water, and horticulture.

But Alphand's conception of nature as a *generative* drama was evidently located in the past. He and Barillet-Deschamps provided few opportunities for organisms and landscapes to display their generative and self-regenerating powers. If nature was a play of creation, it was a rehearsal of past events, not a real-time unfolding of natural processes. Where he and Barillet-Deschamps most certainly did embrace a sense of process was in the seasonal successions of color, texture, and form. On this account they earned praise from William Robinson, who observed, "The true garden is a scene which should be so delightfully varied in all its parts... so perpetually interesting, with vegetation that changes with the days and seasons."⁷⁵³ Even today, the Paris parks in the winter offer an impressive variety of vegetal growth (figs. 5.13-5.14).

Unlike Rousseau, Alphand was interested in presenting the spectacle of nature in a designed landscape—which meant that it had to be staged. And he readily acknowledged the necessity of artifice in presenting the aspect of nature in parks and gardens. He had no doubt that primitive nature was an idea that could only appear through the mediating act of representation. In a garden, as in an exhibition, Alphand wrote, artifice is inevitable, but the artifice should refer to the primitive ideal:

⁷⁵² Alphand, *Promenades*, XXXIV.

⁷⁵³ Robinson, *Parks, Promenades*, 49.

*Dans un jardin... on est obligé de réaliser un ensemble un peu artificiel, dont l'agencement exige du tact et beaucoup de science. La nature y est comme revêtue d'art. Cependant c'est bien cette nature primitive et trouvée inculte qu'il faut embellir et faire valoir.*⁷⁵⁴

(In a garden... one is obliged to realize a somewhat artificial ensemble, the arrangement of which requires tact and a lot of science. Here nature is clad in art. However, it is still this primitive and uncultivated nature that must be beautified and validated).

Some interesting tensions, if not contradictions, appear in Alphand's theory of landscape in relation to nature and décor. He insisted that a designed landscape must relate to its underlying topography and environmental context, as against an arbitrary piece of décor. He rails against overzealous decorators, allegorists, and romantic sentimentalists. Yet he embraces the theatrical analogy insofar as nature itself requires representation. This nature is full of the drama of Genesis, yet stripped of agency to regenerate itself in the designed landscape. Nature in the park is stylized, endowed with seductive charm that reveals human genius. Yet it should somehow evoke a primordial and prehuman ideal, as if to conflate the beautifying with the beautiful. The modern landscape garden dispenses with mythical allegories, but Edenic nature is itself a myth. Alphand attempted to resolve these tensions by calling for the exercise of *gôut* (taste) on the part of the garden artist. All the taste and discernment in the world, however, could not smooth out the theoretical difficulties engendered by contradictory ideals of nature,

⁷⁵⁴ Alphand, *Promenades*, LIV.

and the encounter of those ideals with the physical substance of the ground and modern infrastructure.

Landscape as art and not-art

The ambiguous status of décor in the promenades led to theoretical difficulties with respect to the outworn dichotomy of art and nature. Alphand complicated matters by presenting the work of his bureau as art (garden art), when in fact he and his team viewed landscape with a combination of programmatic, urbanistic, social, and artistic aims. And he largely accepted the mythical, early modern ideal of Nature, even as he sought to distance himself from some versions of it. But in practice, Alphand was beholden to neither art nor nature as conventionally defined. His education and practice as an engineer gave him space to operate outside of the academic debates of the *École* and *Académie des Beaux-Arts*, which in any case were “blind to social conditions and site,” according to Grumbach.⁷⁵⁵ Alphand was keenly interested in the art of composition, but he also devoted himself energetically to problems of scale, fabrication, variation, hydrology, soil, maintenance, and the administration of public space. To tease out the relationship between landscape architecture and art in this period, I return to the theories of Quatremère de Quincy, onetime secretary of the *Académie des Beaux-Arts*. Though he died before the advent of the Second Empire, his theories remained influential.

⁷⁵⁵ Grumbach, “Promenades,” 66.

In *Essai sur la nature* (1823), Quatremère declared that a garden, especially one in the naturalistic or “English” style, could not be a work of art. A garden was a seamless extension of nature, Quatremère asserted, rather than an abstracted image or idea of nature.⁷⁵⁶ This view might have been encouraged by a reading of theorists such as Morel. Alphand disagreed. He thought it obvious that the human representation of nature in a garden was different from “*les choses qui nous entourent*” (the things that surround us).⁷⁵⁷ Alphand noted that an irregular or picturesque garden required just as much planning and artifice as a regular one. It was therefore a work of art, and should somehow reveal its human input:

*Quoique l'art ne s'y exprime pas de la même façon, le génie de l'homme doit également s'y révéler. La nature fournit les grandes lignes; mais elle doit nécessairement subir certains accommodements qui la contiennent et la modifient.*⁷⁵⁸

(Although art does not express itself in the same way, the genius of man must equally reveal itself. Nature provides the outline; but it must necessarily undergo certain accommodations that contain and change it.)

To further differentiate a garden from nature, Alphand imagined what would happen if such a “coquettish” landscape were abandoned. It would quickly go to ruin as

⁷⁵⁶ Antoine Quatremère de Quincy, *Essai sur la nature, le but et les moyens de l'imitation dans les beaux-arts* (Paris: Treuttel et Wurtz, 1823), 149-150.

⁷⁵⁷ Alphand, *Promenades*, LIII.

⁷⁵⁸ *Ibid.*

rugged plants overcame the more delicate ones and filled in the carefully composed open spaces.⁷⁵⁹ (Emile Zola dreamt wistfully of just such an abandonment of the well-coiffed parks of Paris to “impenetrable thickets” and “the democracy of blades of grass and oaks,” which would wipe away “the beastly mutilations of men.”)⁷⁶⁰

Gardening posed irritating difficulties to Quatremère’s theory of art. He devoted only a few pages to the subject of gardening in *Essai sur la nature*, which focused mainly on painting. This is a telling sign that garden art and painting share only limited ground, despite a long tradition of comparing them. Even when Alphand spoke of gardening as art, he did not refer principally to painting. True, he championed a pictorial appreciation of landscape with regard to identifying or creating excellent points of view along the course of the promenade. But the landscape garden for Alphand was less like a still-life and more like a moving picture or one of the performing arts. He compared the composition of visual elements in a garden to the melodic wash of sounds in orchestral music:

*On y produit des combinaisons diverses de formes, de couleurs, de lumières, uniquement pour le plaisir des yeux; comme on combine les sons dans un certain ordre, pour la satisfaction de l'oreille. Le jardin est une mélodie de formes et de couleurs.*⁷⁶¹

⁷⁵⁹ *Ibid.*, LIV. “Si l’on abandonnait ce paysage si coquet, il prendrait bientôt un air désolé...”

⁷⁶⁰ Zola, “Les Squares,” 2.

⁷⁶¹ Alphand, *Promenades*, LIII.

(One makes various combinations of forms, colors, and light for express pleasure of the eyes; as one combines sounds in a certain order for the satisfaction of the ear. The garden is a melody of forms and colors.)

Alphand thus considered landscape as a time-based medium. To bring the landscape scene to life, the promenader had to stroll through it. Unlike in painting, the viewer (visitor) had to move through the landscape in order to appreciate its dynamism.⁷⁶² The performance of nature hinged upon the active participation of the promenader.

Both Alphand and Quatremère believed the purpose of art was to create pleasure, either from the sheer delight of the senses or from the intellectual game of representation.⁷⁶³ Their conceptions of the appropriate link between art and nature were influenced by the ideas of Aristotle, whose *Poetics* exercised an enormous influence over French theories of artistic imitation (*mimesis*) since the time of Louis XIV.⁷⁶⁴ Aristotle defined the poet as both a maker and an imitator, because “what he imitates is actions.”⁷⁶⁵ This sense of *imitation* is in fact halfway to *invention*. “The historian speaks of what has happened, the poet of the kind of thing that *can* happen,” Aristotle wrote.⁷⁶⁶ Quatremère, in a similar vein, defined *imitation* of nature not as the mere act of copying or replicating,

⁷⁶² *Ibid.*, LVIII.

⁷⁶³ Quatremère stated that the goal of artistic imitation is pleasure, then distinguished between the pleasure of the senses and that of the mind. *Essai sur la nature*, 216.

⁷⁶⁴ Gerald F. Else, “Introduction: Aristotle and Literature,” in Aristotle, *Poetics*, trans. Gerald F. Else (Ann Arbor: University of Michigan Press, 1967), 11.

⁷⁶⁵ Aristotle, *Poetics*, 34.

⁷⁶⁶ *Ibid.*, 33.

but as a creative and fictive process: “*C'est qu'en prétendant suivre la nature sur le terrain des réalités, le poëte quitte cémi des fictions, et cesse d'être poëte*” (When the poet attempts to imitate nature on the terrain of reality instead of fiction, he ceases to be a poet.)⁷⁶⁷

If artists were therefore entitled to creative license, they were still supposed to be bound by an invisible ideal of nature. For Quatremère, an ethereal “model” or ideal nature floated behind or beyond the brute matter of the perceptible world. The model, a spiritual and aesthetic construct, offered a higher truth than empirical truth. The terrain of the ideal was a place where the artist could abandon “*le stérile domaine de la réalité, où les hommes les faits, les objets ne se montrent que tels qu'ils sont*” (the sterile domain of reality, where people, facts, and objects show themselves only as they are),” in favor of a new world where objects appear as they *could* be.⁷⁶⁸ Alphanth advocated something along those lines with regard to the need for artifice in the ideal representation of nature in the garden. The fine green grass of a lawn, he wrote, should appear even and silky, recalling the prairie without copying it.⁷⁶⁹ Landscape décor would evoke a truer, if fictive, nature.

However, Alphanth might have taken exception to Quatremère’s complete lack of regard for tangible data and material reality. Where Quatremère was bored by the “sterile domain of reality,” Alphanth, a dedicated empiricist, was passionate about physical and material properties and processes. For Alphanth, empirical knowledge was a prerequisite

⁷⁶⁷ Quatremère, *Essai sur la nature*, 212. See also p. 218.

⁷⁶⁸ *Ibid.*, 220.

⁷⁶⁹ Alphanth, *Promenades*, LIII.

for the pleasures of artifice and representation. Without attending to the mundane and site-specific facts of site, soil and hydrography, the garden artist would never succeed in conjuring the cherished ideal of nature.

Grappling with the dual demands of garden art, Quatremère declared, “*On ne sauroit prétendre à être tout à-la-fois réalité et imitation*” (One cannot claim to be both reality and imitation at the same time), echoing the exasperation of Kant before him.⁷⁷⁰ But the simultaneity of reality and representation is precisely the task that Alphand and his collaborators, notably Barillet-Deschamps, set themselves in designing parks and gardens in Paris. Part substance and part idea, their landscape architecture simultaneously intervened in real ground, with real materials, *and* made that intervention legible. It mixed living materials with visual constructs.

Here we must make a distinction between the abstract, autonomous kind of *image* that Quatremère sought in a pure artwork; and the broader sense of art, décor, and representation that Alphand discussed with regard to landscape architecture. Alphand understood the surface of the landscape as a decorative screen designed for aesthetic delight, but one grounded in underlying topographical conditions. The purpose of décor, at best, was to reveal latent potentials in the site and its relationship to the surrounding city. In a passage relevant to these issues, David Leatherbarrow observation, “the material (constructed) and spatial (situated) characteristics of terrain” enable “modes of

⁷⁷⁰ Quatremère, *Essai sur la nature*, 150. Kant previously stumbled over this same theoretical difficulty in the *Critique of Judgment*, when he appears flummoxed over whether to classify garden art as a kind of truth or illusion, because in fact it is somehow neither, and both, as Michael G. Lee notes in *The German “Mittelweg”*: *Garden Theory and Philosophy in the Time of Kant* (New York: Routledge, 2007), 181-183.

disclosure that are just as significant as image articulation.”⁷⁷¹ This notion of “disclosure” applies in a limited sense to the parks of Paris. Alphand was after something more than creating a series of idealized images of nature. He seems to have conceived of the “art” of landscape as an act of disclosure, related to a range of proximate material and cultural factors.

Clearly Alphand valued both the reality of the ground and the fiction of its surface. The fiction of the surface, once acknowledged as such, could become a carrier of intention. But it could never become, as a work of art, independent from topographical conditions, beholden only to an ideal, because it was always built in real space, with unique limits and possibilities.

A contested relationship between function and ornament

Despite the ubiquitous mixture of public utility and aesthetic embellishment throughout the Second Empire promenades of Paris, the relationship between the two is worth exploring here. Landscape architecture appeared in modern Paris as a public good, in the manner of roads and bridges, and hence subject to expectations of economy and efficacy. But in many respects its practitioners enjoyed a creative liberty more befitting of artists than engineers, suggesting that landscape was a public luxury and ornament. In the context of garden art theory, the promenades of Paris challenged the conventional distinction between useful gardens and pleasure gardens. In architectural circles—from

⁷⁷¹ David Leatherbarrow, *Topographical Stories: Studies in Landscape and Architecture* (Philadelphia: University of Pennsylvania Press, 2004), 9.

Hittorff to Daly, Viollet-le-Duc, and of course Gabriel Davioud—the design of the parks entered into a debate concerning the role of emerging industrial technologies in relation to the *art* of architecture. Engineering literature and the history of *travaux publics* also contemplated a role for art. The timeliness of these questions in the period of the Second Empire was such that Haussmann, Alphand, Davioud, and Barillet-Deschamps all addressed them, but in differing ways.

Haussmann was a proto-functionalist when it came to public architecture and design: “*Dans l'appréciation d'une entreprise publique, l'utilité prime la magnificence. Le bien-être des masses populaires passe avant la satisfaction des yeux difficiles et des goûts raffinés*” (In the appreciation of a public enterprise, usefulness trumps magnificence. The well-being of the masses comes before the satisfaction of harsh eyes and refined tastes).⁷⁷² Haussmann nonetheless saw art in the functional elegance of engineering works, from arched aqueducts to fine roadways. He had little patience for modern artistic innovation, such as Hittorff's experiments in polychromy.

Alphand defined art as, “*la quantité de travail et de savoir qui s'ajoute à toute œuvre pour lui imprimer la grâce ou la perfection*” (the amount of work and expertise added to any work to endow it with grace or perfection).⁷⁷³ Here his sense of *art* echoes Alberti's definition of *ornament* as “something attached or additional.”⁷⁷⁴ It did not follow that ornament was superfluous or arbitrary. Such excess (or excess of labor) was

⁷⁷² Haussmann, *Mémoires*, 271.

⁷⁷³ Alphand, *Promenades*, I. It is interesting to consider the opposite definition, following a suggestion by Anita Berrizbeitia: that art is the work of subtracting the superfluous.

⁷⁷⁴ Alberti, *Art of Building*, 156.

required to dignify construction to a level worthy of its audience, in this case the public. The familiar modernist opposition between structure and ornament (or function and art) did not exist for Alphand, Davioud, or Barillet-Deschamps. Nor did Alphand posit ornament as arising “organically” from within the work, as later theorists would. Art, for Alphand, should subtly reflect the genius of the artist, but more importantly should ennoble the underlying matter and the persons in a position to appreciate it.

The most fundamental aspect of Alphand’s theory of art, declared on the first page of *Les Promenades de Paris*, was the factor of climate in shaping the practice of garden art across cultures. Here the possibilities of art appear necessarily limited by their material and cultural context. In landscape practice, this meant that the disposition of the surface should take inspiration from the existing lay of the land and environmental suitability of the available “palette” of climate-appropriate plants.⁷⁷⁵ Alphand’s position is not reducible to a dichotomy between function and ornament; nor does it suggest a completely “organic” conception of ornament.

Alphand also brought the sensibility of engineering useful *travaux publics* to his theory of garden art. Ornament was good insofar as it added grace or charm, but it could be insufferably superfluous if it ignored the givens of site and function, or worse, if it

⁷⁷⁵ *Ibid.*, XXXV. For example, what Alphand admired in picturesque gardens of the eighteenth century was the emphasis on revealing the special qualities of particular plants and landscape materials in relation to “*les jeux des lumières et des ombres*” (games of light and shadow). Foregoing the support of iconography and “*vieilles formules*” (old formulas), the modern garden artist had at his disposition, “*toute la gamme des tons verts, si riche et si changeante dans nos climats, le coloris des fleurs... variées suivant les saisons*” (the whole spectrum of green tones, so rich and changing in our climates, the coloring of flowers... varied with the seasons). (XXXV)

ventured to impart external significance by way of reference or signification.⁷⁷⁶ He boldly stated the principle of an organic relationship between function and form:

*“On doit éviter les fausses apparences. Que tous ces petits édifices soient décoratifs par leur élégance, mais justifiés par une certaine nécessité; que les ponts soient proportionnés à l'importance du cours d'eau; que les salles de repos soient aménagées et visiblement construites pour l'usage auquel on les destine; qu'on ne leur donne pas, par exemple, un faux air de temple antique; qu'un banc soit un banc, et non un rocher, un fragment de colonne ou d'entablement, et ainsi du reste. Rien n'est beau que le vrai.”*⁷⁷⁷

(We must avoid false appearances. Let all of these little buildings be decorative by their elegance, but justified by a certain necessity; let bridges be proportionate to the size of the watercourse; let shelters be furnished and visibly built for their intended use; let us not give them, for example, the false air of an ancient temple; let a bench be a bench, and not a rock, a fragment of a column or entablature, and so forth. Nothing is beautiful but the true.)

Here the engineer articulates the functional basis of design, in which everything is “justified by a certain necessity,” yet does not exclude ornament. His proclamation reads more like a plea, however, in light of the rather obvious transgressions of the above principle in some of the parks that he oversaw. For example, the bridge in the Parc

⁷⁷⁶ See John Dixon Hunt, “Emblem and Expression in the Eighteenth-Century Landscape Garden,” in *Gardens and the Picturesque* (Cambridge, Mass.: The MIT Press, 1992), 75-102.

⁷⁷⁷ Alphand, *Promenades*, LVI.

Monceau appears overscaled relative to the tiny stream that it crosses (fig. 5.15). The rotundas in the Bois de Vincennes and the Parc des Buttes-Chaumont take after monopteral temples (though more neoclassical than ancient). The artificial rockwork and stalactites of the numerous grottoes can hardly be said to illustrate his assertion, “Nothing is beautiful but the true.”

Since there is no reason to assume that Alphand changed his mind about these constructions after once approving of them, we must surmise that he sometimes differed from his lead designers, the architect Davioud and the landscapist Barillet-Deschamps, who exercised significant creative freedom despite the hierarchical structure of administration. Alphand, as head of the *Service des promenades et plantations*, must have signed off on Davioud’s temples, but evidently he was far from thrilled with them. Ernouf reinforced Alphand’s rebuke of the neoclassical temples in 1868, writing “*Les plus habiles dessinateurs ont peine à se défendre absolument contre toute reminiscence mythologique, puisque... on vient d'en bâtir un [temple] à «la Sibylle» dans le beau parc des Buttes-Chaumont?*” (The most capable designers have difficulty in totally forswearing any mythological reference whatsoever, as... they have just built [a temple] “to the Sibyl” in the beautiful park of Buttes-Chaumont).⁷⁷⁸

But taking a closer look at the circular temple of the Buttes-Chaumont (fig. 5.16), the mythological references appear only in a latent way. It is possible to apprehend the spatial effect of the temple in the landscape without recourse to knowledge of ancient architecture or myth. As Dominique Jarassé points out, there are no figural

⁷⁷⁸ Ernouf, *L'art des jardins* (1868), 96-97.

representations of Venus, Friendship, or Apollo; no narrative animates the frieze or metope of the temples.⁷⁷⁹ Davioud's modern classicism did not simply pander to ancient references. One of his biographers wrote in 1881 that he demonstrated, in the footsteps of his teacher, Léon Vaudoyer, "that architecture is the art of satisfying the necessities of construction in expressing the use of buildings."⁷⁸⁰ Relative to other architects of his day who pressed decoration to the extreme, Davioud exercised marked restraint in his use of iconography in the two neoclassical rotundas. Excepting the gilded gates of the Parc Monceau and the grandiose project for the Orphéon theater, the work of Davioud has an understated, modest quality relative to the bombast of the imperial capital and works such as Garnier's Opéra.⁷⁸¹ Davioud, a graduate of the Ecole des Beaux-Arts who worked in the ateliers of Hittorff and Vaudoyer, among others, prior to entering municipal service, did not generally aim to create "*bouleversements esthétiques*" (aesthetic upheavals), as Rabreau observed.⁷⁸²

In the Bois de Vincennes, Davioud's Doric temple that crowns the grotto at the tip of the Isle of Reuilly (figs. 5.17-5.18) could as well be linked to Laugier's concept of the "primitive hut," a reference to nature as first principle, as to ancient or picturesque

⁷⁷⁹ Dominique Jarassé, *Gabriel Davioud, architecte, 1824-1881* (Paris: Mairies annexes des XVIe et XIXe arrondissements, 1982), 35.

⁷⁸⁰ "Notice sur la vie et les oeuvres de G. Davioud," Paris, 1881, in Daniel Rabreau, Introduction to *Gabriel Davioud, architecte, 1824-1881* (Paris: Mairies annexes des XVIe et XIXe arrondissements, 1982), 15. Orig: "que l'architecture est l'art de satisfaire aux necessites de la construction en manifestant la destination des edifices."

⁷⁸¹ Daniel Rabreau, Introduction to *Gabriel Davioud, architecte, 1824-1881* (Paris: Mairies annexes des XVIe et XIXe arrondissements, 1982), 13.

⁷⁸² *Ibid.*

models. Jarassé notes, “Here a vegetal motif replaces all esoteric references. This temple can only be dedicated to nature, a key aspect of the aesthetic of Davioud and more generally the Haussmannian era.”⁷⁸³ This temple has three functions, so to speak, aside from any mythological signification. First, it serves as belvedere and eye-catcher. Second, it creates a striking contrast with the rustic rocks and woods. And third, its reference to the temples of eighteenth-century aristocratic gardens signals a bestowing of high art upon the working-class population of Eastern Paris, just as the renovated Bois de Boulogne served the posh western districts.⁷⁸⁴ Clearly there are other ways to interpret Davioud’s ornamental use of the neoclassical vocabulary, than as would-be imitation.

Davioud’s own writings reflect an architect grappling with the relationship between art and industry, toward a theory of modern industrial design. In an essay from 1874, “*L’art et l’industrie*”—which won a competition sponsored by the Academy of Beaux-Arts—Davioud argued that industry should serve art, rather than the other way around. He deplored the proliferation of crass, mass-produced decorative art objects devoid of any true “sentiment for art.”⁷⁸⁵ The problem was not, he said, in the methods themselves, but in the lack of respect for artistic design traditions. He was not afraid to explore the aesthetic potentials of new materials and fabrication techniques. On the contrary, he urged artists to explore “new horizons” using the new resources available, and “never to condescend to imitate an abandoned means with a new process.” Taking a

⁷⁸³ *Ibid.*

⁷⁸⁴ *Ibid.* Furthermore, as the catalogue notes, Davioud innovated gently arched roof forms for the temples, departing from the hemispherical and flat domes of previous examples.

⁷⁸⁵ Gabriel J. A. Davioud, *L’art et l’industrie* (Paris: Morel, 1874), 102.

strikingly progressive position, he argued, “What is particular to our modern industry, and what no one dares say to it, is that, after discovering a whole series of inventions, which our fathers could never dream of, it seems to be ashamed to put them to work,” relying on the decorative forms inherited from manual labor.⁷⁸⁶

Davioud certainly relied upon industrial fabrication methods to produce the grilles, streetlamps, kiosks, urinals, and other public furniture that he designed for the promenades. What is noticeable is not merely the efficient replication of this equipment, but the variations on a theme. A series of candelabra streetlamp fixtures varied, for example, according to whether they were placed on sidewalks, pedestrian islands, or outside theaters (fig. 5.19). It was in the 1870s, after his period of employ in Haussmann’s administration, that Davioud became an outspoken critic and theorist (though as early as 1866, he co-authored a proposal to establish a school of applied arts, which would uphold rather than subordinate the tradition of fine arts).⁷⁸⁷ Davioud supported the judicious use of new fabrication techniques in support of more democratic access to art. He encouraged placing well-crafted replicas of classical sculpture in public space, so that “the joy of art is not the exclusive profit of the advantages of fortune.”⁷⁸⁸ But his comments could equally well apply to the furniture he designed for the promenades, or, for that matter, to garden art in the age of industry: “It must be recognized,” he wrote, that the “intrusion” of industrial fabrication “in the domain of

⁷⁸⁶ *Ibid.*, 69-70

⁷⁸⁷ Gabriel Davioud and Jules Klagman, “Projet de collège des beaux-arts appliqués à l’industrie, rapport de la commission consultative de l’Union centrale des arts appliqués à l’industrie” (Paris: Seringe frères, 1866).

⁷⁸⁸ Davioud, *L’art et l’industrie*, 63.

lofty things is a democratic fact that is more convenient to direct than to reject. There is emerging in our time a movement analogous to that which took place after the discovery of the printing press.”⁷⁸⁹

The politics of décor

The political and social climate of Second Empire Paris cast a rather disturbing light on the idea of artifice and surface appearances. Official acts of representation slid too easily into *misrepresentation* and ruse.⁷⁹⁰ Deception was more or less official policy in a regime that projected a façade of imperial splendor and popular support even while it suppressed the republic, censored the press, and struggled to solidify its economic its political base. For these reasons the harmonious, naturalesque décor of the parks could be seen as an attempt to paper over simmering injustices and class inequalities. The rise of Louis Napoleon III represented a triumph of conservative reaction and empty imagery. If the reign of Napoléon Bonaparte represented a tragic denouement to the Revolution and its aftermath, according to Marx, the rise of his nephew represented a farcical throwback to the uncle. On the eve of the Second Empire, Marx characterized the younger Napoleon as, “an adventurer who hides his trivially repulsive features under the iron death mask of

⁷⁸⁹ *Ibid.*

⁷⁹⁰ Erving Goffman discusses the distinction between performance and ruse in *Presentation of Self*, 58.

Napoleon.”⁷⁹¹ The “mask” here appears as the sign of fallacy; theater is understood as the domain of frauds and dupes.

Heath Schenker portrays the Bois de Boulogne partially as an expression of the undemocratic political regime: “The notion of a people’s empire had to be packaged in deception and false pretense. The parks, with their elaborately contrived effects, their artificial nature, their stylized, repetitive attractions, symbolized not only the English style in landscape gardening, but the political style of Napoleon III.”⁷⁹² She supports the opinion of art historian Robert Herbert, who sees in the plan of the Bois de Boulogne “a massive deception,” a duplicitous image of power masked by a wash of carefree nature and pleasure.⁷⁹³ This is an intriguing and in some ways appealing position, since it renders the landscape suddenly legible as a representation of imperial power. Like the gardens of Versailles, the renovated Bois de Boulogne was in part meant to reflect the power and taste of its patron. This time, however, instead of displaying an absolute mastery over nature by way of geometric parterres and axial vistas, it offered a more modern image of power and elegance by way of a simulated free play of nature.

But to directly correlate the design of the parks with the politics of the regime that commissioned them would be to overstate the Emperor’s power and understate his design team. Idioms of architecture and landscape design are often associated with political

⁷⁹¹ Karl Marx, “The Eighteenth Brumaire of Louis Bonaparte,” trans. F. Engels, in *The Marx-Engels Reader*, ed. Robert C. Tucker (New York: Norton, 1978), 596.

⁷⁹² Schenker, *Melodramatic Landscapes*, 65.

⁷⁹³ Robert Herbert, *Impressionism: Art, Leisure, and Parisian Society* (New Haven: Yale University Press, 1988), 144, quoted in Schenker, *Melodramatic Landscapes*, 65.

systems or regimes, but rarely can they actually be shown to express the inner values of those systems, especially when they remain in good use, as the Second Empire parks have, after subsequent revolutions. Even though the Emperor was personally involved with planning at least some of the new parks and boulevards, it is not clear that his motives were acutely political, beyond a general glorification of himself through the embellishment of his capital. Moreover, as Lauren M. O'Connell wrote with respect to Paris, “while the bricks and mortar may endure, the cultural values and meanings attached to them shift, often radically so, over the course of time.”⁷⁹⁴

There is a correlation between the greening of Paris during the Second Empire, and changing social and economic relations. As Schenker herself notes, following David Harvey, the real social power manifest in the changing face of Paris in the Second Empire was the triumph of the bourgeoisie. The commodification of nature and the urbanization of Paris paralleled the expansion of finance capital and credit.⁷⁹⁵ The greening of the city partly represented a naturalization of capitalist social and economic relations. Schenker aptly cites Roland Barthes’s view that the myth of nature provides ideological cover for historically specific circumstances and class-specific values.⁷⁹⁶ In this light, the emperor was merely a figurehead for the rising class of businessmen, bankers, and professionals. The new parks and boulevards reflected their tastes and habits at least as much as his

⁷⁹⁴ Lauren M. O'Connell, “Afterlives of the Tour Saint-Jacques: Plotting the Perceptual History of an Urban Fragment,” *Journal of the Society of Architectural Historians*, Vol. 60, No. 4 (Dec., 2001), 450.

⁷⁹⁵ Harvey, *Capital of Modernity*, 246, 252.

⁷⁹⁶ Barthes, *Mythologies*, trans. Annette Lavers (New York: Hill and Wang, 1994), 109-58, cited in Schenker, *Melodramatic Landscapes*, 7-8.

thirst for power. The promenades of Paris, despite their imperial provenance, provided a stage for the self-presentation for the bourgeoisie.

This historical correlation does not prove that the landscape architecture of the period reflects a deception or some ulterior motive. The case for deception rests upon the equation of artifice with tyranny, an echo of the eighteenth-century commonplace leveraged by British lords against their French royal and aristocratic counterparts. Anglo-American observers have often responded to the theatricality of French garden art, both in its Baroque and more Picturesque forms, with accusations of political, moral, or spiritual corruption. Some of these accusations reflect nothing more than cultural preferences (and climatic differences, as Alphand pointed out). It is possible to embrace the decorative function of the landscape architecture of the Second Empire, without any trace of sympathy whatsoever for the imperial politics associated with their creation. Grumbach, for example, saw in the lavishness of the promenades not a repressive gesture, but on the contrary, a startling assertion of the right of the urban public to pleasure and beauty, and at the same time, “the architect’s duty to the community.”⁷⁹⁷ Le Dantec and Le Dantec read the promenades as a heroic attempt to enrich the city, couched in terms of didactic and disciplinary intentions.⁷⁹⁸ The embellishment of public space can be generous and progressive, insofar as “the public” constitutes a broad swath of society.

⁷⁹⁷ Grumbach, “Promenades,” 66.

⁷⁹⁸ Denise and Jean-Pierre Le Dantec, *Reading the French garden: story and history*, trans. Jessica Levine (Cambridge, Mass.: MIT Press, 1990), 167-172.

Even Victor Hugo, initially exiled for his outspoken opposition to the Second Empire, saw Parisian theatrical play as potentially subversive. Revolution was a possible, perhaps inevitable act in the ongoing performance of history. “*Quand il est mécontent, Paris se masque. De quel masque? D'un masque de bal*” (When Paris is discontent, it dons a mask. What mask? A ball mask), he wrote somewhat ominously and presciently in the introduction to the *Paris-Guide* of 1867.⁷⁹⁹ Hugo thus points to an important gap between the visible surface and the latent depths of culture. This gap represents not a grand deception, but a space of agency and resistance. Even revolution would require performance.

We must distinguish between the play of artifice in the landscape and the changing significance of that artifice. To read political power directly into the plan of the Bois de Boulogne is tempting because it invites us to see the landscape and its social context as a seamless whole. In this reading, the frictions are resolved and an organic coherence is restored to the relationship between substance and surface. However, this coherence is itself an illusory construct. No such clarity existed in the actual design, construction, and reception of the public promenades; nor in the authority of the Emperor, whose emblem of an eagle was changed to a goose by cartoonists.⁸⁰⁰ Landscape architecture in Second Empire Paris is in fact defined by unresolved contradictions that make it all the more fascinating. One of those contradictions lies in the tension between imperial authority and democracy in public space. The parks and squares were patrolled

⁷⁹⁹ Hugo, “Paris,” XXX.

⁸⁰⁰ Scott D. Carpenter, “Of False Napoléons, and Other Political Prostheses: Writing Oppositionally from the Second Empire,” *Nineteenth-Century French Studies* 25 No. 3-4 (Spring-Summer 1997), 302-319.

by the police, yet they belonged to everyone. Moreover, the Service des Promenades et Plantations sometimes agreed to modify the parks in response to community petitions. Especially in the later years of the empire, working-class residents exercised some influence over the administration and planning of the city's public green spaces.⁸⁰¹

The promenades cannot be understood sheerly in terms of authorial or design intention. But even the intentions of the designers, when examined closely, permit a certain slippage between seen and unseen conditions. Instead of full transparency of expression from inner substance to outer surface aspect, one finds complexity and contradiction, enabling multiple readings and expressive possibilities.⁸⁰² These evoke both cultural ideals and underlying systems and strata. *Décor*, as practiced by Alphand and his collaborators, constitutes a continual game of covering and uncovering, concealment and representation, which announces the garden as a frame for the shared performance of *making*.

⁸⁰¹ See Hopkins, *Planning the Greenspaces*.

⁸⁰² The phrase "complexity and contradiction," of course, is borrowed from Robert Venturi, but is not meant to invoke the full baggage of postmodern theory. The surface of the landscape was not essentially a free-floating sign or an aesthetic game, though signification and play were among its expressive potentials.

6. Landscapes beyond themselves

Le Dantec recently recalled Foucault's description of gardens as heterotopic spaces, at once "*la plus petite parcelle du monde*" (the smallest parcel of the world) and "*la totalité du monde*" (the totality of the world).⁸⁰³ Microcosm has been a recurring, if often problematic, theme in modern garden art. The totality of the world is not, in any case, the only way in which the garden can evoke the world beyond its own borders.

Hunt has contemplated "the garden's reference to what lies beyond its boundaries, boundaries that... peculiarly define it and yet do not insulate it from the worlds in which and out of the materials of which it is constructed."⁸⁰⁴ Such references may constitute acts of representation, in Hunt's words, "re-presentation, the presentation over again in garden terms of a whole range of other cultural and natural elements and occurrences."⁸⁰⁵ This kind of representation cannot be reduced to mere signification, for it can prompt different readings in different situations and among different viewers, who bring their own frames of reference.

If the parks and squares of Second Empire Paris sometimes display a mundane quality, they have also shown themselves capable of eliciting a web of associations and

⁸⁰³ Michel Foucault, *Dits et écrits*, vol 1., ed. Dafert and Ewald (Paris: Gallimard, 2004), quoted in Le Dantec, *Poétique des jardins*, 14.

⁸⁰⁴ Hunt, *Greater Perfections*, 76.

⁸⁰⁵ *Ibid.*

meanings, some intended and others not. In this chapter I discuss several ways in which these landscapes reached *outside* of themselves, in the cultural context of Second Empire culture. One, they offered their visitors cues and prompts to evoke narratives of travel, journey, or escape to other regions and places, as in the Parc des Buttes-Chaumont. Two, they enacted and represented the acclimation or *domestication* of exotic organisms and biomes, as in the Jardin d'acclimatation; and a parallel domestication of new technology and machines. Three, public gardens attempted to portray a near-seamless assimilation of heterogeneous, foreign cultural elements into the imperial capital, confirming its supposedly universal identity, as in the garden encompassing the site of the 1867 *Exposition universelle*. And fourth, the parks and squares—containing dank grottoes and historic relics—gestured to an unseen and all but formless, ineffable, unknowable world within, suggesting primitive origins of Parisian modernity.

The Bois de Boulogne established the wilderness travel motif from the 1850s, inviting visitors to place themselves in faraway landscapes. Gourdon's guidebook from 1861 likened the setting of the *rond des cascades* to a mountain spring, drawing an explicit parallel between picturesque travel and park design. What made the newly constructed landscape really compelling to him was not only its evocation of a distant place, but also its insinuation of a longer past. He found in the assemblage of weathered rocks, plants, and running water a sense of organic processes over time:

C'est un tableau qui rappelle les sites les plus pittoresques des nos montagnes d'Auvergne. Rien n'y manque, ni l'ampleur, ni les détails. Les rochers, maculés par les mousses, criblés de trous, noircis par le temps, ont des figures étranges:

*on dirait de gigantesques ossements. Partout où un peu de terre végétale ont pu se fixer, des graminées ont poussées, des lierres et des lianes se sont attachés, des touffes d'herbe ont surgi.*⁸⁰⁶

(It is a tableau that recalls the most picturesque sites of our mountains of Auvergne. Nothing is lacking in the scope or in the details. Rocks, mottled by moss, pocked with holes and blackened by time, have strange shapes: like gigantic bones. Wherever a bit of topsoil has been able to fix itself, grasses have sprouted, ivy and vines have attached themselves, tufts of grass have arisen).

The comparatively miniscule Square des Batignolles, in the newly annexed 17th arrondissement, similarly reminded the historian Ernouf of distant landscapes: “*On se croirait plutôt dans le fond de quelque vallée des Vosges ou du Jura, qu'au centre d'un des plus prosaïques faubourgs de Paris*” (One would think oneself in the depths of some valley in the Vosges or the Jura, rather than in the center of the most prosaic suburbs of Paris), Ernouf beamed (fig. 2.11).⁸⁰⁷

‘All times and all places’ in the Jardin Monceau

The representation of the *not-here* and the *not-now* in Parisian garden art dates at least to Carmontelle’s Jardin Monceau, completed in 1778. It was commissioned by Philippe d’Orleans, duc de Chartres, father of the future king Louis-Philippe, on a flat site in what

⁸⁰⁶ Gourdon, *Bois de Boulogne* (1861), 112-114.

⁸⁰⁷ Ernouf, *L’art des jardins* (1868) 234.

was then a Western suburb of Paris. The young duke entrusted the design to Louis Carrogis, known as Carmontelle, a renowned scenographer, painter, and engineer. Carmontelle took seriously the task of developing a specifically French version of the picturesque, one unburdened from the “English” (read: Capability Brown’s) insistence on pastoral naturalism.⁸⁰⁸ In his writings and his designs, he unapologetically embraced urbane theatricality and diversion in the garden, especially with regard to flat or seemingly banal sites where there was little “nature” to work with:

*Transportons, dans nos Jardins, les changements de Scène des Opéra; faisons-y voir, en réalité, ce que les plus habiles peintres pourroient y offrir en décorations: tous les temps & tous les lieux.... Puisqu'il faut tout créer, usons de cette liberté pour plaire, pour amuser, et pour intéresser.*⁸⁰⁹

(Let us bring into our gardens the changing of opera scenery; let us make visible, in reality, that which the most skilled painters could offer in stage decorations: all time and all places.... Since we must create everything, let us use this freedom to please, to entertain and to interest.)

What Carmontelle created at the *folie Monceau* or *Folie de Chartres*, as the garden was sometimes called, was a cosmopolitan land of amusements, which visitors

⁸⁰⁸ See David L. Hays, “‘This is not a 'Jardin anglais’: Carmontelle, the Jardin de Monceau, and Irregular Garden Design in Eighteenth-Century France,” in *Villas and Gardens in Early Modern France and Italy*, eds. Mirka Benes and Dianne Harris (Cambridge and New York: Cambridge University Press, 2001), 294-326.

⁸⁰⁹ Louis Carmontelle, *Jardin de Monceau, près de Paris, appartenant a son altesse sérénissime Monseigneur le Duc de Chartres* (Paris: Delafosse, Née, et Masquelier, 1779), 4. Digital version via Oak Spring Garden Library, <http://www.oakspring.org/Carmontelle.html> (accessed Nov. 2, 2014).

brought to life by exploring on foot. A playground for educated aristocrats, the garden formed a *theatrum mundi*, or a theater of the world in miniature, in which the lawns and woods were studded with fantastical evocations of far-away places and times, as well as references to local history.⁸¹⁰ The extensive program of *fabriques* included a Chinese bridge, Tartar and Turkish tents, a miniature aqueduct, a ruined castle with lookout tower, a ruined temple, a non-ruined temple, a pagoda or minaret, a wood of tombs, a Dutch windmill, a Swiss farm, an island of boulders, and a Circus or Naumachia (ancient Roman water theater for staging naval battles). Sheep were tended by a shepherd dressed in Turkish costume (fig 6.1). A grove called the Chestnut Room served as an open-air theater overlooking the landscape, with seats resembling theater boxes.

“*Ceci n’est point un jardin anglais*” (This is not an English garden), Carmontelle is rumored to have inscribed on a stone wall, and written in his papers.⁸¹¹ Indeed, the Folie Monceau was far too theatrical to be compared with an “English” landscape garden, despite its irregular and picturesque elements. This uniquely French and cosmopolitan space came out of a love for fantasy and play, not necessarily a love of nature. The *fabriques*—all of which could be “climbed, entered, encircled, passed through, or touched,” according to Hays, were intended as references, not simulations.⁸¹² Artifice was out in the open.

⁸¹⁰ Hunt discusses the concept of *theatrum mundi* in “Theaters, Gardens, and Garden Theaters,” in *Gardens and the Picturesque*, 54-55, 72-73.

⁸¹¹ Hays, “Not an English Garden,” 322.

⁸¹² *Ibid.*, 320.

Hunt has identified “basically two French ideas of picturesque nature struggling for elbow room” in French garden art in the second half of the nineteenth century.⁸¹³ The increasingly popular art of irregular, rustic, or picturesque gardens bifurcated between more and less theatrical renderings of nature. The Jardin Monceau exemplified the more theatrical approach, which extrapolated from nature and architecture to create densely scenographic gardens packed with exotic pavilions, landscape features, and serpentine pathways. This was the so-called *anglo-chinois* garden, as documented in the illustrated *cahiers* of Georges-Louis Le Rouge. Other examples from the pre-Revolutionary period include the faux-rustic *hameau* (hamlet) at the Château de Chantilly, Marie-Antoinette’s *hameau* at the Petit Trianon, Versailles, the Désert de Retz and, nearer to Paris, the Folie St.-James and the Parc de Bagatelle.⁸¹⁴

The other approach, more understated but still theatrical in its appeal to the senses, celebrated the pastoral beauties of nature—particularly French nature and the agricultural landscape. Its prime proponent in France of the late eighteenth and early nineteenth centuries was Jean-Marie Morel, an engineer-turned-landscape architect (like Alphand). Morel downplayed the hand of the designer in the landscape and advocated broader, simpler sweeps of turf and copse. For Morel, landscapes (*pays*) were formed by interdependent natural processes and systems.⁸¹⁵ His approach to shaping country parks, gardens, and farms reflected both empirical sensationalist philosophy and scientific

⁸¹³ Hunt, *Picturesque Garden in Europe*, 127.

⁸¹⁴ *Ibid.*, 104-139.

⁸¹⁵ Disponzio, “Morel and the Invention of Landscape Architecture,” 144.

analysis of nature.⁸¹⁶ Still, Morel found it useful to invoke theatrical analogies and *le spectacle de la nature*. The two competing versions of the French picturesque should not be mistaken for a polar contrast between natural and artificial. Both dealt in nature and artifice, and both treated the garden as a space of representation. Both took the form of immersive *scenes* in which visitors could observe and play. And both would reappear in the landscape architecture of the Second Empire, in a synthesis of simplified naturalism with urban theatricality. The more influential version of the Picturesque for Alphand, at least in his own conception of his work, was the *less* overtly theatrical of the two.

In 1860-61, Alphand and his collaborators engaged directly with the remnants of Carmontelle's Jardin Monceau, long since altered and in need of repair, having passed among different owners. As discussed in Chapter 2, Napoléon III decided to redevelop the old aristocratic garden as the centerpiece of a luxurious new bourgeois neighborhood to the West of the old urban core. Alphand seems basically to have misread Carmontelle's intentions when he described the old Monceau as a flawed attempt to capture "*des beaux effets de la nature*" (the beautiful effects of nature).⁸¹⁷ The excessively labyrinthine lawns, clumps, and paths, Alphand speculated, reflected Carmontelle's desire to distinguish his art, above all, from ponderous baroque symmetries.⁸¹⁸ In point of fact, Carmontelle wanted to distinguish his art from the banality of the Brownian model. Alphand did commend Carmontelle's handling of

⁸¹⁶ See Joseph Disponzio's introductory essay to the catalogue of designs of Jean-Marie Morel, *Studies in the History of Gardens and Designed Landscapes* Vol. 21 No. 3-4 (Autumn-Winter 2001), 153-54.

⁸¹⁷ Alphand, *Promenades*, XXXII.

⁸¹⁸ *Ibid.* "On imitait des trivialités, des laideurs, dans la crainte de retomber dans le compassé."

hydrography, surface relief, and visual perspectives—the very things that he valued.

He praised Carmontelle for introducing water, points of view, and graceful “accidents of terrain” to an otherwise flat and dry site.⁸¹⁹

The new landscape design by Barillet-Deschamps, under Alphand’s direction, exchanged one mode of picturesque nature for another. It no longer formed a *theatrum mundi* by way of its far-fetched structures, but it nonetheless represented a cosmopolitan whole by gathering variegated plantings from around the world into its lush confines. The park’s “horticultural decoration,” as William Robinson put it, was so remarkable and luxurious that it became, in Robinson’s eyes, the principal attraction, worth making a special trip to see.⁸²⁰ Freestanding trees, clumps of shrubs, and beds of flowers and fine-leaved plants, many of them new to Paris, created layered compositions of form and color that changed continually with the seasons. It was a performance of the bountiful variety of vegetal life that in turn became a backdrop for social excursions and new apartments along the perimeter.⁸²¹

The Buttes-Chaumont as fantastic voyage

Alphand wrote of attempting to give the Buttes-Chaumont “*l’aspect d’un paysage de région montagneuse*” (the aspect of a landscape of a mountainous region) by exploiting

⁸¹⁹ *Ibid.*, 191-193.

⁸²⁰ William Robinson, *Parks, Promenades*, 48 and 58. Robinson called the Parc Monceau “on the whole the most beautiful garden in Paris.”

⁸²¹ See, for example, Alfred Delvau, *Les plaisirs de Paris : guide pratique et illustré* (Paris: Achille Faure, 1867), 45.

the “*accidents de terrain et des profondes excavations des anciennes carrières à plâtre*” (accidents of terrain and deep excavations of the former plaster quarries).⁸²² On this account the park is known as, “the earliest and most dramatic example of a waste disposal site recreated into a park,” in the words of Mira Engler.⁸²³ Today the park’s former use is widely appreciated, at least by landscape historians.

At the same time, the “mountainous” landscape it also alludes to other places entirely. Its sculpted rockface imitates the famous chalk cliffs of Étretat along the Normandy coast, some 200 kilometers northwest of Paris; its monopteral belvedere and tall cascade vaguely recall the ancient acropolis of Tivoli, Italy; and the horticulture and architecture summon other places to mind, both real and imagined, from the alpine Jura region to the settings of adventure novels. The Buttes-Chaumont thus prompts its visitors to *play* at other landscapes, revealing its own artifice as it presents an identity starkly different from the one it had before 1864. And it does so despite, or rather in addition to, the hygienic, urban, financial, and political motives of its creation.⁸²⁴ Whereas Alphand’s renovation of the Parc Monceau pared down Carmontelle’s concept of “all times and all places,” the Buttes-Chaumont revives the theatrical-exotic strain of the picturesque. The park’s “fabricated condition” is plain to see, for example in the concrete lining of the lake edge and the rills, or in the refinished rockfaces and crafted stalactites.⁸²⁵ Inaugurated by

⁸²² *Ibid.*, 203.

⁸²³ Engler, “Waste Landscapes,” 13.

⁸²⁴ Le Dantec, *Poétique des jardins*, 20-21.

⁸²⁵ Ann E. Komara, “*Art and industry*” at the *Parc des Buttes Chaumont*, MA Thesis (University of Virginia, 2002), 71.

the Emperor at the 1867 *Exposition universelle*, this park in the working-class 19th arrondissement, the park was an exhibition in itself.

But visitors' and journalists' accounts of the park, as well as analyses by landscape theorists today, have continued to search beneath and beyond the surface disposition and décor, invoking the longer history of the site as a gallows, a quarry, a dumping ground, and a combat zone.⁸²⁶ Alphand himself briefly recounted the history of the old “*chauve-mont*” (bald mountain) in his methodical fashion in *Les Promenades de Paris*. Ultimately these readings rely on a similar, if different hermeneutic to link the seen and the unseen, the here and the not-here. It is in part the simultaneity of possible readings—the play between the evident and the imagined—that enlivens the heaving landscape of the Buttes-Chaumont. Despite the highly articulated nature of the surface, the landscape retains a sense of the latent, the unknown, and the undefined that Leatherbarrow has discussed under the heading of *topography*.⁸²⁷ The site of the park is not only *formed*, but also, implicitly, *formative*, possessed of an unseen reservoir of potential events and forces that continues to captivate visitors and scholars.⁸²⁸

Among the park's numerous landscape references, that of Norman cliffs ranks among the strongest. The sculpted rocks rising from the artificial lake (fig. 6.2) include miniatures of Étretat's iconic natural rock arch and towering “needle” carved by the sea

⁸²⁶ Engler, “Waste Landscapes,” 11-25. As to wartime history, the heights of Buttes-Chaumont were the site of an artillery installation in the last stand of Napoléon I's troops against the allied armies in 1814, and additional combat and executions occurred there during the Prussian siege of 1870 and the repression of the Commune uprising of 1871.

⁸²⁷ Leatherbarrow, *Topographical Stories*. See especially the conclusion, “Ethics of the Dust.”

⁸²⁸ See *Ibid.*; as Leatherbarrow has defined topography as *formative* in this sense.

(fig. 6.3). Étretat, once a tiny fishing hamlet, became a renowned sea-bathing resort by the early 1860s, when railroad connections reached nearby towns. It became a favorite haunt of Courbet, Offenbach, and other artists and luminaries of the Second Empire (fig. 6.4). Parisians came to know its striking coastline through painting and literature as well as tourism.⁸²⁹ “*Ses falaises sont si imposantes que le regard ne peut s'en détacher*” (Its cliffs are so impressive that one cannot help gazing at them), wrote a doctor, Miramont, who set up a practice in Étretat specialized in the medicinal effects of sea bathing. In his descriptions of the landscape, the doctor showed a marked taste for the Burkean sublime.⁸³⁰ He described a rocky abyss called the Cauldron, where at high tide, “*le choc impétueux des vagues fait retentir les échos de détonations formidables, offrent un majestueux spectacle qui rappelle le désordre du chaos*” (the impetuous shock of the waves makes the echoes of tremendous explosions resound, recalling the disorder of chaos).⁸³¹ He continued,

Lorsque, seul sur la cime d'un de ses pics, on contemple la mer en fureur jusqu'au point où l'oeil la confond avec le ciel, l'esprit devient, en effet, rêveur et se remplit d'images; il vous semble entendre avec ses mugissements et le sifflement des vents, la prière et les cris de détresse de naufragés; une religieuse terreur vous

⁸²⁹ Parisians first began to get acquainted with Étretat in the 1830s via the novels of Alphonse Karr, notably *Friday* (1835) and *Histoire de Romain d'Étretat* (1836). Courbet painted many views of the Étretat coast in the 1860s-70s. Monet painted a series of Étretat views in the 1880s, and Maupassant portrayed Étretat in “Guillemot Rock” (1882) and “Adieu” (1884). The celebrated composer Jacques Offenbach, a favorite of Second Empire society, hosted soirées at his Villa Orpheé, Étretat, in the 1860s.

⁸³⁰ P.-M.-L. Miramont, *Étretat : vingt années d'expérience aux bains de mer ; guide médical et hygiénique aux bains de mer* (Paris: A. Delahaye, 1867), 11.

⁸³¹ *Ibid.*

*saisit bientôt et vous tremblez, faible créature, de vous trouver si petit à côté de cet Océan et de la puissance infinie qui l'a créé.*⁸³²

(When alone on the summit of one of its peaks, one contemplates the stormy sea to the point where the eye confuses it with the sky, the mind drifts into reverie and fills with images; you seem to hear with its roaring and whistling winds, the prayers and cries of distress of the shipwrecked; religious terror soon grabs you and you tremble, weak creature, to find yourself so small next to the ocean and the infinite power that created it.)

In this decidedly literary account of the landscape, description mixes with philosophy and emotion, and sensation gives way to spiritual reflection. It recalls something of Rousseau, but with heightened bravura and spectacle. In using literary language to emphasize the strange *otherness* of nature, conveying a sort of rapture, the narrator positions himself as a cultured urbanite.

In a similar way, the precipices and cascades of the Parc des Buttes-Chaumont cater to an urban appetite for marvelous landscape imagery and the strangeness of travel. The designed landscape could evoke a fantastic voyage like the ones depicted in the 1860 play, *Les Voyages de Monsieur Perrichon*, or in Jules Verne's science fiction classic of 1864, *Voyage au centre de la Terre* (Journey to the Center of the Earth), in which the mysteries of landscape take center stage (fig. 6.5).⁸³³ Verne's protagonist, a German

⁸³² *Ibid.*

⁸³³ Le Dantec notes, "the whole [of the park] forms a microcosm balancing the universe of Monsieur Perrichon and that of the *Voyages extraordinaires* of Jules Verne" (*Poétique des Jardins*, 22).

scientist, attempts to test his hypothesis that the earth is full of interconnecting volcanic tubes. He leads a small party of explorers into a dormant volcano shaft in Iceland, later to emerge through another volcano in Italy. Along the way, they encounter wild creatures and spectacular landforms, including “*un immense rocher percé à jour*” (an immense rock with an opening), through which a furious sea spumed.⁸³⁴ The illustrations by Édouard Riou in the 1867 edition closely resemble illustrations of the rockwork in picturesque landscape and garden design books, from Le Rouge to Alphand (6.6). Verne’s writing exhibits a “displacement of the realist narrative towards the extraordinary, the scientific, and the spaces abroad,” as Christèle Couleau has asserted, just as the landscape architecture of the Buttes-Chaumont does.⁸³⁵ The fictional network of tubes in Verne’s plot constitutes a great geological sewer system—perhaps inspired by the real tubes for sewerage then being installed under Paris, a modern wonder and a tourist attraction at the 1867 *Exposition universelle*.

An arched masonry bridge in the park (6.7), one of the two offering access to the elevated promontory in the middle of the lake, may call to mind the legendary, vertigo-inducing *ponts du diable* or “devil’s bridges” constructed throughout the Alps and Pyrénées (fig. 6.8). It spans only 12 meters, but places the visitor 20 meters above the road and the lake below.⁸³⁶ The Surrealist writer Aragon wrote that the bridge conjured “*la Mort Violente*” (Violent Death) and was known unofficially as the Suicide Bridge,

⁸³⁴ Jules Verne, *Voyage au centre de la Terre*, (Paris: J. Hetzel, 1864), 72.

⁸³⁵ Christèle Couleau, “Tentatives d’évasion?: Jules Verne, des topoï réalistes à la recherche d’un genre nouveau,” *Nineteenth-Century French Studies* Vol. 43 (Spring-Summer 2015), Nos. 3-4, pp. 178.

⁸³⁶ Alphand, *Promenades*, 203.

because its victims included, “*même des passants qui n’en avaient pas pris le parti mais que l’abîme tout à coup tentait*” (even passers-by who had had no intention whatsoever of killing themselves but found themselves suddenly tempted by the abyss).⁸³⁷ The strange temptation of the abyss—landscape as an alluring mortal threat—plays directly into eighteenth-century aesthetics of the sublime, which Aragon enthusiastically reproduces despite his avant-garde pretensions. What excites Aragon and others here is the implied potential for a morbidly unforeseen event. Here again that which is evident serves as a scaffold for a looming hypothetical.

The other bridge to the island, a suspension bridge designed by Gustave Eiffel, thrills with its combination of long span and lightweight, gravity-defying construction. It spans 65 meters between the abutments.⁸³⁸ Here the marvel of steel technology and industrial engineering merges with the sweeping views of the park landscape, and Paris beyond, forming an ideal romantic meeting spot, as imagined in a story by the Le Dantecs.⁸³⁹ Suspension bridges had already been around for half a century by the time of the park’s opening, but still they possessed the power to enchant—and to instill fear, since there were still notable failures, as in 1852 at the Pont de la Roche Bernard in Brittany. Back on land, a hilly, pedestrian-only footpath amidst a grove of Himalayan cedars simulated a hike in Nepal. And the architecture of Davioud’s guardhouses and

⁸³⁷ Aragon, *Paysan de Paris*, 205, 168.

⁸³⁸ Alphand, *Promenades*, 203.

⁸³⁹ Le Dantec, *Reading the French Garden*, 185. In the fictional story set in the late nineteenth century, the narrator, a young functionary (man), plans to meet his date on the bridge, the perfect spot, he reasons, to lead her either to the rotunda to dazzle her with the view, or straight to the grotto, where shade and coolness will aid his romantic designs.

café-restaurants in the park simulated Swiss alpine chalets, borrowing from well-established tropes.⁸⁴⁰

The Buttes-Chaumont also plays at the landscape of the ancient acropolis of Tivoli. There, the remnants of the ancient Roman Temple of Vesta, dedicated to the Tiburtine Sibyl (oracle), overlook the falls of the Aniene River. Both the monopteros and its astonishing setting were widely depicted in architectural studies and picturesque views, for example by Desgodetz, Piranesi, and Dietrich (fig. 6.9). The circular temple inspired numerous physical reinterpretations in eighteenth-century gardens, from William Kent's Temple of Ancient Virtue at Stowe, to Richard Mique's Temple of Love in the garden of the Petit Trianon (fig. 6.10), Bélanger's Temple of the Sibyl at Méréville (fig. 6.11), and the monopteros in the Englischen Garten of Munich. In the Buttes-Chaumont, Gabriel Davioud's belvedere rotunda once again paid homage to the temple at Tivoli, though it deviated markedly in proportion and detail. It is much more slender relative to its height—producing a more ethereal effect—and its Corinthian order lacks any frieze.

Davioud's pavilion has one advantage over all its previous imitators, namely that it sits atop a tall cliff (fig. 6.12). It therefore evokes the precipitous landscape setting of the original, even if its architectural form resembles the original only in its circular plan. Better yet, it is accompanied by a major cascade. In the mid-1830s, just as Paris-based

⁸⁴⁰ For a discussion of the phenomenon of the chalet in the picturesque garden, see Michel Vernes, "Le chalet infidèle ou les dérivés d'une architecture vertueuse et de son paysage de rêve," *Revue d'histoire du XIXe siècle* 32 (2006), 111-136. Davioud had also designed chalet-inspired buildings or the Bois de Boulogne, a decade before the Buttes-Chaumont.

publishers Firmin Didot released a new collection of Piranesi's etchings, the engineer Clemente Folchi reshaped the falls of the Aniene at Tivoli. In response to a flood that had destroyed many houses, Folchi redirected the river through two new tunnels, to a new outlet in the limestone cliff, whence it fell a staggering 130 meters to a newly prepared basin, farther removed from the town.⁸⁴¹ The combination of modern hydraulic engineering with awe-inspiring topography at Tivoli offered a tantalizing precedent for Alphand and his design team. At the Buttes-Chaumont, they directed waters from a new Belleville reservoir southeast of the site into the park to form a multi-part cascade. The stream issues from an opening in the retaining wall below the Rue Botzaris, begins a rapid descent into the park, and ultimately pours into the cavernous grotto through a hole in the rock before flowing calmly down the rills into the lake (figs. 6.13-14).⁸⁴²

Part of what made Étretat successful in the 1860s, despite its exotic topography, was its networked connection to Paris by rail and telegraph. It was the kind of resort town where tourists counted on twice-daily mail deliveries, and checked the status of the stock market on the door of the telegraph office.⁸⁴³ And not only did the railroad bring the seaside resort within the metropolitan orbit, but also it changed the way Parisians

⁸⁴¹ United Nations Ministry of Cultural Heritage and Activities, "The Aniene valley and Villa Gregoriana in Tivoli," UNESCO World Heritage Centre, Tentative Lists, 2006 (<http://whc.unesco.org/en/tentativelists/5008/>), accessed 8 July 2015.

⁸⁴² The park's hydrological systems—the first for effects, the second for surface flow and drainage) is discussed in Komara, "Art and Industry," 72-74. The city of Paris is renovating the park and its waterworks from 2013 to 2016.

⁸⁴³ *Ibid.*, 12.

perceived landscape along the journey.⁸⁴⁴ Dr. Miramont wrote, “*La vitesse de la locomotive laisse à peine à nos yeux le temps d’embrasser les paysages enchanteurs qu’elle traverse*” (The speed of the locomotive barely leaves time for our eyes to take in the enchanting scenery that it passes).⁸⁴⁵ Through the window of a train, the topography of valleys, farms, factories, village steeples, castles, green meadows, the meandering Seine, all flatten into nothing but “*changements à vue,*” or changes of scenery.⁸⁴⁶ Miramont was not complaining here. He enjoyed allowing the train’s movement to render the countryside as a purely visual landscape phenomenon, a series of “*rapides apparitions*” (rapid apparitions) animating the “*décors de la nature*” (scenes of nature) flying past.⁸⁴⁷

And the Parc des Buttes-Chaumont, in turn, offered its own scenographic encounter with railroad technology. The belt railway, or *chemin de fer de (petite) ceinture*, connecting the various rail terminals around the circumference of Paris, runs through a trench in the cedar wood of the northern part of the park. The relatively steep, rocky trails of this part of the park afforded a view of the tracks and occasional trains. Even more telling is the café perched on a hilltop above, directly overlooking the mouth of the tunnel. From this comfortable vantage, patrons could see locomotives briefly burst

⁸⁴⁴ Wolfgang Schivelbusch has helped clarify related themes in his study, *The Railway Journey: The Industrialization of Time and Space in the Nineteenth Century*, 2nd ed. (Berkeley: University of California Press, 2014); originally published as *Geschichte der Eisenbahnreise. Zur Industrialisierung von Raum und Zeit im 19. Jahrhundert* (Munich and Vienna: Hanser, 1977).

⁸⁴⁵ Miramont, *Étretat*, 10.

⁸⁴⁶ *Ibid.*

⁸⁴⁷ *Ibid.*

into view, as mentioned above. The machine had a place in the garden, and technology had a place in the aesthetic of the picturesque. The aesthetics of viewing landscape through a moving train window finds an echo in the landscape design of the park, with its sequence of continuously changing views as visitors walk or ride along the paths, as Freytag pointed out.⁸⁴⁸

The tunnel also reminded some Parisians of the park's former use as a quarry, and of the marginal population that supposedly still haunted the tunnels. A journalist observed of the park:

*Mais, si la ville fastueuse a mis son cachet à la surface du sol, on retrouve, bien au-dessous, les bas-fonds de la société. Les carrières d'Amerique... ont des galeries longues de 1,000 metres, où des malheureux, sans asile, des vagabonds, mêlés a des voleurs de la pire espèce, vont, la nuit, chercher un refuge gratuit et de la chaleur auprès des fours à plâtre. De temps à autre, la police fait une descente dans ces hôtels dégarnis de la nature et enlève tout ce qui s'y trouve : misérables, vagabonds et voleurs... Parfois, ceux qui ont échappé au coup de filet se vengent sur les habitations des propriétaires de carrières.*⁸⁴⁹

(But if the glitzy city has put its stamp on the surface of the ground, one finds, further below, the lower depths of society. The quarries *d'Amerique...* have long galleries of 1,000 meters, where the unhappy, the homeless, vagabonds, mixed

⁸⁴⁸ Anette Freytag, "When the Railway Conquered the Garden: Velocity in Parisian and Viennese Parks" in Michel Conan, ed., *Landscape Design And The Experience Of Motion* (Washington, D.C.: Dumbarton Oaks, 2003), 233.

⁸⁴⁹ Gastineau, "Le Pourtour de Paris," 1452.

with thieves of the worst kind go at night to seek free refuge and warmth from the plaster furnaces. From time to time, the police raid these barren hotels and haul away all they find there: the poor, vagrants and thieves ... Sometimes, those who have escaped the dragnet take revenge on dwellings of the quarry owners.)

This account reflects the well-known preoccupation with crime and criminality in the class-divided city of the mid-nineteenth century, but in a more general sense it illustrates how the redesigned surface of the landscape did not simply erase or displace all of the site's lingering associations. The fantasies of voyage and adventure remained only one *layer* of landscape fiction. Another layer of fiction (not to say falsehood) found inspiration in the subsoil of quarries and rail tunnels. These spaces appeared as instances of a lapsed second nature, on the verge of reverting to the uncontrolled wilderness of primordial first nature. Despite expressions of fear in relation to the subterranean wild, the seeming resistance of this ground to the surface regime of order endowed it with a certain dramatic allure.⁸⁵⁰

Yet another layer of identity is based in the historical conflicts fought on the grounds of the Buttes-Chaumont, both before and after it became a park. In 1814, the artillery troops of Napoléon I made a last stand from the heights of the quarry against the allied armies. During the 1870 war with Prussia, Alphand, assumed the roles of a military officer. It may have been he who organized the draining of the lake of the Buttes-

⁸⁵⁰ A bourgeois preoccupation with crime and “the lower depths” of society is reflected in an entire literary genre, of which Henry Monnier’s *Les bas-fonds de la société* (Paris: Jules Claye, 1862), is just one example. Another is James Dabney McCabe, *Paris by sunlight and gaslight* (Philadelphia: National Publishing, 1869). For a contemporary analysis see Andrea Goulet, *Legacies of the Rue Morgue: Science, Space, and Crime Fiction in France* (Philadelphia: University of Pennsylvania, 2015).

Chaumont, to repurpose it as a storage depot for petroleum barrels. During the first days or weeks of the siege, an enormous conflagration erupted from the lakebed, calcifying the pile of gypsum (fig. 6.15).⁸⁵¹ A notice posted by the Mayor of Paris, Étienne Arago, explained, “*Un incendie considérable venait d'éclater dans le lac des buttes Chaumont, où une grande quantité de fûts d'huiles essentielles se trouvaient gerbés et presque complètement recouverts de terre*” (A major fire had broken out in the lake of the Buttes-Chaumont, where a large number of oil barrels were stacked and almost completely covered with soil).⁸⁵² The local citizenry apparently responded to the crisis before the authorities arrived, spontaneously organizing themselves to contain the fire and protect what oil they could. “*En moins de temps qu'il n'en faut pour le dire, les chaînes s'étaient organisées, les seaux d'incendie remplis de terre circulaient de main en main et étouffaient le foyer*” (In less time than it takes to tell, chains were organized, and fire buckets filled with soil passing from hand to hand to stifle the fire).⁸⁵³

The fire was not the only unforeseen event that the Parc des Buttes-Chaumont suffered. Seemingly since its construction starting in 1864, it has been constantly in the course of repair, restoration, work accidents, closures of this or that section, warnings about safety, or the drying and refilling of the lake. The history of maintenance activity shows that the park landscape is “of an extreme fragility,” in Hamon’s report, faced with

⁸⁵¹ Hamon, “Historique” 9.

⁸⁵² Étienne Arago, “Proclamation,” September 1870, Imprimerie Nationale, in Armand Le Chevallier, ed., *Les Murailles politiques françaises : depuis le 4 septembre 1870* (Paris: Le Chevalier, 1873), 113.

⁸⁵³ *Ibid.*

crumbling rock faces, horticultural difficulties, and a complex hydrography.⁸⁵⁴

Resilient it is not, at least in its surface features' ability to weather the effects of climate, time, and use. But the park has proven highly culturally resilient, as community members in the 19th arrondissement have lobbied for its maintenance, and landscape historians and practitioners continually return to find new merits in it. The latest conservation and renovation effort—currently underway in 2015—is designed to reduce the park's consumption of water and energy, and increase biodiversity.

Acclimatization in the *jardin d'acclimatation* and beyond

The notion of bringing the wider landscape into Paris extended to a global scale. Edouard André insisted that the promenades of Paris furnish a microcosm of the whole world of botany. Beyond the immediate goal of decorating the city with bursting colors and vegetal forms, he dreamed of creating a sort of horticultural universe in Paris:

La flore de l'Europe, de l'Asie et de l'Amerique tempérée ne nous suffit déjà plus.... La famille complete des végétaux de toutes les régions doit nous fournir la plupart de ses représentants, au moins pour notre saison d'été.... Il faut que les plantes soient amenées a oublier leur bien-être natale, et que nous reproduisions artificiellement, par une sorte de divination, si nous ne les avons point vus, le site et le sol où elles sont nées."⁸⁵⁵

⁸⁵⁴ Hamon, "Historique," 9.

⁸⁵⁵ André, "Les jardins," 1204-1205.

(The flora of Europe, Asia and temperate America is no longer enough for us...

The complete family of plants from all regions should provide us with most of its representatives, at least for our summer season.... We have to make the plants forget their native well-being, and artificially reproduce, by a sort of guesswork, the site and the ground where they were born, if we have not seen them.)

This statement, tinged with colonialist ardor, encapsulates the doctrine of *acclimation* or *acclimatization*, by which scientists would attempt to domesticate foreign species for some tangible benefit. In Édouard's case, the benefit was none other than beauty and the satisfaction of horticultural innovation. But the most avid proponents of acclimatization, especially in France and Britain, endeavored systematically to domesticate exotic flora and fauna in order to boost agricultural and economic production.⁸⁵⁶ At the same time, they set up satellite acclimatization facilities in their colonies, mirroring the colonial economy itself. The greatest French proponent of acclimatization was the zoologist Isidore Geoffroy Saint-Hilaire, son of the Étienne Geoffroy Saint-Hilaire, a celebrated natural philosopher and zoologist who posited a primitive theory of the evolution or modification of species. Geoffroy Saint-Hilaire the younger founded the Société zoologique d'acclimatation in 1854, and in 1860 presided over the opening of the Jardin zoologique d'acclimatation inside the Bois de Boulogne.

In his writings, Geoffroy Saint-Hilaire questioned why French farmers and gardeners should merely manage the plant and animal species already available to them,

⁸⁵⁶ For an overview of the acclimatization movement, see Warwick Anderson, "Climates of Opinion: Acclimatization in Nineteenth-Century France and England," *Victorian Studies* 35 no. 2 (Winter 1992), 135-157.

when the whole world was at their fingertips: “*On conserve ; ne pourrait-on s'enrichir?*” (We conserve; couldn't we also enrich ourselves?)⁸⁵⁷ Not only livestock but also birds, insects, and fish came under consideration. For example, Saint-Hilaire urged stocking French waters with the Egyptian Binny and Giant Gourami, both excellent food sources, he wrote.⁸⁵⁸ With an eye toward the domestic textile industry, he experimented with the domestication of silkworms, llamas, and alpacas. The latter presented serious, but “not insurmountable” difficulties, he wrote, since they naturally thrive in the cold Andean air, 3000-3500 meters above sea level, where they eat grasses found nowhere else on earth (fig. 6.16).⁸⁵⁹ Geoffroy Saint-Hilaire even quoted Francis Bacon's utopian vision of *New Atlantis* (1627), which envisioned domesticated plants and animals modified the will of human ingenuity.⁸⁶⁰ The acclimatization movement, supported by nationalist and commercial agendas on the one hand, and scientific or quasi-scientific ones on the other; swelled to include regional and international affiliate chapters during the Second Empire.

The acclimatization garden in the Bois de Boulogne, financed by Rothschild and other stockholders, attempted to put all this theory into practice. The mission of the

⁸⁵⁷ Isidore Geoffroy Saint-Hilaire, *Acclimatation et domestication des animaux utiles* 4th ed. (Paris: Librairie Agricole de la Maison Rustique, 1861), 38.

⁸⁵⁸ *Ibid.*, 428-435.

⁸⁵⁹ *Ibid.*, 27.

⁸⁶⁰ Francis Bacon, *New Atlantis*, ed. Alfred Gough (Oxford: Clarendon, 1915), originally published 1627. Bacon envisioned plants that grow faster, in any season, “and their fruit greater, and sweeter, and with larger and sweeter fruit, and of differing Tast [sic], Smell, Colour, and Figure from their Nature. And many of them we so order as they become of Medicinall [sic] use” (38). The passage quoted by Geoffroy Saint-Hilaire described animals made to grow larger, smaller, in different shapes, and with more or less prolific breeding patterns.

privately run zoo, Alphand summarized, was “to acclimatize, to multiply, and to popularize” exotic animal or plant species that appeared useful or enjoyable to French society.⁸⁶¹ Perhaps ostriches could be trained to pull chariots (fig. 6.17), and foreign game birds raised profitably alongside familiar chickens. Geoffroy Saint-Hilaire attempted to distinguish the acclimation garden from the more conventional zoo (or *ménagerie*) of the Jardin des Plantes established in 1793 by his father. The latter catered to scientific research and public curiosity, whereas the new acclimation garden would focus on breeding only “useful” or potentially useful species as beasts of burden, sources of food, or decoration.⁸⁶² There were no snakes or panthers, for example, but there were pollinator insects, onagers (wild asses), and foreign cattle. The success of the garden was measured partly in the commercial values of the animals it succeeded in breeding.⁸⁶³

The naturalesque design of the animal habitats would supposedly satisfy the animals’ needs, as well as please the eyes of visitors (fig. 6.18). Clumps of greenery and flowers alternated with the animal pastures, duck ponds, insect house, birdhouse, and aquarium, along an elliptical circuit (fig. 6.19). Waterfowl had free reign of the ponds and the human-made brook. The aquarium contained rockwork and grottoes finished in *stucco*, similar to what was used in the grottoes of the parks of Monceau and Buttes-Chaumont, and those of the aquarium and grottoes of the 1867 fairgrounds of the

⁸⁶¹ Alphand, *Promenades*, 101.

⁸⁶² Geoffroy Saint-Hilaire, *Acclimatation*, 514.

⁸⁶³ Maxime Ducamp, “Le jardin d’acclimatation,” in *Paris-Guide par les principaux écrivains et artistes de la France, Vol. 2—La Vie* (Paris: Librairie Internationale, 1867), 1268-1269. The garden actually sought to lower the average cost of exotic species, by propagating them.

Exposition universelle. The semi-reflective glass of the fishtanks allowed the viewing corridors to remain dark, while marine creatures were brightly illuminated. Another artificial rock was built in the outdoor livestock pastures, where goats climbed and grazed.⁸⁶⁴

Although the zoo initially attracted large crowds, a *New York Times* correspondent cast doubts upon the likelihood of its scientific success, and upon the animals' contentment in their new surroundings: "The goats on the artificial mountains of rocks, the ducks in their artificial lakes, and the ostriches in their handsome inclosures of grass and tree, gaze at you with an artificial, and distracted gaze, which speaks louder than words their feeling of desolation and dreariness."⁸⁶⁵ The garden artist Lecoq found aesthetic faults with the disposition of the garden, particularly with regard to plantings, rocks, stream, *vallonement*, and curves.⁸⁶⁶

In the late 1870s, the garden reoriented its exhibitions to "anthropological" acclimatization, consisting of dehumanizing and exploitative "human zoos," featuring colonized subjects. Geoffroy Saint-Hilaire had died soon after the zoo opened, and the institution had struggled somewhat to implement its mission and retain public interest.⁸⁶⁷

⁸⁶⁴ Daly, "Promenades et plantations," 131.

⁸⁶⁵ Malakoff, "Parisian Gossip. Zoological Garden of the Bois de Boulogne," *New York Times*, 10 Dec. 1860.

⁸⁶⁶ Lecoq, *Le Paysagiste*, II. "*Le Jardin d'acclimatation est lui-même loin de pouvoir servir de modèle: les rochers, la rivière, les valonnements, les courbes, etc.... Ici non plus, ce n'est pas l'argent qui à manqué, mais bien le bon goût chez l'architecte-paysagiste chargé de ce travail.*"

⁸⁶⁷ Lefèvre, *Les Parcs et les jardins*, 286-287. The remote location and admission fee may have deterred some visitors, the young garden lacked shade cover, and the aquarium reportedly compared unfavorably to

The “anthropological” exhibits strayed outside the bounds of the philosophy of Geoffrey Saint-Hilaire, but they nonetheless reveal how the general enterprise of acclimatization was linked to a totalizing view of world colonization and assimilation into the imperial culture. Ideals of progressive science and the public interest were inflected with geopolitical and social hierarchies, as well as an economic motive. But the acclimatization garden tended to flatten those power relations into an image of a perfectly harmonious and domesticated nature ruled peacefully by humans (that is, Western men of science and commerce). It fueled an Edenic ideal of nature in which the organisms of the world could live as in a garden, without strife and contradiction (fig. 6.20).

In an age caught between nostalgic yearning for eternal truths and faith in nonstop technological progress, acclimatization seemed to represent the logical, desirable, even “natural” next step in the relationship between modern human society and the environment. The one redeeming aspect of acclimatization, in retrospect, lies in its presciently dynamic view of species and habitat. Acclimatizers saw the potential for change and potential adaptation, where others saw a more or less static condition of eternal nature. But there were grave problems with their human- and Western-centric view of nature. In 1879, André noted that the concept of acclimatization was criticized even in its day as a delusion or pipe dream, *une douce chimère*, which had no basis in scientific reality.⁸⁶⁸

the one in the London zoo, despite its 50 meter (164 feet)-long gallery featuring both freshwater and saltwater tanks.

⁸⁶⁸ André quoted a remark by a naturalist known as Dupetit-Thouars in comparing the sometimes-fantastical science of acclimatization to *une douce chimère* (pipe dream), implying wishful thinking. André,

Beyond the confines of the Jardin d'acclimatation, Alphand and the Office of Promenades practiced acclimatization, after a manner, in the public landscape architecture of Paris. One author composed a whimsical verse to describe the exotic horticulture abounding throughout the new squares: *Et les temps, les climats, vaincus par les prodiges / Semblent de la féerie épuiser les prestiges* (Times and climates, conquered by miracles / Seem by their magic to exhaust all praise).⁸⁶⁹ But the host “climate” was not simply the seasonal temperature and humidity of northern France, but also the specifically urban environment of Paris, with its traffic and buildings and gaslamps.

The squares, parks, and planted walks constituted a kind of extended acclimatization network: “*la nature acclimatée dans notre monde de moellons et de poussière*” (nature acclimated to our world of rubble and dust), George Sand wrote in 1867.⁸⁷⁰ No longer would tropical plants be confined to conservatories, and no longer would landscape gardening be confined to country manors. The undulating lawns and rich horticulture of parks and squares recalled the luxury of royal estates—as if offering Marie-Antoinette’s Petit Trianon to the general public—and assimilated the pleasure garden to the rigors of the urban environment. Sand further believed that “plants, like animals, can be trained,” and that astonishing new flora would soon appear in the public

L'Art des jardins, 197. I could not trace the quote to an original source, but found it repeated in other publications, such as the *Bulletin de la Société Nationale D'acclimatation* Vol. 64 (1917), 188.

⁸⁶⁹ Friès, “Le Parc de Monceaux,” 89.

⁸⁷⁰ Sand, “Rêverie,” 1196.

parks, thanks to the establishment of enormous new climate-controlled greenhouses and nurseries dedicated to the acclimatization and propagation of hitherto rare species.⁸⁷¹

Gathering the world in the *Exposition* garden of 1867

The dream of an all-encompassing ecosystem gathered together by an architecture of “acclimatization” appeared once again at the 1867 *Exposition universelle* (World’s Fair). Landscape architecture was called to help showcase modern French ingenuity and the religion of progress. While the festivities were commenced at the Buttes-Chaumont, the main displays of industry and culture were staged on the Champ de Mars. This vast parade ground, larger then than it is today, offered much more space than the crowded Champs-Élysées, where the previous World’s Fair had taken place in 1855, its Palace of Industry surrounded by the foliage and gaiety of that favorite promenade. Alphand and his design team designed a garden city from scratch: a luxuriant picturesque garden studded with eclectic pavilions by different architects (fig. 6.21). Mirroring the city at large, the paths leading to entrances of the main exhibition hall were named *avenues*; a ring path around the pavilion was called the *grand boulevard*. Luxuriant foliage and flowers offered to delight the gaze in any and every direction. A temporary spur of the *petit ceinture* belt railway conveyed visitors to the edge of the fairgrounds.

The enormous “omnibus” pavilion, formed of concentric ovals, occupied the center of the site (fig. 6.22). As with previous exhibition halls, its iron-and-glass

⁸⁷¹ *Ibid.*, 1200.

construction recalled conservatories, the realm of horticulture and science. The omnibus pavilion was a garden full of technological specimens, containing stall upon stall of fabricated objects from around the world, including commercial and industrial products as well as artworks. At the very center of the building's concentric rings lay, tellingly, another garden. The ubiquity of gardens and landscape imagery in and around the exhibition implied reciprocity between nature and modern civilization. Constant change, empire, capitalism, and technological mastery of nature—all sanctioned by nature itself. In this Eden of industrial progress, the quest for global supremacy among rival imperial powers appeared not violent but benign.

A “reserve garden” dedicated to landscape and horticulture occupied the northeast corner of the site. All the features of the promenades of Paris reappeared in condensed form in the exposition garden, which Limido has called, “the apogee of landscape principles of the period.”⁸⁷² Here Barillet-Deschamps displayed his well-practiced art of gentle *vallonement*, or undulation, of the lawns through which a stream threaded a sinuous course (fig. 6.23). A bubbling cascade spouted from a pile of rockwork in front of the main conservatory; another cascade fell from a grotto that marked the entrance to the aquarium. The aquarium itself was disposed as a grotto (fig. 6.24), not unlike the one in the Jardin d'acclimatation.⁸⁷³ In the enthusiastic description of one enthusiastic

⁸⁷² Limido, *Barillet-Deschamps*, 158.

⁸⁷³ One of many descriptions can be found in Richard, *L'Album de l'Exposition*, 81.

journalist, the experience of the aquarium was as good as anything Gilliat, the protagonist of Hugo's novel of 1866, *Les Travailleurs de la mer* (The Toilers of the Sea).⁸⁷⁴

Technology also had a place in the garden. A 58-meter (190-foot)-tall lighthouse, fabricated from cast-iron components by Rigolet in Paris, towered over a kidney-shaped pond in the northeast corner of the park, near the Seine (fig. 6.25). Designed to be disassembled and reassembled at will, it was destined for service on the treacherous Roches-Douvres reef in the English Channel (Fig. 6.26).⁸⁷⁵ The lighthouse therefore played at the *here* and *there* seen also in the Buttes-Chaumont and the Jardin d'acclimatation. Its presence in the garden was that of a monument, like a victory column—but in this case the triumph at hand was a technological one. Prefiguring the erection of the Eiffel Tower on the same site two decades later, the lighthouse perfectly illustrates the functions of the exhibition park as a mythical incubator for the “growth” of marvelous technologies, and a stage for their public presentation. The garden, serving as frame, could just as easily showcase the wonders of science as the wonders of nature. The lighthouse, a utilitarian construction, temporarily acquired the status of a civic monument, like that of the Tour Saint-Jacques.

The *exposition universelle* was a feast of orientalist exoticism, insofar as the representation and reception of non-European cultures. The expo garden gathered

⁸⁷⁴ *Ibid.*

⁸⁷⁵ After the fair the tower was disassembled, shipped, and reassembled on site, and illuminated in 1868. An illustration with some information can be found in *L'Exposition populaire illustrée* (1867), 160.

fragments of a far-flung empire into an uneasy whole. In the most generous reading, everyone could move along the same path of progress, even if at different speeds. One version of this dream concerned a “universal” quest for political liberty in the tradition of the French Revolution, as Victor Hugo proposed in the introduction to *Paris-Guide*.⁸⁷⁶ Another version concerned economic development. Egypt, for example, had three pavilions: reproductions of an ancient temple; a medieval dwelling; and a contemporary commercial structure, the *okel*, containing shops and workshops around a courtyard.

While the temple indulged a desire to recall “the earliest memories of the world,” the strikingly modern *okel* “showed Egypt engaged on the new path” paved by Europe.⁸⁷⁷ A fourth pavilion celebrated the recently opened Suez Canal. All of these exhibits were conceived as vehicles to transport the viewer to “the middle of the Orient, by the banks of the Nile...”⁸⁷⁸ Unbeknownst to anyone at the time, the smooth, boxy forms of the Egyptian *okel* foreshadowed the modern European architecture of the 1920s (fig. 6.27). Meanwhile, the French Imperial pavilion mixed orientalist and rococo forms and motifs, in a throwback to the eighteenth-century Chinese house at Sanssouci in Potsdam (fig. 6.28).

⁸⁷⁶ Hugo, “Paris.” The theme of peace is developed throughout the essay. Hugo compares Civilization to a sailing ship, with Paris as its *point vélique*, or center of gravity, upon which all the forces of the wind are concentrated and converted into forward motion (56). In thinly veiled language he called for an end to the Second Empire and a return to a more democratic form of governance, to lead Paris and the rest of the world into an age of peace and enlightenment.

⁸⁷⁷ Charles-Edmond Chojecki, *L'Égypte à l'Exposition universelle de 1867* (Paris: Dentu, 1867), 19.

⁸⁷⁸ *Ibid.*, 18.

The culture of exoticism concentrated in the 1867 exhibition extended beyond the bounds of the Champ de Mars. And it did not always take the form of Hugo's quest for "universal," albeit French-style, liberty and equality. It could just as easily provide cover for expressions of chauvinism or racism. For example, a journalist in the mainstream *Figaro* narrated an imagined adventure in the Parc Monceau:

*Les pelouses verdoyantes sont encombrées de plantes exotiques en si grand nombre que le promeneur se croit tout à coup transporté dans des régions tropicales... Le hasard m'a conduit sous un fourré près de la cascade, où j'ai aperçu une négresse ; ses yeux fixaient avec amour les palmiers, les dattiers et les arbres à feuilles gigantesques transportés là à grands frais par l'ingénieur en chef de la ville. « Monsieur, me dit-elle en son naïf langage, « c'est comme ça à la Martinique. »*⁸⁷⁹

(The green lawns are brimming with exotic plants in such large numbers that the *promeneur* feels himself suddenly transported to tropical regions.... Chance led me into a forest near the waterfall, where I glimpsed a Negress. Her eyes fixed lovingly on the palm trees, the date trees, and the trees of gigantic leaf transported at great cost by the engineer-in-chief of the city. "Monsieur," she said to me in her simple language, "It's like this in Martinique.)

In this passage, vaguely reminiscent of a travelogue or adventure story, the allure of the exotic landscape is tinged with the repression of the exoticized other. The fantasy

⁸⁷⁹ M. Francis Magnard, *Le Figaro*, 18 July 1868, in Félix Mouffet, *M. Haussmann et les Parisiens* (Paris: E. Dentu, 1868), 40.

encounter reproduces the power dynamic of colonizer and colonized, as the European male gaze falls upon the subaltern, “simple” African female. The landscape of the park has already suggested the terms of this encounter, for it is styled in the manner of a feminine seduction.⁸⁸⁰ It coyly invites the gaze of the promeneur, who in this case has in fact become the *flâneur* in search of novelties. The urban practice of *flânerie*, a branch of promenade, assumed the privilege to look, to admire, to fantasize, and perhaps to buy—which is why artists such as Manet identified the figure of the prostitute as emblematic of the new city.⁸⁸¹

It is not hard to draw a connection between the exoticism of the expo jardin and the imperial aims of exploiting distant lands and cultures. And yet the desire to give visible presence to a wider field of culture and landscape does not in itself contain the seed of oppression. The expo garden transformed the Champs de Mars into something it was not—a gathering of the world at large—which, however absurdly, was thought to form a kind of orbit around Paris. In short, Alphand and Barillet-Deschamps disposed the site to identify with what they considered the widest possible milieu, beyond the confines of the site.

The folly was not in attempting to engage with such a milieu, but in the particular definition of the milieu, which all too clearly reflects colonial Eurocentricism and French universalism. The prejudicial ideologies lurking within the cosmopolitan fair impugn the culture from which they sprung, more than the topographical endeavor that the fair

⁸⁸⁰ See Lavin, “Sacrifice in the Garden.”

⁸⁸¹ Clark, *Painting of Modern Life*, 78.

organizers strained to the breaking point. The organization of national and thematic pavilions on the site reinforced a hierarchy of center and periphery (with Western European nations nearest the center), but the very center was the garden, a piece of nature symbolizing the inexhaustible wellspring of modern civilization.

Grottoes, reservoirs of darkness

La *Ville Lumière* had also its dark spaces, metaphorical and tangible—La Ville Grottesque. “*Paris est une sorte de puits perdu*” (Paris is a soak pit), Victor Hugo wrote in 1867, referring to the depths of history and the narrative of progress embodied therein.⁸⁸² He used geological imagery to illustrate an imagined descent back in time, like a Parisian Dante, reading the narrative of civilization in reverse:

*Elle a des couches d'alluvion... des spirales de labyrinthe.... Une cave nettoyée met à jour une cave obstruée. Sous le rez-de-chaussée, il y a une crypte, plus bas que la crypte une caverne, plus avant que la caverne un sépulcre, au-dessous du sépulcre le gouffre. Le gouffre, c'est l'inconnu celtique.*⁸⁸³

(It has layers of alluvium... labyrinthine spirals.... A clean cellar reveals an obstructed cellar. Beneath the ground floor lies a crypt, below the crypt a cavern, further down from the cavern a sepulchre, and below the sepulcher, the abyss. The abyss is the Celtic unknown.)

⁸⁸² Hugo, “Paris,” 21.

⁸⁸³ *Ibid.*, 22.

Hugo's invocation of a latent abyss found physical expression in the plethora of grottoes constructed in the parks and gardens of the Second Empire. The first two grottoes appeared in the Bois de Boulogne in 1855, the larger one being the two-level cavern behind the Grande Cascade of Longchamp (fig. 6.29). Grottoes at the Parc Monceau, Bois de Vincennes (fig. 6.30), and Parc Buttes-Chaumont (fig. 6.6) followed, and grottesque rockwork appeared in the Square des Batignolles (fig. 6.31) and Parc Montsouris (fig. 6.32). On the other hand, Hugo used metaphors of light to express his hopes for the future of French civilization, and by extension world civilization (since he considered Paris the center of the world, even though he remained in exile on the island of Guernsey).

The grotto is everything that the boulevard is not. In the parks of Second Empire Paris, the grotto staged a fantasy of exemption and rebuttal to the seeming city of light. Louis-Napoléon declared in 1850, "*Que la lumière bienfaisante du soleil pénètre partout dans nos murs, comme la lumière de la vérité dans nos coeurs*" (May the beneficial light of the sun penetrate our walls everywhere, as the light of truth penetrates our hearts).⁸⁸⁴ Haussmann would realize a version of this edict in opening thoroughfares equipped with sanitary drainage and blazing gaslights, bordered with glass shopfronts and café windows, all of which reflected the abstractions of axial planning. The grotto also contrasted with the coolly rational architecture of the *serres*, or conservatories. Like the boulevards, the *serres* were equipped with gas to keep the plants growing all year round,

⁸⁸⁴ From a speech at the Hotel de Ville on 10 Dec. 1850. Napoléon III, *Discours et proclamations de Louis-Napoléon Bonaparte, Président de la République* (Paris: Schiller, 1851), 142.

and even at night. Here the literal transparency and regularity of the architecture corresponded to the figurative transparency of scientific knowledge and enlightened thought. In the space of the parks and gardens, the grottoes contrasted markedly with architectural structures crowning either the grotto itself or a nearby rock, as in the Bois de Vincennes (fig. 1.6) and the Buttes-Chaumont (6.12). The temporary grotto and belvedere of the aquarium of the 1867 exhibition garden embodies the same play of opposites (fig. 6.33) This contrast conventionally evokes a narrative from primitive to modern, from brutal to sophisticated, from instinct to reasoning.

The delicious juxtaposition of the rustic and the refined, the earthy and the celestial, has a long history in the garden art of France, Europe, and Britain. Numerous examples can be found in the *anglo-chinois* gardens completed in the waning years of the French *ancien régime*. The Parc de Bagatelle for the Comte d'Artois contains a habitable grotto surmounted by a lightweight belvedere in wrought iron (fig. 6.34). In the *anglo-chinois* garden of the Petit-Trianon at Versailles, Richard Mique and Hubert Robert erected an elaborate rock adjacent to a light-filled belvedere (fig. 6.35). In Laborde's parc of Méréville (from 1784), the depths of the grotto and cascade contrasted with the view of the towering belvedere column, which served as an astronomical observatory.⁸⁸⁵ In the

⁸⁸⁵ Alexandre de Laborde, *Description des nouveaux jardins de la France et de ses anciens châteaux* (Paris: Imprimerie de Delance, 1808), 106. The park of Méréville was by Hubert Robert with the architect François-Joseph Bélanger in the 1780s. A nineteenth-century description of the park can be found in Dusaut, *Description du château et du parc de Méréville*. Paris: Béthune et Plon, 1835. The column, modeled loosely on that of Trajan, but without the sculptural decoration, served as a belvedere and also as an astronomical observatory from which Delambre measured the Meridian of Paris to ascertain the exact length of the meter in the 1790s. By contrast, the grotto was a refuge of primitive simplicity, which had the power to transport the visitor, as Laborde wrote in 1808: “*C'est surtout du fond de cette grotte que la cascade et tout ce qui l'environne font éprouver l'illusion des plus beaux sites de la Suisse ou des Pyrénées*” (It is especially from deep inside this grotto that the cascade and all that surrounds it give the illusion of the most beautiful sites of Switzerland or the Pyrenees).

park of Saint-Leu, in Val d'Oise, a minimal temple crowned an outcropping of rocks from which a cascade issued (fig. 6.36).⁸⁸⁶ In a variation of the usual grotto below the falls, Le Rouge showed a project for an “appartement” under the river, inspired by supposed Chinese examples, with a glass ceiling (fig. 6.37).⁸⁸⁷

The articulation of contrast between untamed earth and well-ordered architecture dates back through classical antiquity and beyond, to Archaic traditions. David Leatherbarrow has written of a “vertical antimony between what is dry—above and wet—below” in the ancient Greek culture.⁸⁸⁸ Although the former, associated with the masculine, came to dominate over the latter, associated with the feminine, “Edgeless matter was, nevertheless, vital and procreative—a fertile fluidity from which all visible things arose.”⁸⁸⁹ At the ancient sanctuary of Delphi, the rites of chthonic earth worship, concretized in the Rock of the Sibyl, were superseded by the worship of the sun god, Apollo, whose followers built a Doric temple (fig. 6.38). In mythological terms, Apollo slew Python, who served as guardian of the Earth goddess, Gaia. The priests of Apollo did not destroy the Rock of the Sibyl; they left the shrine intact and attempted to coöpt the authority of the oracle. For it was widely seen as the navel of the world, or *omphalos*.

⁸⁸⁶ Laborde owned and developed this property in the mid-1770s, but in the 1780s it belonged to the Duc de Chartres, future Philippe Egalité, who also owned the Jardin Monceau.

⁸⁸⁷ The plan drawing is the seventh plate of Cahier 12, but in the inset view of the projected apartment, Le Rouge refers the reader to first plate of the same cahier, which explains the “Chinese” art of glass-ceilinged, underwater rooms.

⁸⁸⁸ Leatherbarrow, *Topographical Stories*, 116.

⁸⁸⁹ *Ibid.*

The reciprocal architectures of light and dark in the garden also correspond to a pair of myths or illusions theorized by Henri Lefebvre in *The Production of Space*. On the one hand, socially produced space offers an “illusion of transparency.”⁸⁹⁰ Here, in Lefebvre words, “space appears as luminous, as intelligible, as giving action free rein.” This is the space of the scientific *serre*, the celestial temple. On the other hand, Lefebvre identified an illusion of realism, or “natural simplicity,” characterized by imagery of the substantiality of the earth.⁸⁹¹ In place of transparency and free movement is opacity and constraint. Lefebvre invoked the image of a sculptor working in dense media, “delivered direct from the domain of Mother Nature.”⁸⁹² He added, “When space is not being overseen by the geometer, it is liable to take on the physical qualities and properties of the earth.”⁸⁹³

In Paris, the grotto could be seen as a reminder of primitive beginnings. Just beyond the threshold of decorative and aesthetic intent, the grotto also served as a repository of an ancestral, primordial past; a repository of mythical history and irrational impulses. A guidebook compared the rockwork of the Parc Monceau (fig. 6.39) to, “*un des soulèvements spontanés qui, dans les temps primitifs, eurent lieu sur tous les points du globe en travail de formation. On dirait qu'il est sorti du sein de la terre en un seul bloc*” (one of those spontaneous uprisings which, in primitive times, took place on all

⁸⁹⁰ Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Malden, Mass.: Blackwell, 1991), 27-28.

⁸⁹¹ *Ibid.* 29-30.

⁸⁹² *Ibid.*, 30.

⁸⁹³ *Ibid.*

points of the globe in the process of formation. It looks like it came out of the bowels of the earth in one piece).⁸⁹⁴ The botanist and garden theorist Pierre Boitard published a fantasy novel in 1861, *Paris avant les hommes* (Paris Before Humans), which contemplated a prehistoric landscape on the Parisian soil where the light of modernity now seemed to shine.

It was not only grottoes that served as symbolic repositories of a mythical past. Each new park and square was a mythical interior at the same time as it evoked, according to a different reading, peripheral countryside. At the center of this naturalesque interior, the visitor was likely to discover either a cascading *source* with rock, or else a historic monument preserved and refurbished from the capital's rich past. The refurbishment of historic relics, especially fountains, to occupy the center of the squares speaks to a similar desire to engage with unseen reservoirs. Goujon's fountain of the nymphs in the Square des Innocents, and the restored Tour Saint-Jacques (the "palladium" of the old city, according to Fournier) framed by a garden square provided spiritual sustenance for the modern capital by referencing a storied past, a misty realm from which emanated the identity of modern Paris.⁸⁹⁵ Grottoes and monuments in the garden thus served as metaphorical *sources* of Parisian modernity, much as literal river sources were associated with a fecund and generative power. Courbet, captivated by the mystique of the orifices of the earth, painted a series of *Sources* in the mid-1860s (fig. 6.40). In the context of a paternalistic culture, such symbols of unfathomable depth were

⁸⁹⁴ Germaine Boué, *Les Squares et jardins de Paris. Le parc de Monceaux. Notice historique et légendaire* (Paris, 1867), 13.

⁸⁹⁵ Fournier, *Paris dans sa splendeur*, 52.

associated with the feminine *other*. The grottoes were essentially yonic spaces. The connection between constructed geology and constructed gender becomes rather explicit in light of Courbet's painting of a vagina from 1866, which he titled, *L'origine du monde* (The Origin of the World).

The evocative power of the grottoes and other fabriques is not, however, reducible a mere representation of *a priori* ideas. Seen as part of the urban landscape, these reservoirs of darkness invited a play of imagination and intellect. Walter Benjamin wrote of experiencing the city in a such as mnemonic way. The footsteps of the *flâneur*, he wrote, create an "astounding resonance" on the "hollow" asphalt.⁸⁹⁶ The ground of the city is in fact a "double-ground," an ambiguous landscape set in motion by the *flâneur*'s footsteps. Memory, serving as Muse, "goes along the streets in front of him, and each street is a vertiginous experience. It leads downward... to a past that is all the more spellbinding as it is not just the author's own private past."⁸⁹⁷ The urban ground becomes a bi-faceted *topos* that overlays diachronic modes of experience. Though Benjamin evoked a poetic void beneath the street, others explored the literal caverns beneath Paris. Picon has discussed the advent of specialized atlases of Paris in the nineteenth century, focusing on subterranean geography of quarry pits, catacombs, aquifers, and other geological phenomena (6.41).⁸⁹⁸ Here cartography not only furnished empirical

⁸⁹⁶ Walter Benjamin, "Return of the Flâneur," in *Walter Benjamin: Selected Works, Volume 2: Part 1: 1927-1930*, ed. Michael W. Jennings, Howard Eiland, & Gary Smith (Cambridge, Mass.: Belknap / Harvard University Press, 2005), 262.

⁸⁹⁷ *Ibid.*

⁸⁹⁸ Antoine Picon, "Nineteenth-Century Urban Cartography and the Scientific Ideal: The Case of Paris," *Osiris*, 2nd Series, Vol. 18, Science and the City (2003), 141.

descriptions of the ground, but also fueled Parisians' imaginations. There seemed to be a hidden world hidden just beneath the pavements. Even projects of strictly utilitarian purpose—like the Passy artesian well—drew public expressions of wonderment. It was the fantastic as much as the didactic quality of the newly constructed sewers, for example, that led visitors to embark upon tours of these public works (fig. 6.42). The marvelous was the reciprocal aspect of the descriptive; and fiction interdependent with fact.

One of Benjamin's insights was that it was possible, and highly enjoyable, in walking through a city, to defy the conventional opposition between the tangible and the intangible. The great traveler was sensitive to what was available to the senses, and also to the imagination. For such a person, he wrote, "everything seems closer to everything else, and hence to him, since he is in their midst."⁸⁹⁹ Such a walker requires sensory information, but also a sense of the *beyond* or, in the case of urban topography, *beneath*. Benjamin wrote, "the distanced Romantic is as ignorant of this [way of experiencing the city] as the Positivist."⁹⁰⁰ In other words, sheer fanciful inventiveness neglects the concrete basis of mnemonic space; just as the Positivist, blind to the real yet intangible action of memory, has no way to understand the solubility of the *flâneur's* body (which includes mind and memory) within the immersive field of his surround.⁹⁰¹ This solubility

⁸⁹⁹ Walter Benjamin, "The Great Art of Making Things Seem Closer Together," trans. Rodney Livingstone, in *Selected Works 2*, 248.

⁹⁰⁰ *Ibid.*

⁹⁰¹ *Ibid.*

extends to the changing aspect of the city itself, full of latent possibilities and vanished realities.

The grottoes, as fabricated objects and spaces in carefully designed landscapes, lacked the qualities of palimpsest that Benjamin found in the streets of Paris. And indeed, not all park visitors read the grottoes in the spirit of time travel and primitivism; they also see them, for example, as indulgent décor or as didactic expositions of geology. In the broader culture of the day, the category of *merveilles* (wonders) or *the marvelous* linked representations of primeval nature with representations of technology and scientific thought. Both natural and technological *merveilles* were objects of scientific study. Both, too, were objects of fantastic speculation and mythical invention. Locomotives, basalt formations, comets, and ancient ruins, for example, served as interchangeably marvelous phenomena in literary and visual representations. In 1864 the publisher Hachette inaugurated a popular series, *La Bibliothèque des Merveilles* (Library of Wonders), encompassing dozens of volumes devoted to subjects such as bird migration, electric lighting, astronomy, fire, the South Pole, architecture, sea monsters, grottoes, and, in 1867, a survey of parks and gardens from antiquity to the present.⁹⁰² In 1867, the year of the Expo and the publication of Alphand's *Les Promenades de Paris*, they published an illustrated book of caves and grottoes, both human-made and natural.⁹⁰³

Beyond a widespread public enthusiasm for the evocative power of geology, the grotto-building endeavor of Second Empire Paris may be attributed at least partly to

⁹⁰² The series was edited by Edouard Charton between 1864-1890, and included dozens of titles.

⁹⁰³ Adolphe Badin, *Grottes et caverns* (Paris: Hachette, 1867).

the enthusiasm of Barillet-Deschamps. Haussmann tolerated the grottoes, but grudgingly, judging by his retrospective reference to “*la grotte inévitable*” of the Buttes-Chaumont, as if there was nothing he could have done to stop its implementation.⁹⁰⁴ In describing the Parc Monceau, Haussmann blamed “*le goût public*” (public taste) for imposing the construction of a grotto, complete with artificial stalactites and cascade, upon an otherwise restrained design.⁹⁰⁵ The earthwork—a lovingly rendered outpost of darkness in the imperial city of light—greeted visitors just off the central crossroads of the park, no less (fig. 6.43).

On the one hand, the grottoes validate the triumph of the regime of light. For they are disposed as inert, self-contained objects in a controlled field, which the visitor can choose to enter and exit at will, like opening and closing an adventure novel. The sign of primitive nature may ultimately sanction the superior intelligence that has apparently conquered it. On the other hand, however, the visceral power of the ground, which the grotto evokes but cannot show, is never fully subsumed by its rationally ordered counterparts. In eighteenth-century gardens, the grotto was the space of an imagined encounter with a nymph, often represented by statuary. Nineteenth-century gardens eliminated the explicit mythological references, but reproduced the promise of an encounter with nature’s *other*, usually in concert with falling or running water. The vitality of nature takes prosaic and mundane as well as poetic forms, of course: pigeons

⁹⁰⁴ Haussmann, *Mémoires*, 236.

⁹⁰⁵ *Ibid.*, 233

roost in the artificial stalactites of the grotto of the Buttes-Chaumont, as evidenced by the droppings on the concrete floor.

The grotto suggests that there remains an original and irreplaceable *source* of knowledge and civilization, somewhere outside the products of civilization and the mechanisms of knowledge. It temporarily suspends the axiomatic reality of the finished ground. Reservoirs of darkness in the city of light thus have the potential to evoke landscapes outside themselves—or rather, deeper inside and beneath themselves, as in Hugo's imagined abyss.

Conclusion

In 1873, as Alphand and the *Service des Promenades et Plantations* worked to rebuild the parks and gardens after the violence of 1870-71, George Sand reflected on the perils of mistaking surface décor for the ground itself. She used a landscape metaphor to make the case for universal suffrage. The political system needed to accommodate the sometimes latent but powerful will of the populace, just as the surface of a designed landscape was never truly separate from its substrata and processes. She condemned the “capital error” of educated and privileged people who, “*vivent dans un jardin fleuri, sans s'être jamais demandé ce qu'il y a sous la mince couche de terreau qui nourrit leurs plantes d'agrément*” (live in a flower-filled garden, without ever having asked themselves what lies beneath the thin layer of soil that nourishes the ornamental plants).⁹⁰⁶ She continued:

*Ils voudraient sans doute que toute la terre fût ce jardin d'Eden, où l'on se promènerait en escarpins et d'où seraient bannis les gros sabots qui écrasent les fraîches couleurs et les suaves parfums. Sous cette écorce paradisiaque, il y a pourtant la terre brute avec ses carrières puissantes, ses mines précieuses et, plus au fond, ses volcans redoutables. Il faut bien que ces richesses et ces périls aient une issue.*⁹⁰⁷

⁹⁰⁶ George Sand, *Impressions et Souvenirs* (Paris: Michel-Levy, 1873), 108-109.

⁹⁰⁷ *Ibid.*

(They would undoubtedly like for all the Earth to be this garden of Eden, where one promenades in stilettos, banishing the bulky clogs that crush the fresh colors and suave perfumes. Beneath this paradisiacal veneer, however, lies the rough earth with its huge quarries, its precious mines and, even deeper, its formidable volcanoes. These riches and perils must have a way out.)

This is not a critique of décor and artifice in themselves, but a warning against neglecting the unseen dimensions of landscape and, by extension, the social realm. Instead of accusing garden designers of deception, Sand accuses the inhabitants of the garden of *self-deception*. What people neglect at their peril is the latent topography that inevitably impinges upon the reshaping and occupancy of the surface. In other words, the surface becomes untenable if it does not somehow communicate with the deeper and wider processes of its milieu. Yet topography does not dictate the articulation of the surface. Instead, it forms a reservoir of possibilities enabling varied and impermanent surface articulations. These articulations may be delightful and inhabitable, but should be understood as mere screens in relation to more durable substance and powerful forces arrayed behind, beneath, and around them.

In rendering nature as an architectural décor, Alphand acknowledged the ground as a partially fabricated entity. The potential implications of such a position are profound. Among these, the thought that nature does not necessarily inhere in naturalesque landscape; that modern technology has a place in the garden; that the sensuous surfaces of public landscapes belong to the cultural realm; but that the visible aspect of a site is only part of what enables its cultural and technical performance. Décor announces that it

does not work autonomously, and thus implies elaborate workings behind the scene, or beyond the apparent frame of action. The terms of this schema are not reductive, but rather generative. For the evident difference between surface and substance invites leaps of imagination to reconcile the gap. Cynics saw in landscape décor only a facile veneer, but its defenders saw it as just one of several layers, oriented to human perception, but not autonomous from or ignorant of underlying physical and cultural factors.

The designed landscape surface has even proven itself amenable to present-day notions of ecology, unforeseen by Alphand and his contemporaries. As a pattern of relations and processes, ecology finds rapid purchase among the “workings behind the scene,” but that does require that it be relegated to obscurity. For ecology has become the new ideal of nature. It has attained a cultural status in the twenty-first century that picturesque nature occupied in the mid-nineteenth. As such, it requires expression in the form of decor, in addition to bearing upon less visible facets of earth, water, flora, and fauna. In recent years, the municipal service responsible for parks and gardens in Paris has retrofitted many of the Second Empire landscapes to promote biodiversity, conserve water, and support educational efforts concerning ecology. Swaths of lawn are left unmowed, in order to serve as habitat for butterflies and birds. The concrete edges of the Daumesnil lake in the Bois de Vincennes are overgrown with grasses, making the water’s edge more hospitable to ducks and other creatures.

Whereas the parks and squares once celebrated the luxury of cosmopolitan horticulture and the triumphant domestication of exotic species, now they celebrate biodiversity, including a selection of more or less indigenous plants. Ecological

dynamism is the present-day equivalent of Alphand's "drama of Genesis," celebrating the procreative power of the earth. The nineteenth-century theory of landscape décor did not anticipate these changes, but it does not stand in their way. For Alphand and Barillet-Deschamps always assumed that the surface of the landscape did *not* constitute the whole of the project. But the surface was a privileged layer of the ground, because it qualified the parks and gardens as part of a cultural realm linked with urban culture and society, and with the practice of *promenade*.

The point is not that décor is integral to an ecological conception of landscape, but that its use is sanctioned by a multi-layered view of landscape. Different layers of the designed landscape can answer to different material and cultural needs, which may change from one generation to the next. The superimposed layers of the ground must be permitted to diverge or de-laminate to a certain extent, precisely because they operate at different scales, speeds, and levels of visibility.

One of the strengths of the position outlined above is that it enables more flexibility than an approach that requires total organic integrity. Alphand, Barillet-Deschamps, and Davioud were less concerned with following the rules of garden art or urban architecture, than in figuring out how to make garden art *work* in the challenging field conditions of the modern city. They showed that garden art could support the project of urbanization, and conversely, that the modern city could admit of something called *nature*—though the nature of that nature remained ambiguous and fiercely debated. New urban promenades borrowed from peripheral, suburban, or even rural precedents, as evidenced by the adaptation of tree planting practices from national roads to urban

thoroughfares. At least some of their environmental attributes—space, air, sunlight, shade, drainage, fresh water—contrasted with the cramped and unhygienic aspects associated with the old city. But the openness of the new urban promenades differed from the openness of country roads. They had the effect not of making the city dissolve into the country, but on the contrary, to make the city more visible than ever as a recognizable entity. For the promenades of the Second Empire were spaces for looking and meeting as well as strolling.

The promenades of Paris made it possible to speak of nature in the city, and debate its significance and performance. It consisted of tangible environmental phenomena on the one hand, and on the other hand, representations and evocations of something that was *not* present. Considered as an episode in the history of garden art and town planning, the making of the promenades of Paris experimented in a number of ways. In the first place, they integrated country landscape practices with urban culture and space on a large scale. Two, inherited typological distinctions weakened in the face of new amalgams of garden, park, square, plaza, intersection, boulevard, avenue, and street. The new combinations led toward a more generic concept of urban landscape as green space. Three, the garden was repackaged as a recurring unit of the urban fabric, adaptable to varying scales and publics and site conditions, and compatible with modern infrastructure. Four, the new promenades required massive new horticultural facilities and labor resources to maintain, let alone to construct. Notably, however, Alphand and his collaborators insisted on *not dissolving* garden art into schematic urban planning. For all the prosaic moments in the promenades of Paris, the poetic intentions show

themselves time and again.

The new boulevards through the center of Paris, lined with shops and apartments, reproduced some of the spatial and cultural qualities of the original, peripheral ring of boulevards along the former ramparts. The new avenues generalized the idea of a noble, rustic approach route to an urban thoroughfare, with or without the traditional rows of trees. In part they fulfilled Laugier's erstwhile call for urban streets resembling forest drives, as might be seen on royal estates. Haussmann's passion for unbroken perspectives recalled the planning of Baroque gardens. Even the plentiful gaslamps evoked former peripheral promenades like the Champs-Élysées and the Bal Mabille. Strategic military factors, though significant, do not appear to have been the primary motive in the conception and execution of the new thoroughfares.

The design of the new boulevards included more space for pedestrians than for vehicles. They also included street trees, gaslights, buried utilities, and a host of furniture and hardware designed to mediate among different uses and users. The components themselves remained mostly consistent from one instance to the next, but their configuration varied, depending on the width of the right-of-way, among other factors. Vegetal, mineral, and metallic elements all contributed to the architecture and landscape of the street; drainage for tree pits along the boulevards was considered as carefully as the engineering of gas and sewer lines. This integration was made possible by the administrative structure set up by Haussmann, in which the engineers in charge of roads, water, and landscape architecture worked on equal footing.

Bringing water to the Bois de Boulogne and controlling its flow provided a major test of Alphand's "double functions" of engineer and artist. His layered approach enabled him and his collaborators to address both the surface aspect and the underlying system, while allowing these levels to diverge in terms of visual expression. Water served not only as the instrument of change in the Bois de Boulogne but also as an object of change and, finally, as a sign of the change accomplished. Three overlapping water distribution systems and a seven-year well excavation project testify to challenges encountered in the field. Far from exercising omnipotence to master and reshape ground and hydrology at will, Alphand instead called for careful study of existing topography and limits to guide the design process. The appealing logic of this position appears to contrast with the alleged folly of Varé, the non-engineer whom Haussmann dismissed before recruiting Alphand. Varé was probably not the dunce that Haussmann depicts, but he lacked a verifiable survey and design method.

What Alphand seems to have realized, and what Barillet-Deschamps expressed in the grottoes, was that the ground is never fully formed, never inert, despite its otherwise finished aspect. Even the developed and hardened ground of the city retains a certain unknown and unknowable capacity for change and action, beyond the best-laid plans. Alphand had the opportunity to learn that lesson in the most literal of terms with respect to the long-delayed artesian well-drilling project at Passy. The grottoes and refurbished fountains and nymphaeums make a similar point, but on a metaphorical level. In dank caverns as well as sun-dappled lakes and gaslit boulevards, modern Paris discovered its own idealized image, linking mythical past and future with a present that would never

quite settle into focus. What was clear was that the garden now belonged in the city.

Far from an autonomous work of art, it would give and take, inflect and be inflected by its environment.

The promenades of Paris were thoroughly fabricated, crafted, and maintained—but not *mastered*, after all, in the manner of a conquered territory. Domesticated, yes. Urbanized, yes. But mastered? That would require cleansing the ground of contingencies, variables, unexpected happenings and uncontrollable forces. The imperial regime could not accomplish such a feat in the political realm, and nor could the engineers, landscape architects, and architects of the *Service des Promenades et Plantations* accomplish master the physical and cultural ground of the urban landscape. Even the most seemingly systematic of their interventions are revealed, at a finer grain, to be custom-adjusted solutions, even if they retain generic similarities. In the friction between the physical ground and a fictive topology lay the act of design.

ILLUSTRATIONS

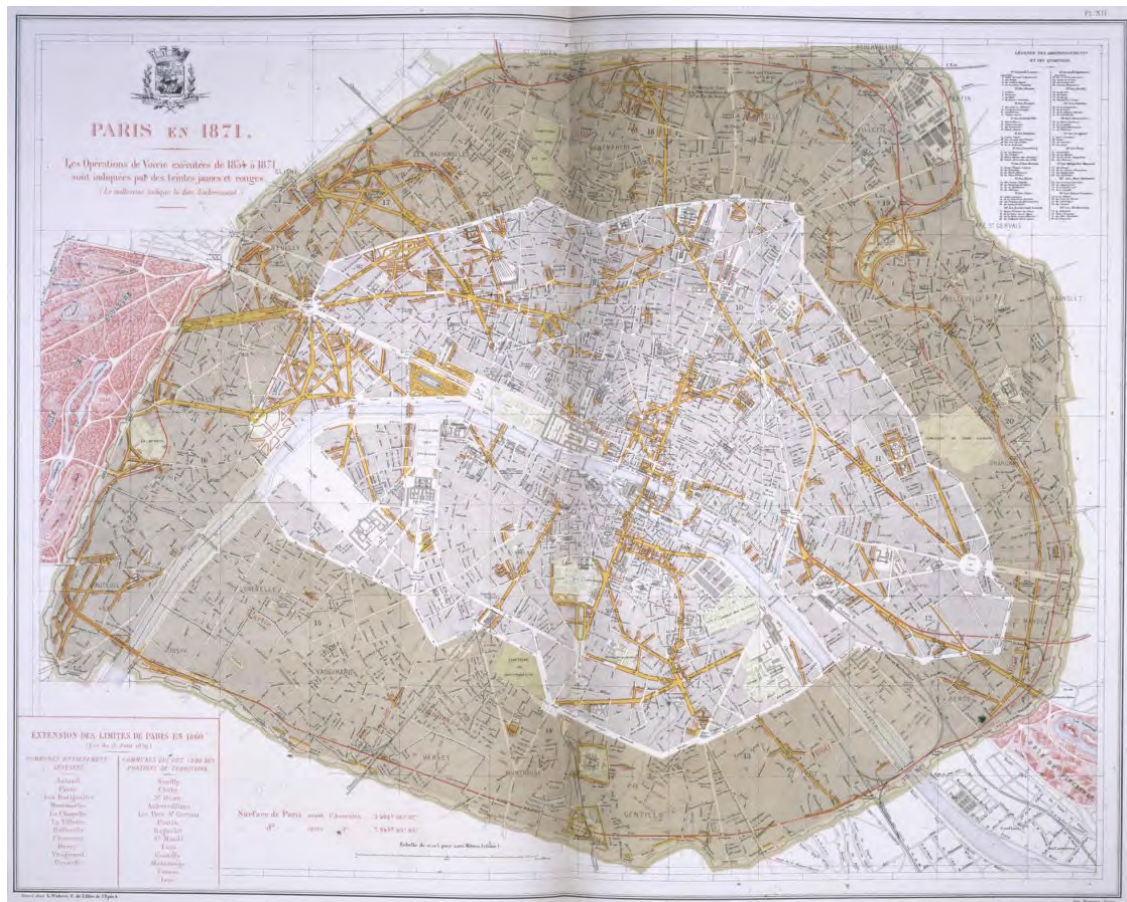


Figure 1.1

Paris in 1871, infrastructure operations executed between 1854 and 1871. By Louis Wuhler, A. Alphand, L. Fauve. From Alphand, ed., *Atlas municipal des vingt arrondissements de Paris*, 1894, Pl. 12. Bibliothèque de l'Hôtel de ville de Paris.

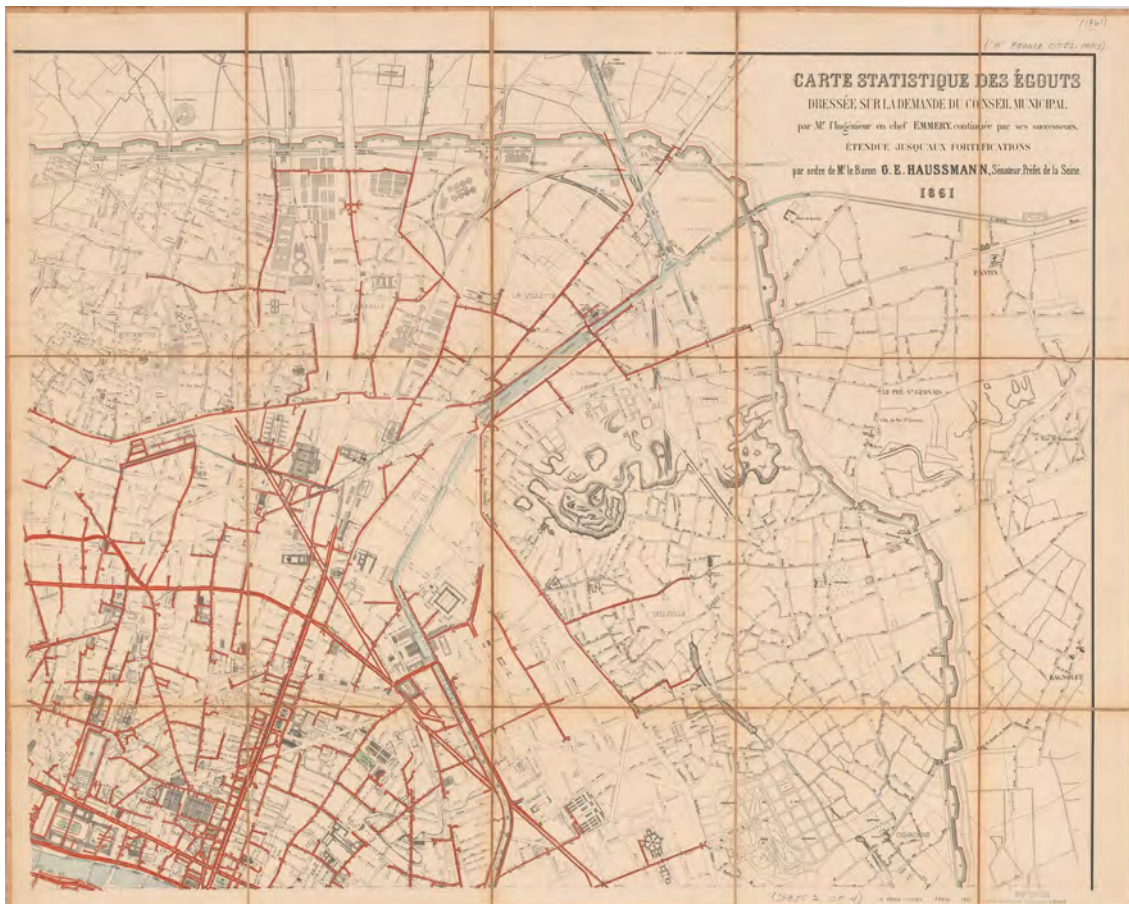


Figure 1.2
 Northeast segment of Haussmann's sewer plan of 1861.

The rebuilding and expansion of the Paris sewer system was well underway, though far from complete, by 1861, under the direction of the engineer Belgrand. The north-south axis in red marks the sewer of the new Boulevard de Sébastopol, while the city's northeastern districts are not yet served by the system.



Figure 1.3
Map of the diversions of the Dhuis, and Sources of the Vanne.
From Eugène Belgrand, *Travaux souterrains de Paris* Vol. IV, Pl. 20. Paris: Lemerrier, 1882. BNF.



Figure 1.4
General plan of the promenades of Paris, c. 1867. From Alphand, *Les Promenades de Paris*. Drawn by A. Antoine, steel engraving by F. Lefèvre. Bibliothèque de l'Institut National d'Histoire de l'Art (INHA), collections Jacques Doucet.

The plan situates the public parks and gardens of Paris amidst the public thoroughfares, buildings, railways, and fortifications. Drafted in 1867, it pictures a handful of not-yet-realized projects. The fall of the Second Empire made various features of this plan obsolete, but the basic correspondence between urbanism and garden art remained valid.

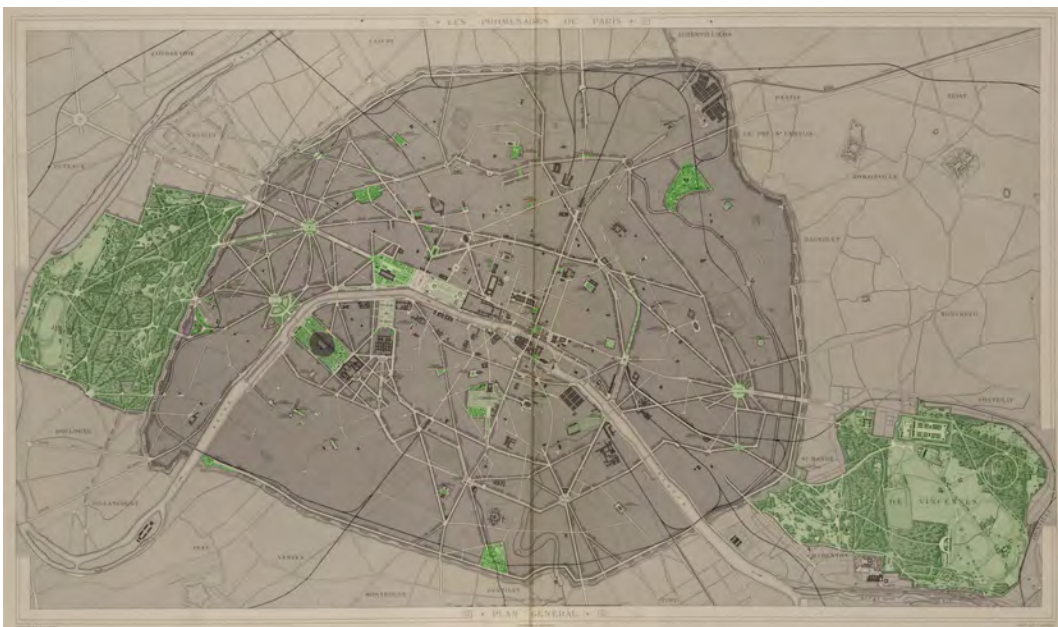


Figure 1.5
General plan of the promenades of Paris, Alphand, c. 1867, with highlights by author.

The green highlights show the distribution of the roughly 1,850 hectares of municipal promenades, from the two large peripheral *bois* to the modest squares and plazas inside the city. The older, state-owned gardens of the Tuileries, Plantes, and Luxembourg are shown in a faint half-tone.



Figure 1.6
 Frontispiece, *Les Promenades de Paris*. Engraving on copper by Émile Hochereau. INHA.

The pictorial space of this image collapses the real space of the promenades into a fictional mash of landmarks, divorced from their contexts. It speaks purely of the image of the city and the art of composition.

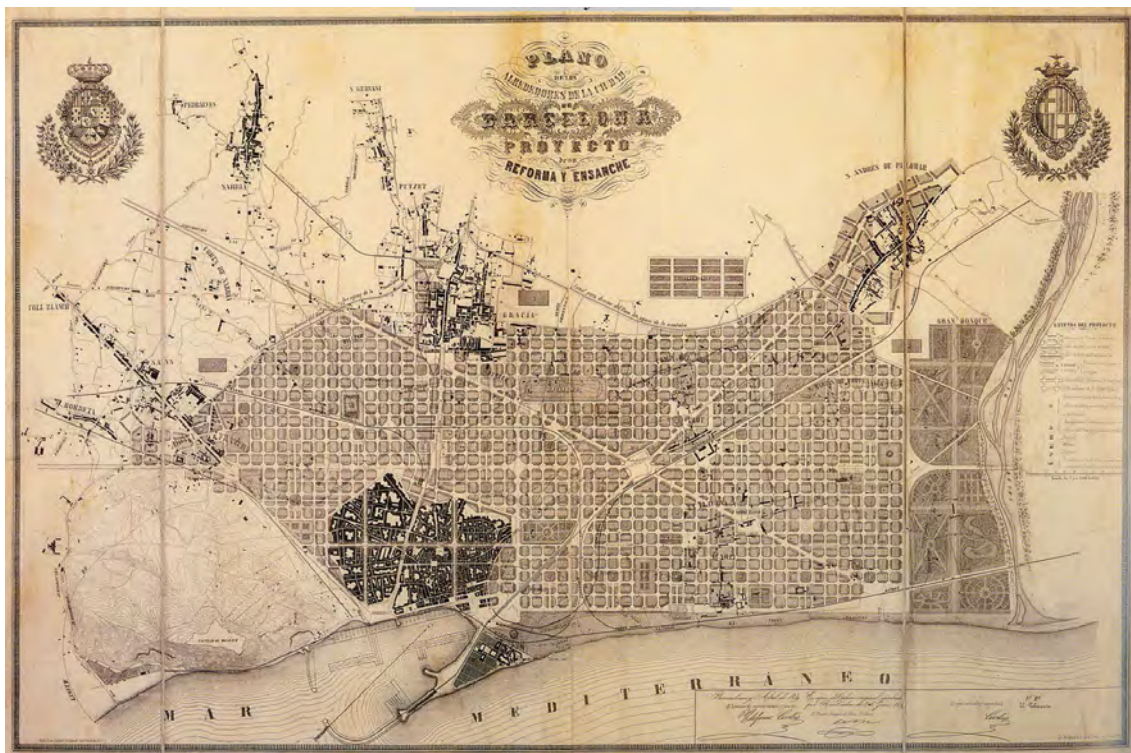


Figure 1.8
 Ildefonso Cerdá, Project for the Reform and Extension of
 Barcelona. Original version dated 19 March 1859. Museu
 d'Història de la Ciutat, Barcelona.

Cerdá introduced the term *urbanization* in the modern sense
 of city-building. His theory translated to abstract grids to
 facilitate orderly growth and transportation



Figure 1.9
Parc des Buttes-Chaumont – View of the Cliffs. From Alphand, *Promenades*.

The extreme relief of the park, adapted from a former quarry, fulfilled Alphand's dictum that the landscape must unfold ever-changing views as one moves through it.



Figure 1.10
Frederick Nash, View of the Tuileries Garden from the Grand Entrance. c.1820-1870. BNF.

The Tuileries exemplified the simple, symmetrical layout that theorists long believed appropriate for public gardens, both to facilitate social interaction and to ensure safety.



Figure 1.11
View of the Boulevard Richard-Lenoir. Photo by by author, May 2015

Vents allow air and light to pass between the street-level and the canal below, in a subtle juncture of infrastructure and public space. The pedestrian areas in the center of the boulevard contain gardens, fountains and open spaces for semi-weekly markets.

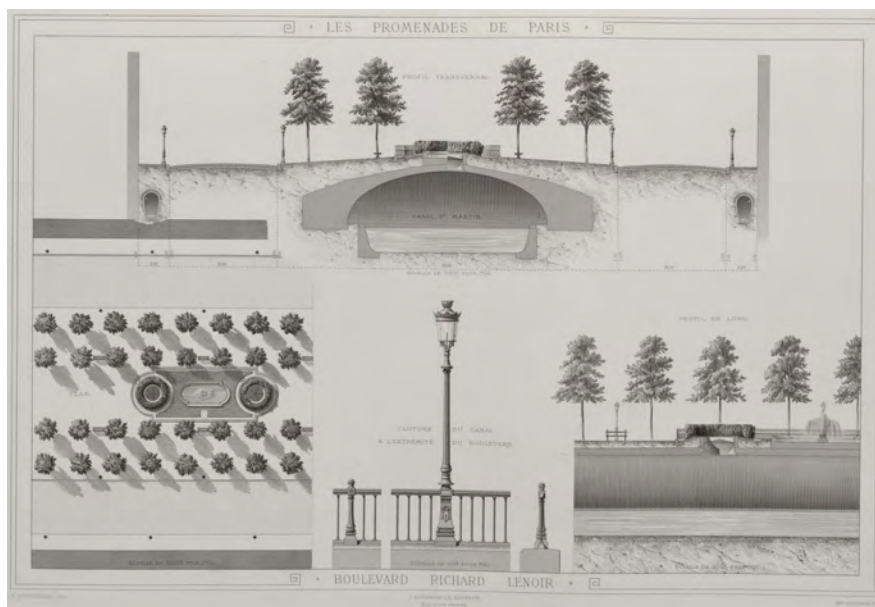
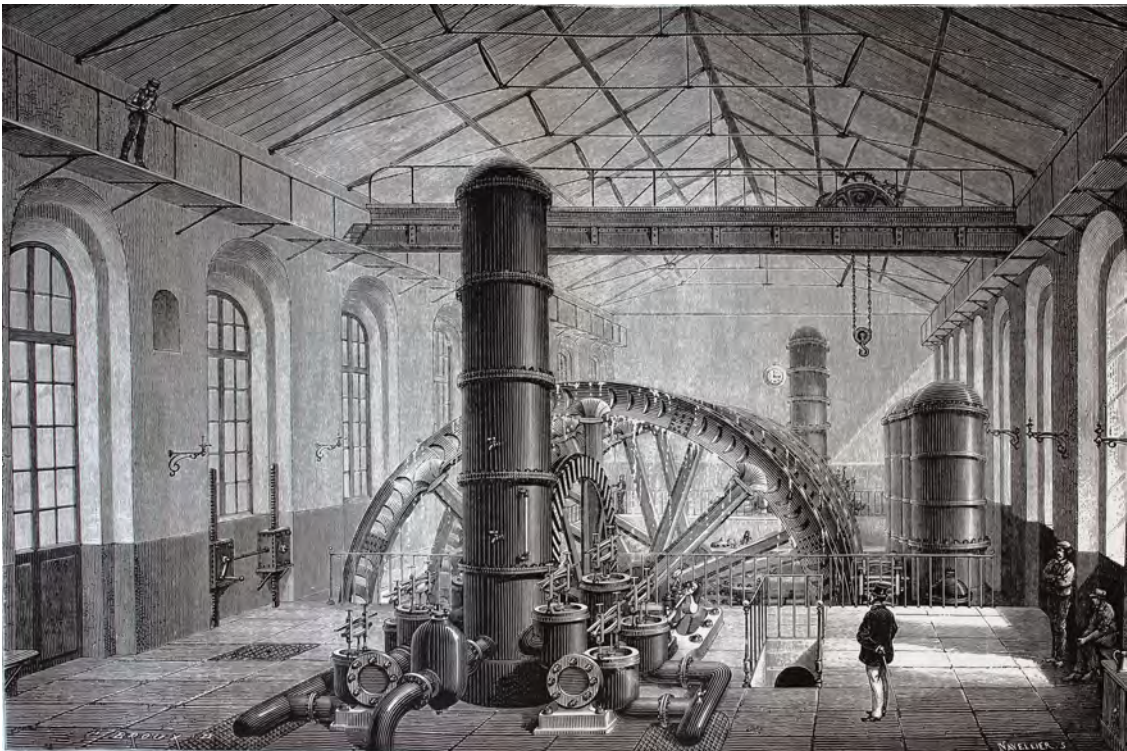


Figure 1.12
Section and plan of the Boulevard Richard-Lenoir. From Alphand, *Promenades*.

Alphand called upon his engineering skills to organize the deepening and decking over of the Canal Saint-Martin, atop which his office created a planted boulevard pierced with holes for light and ventilation.



Figures 1.13
Hydraulic works of Saint-Maur, Bois de Vincennes. From *Les Merveilles de l'Industrie* (Paris: Furne, Jovet, 1873), engraving by Navellier.

The “*usine hydraulique*” lifted water from the Marne up to the highest lake in the Bois de Vincennes, from which it flowed into various streams and other lakes.



Figure 1.14

View from the Plateau of Gravelle, Bois de Vincennes. From Alphand, *Promenades*. Alphand noted that the sweeping view was enhanced by the wafting smoke of locomotives visible in the distance.



Figure 1.15

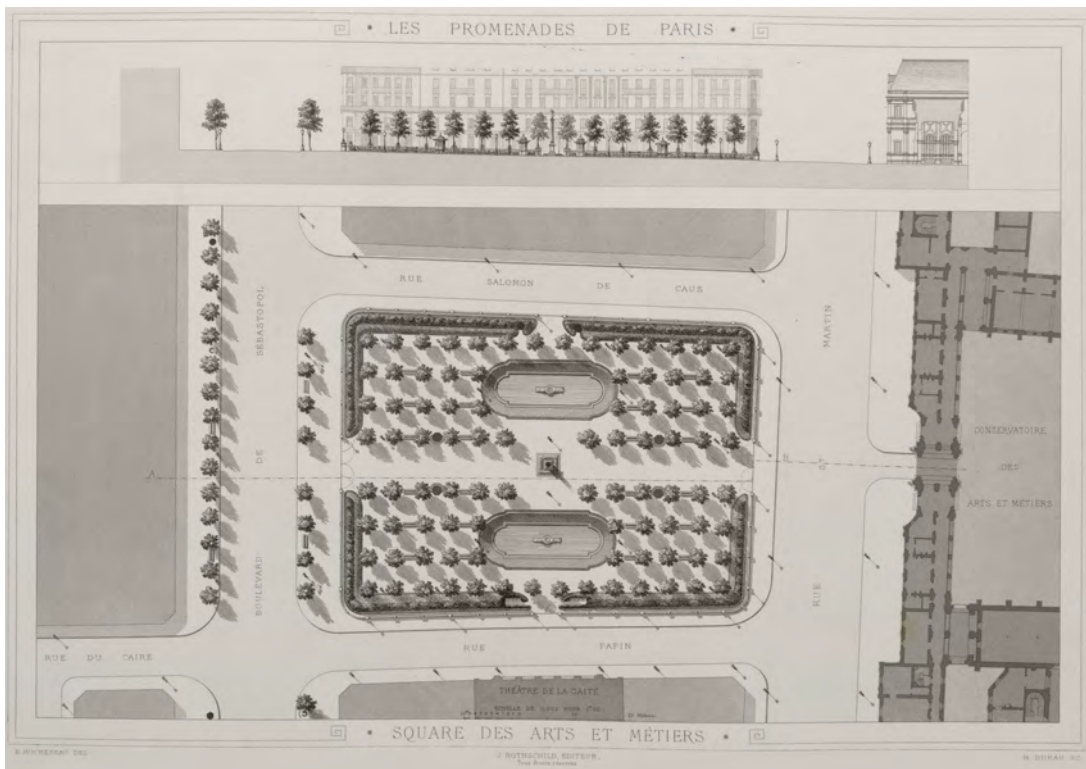
View of the Lac Saint-Mandé, Bois de Vincennes. From Alphand, *Promenades*. The lake was a tranquil haven despite the fact that a railway passed nearby.



Figures 1.16, 1.17

The Parc Montsouris. Photos by author, May 2015.

Trains passing through the park can be heard from the placid lake, and viewed from higher ground near the station. A second railway, the *Petite Ceinture*, no longer used, also crosses through the landscape park completed in 1875.



Figures 1.18, 1.19

View and plan of the Square des Arts-et-Métiers (today Émile Chautemps). From Alphand, *Promenades*.

Alphand encouraged regular, symmetrical layouts in gardens expected to receive very high numbers of visitors. This square serves not only as a respite from the Boulevard Haussmann, but also as a kind of courtyard before the adjacent Conservatoire des Arts-et-Métiers and the Théâtre de la Gaité.



Figure 1.20

Topographic plan of the Buttes-Chaumont, with elevation contours “before” and “after” renovation.

In this chromolithograph, the red contour lines show the reshaped land on top of the older hills and voids caused by quarrying. The location of the grotto, the lake, and hills responds to the preexisting topography.

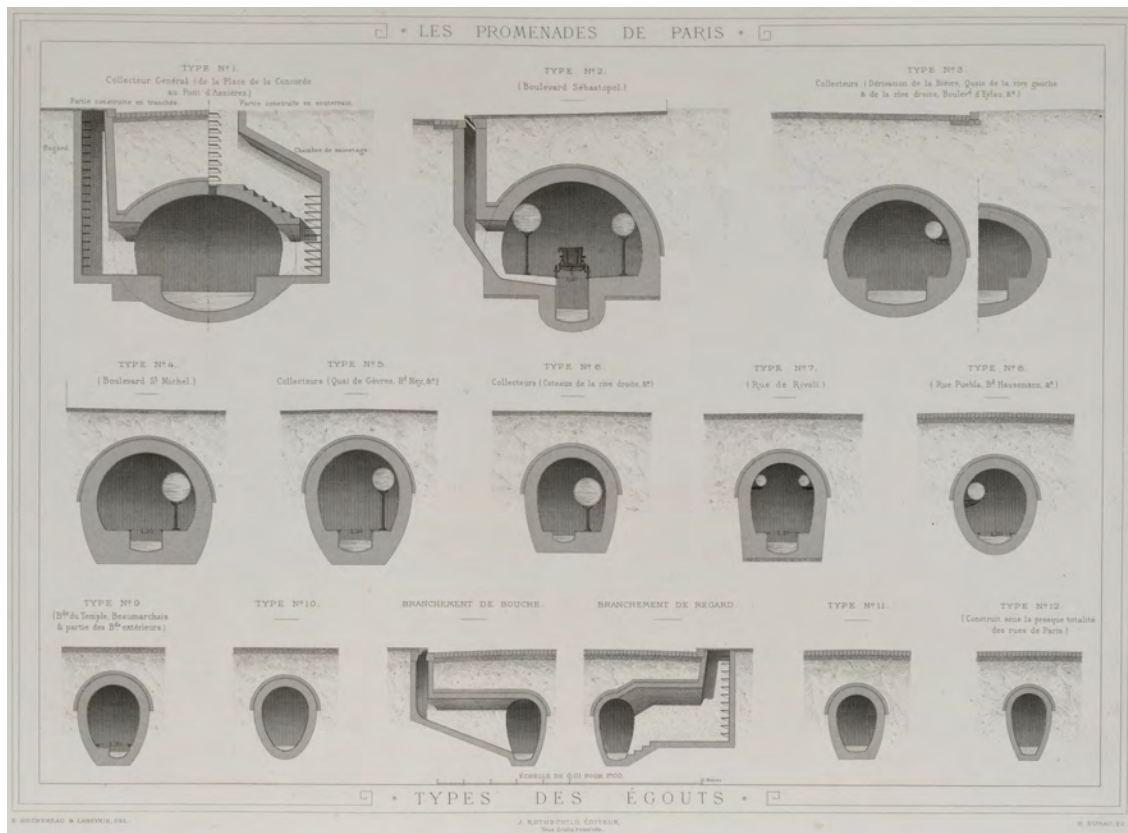


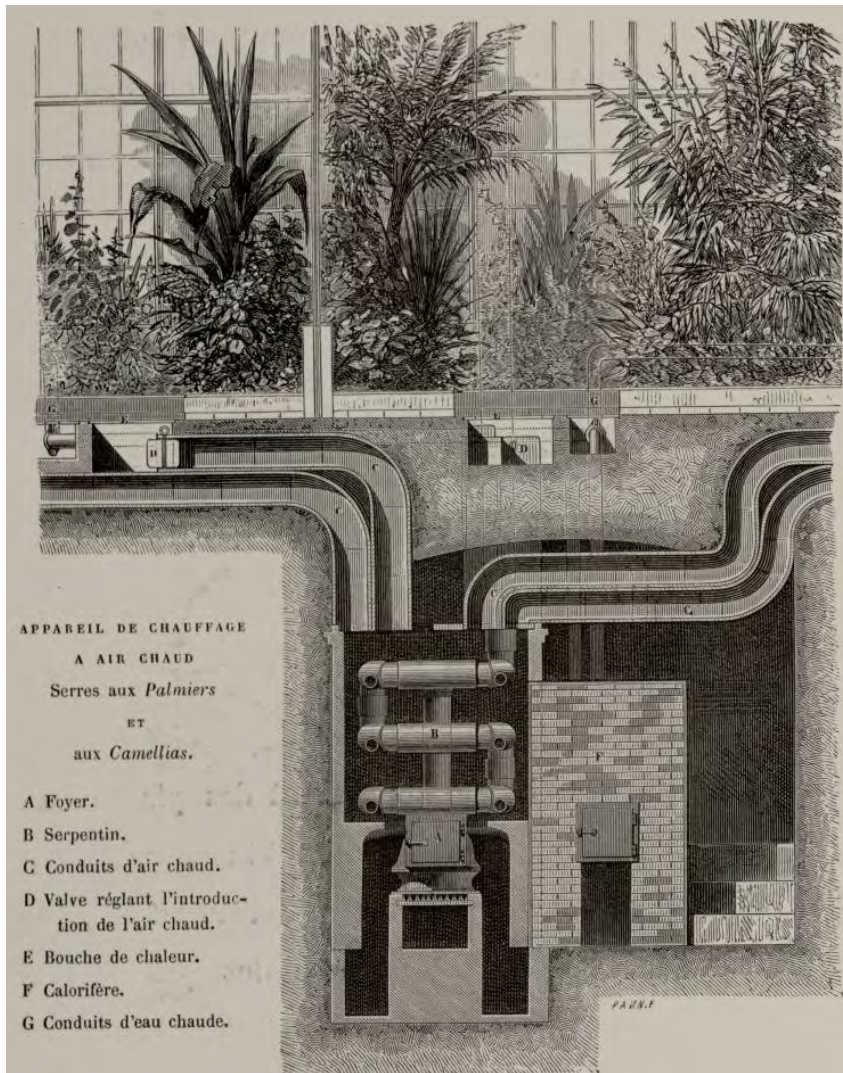
Figure 1.21
Types of sewers. From Alphand, *Les Promenades de Paris*.

The 12 different *types* of sewers constitute a single typology, like the members of a single biological species or the species in a given genus.



Figure 1.22
Enclosures of different squares, designed by Davioud. From Alphand, *Les Promenades de Paris*.

Each wrought-iron fences or grilles around the perimeter or the square and parks had a distinctive designs, despite having a standard height and mass.

**Figure 1.23**

Section of the furnace of the palm and camellia house. From Alphan, *Les Promenades de Paris*.

**Figure 1.24**

View of the caves (cellars) of *La Fleuriste de la Muette*. From Alphan, *Les Promenades de Paris*.

This giant horticultural factory, located at the edge of the Bois de Boulogne, was one of five municipal nurseries established by the Service des Promenades et Plantations. employed 80 to 100 workers and produced up to three million plants per year by the mid-1860s. Flowers were refreshed at mid-season, and delicate plants were brought back under glass for winter.

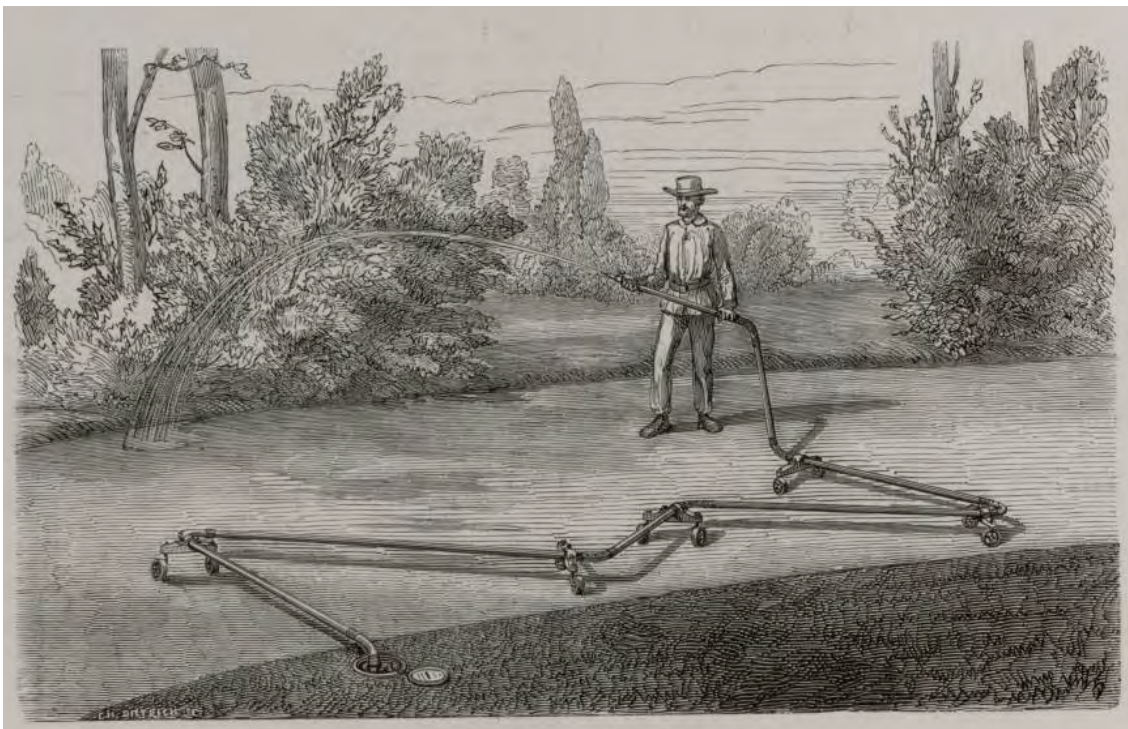


Figure 1.25
Watering with an articulated hose. From Alphand, *Les Promenades de Paris*.

Alphand compared the material and labor costs of numerous irrigation systems, from pipes and hoses to mobile tankards. Not only the plants, but also the unpaved roads needed to be watered continuously in the summer months to keep the dust down.

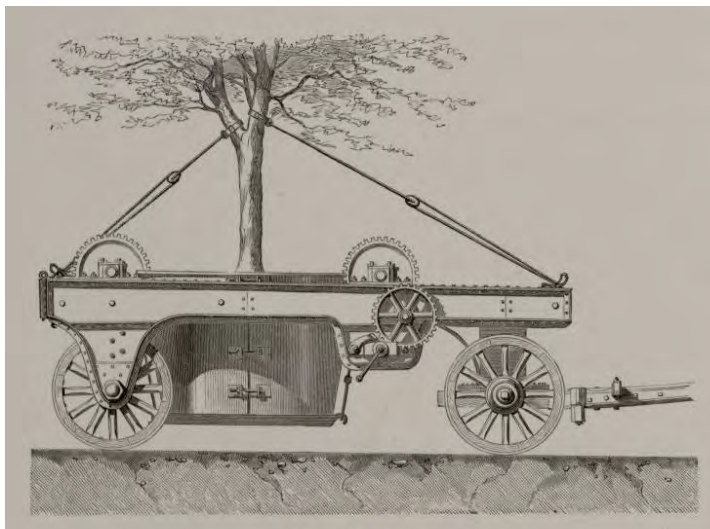


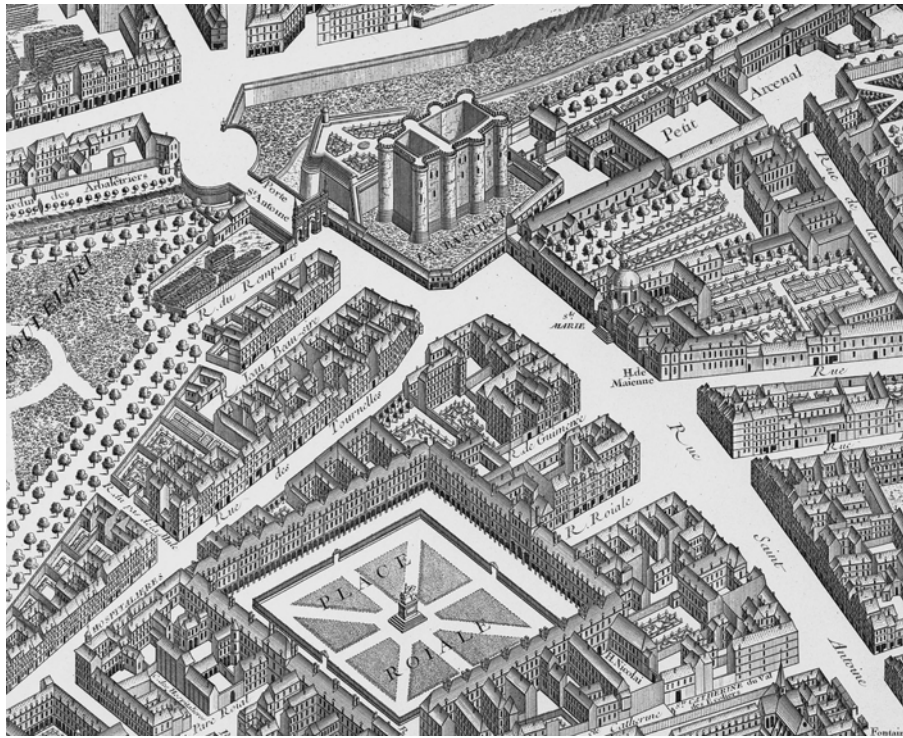
Figure 1.26
Large transplanting chariot. From Alphand, *Promenades*. Transplanting operations signified technological prowess, but Alphand cautioned that large trees often did not flourish after being transplanted. The machines were reportedly conceived by Barillet-Deschamps.



Figure 1.27
Preparing a tree for transplanting in the municipal nursery of Paris. From Ernouf, *L'art des jardins* (1868).

DIAMÈTRE des MOTTES.	DIAMÈTRE du TRONC.	HAUTEUR de L'ARBRE.	NATURE du CHARIOT.	NOMBRE DE CHEVAUX employés au transport.	PRIX DE LA TRANSPLANTATION en supposant un parcours de 3 à 4 kilom. du lieu de l'arrachage à celui de la mise en place.
de 0 ^m ,80 à 1 ^m ,00	de 0 ^m ,05 à 0 ^m ,08	de 6 à 10 ^m	Petit chariot en bois avec treuils.	1	de 20 à 40 fr.
de 1 ^m ,00 à 1 ^m ,30	de 0 ^m ,10 à 0 ^m ,20	de 6 à 12 ^m	Chariot moyen en bois avec treuils.	2 ou 3	de 40 à 75 fr.
de 1 ^m ,30 à 2 ^m ,50	de 0 ^m ,20 à 0 ^m ,80	de 6 à 20 ^m	Grand chariot en fer et fonte avec treuils et engrenage.	7 à 9	de 75 à 120 fr.

Figure 1.28
Table of transplanting sizes, method, and costs. From Alphand, *Promenades*. An example of Alphand's rigorous quantifications.



Figures 2.1
The Place Royale. Detail of the Turgot Plan, 1739.



Figure 2.2.
The place royale around 1660. "Passage du carrosse du roi." Painter anonymous. Musée Carnavalet.

The enclosed green in the center of the plaza, added in the mid-seventeenth century, made the *place* into something closer to a *jardin*.

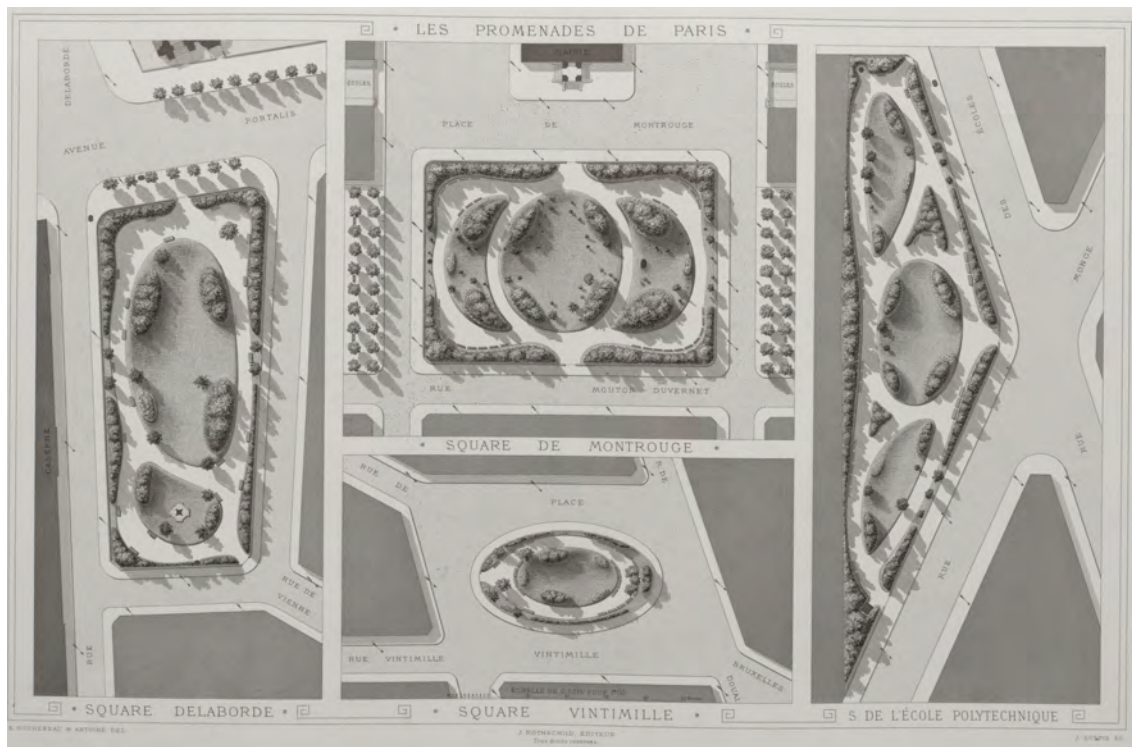


Figure 2.3

Plan of the squares Laborde, Montrouge, Polytechnique, and Vintimille. From Alphand, *Les Promenades de Paris*.

The Square Vintimille, bottom center, was originally a private garden developed by real estate speculators. The layout of the Square de Montrouge, top center, subtly aligns with the architecture of the *mairie* (town hall) that it faces.



Figure 2.4

Edouard Vuillard, *Place Vintimille*, 1911, five-panel screen, distemper on paper laid down on canvas, National Gallery of Art, Washington.



Figure 2.5
The Tour Saint-Jacques, surrounded by garden square. Photograph by Charles Soulier, c.1867. Metropolitan Museum of Art.

Newly restored and disengaged to form a freestanding monument, the tower became at once a decorative object, and a carrier of civic memory and image.



Figure 2.7
View of the Square du Temple. From Alphand, *Promenades*.

The garden formed part of an urban triad, together with the new town hall (background, center) and the new market hall (left).



Figure 2.9
View of the fountain and Square des Innocents.
From Alphand, *Promenades*.

The Renaissance nymphaeum was converted to a freestanding public fountain in the eighteenth century, then transposed and reconstructed—with a few embellishments—to anchor the new garden square in 1859.



Figure 2.10
View of the Square des Batignolles. Photograph by author, May 2015.

Among the largest and most picturesque of the urban squares, the Square des Batignolles occupies a former church yard in what was, in 1862, a heavily working-class neighborhood.



Figure 2.11
The Square Batignolles seen across the railway. Photograph by author, May 2015.

A tree-lined esplanade (right) separates the rich foliage of the park from the rail tracks leading to the Gare Saint-Lazare.

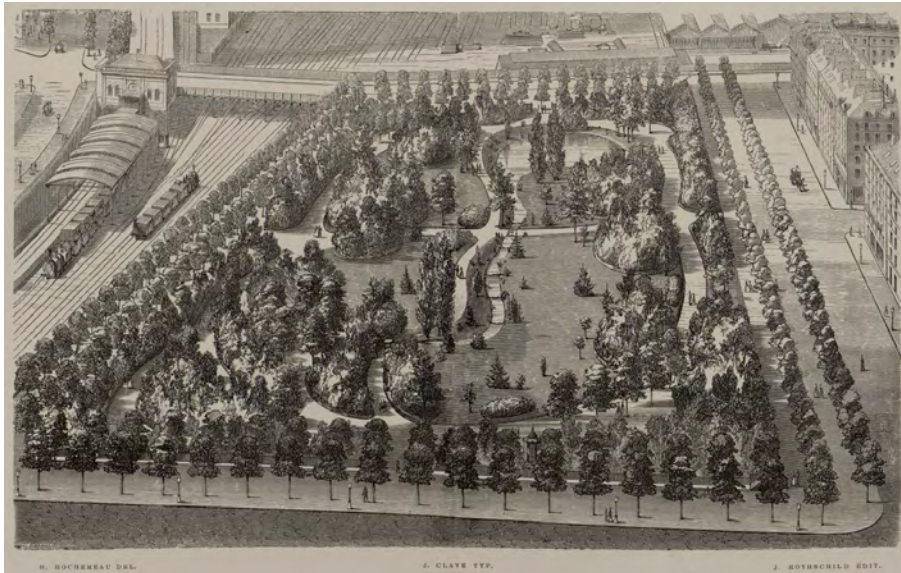


Figure 2.12
Aerial view of the Square des Batignolles. From Alphand, *Les Promenades de Paris*.

The sensuously designed landscape is insulated from its surroundings—notably the railway trench, at left—by a double-ring of trees.



Figure 2.13
Edouard Manet, *The Railway*, 1873. National Gallery of Art.

The sight of moving trains captivated some park visitors, as it did the girl pictured in Manet's *The Railway*, set in the vicinity of the Square des Batignolles.

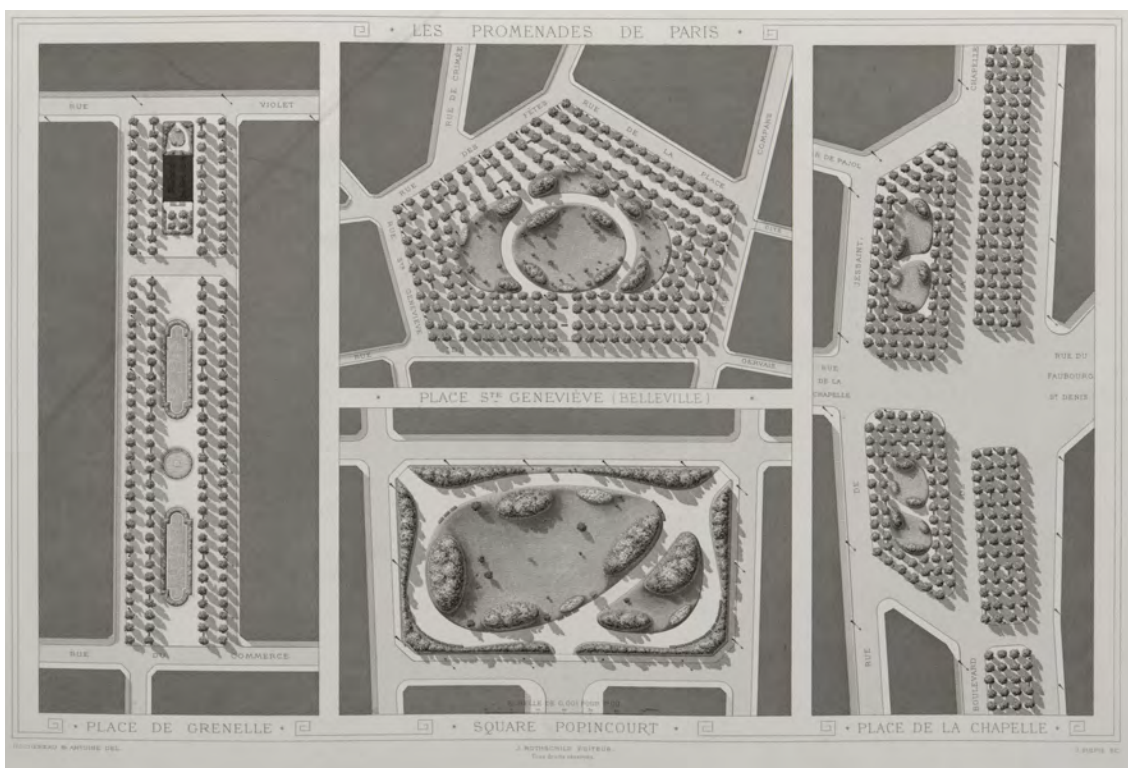


Figure 2.14
Plan of the Place Geneviève, Square Popincourt, etc. From Alphand,
Les Promenades de Paris.

The Service des Promenades et Plantations created a square inside the existing Place Geneviève in Belleville (since demolished). The appearance of a garden in the former *place* corresponded with the cessation of the raucous Mardi Gras festival that traditionally ended there, prior to the annexation of Belleville. The Square Popincourt (Maurice-Gardette) occupies the site of a former abattoir.



Figure 2.15
Plan of the Parc Montsouris, Square Victor, etc. From Alphand,
Les Promenades de Paris.

The Square Victor (top center), one of the few squares not to be enclosed by a grille, occupies leftover space between the fortifications, a railway, and the Seine. The Parc Montsouris (bottom center) is crossed by two railways.

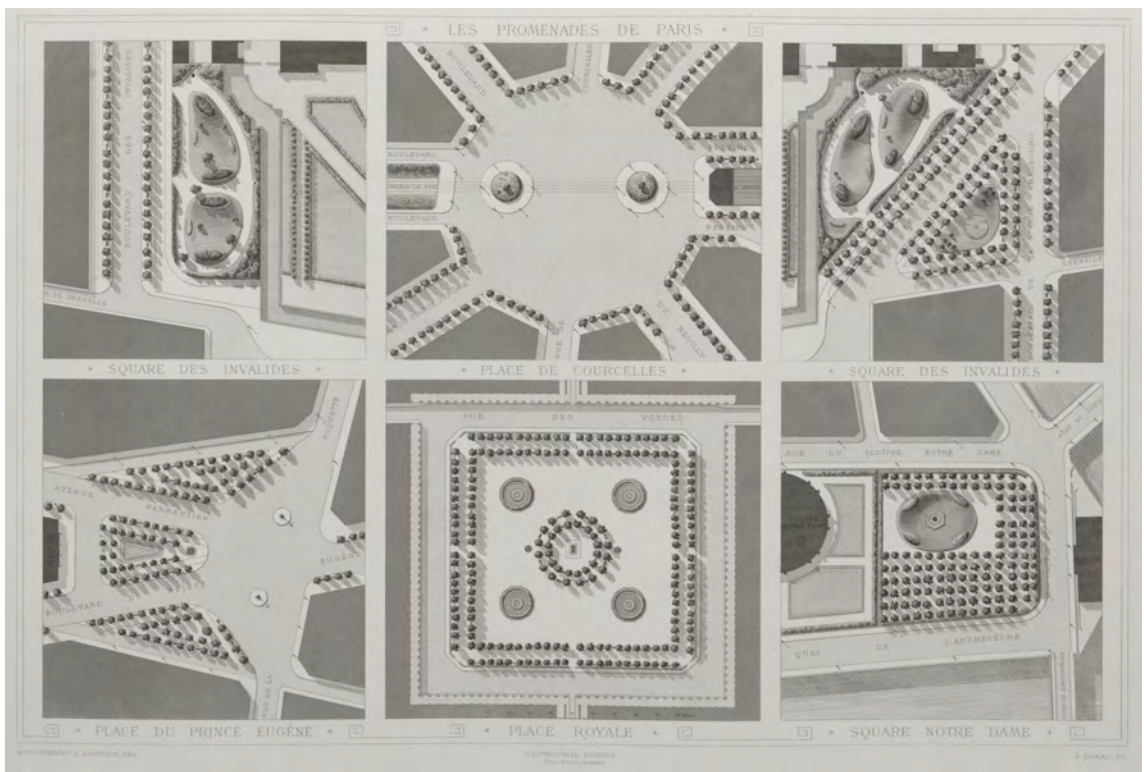


Figure 2.16
Plan of the Squares des Invalides, Place de Courcelles, Square Notre-Dame, Place Royale (Vosges), and Place de Prince-Eugene (Voltaire). From Alphand, *Les Promenades de Paris*.

The Service des Promenades et Plantations resourcefully adapted irregular remnant spaces. The Square des Invalides comprises two separate spaces (top left and top right), one of which is further split by a street. Alphand's main contribution to the older square of the Place Royale (Vosges, center) was to plant a grove of trees around the equestrian statue of Louis XIII.

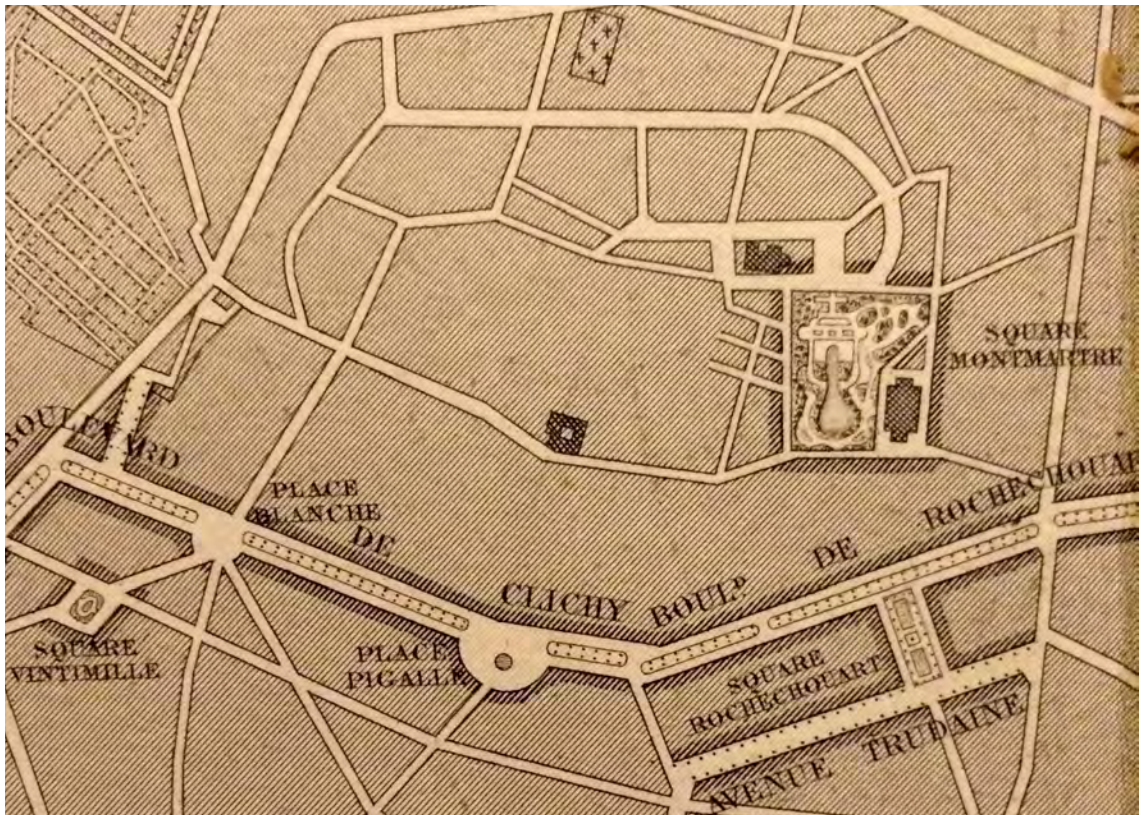


Figure 2.17
Detail of the plan general (Square Montmartre). From Alphand, *Les Promenades de Paris*.

Among Alphand's most ambitious attempts to turn a neglected space into a public garden square was the Square de Montmartre (subsequently called Saint-Pierre, Willette, and today Louise-Michel), occupying steep slopes that had been mined for gypsum. It was constructed haltingly from the 1880s-1920s. This detail of the overall plan, drafted c.1867, projects the square prior to the idea of the Basilica of Sacré-Coeur.

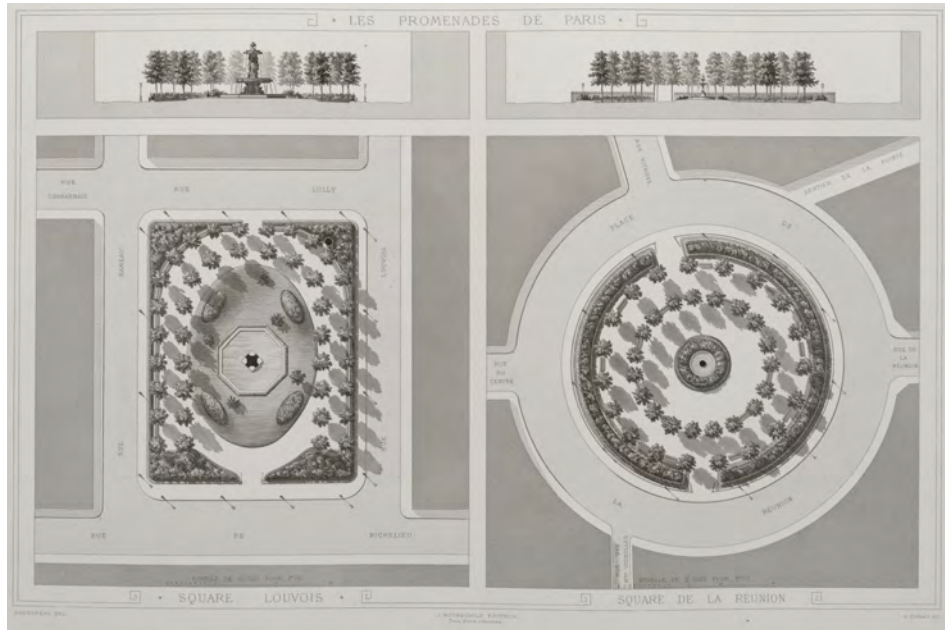


Figure 2.18
Plan of the Squares Louvois and Réunion. From Alphand, *Promenades*.

The conversion of these two former *places* into garden *squares* involved adding vegetation, gas lamps, and perhaps most importantly, a perimeter grille to create a pedestrian-only, daytime-only enclave.

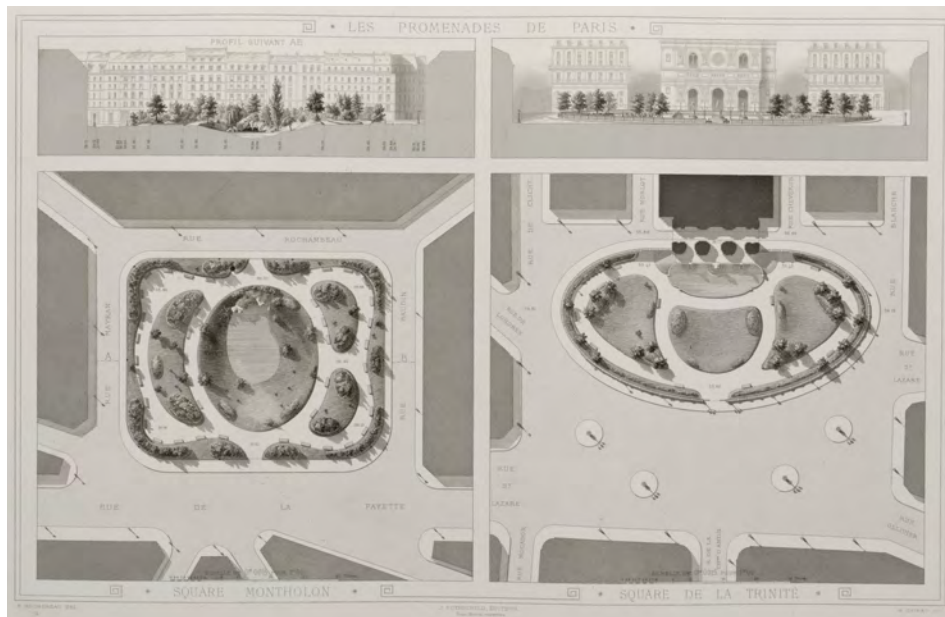


Figure 2.19
Plan of the Squares Montholon and Church of the Trinity. From Alphand, *Promenades*.

These squares served as urban foyers to the adjacent buildings: government hall and church, respectively. The Trinity square, demarcated by an architectural fountain on one side, opened on the other side into a general plaza.

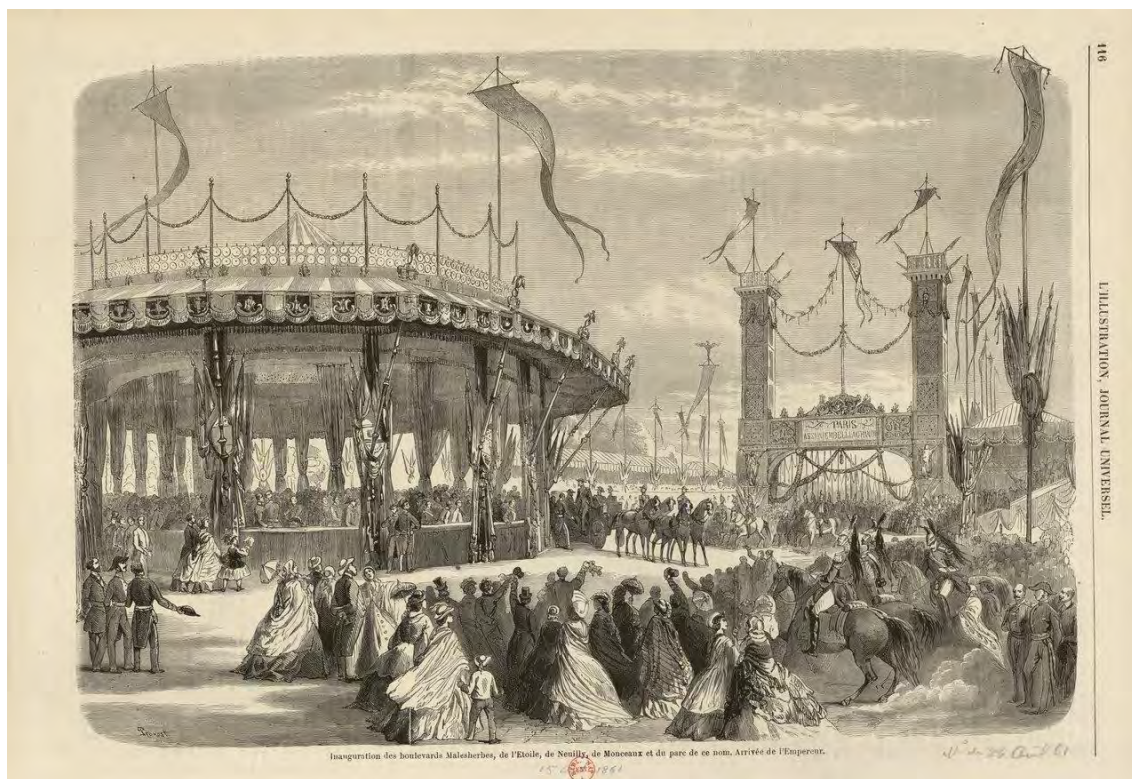


Figure 2.20
 “*Urbs Renovata.*” Inauguration of the Parc Monceau and Boulevard Malesherbes. From *L’illustration. Journal universel*, 25 Aug. 1961.

Park and boulevard were conceived and planned together, each representing different aspects of “Paris sanitized, embellished, enlarged.”

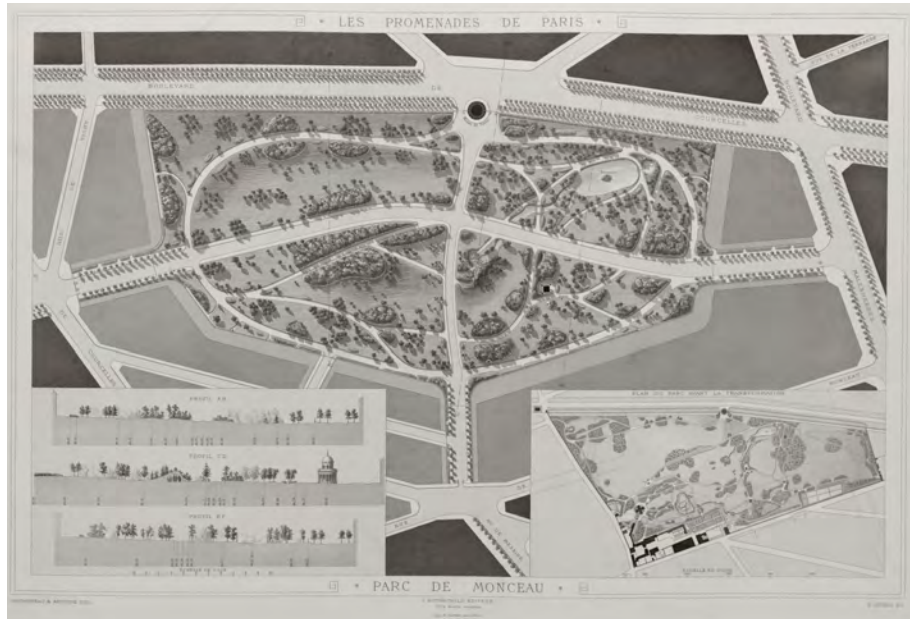


Figure 2.21
Alphand, Plan of the Parc Monceau.

The two main perpendicular drives of the park are extensions of surrounding boulevards and streets, with which they share water, sewer, and gas utilities.



Figure 2.22
Main *allée* of the Parc Monceau. Photograph by author, May 2015.

Despite the park's irregular, picturesque design, the larger *allées* recall the social nature of earlier public gardens.



Figure 2.23
Charles Marville, Top of the Rue Champlain, 20th
arrondissement, c. 1877-78. Musée Carnavalet, Paris.

The presence of shantytowns near the edges of the city, and beyond the fortifications, showed that not all Parisians had access to the benefits of public works.



Figure 3.1
 Île Natalie (Natalie's Island), Parc de Méréville. From Alexandre Laborde, *Description des nouveaux jardins de la France*, 1808, Plate 56.

The idea to make an enchanting island in the middle of a placid lake or *rivière* in the Bois de Boulogne was inspired not only by English examples, but also by French and other Continental examples, such as the eighteenth-century Méréville estate in



Figure 3.2 (and detail)

Plan of the Bois de Boulogne after renovation, showing water network. From Alphand, *Les Promenades de Paris*.

The whole project of renovating the Bois de Boulogne ultimately depended upon hydrographic design, including visible and invisible aspects. This full-spread plan shows buried water lines (in red) from three different sources, key to converting the arid forest into a lush park.



Figure 3.3
Plan of the Bois de Boulogne, signed by Varé, 10 June 1854.
Bibliothèque historique de la ville de Paris.

The Emperor commissioned the redesign of the Bois de Boulogne from the landscape architect Louis-Sulpice Varé, prior to the arrival of Haussmann, Alphand, and Barillet-Deschamps.

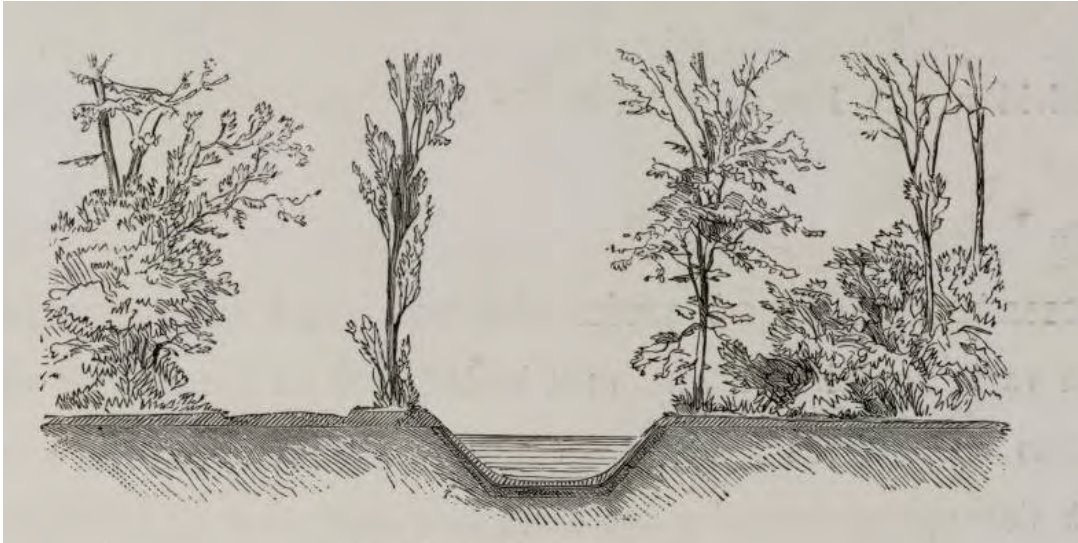


Figure 3.4
 “Profil de ruisseau” (cross-section of stream). From Alphand, *Promenades*.

The streambeds were lined in concrete after the initial trial in clay was repeatedly punctured by debris and water rats.



Figures 3.5, 3.6
 Front and profile views of dams across a stream. From Alphand, *Promenades*.

Small dams slowed the flow of water along its gradual descent to the Seine. The rough concrete barriers were covered with natural rocks, sometimes forming simple bridges.



Figure 3.7
Charles Marville, Mare aux Biches, Bois de Boulogne. Photograph c.1858-60. Metropolitan Museum of Art.

Alphand conserved the quiet pond known as the Mare aux Biches, but regularized its water supply and built a cascade to supply it



Figure 3.8
Charles Marville, Mare aux Biches, Bois de Boulogne. Photograph c.1858-60. Museum of Fine Arts, Houston.

The price of the improved image of nature was the loss of the seasonal fluctuations of water level and the pond ecosystem.



Figure 3.9
Charles Marville, Grande Cascade of the Bois de Boulogne. Photograph c.1858. Bibliothèque historique de la Ville de Paris.

The largest fall in the Bois de Boulogne is the 7.5-meter drop of the Grande Cascade, near the former Porte de Longchamp. Constructed with boulders from the forest of Fontainebleau, it was occasioned, Alphand wrote, by the rapid change in elevation.



Figure 3.10
A. Prévost, Grande Cascade of the Bois de Boulogne. c. 1855-1870, Bibliothèque nationale de France, Collection de Vinck.

The relatively small basin enabled visitors to gather around to watch the *jeux d'eaux*, as in the first ring of a theater.



Figure 3.11
Upper grotto, Grande Cascade. From Alphand, *Promenades*.

Visitors could originally explore the upper grotto, through which water gushed toward the precipice, when released from the reservoir.



Figure 3.12
Lower grotto, Grande Cascade. Photo by author, May 2015.

Through the curtain of falling water, signs of the city, such as automobile traffic, remain visible.



Figure 3.13
Long section, Grande Cascade. From Alphand, *Promenades*.

The Grande Cascade dramatizes the abrupt change in elevation at the edge of the plain of Longchamp.



Figure 3.14
Grande Cascade, Méréville. From Laborde, *Description des nouveaux jardins*.

Laborde built an underground canal and diverted water from a nearby river to supply the cascade at his estate, Méréville, in the 1780s.

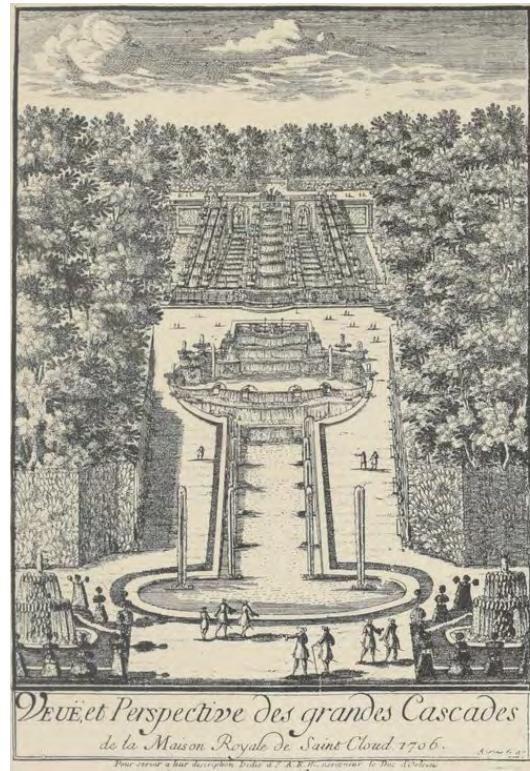


Figure 3.15
Grande Cascade, Château de Saint-Cloud. From Fleury, *Le Palais de Saint-Cloud*.

Designed by Le Pautre in the 1660s, the cascade was the culminating feature of a water course stretching 1.1 kilometers and dropping 76 meters in elevation.



Figure 3.16
Grande Cascade, water off. Photo by author, May 2015.

Like the jets and fountains of Louis XIV at Versailles, the Grande Cascade could not and cannot run continuously, because of the limited amount of water available.



Figure 3.17
Reservoir of the Grande Cascade. Photo by author, May 2015.

The reservoir, established in a former gravel pit above the falls, is disposed as a lake in itself. Its concrete banks are totally undisguised.

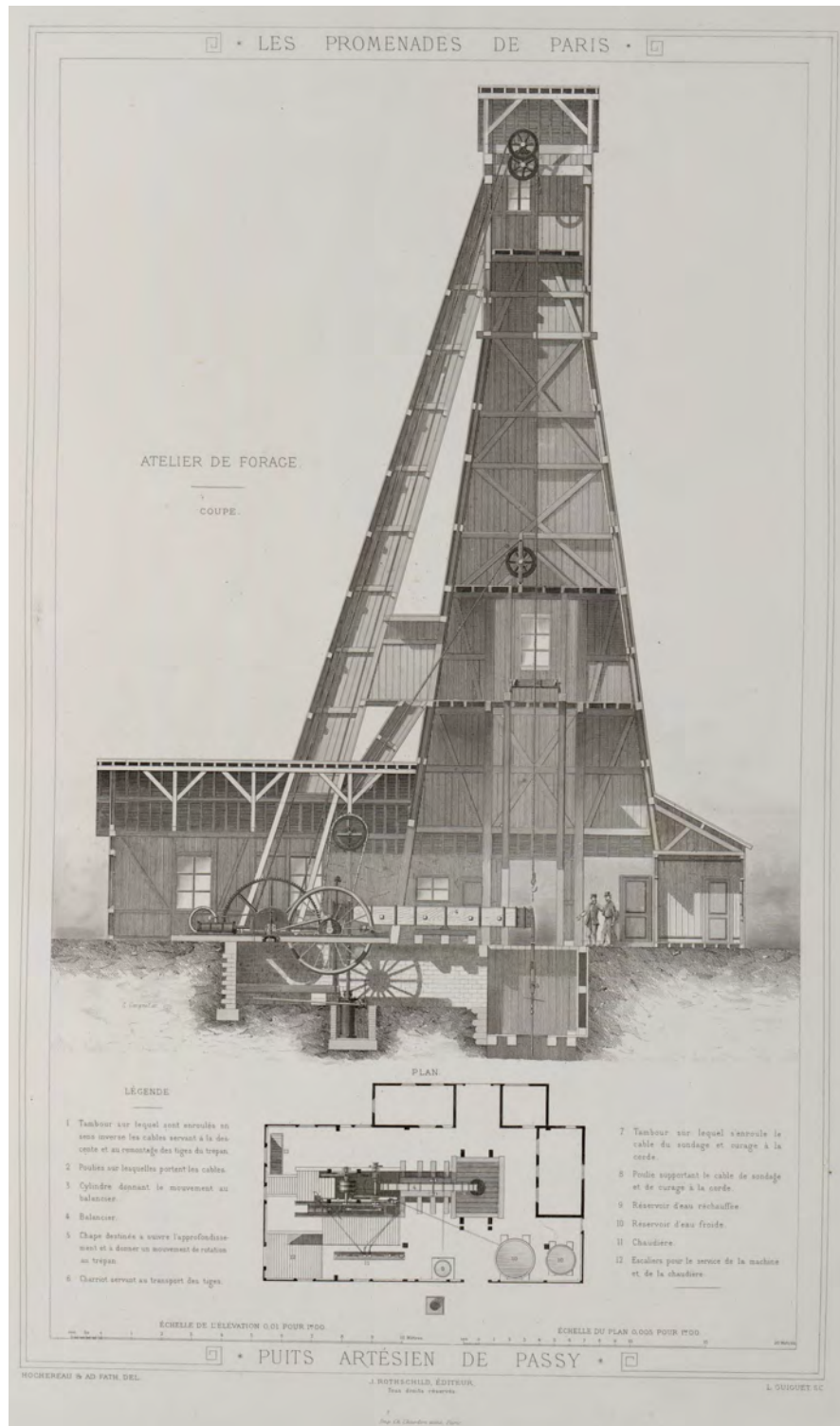


Figure 3.18
Drilling rig of the artesian well of Passy. From Alphand, *Promenades*.

The engineers hit obstacle after obstacle in their quest to reach the aquifer. The embattled project captured the public imagination, despite the fact that the only visible sign of it was the boxy drilling shed belching black smoke.

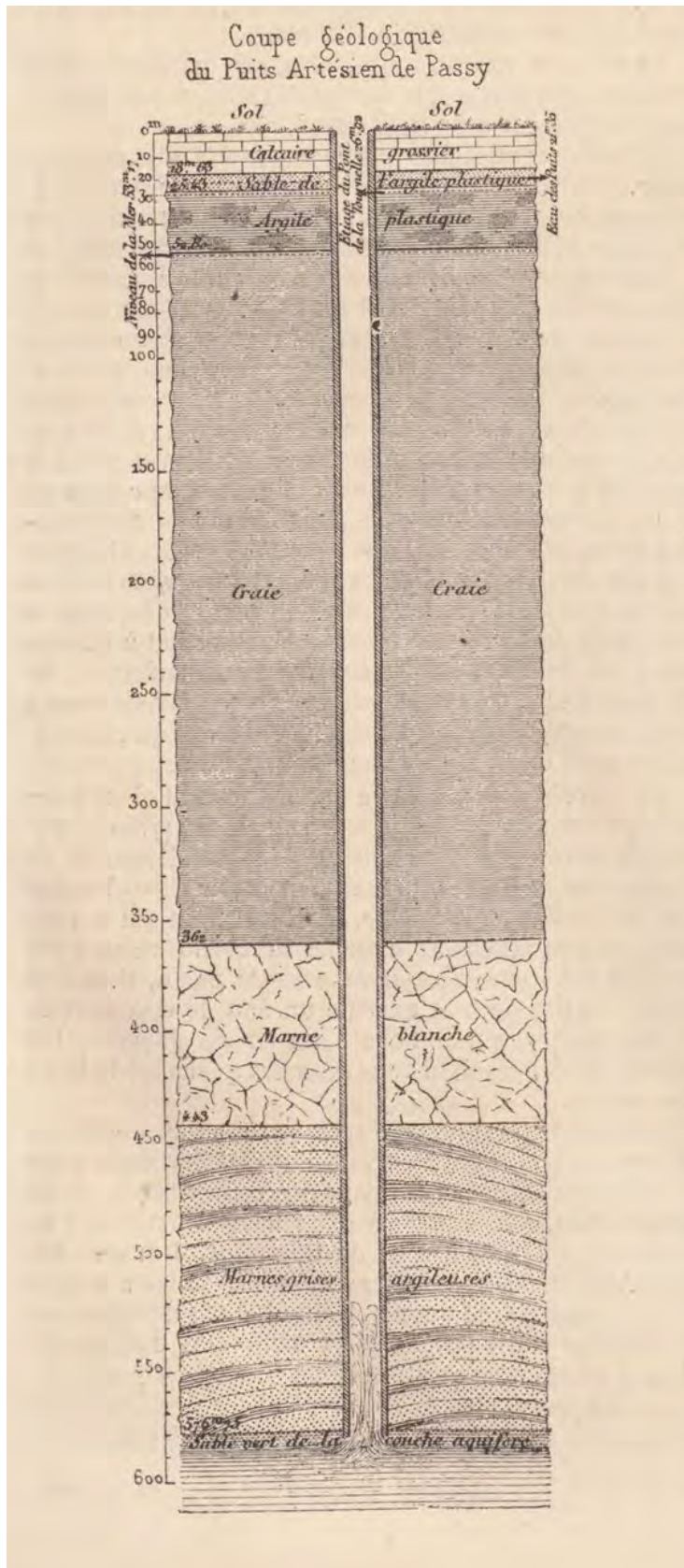


Figure 3.19

Geological section of the artesian well of Passy. From *Le Monde Illustré*, 8 June 1861.

After six years of halting efforts, Alphand allowed the newspaper to publish this section showing the layers of clay, sand, and stone to a depth of half a kilometer beneath the surface, which had given his team so much trouble.

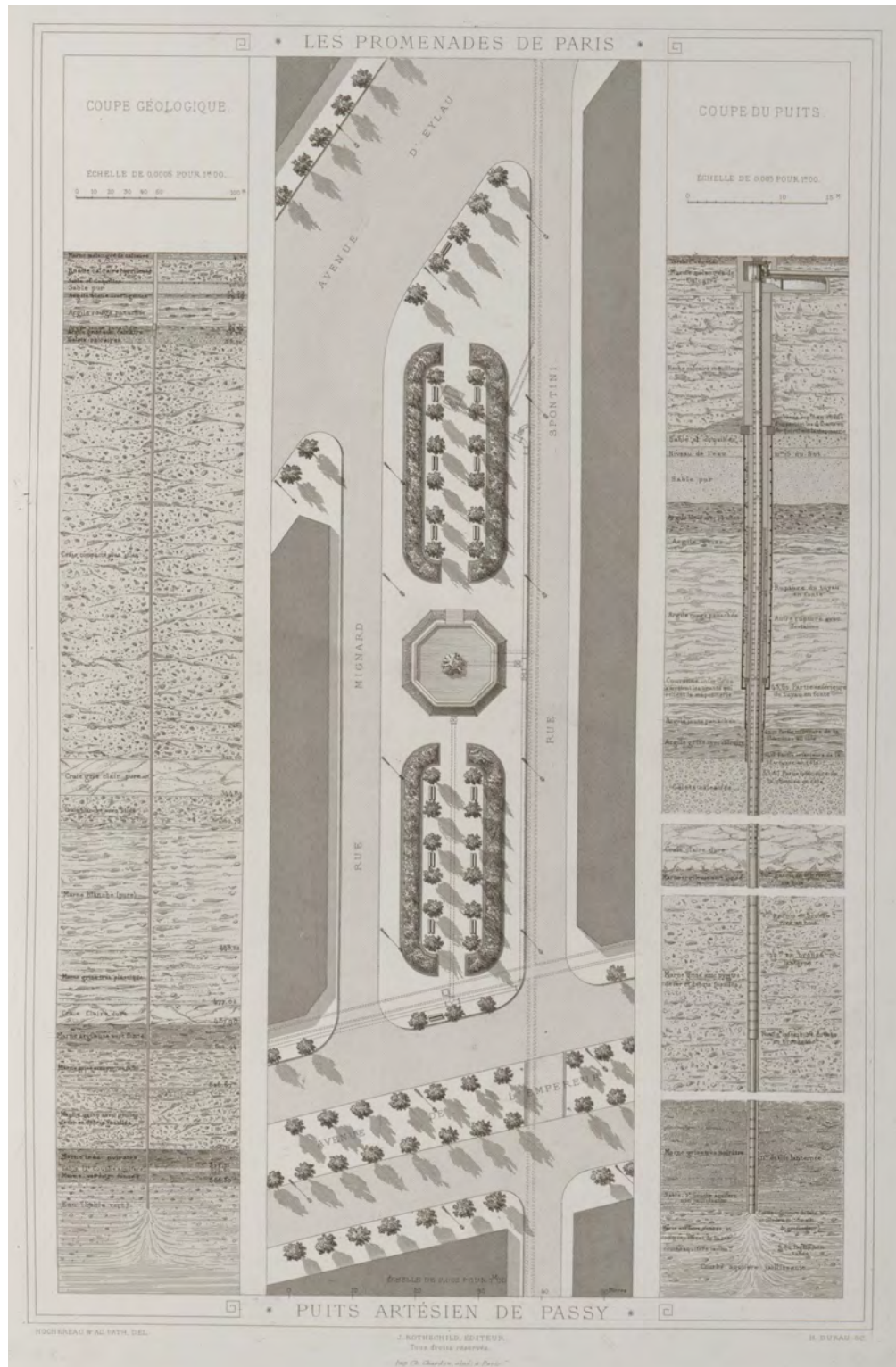


Figure 3.20
Geological section and public square of Passy. From Alphand, *Promenades*.

Finally a public garden square marked the site of the engineers' prolonged struggle, furnishing local residents with a source of drinking water

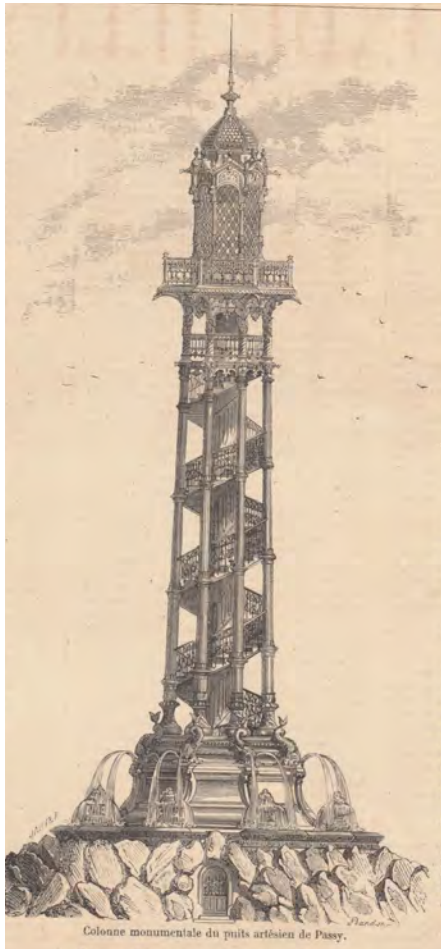


Figure 3.21
Project for a monumental column at the artesian well of Passy. From *Le Monde Illustré*, 3 Oct. 1857.

This unrealized tower, designed by Alphand and the engineer Darcel, would have crowned the artesian well below, serving as both a standpipe and an ornamental fountain.



Figure 3.22
Alphand, Jean Darcel, and Emile Reiber, Project for a cast iron tower for the artesian well of Passy, 1857. RMN-Grand Palais (Musée d'Orsay).

In an alternate version of the same project, rendered in watercolor, the tower rests upon a base of dressed, rather than rustic, stonework, reminiscent of a classical nymphaeum.

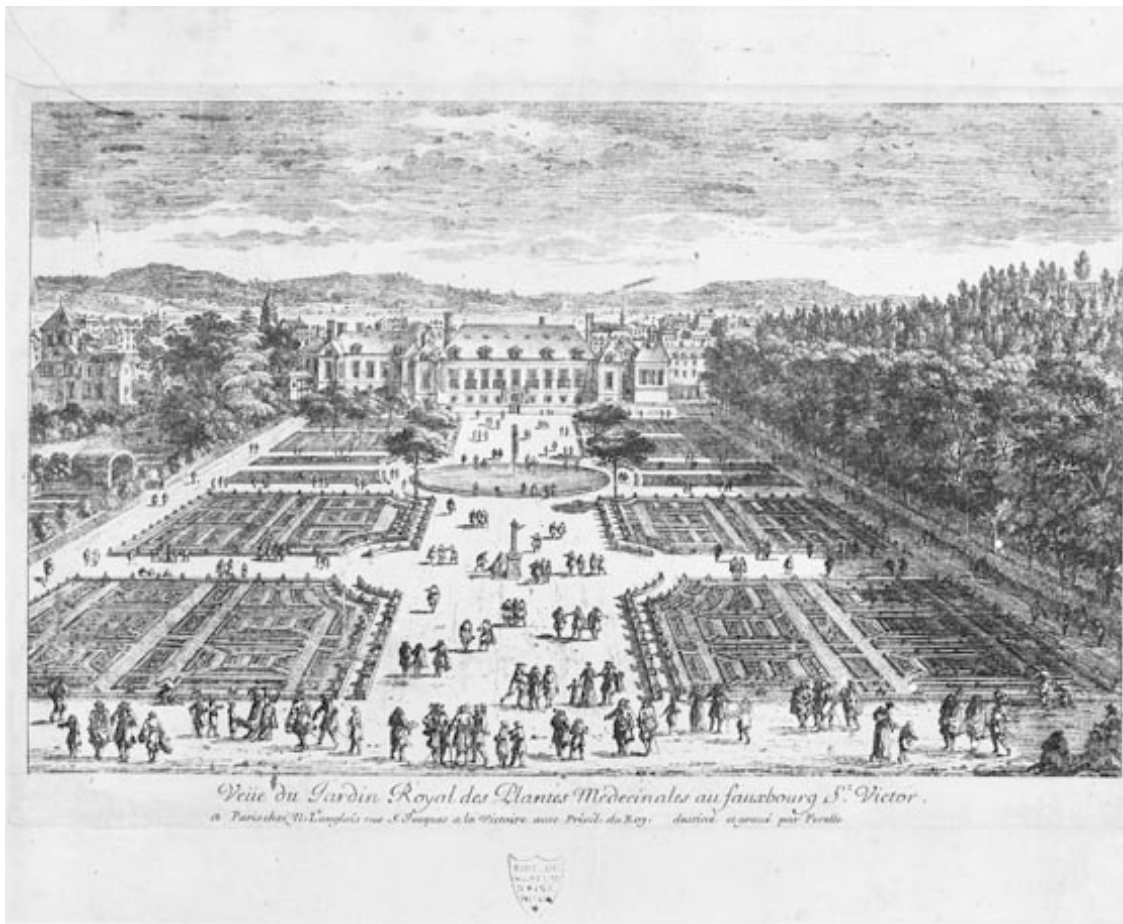


Figure 4.1
View of the Jardin Royal des Plantes Medecinales, 1690,
by Adam Perelle. RMN-Grand Palais (Château de
Versailles). Muséum national d'histoire naturelle.

The Jardin des Plantes, like the other state gardens established in the seventeenth century, was located outside the city walls. Vegetated space and the practice of promenade were long associated with the peripheries of the city.



Figure 4.2

A view of the boulevards around 1810. BnF.

Wider than any city street, the boulevards, occupying the ring of former fortifications, were planted with up to four rows of trees, offering shade and organizing carriage circulation.



Figure 4.3

Promenade on the Boulevard Italien, 1797. BnF.

In the eighteenth century, the old elite rituals of promenade gave way to a more heterogeneous culture of theater, amusements, food and drink, and social mixing among different classes.



Figure 4.4
Plan of Paris and its suburbs, Delagrive, 1728.

It was by exiting the city that Parisians could find air and space to roam, and look back upon the city from the surrounding heights. Rousseau sought out the edges of the city for his contemplative strolls, while others sought out estate gardens, villages, or open farmland.



Figure 4.5
View of the Barrière Saint-Martin et the basin of the Ourcq canal. Anonymous etching, undated (c.1820-30?), Chéreau, M. Binelli, del. BNF.

Public engineering works could also create opportunities for promenade, as, for example, along the tree-lined quays of the Bassin de la Villette, opened in 1808 on the orders of Napoléon.



Figure 4.6
View of the Bassin de la Villette in 2015. Photograph by author.

The open spaces along the basin are popular gathering spots today. The quays are divided into bands of pavement, sanded allées and play areas, tree-lined walks, cycling paths, and streets for automobiles.



Figure 4.7
Promenades aériennes or *Montagnes russes* at the jardin Beaujon. Louis Garneray, 1817. BNF.

In the late eighteenth and early nineteenth centuries, private amusement gardens and open-air ballrooms were concentrated on the western outskirts of Paris, in the vicinity of the Champs-Élysées. Pictured here, the celebrated “Russian mountains” at the Folies Beaujon offering a *promenade aérienne*, or aerial stroll.

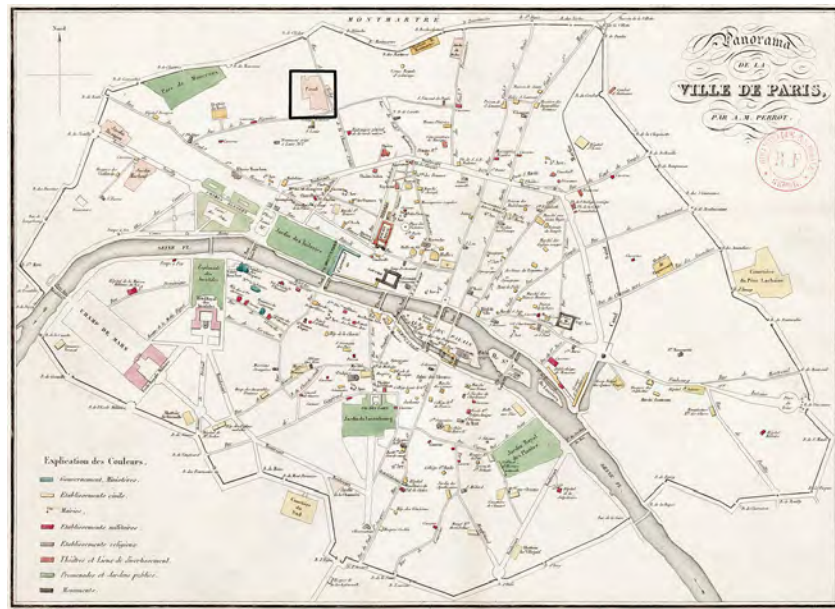


Figure 4.8
 Panorama (plan) of the city of Paris, by Perrot, 1826. BnF.

Public gardens in the first half of the nineteenth century (shown in green) remained limited to those established in the early 1600s, with the addition of the Parc de Monceaux. The private gardens of Tivoli, Marbeuf, and Beaujon, color-coded with theaters, are clustered near the western edge of the city.



Figure 4.9
Honoré Daumier, *Promenade hygiénique et sentimentale...* no. 16 from the series *Professeurs et moutards* 1846. de Young Museum.

Daumier's cartoon mocks the supposed virtues of the healthful and sentimental promenade, which nonetheless causes its practitioners to take deep breaths of fresh air (by yawning from boredom).



Figure 4.10
Honoré Daumier, *Les trains de plaisir*, 1864, Lithograph, National Gallery of Art.

Here Daumier shows the irony of Parisians' crowding onto tightly packed trains to attempt to escape the city for a weekend excursion in the country. Middle-class holiday cottages were crowded together in suburban zones.



Figure 4.11
 "Promenades aux environs de Paris" (plan), Late 19th century.
 BnF.

New transportation and communication technologies brought city and country closer together. Here railroad lines (shown in black) give Parisians access to an ever-expanding zone of potential pleasure strolls and excursions. The culture of promenade tied urban society with exurban landscapes.

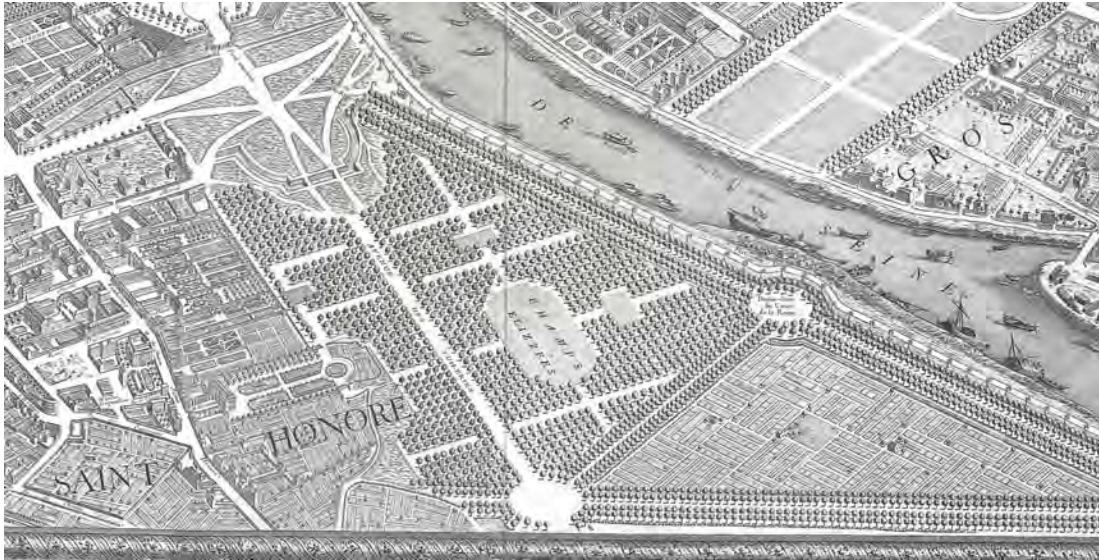


Figure 4.12
The Champs-Élysées as shown on the Turgot Plan, 1739.

New transportation and communication technologies brought city and country closer together. Here railroad lines (shown in black) give Parisians access to an ever-expanding zone of potential pleasure strolls and excursions. The culture of promenade tied urban society with exurban landscapes.

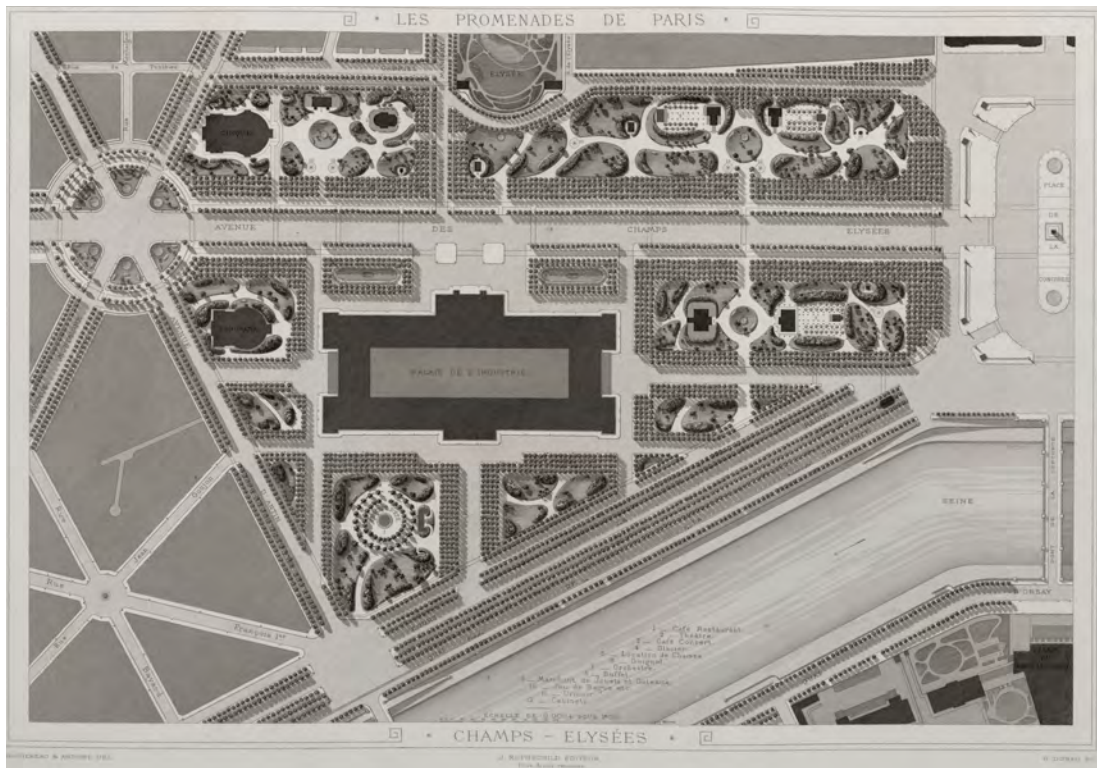


Figure 4.13
The Champs-Élysées as renovated in 1858. From Alphand, *Promenades*.

Large trees still lined the avenue and allées, but the deeper groves were converted into irregular gardens dotted with amusements.



Figure 4.14

Alphand, Fountain near the circus, Champs-Élysées.

The irregular gardens off the central avenue, designed by Barillet-Deschamps, resembling squares, provided a change in scale and more variety in terms of both program and sensory experience.

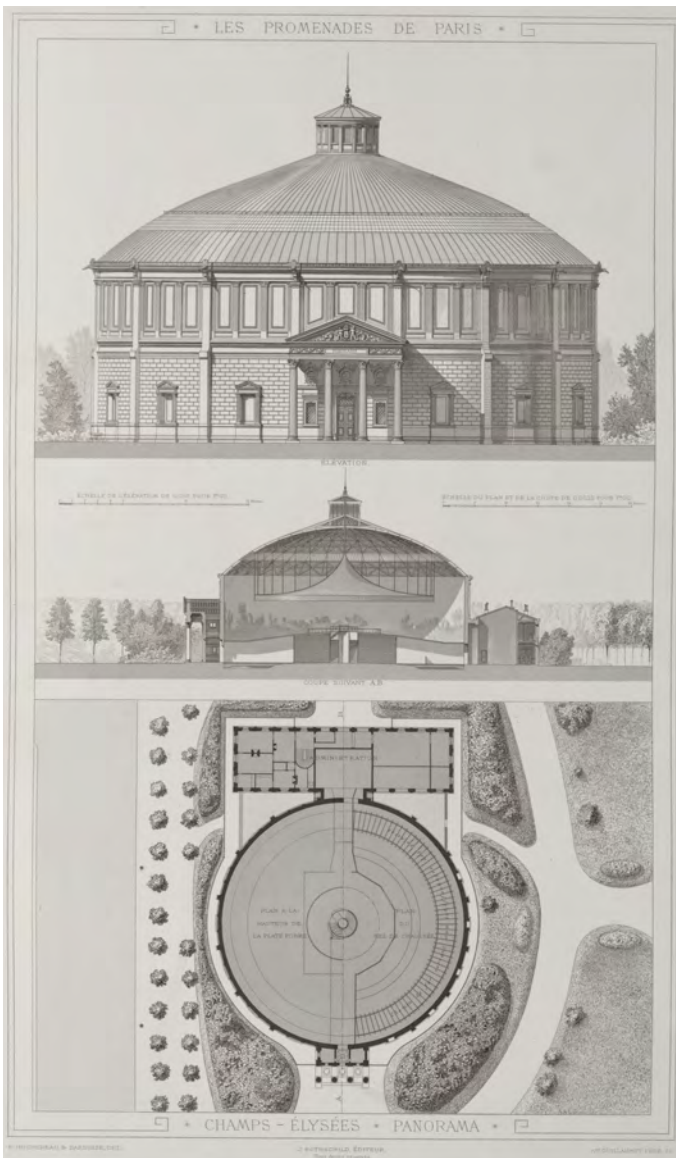


Figure 4.15

Panorama National designed by Gabriel Davioud. From Alphand, *Les Promenades de Paris*.

Among the most monumental amusement structures in the Champs-Élysées, the building ushered visitors onto a central platform, from which they could observe a painted scene in the round. This building replaced an older panorama designed by Hittorff. The parks and gardens of the Second Empire offered open-air panoramas as well, for example from the heights of the Buttes-Chaumont.



Figure 4.16
Marville, Boulevard de Sébastopol. c.1860.
State Library Victoria Melbourne.

For the first time, with the Boulevard de Sébastopol, the term *boulevard* was applied to a purpose-built axis through the heart of Paris, rather than to the space of cleared fortifications. Measuring 30 meters wide, the boulevard was equipped with rows of trees, street furniture, and plenty of room to walk, ride, shop, or *flâner*, reproducing something of the peripheral *Grands Boulevards* inside the old urban core.



Figure 4.17
View of the Place de Sebastopol (Saint-Michel). BHVP.

On the left bank of the Seine, the Boulevard de Sebastopol opened into a large new place, known as Saint-Michel, anchored by Davioud's engaged fountain.



Figure 4.18
Design of the Fontaine Saint-Michel and obligatory apartment façades, Gabriel Davioud. BHVP.

Davioud's neoclassical fountain design was echoed in the obligatory apartment facades of the Place Saint-Michel.

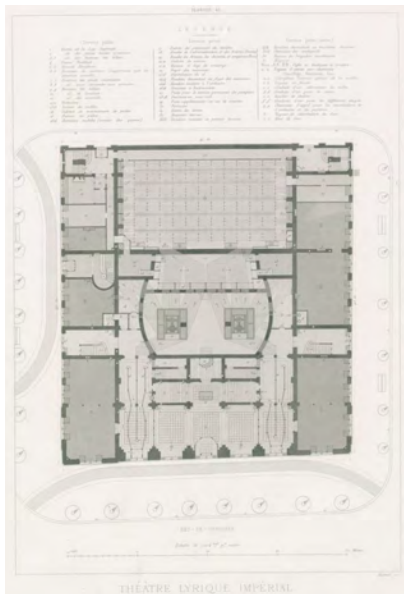


Figure 4.19
Ground plan, Théâtre Lyrique
Impérial, by Gabriel Davioud. From
Daly and Davioud, *Les théâtres de
la Place du Châtelet*, 1865.

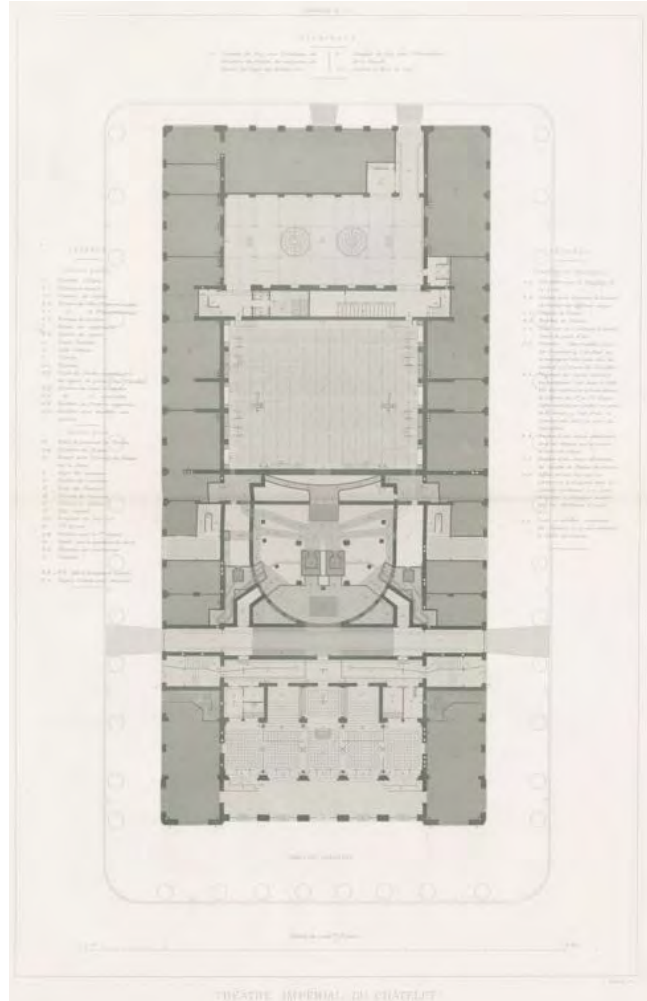


Figure 4.20
Ground plan, Théâtre Impérial du Châtelet, by Gabriel
Davioud. From Daly and Davioud, *Les théâtres de la
Place du Châtelet*, 1865.

The two new theaters, dedicated respectively to opera and theater (shown in approximate relative scale) brought the performing arts to the old center of town. They also incorporated the commerce of the boulevard in the form of cafés and boutique to occupy the street-level galleries (shaded in dark gray on the plans). The theaters were thus conceived not only as cultural monuments, but as mixed-used urban buildings.

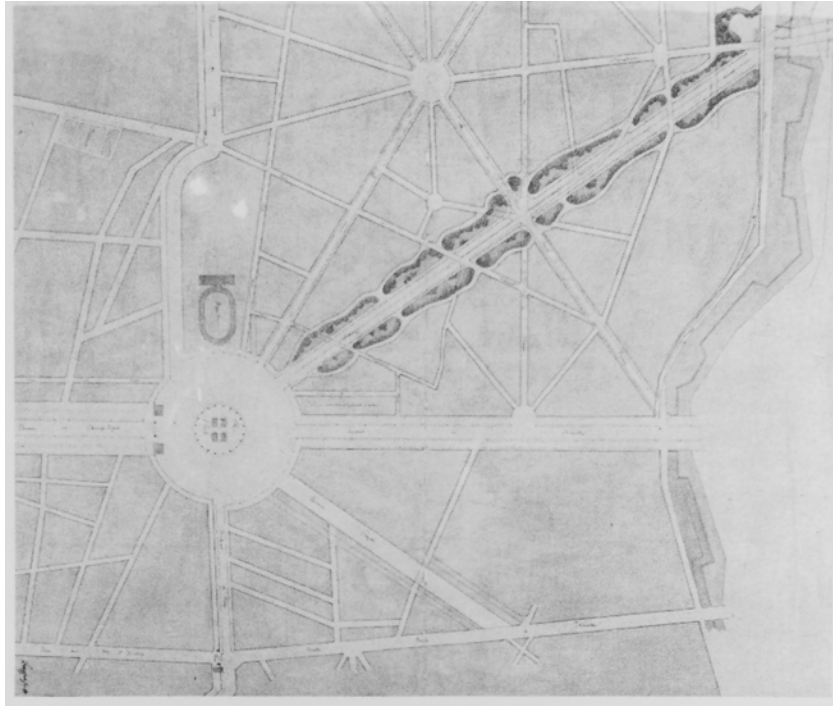


Figure 4.21
Project for the Place de l'Étoile and Avenue du Parc de Boulogne, Jacques-Ignace Hittorff, dated June 1853. From von Joest, *Hittorff*.

Hittorff's original plan for the avenue to the Bois, a 40-meter roadway flanked by irregular gardens, was rejected by Haussmann as too puny.

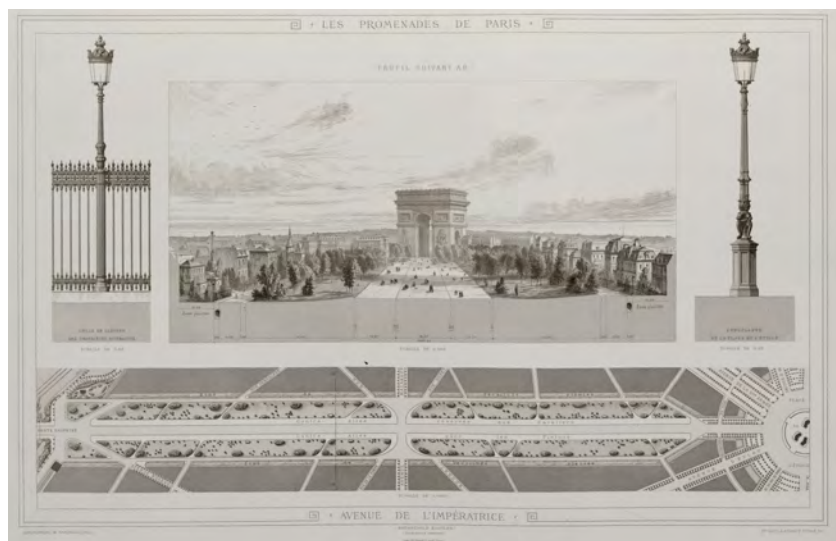
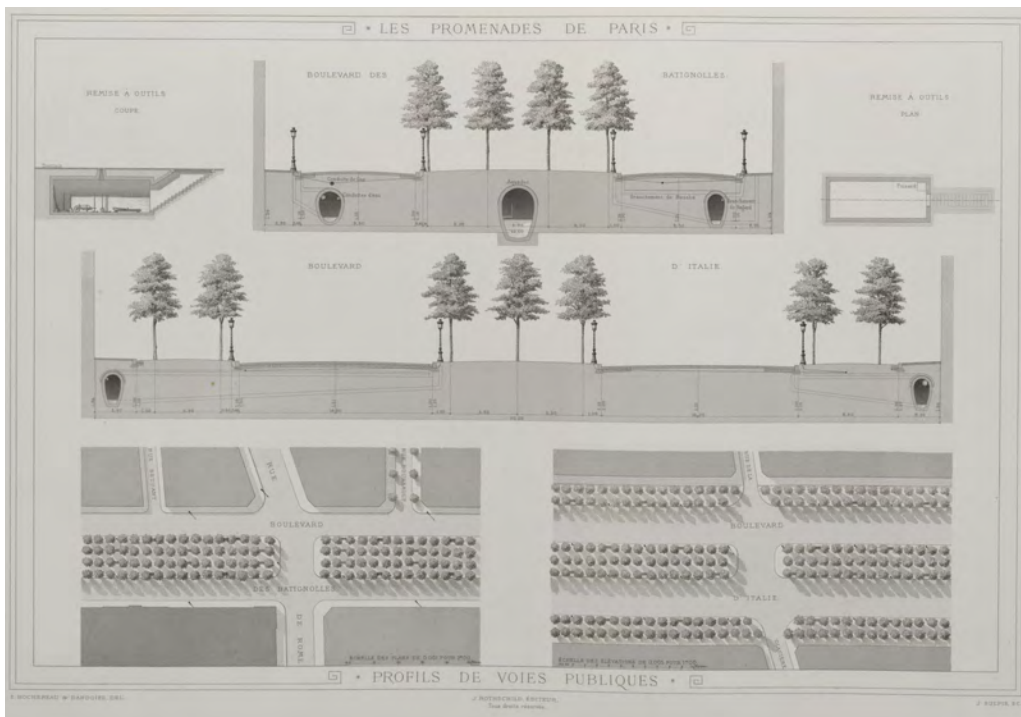
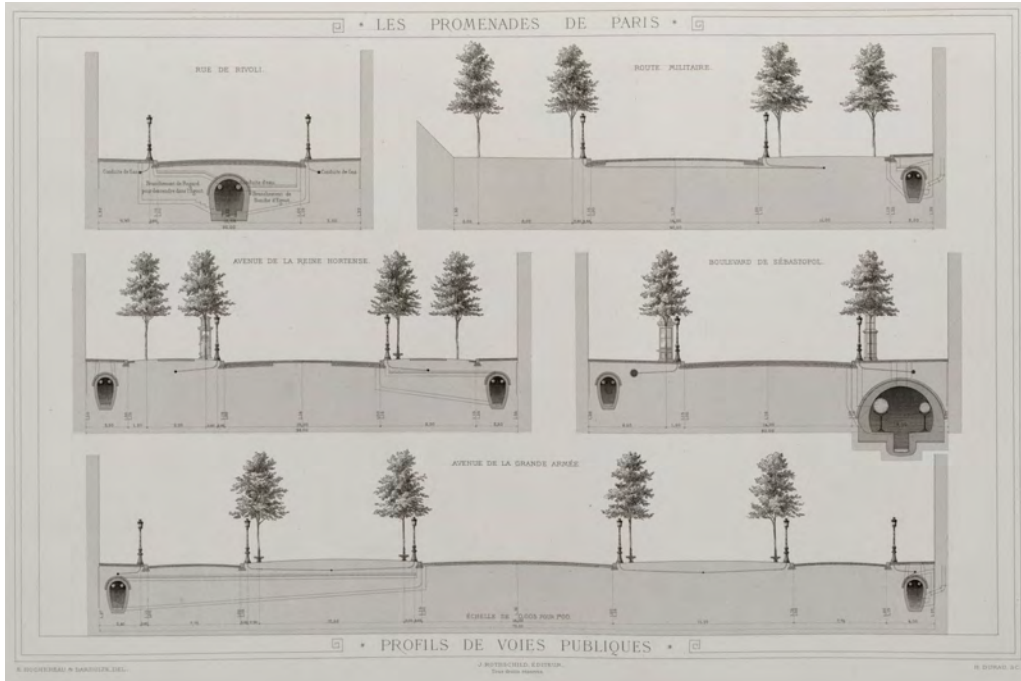


Figure 4.22
View and plan of the Avenue de l'Impératrice (Foch). From Alphand, *Promenades*.

The imposing, 120-meter-wide avenue, redesigned by Alphand, recalls the Louis XIV's approach to Versailles, the Avenue de Paris. Unlike a traditional, tree-lined avenue, here the grassy medians are planted with irregular clumps of vegetation.



Figures 4.23-4.24
 Profiles of public thoroughfares. From Alphand, *Promenades*.

The seven profiles of boulevards, avenues, and streets share essential components: underground sewers and fresh water pipes, a graded carriageway with arched profile for drainage, sidewalks or *allées*, gaslights, and trees (except for the Rue de Rivoli, top left). Public ways thus facilitated the circulation of fluids and gas below street grade, traffic and pedestrians at grade, and air and light, so to speak, above grade.

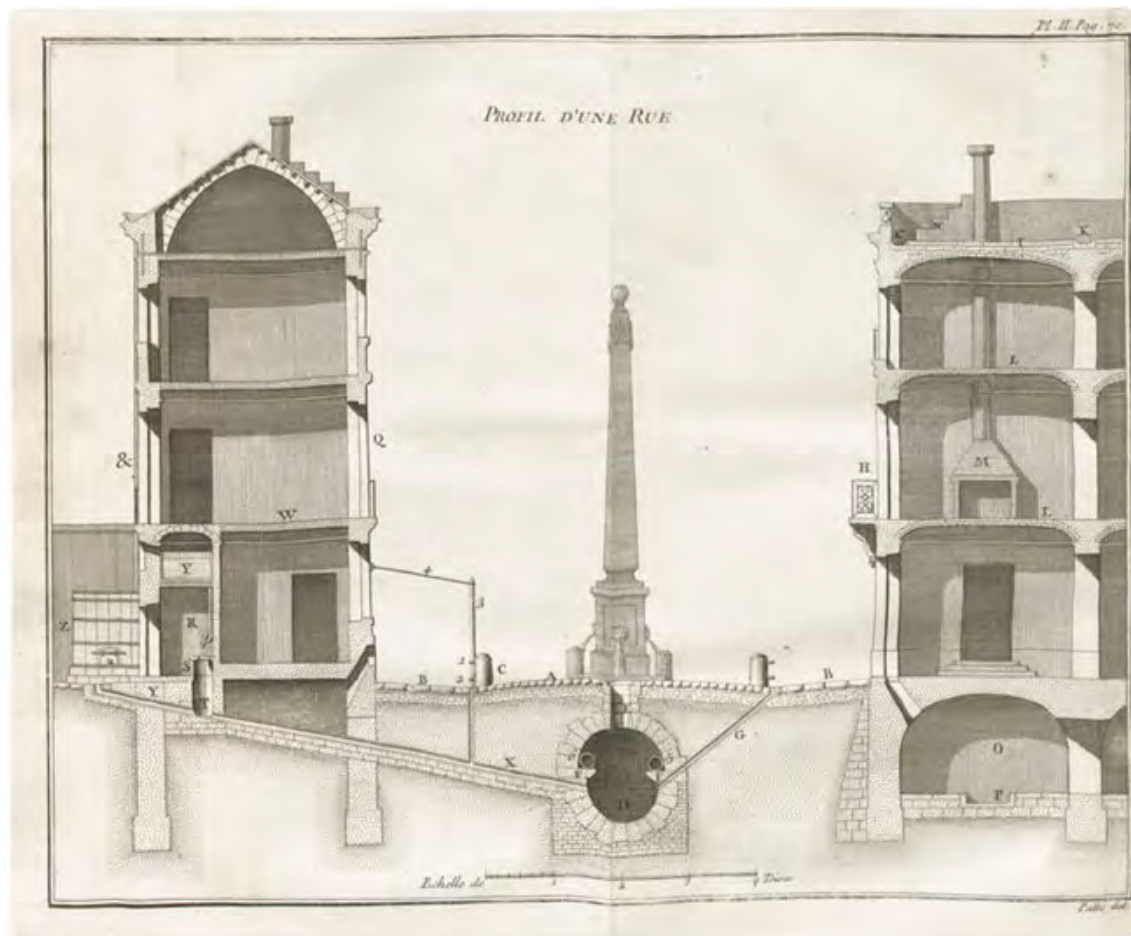


Figure 4.25
Pierre Patte, Section through a street in a new town, 1769.

The hygienic organization of the functions of the street—notably water, drainage, and sewerage—was theorized long before the time of Haussmann’s engineers. There was no gas in Patte’s time, however; nor did he conceive of planting the surface with rows of trees, as along the boulevards or country roads.

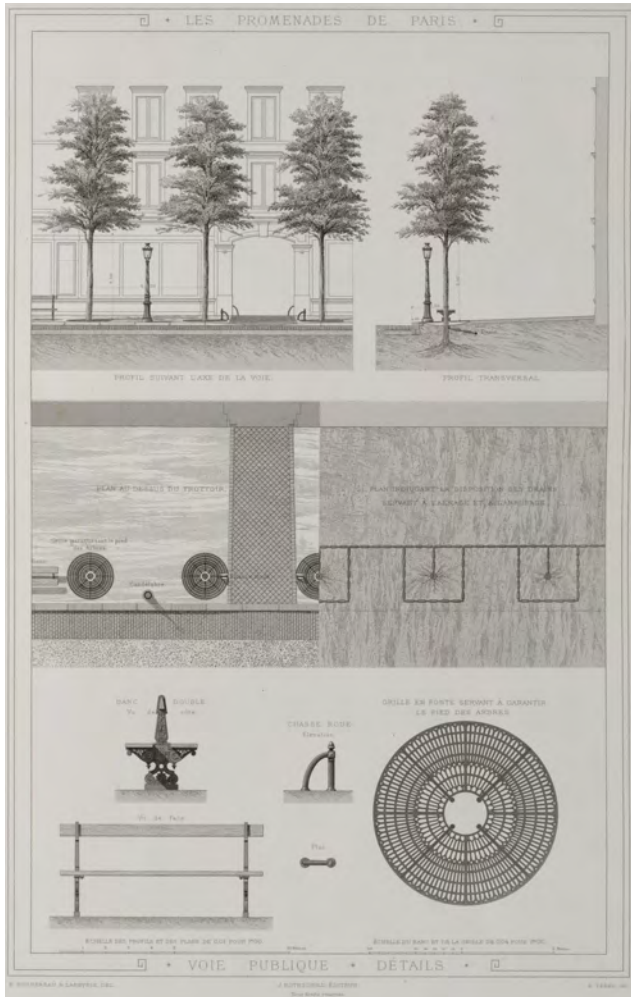


Figure 4.26
Details of *voie publique*. From Alphand, *Promenades*.

This plate reveals additional nuances in the interface among mineral, vegetal, hydrological, metallic, and gaseous components. For example, foliage must be trimmed below the level of the gaslights. Tree roots are either drained or irrigated by buried pipes, and protected by iron grilles. To reduce the exposure of tree roots to leaking gas, the city required the gas company to encase their pipes in gravel, and to provide regular outlets to the air



Figure 4.27
Gustave Caillebotte, *The Boulevard Seen from Above*, 1880. Oil on canvas. Private Collection. Comité Caillebotte, Paris. Courtesy National Gallery of Art.

Caillebotte's painting suggests how the quotidian furniture of the boulevard forms a convivial scene of everyday life.



Figure 4.28
Victor Baltard, Project for the Place Prince-Eugène (Voltaire). From *Le Monde Illustré*, 8 Nov. 1862.

Baltard, better known for designing the iron-and-glass market hall in the center of town, here proposed a monumental decoration for the Place Voltaire, which was not accepted.



Figure 4.29
View the Place Prince-Eugène (Voltaire) as realized. From *Le Monde Illustré*, 1865.

As built, the *place plantée* (vegetated plaza), is simply an open space relieved by trees, especially on the side nearest the town hall, seen here in the background. See also the plan, Figure 2.16.

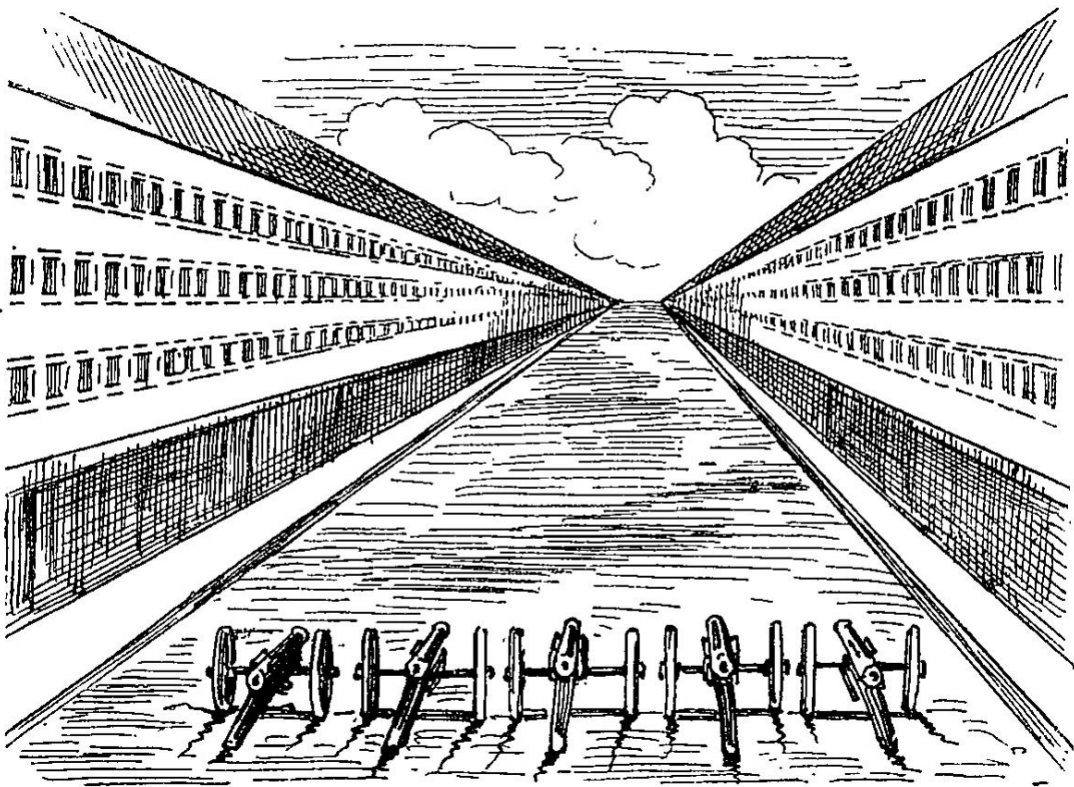


Figure 4.30

Georges Lafosse, Canon and boulevard, 1878. From Touchatout, *La dégringolade impériale*.

This satirical but bleak rendering, from after the fall of the Second Empire, portrays the Haussmannian boulevard as nothing more than a firing range flanked by oppressively monotonous buildings. Here the metaphor between the allée of a hunting forest and an urban thoroughfare takes on a more sinister dimension, in light of the bloody conflicts of 1871.

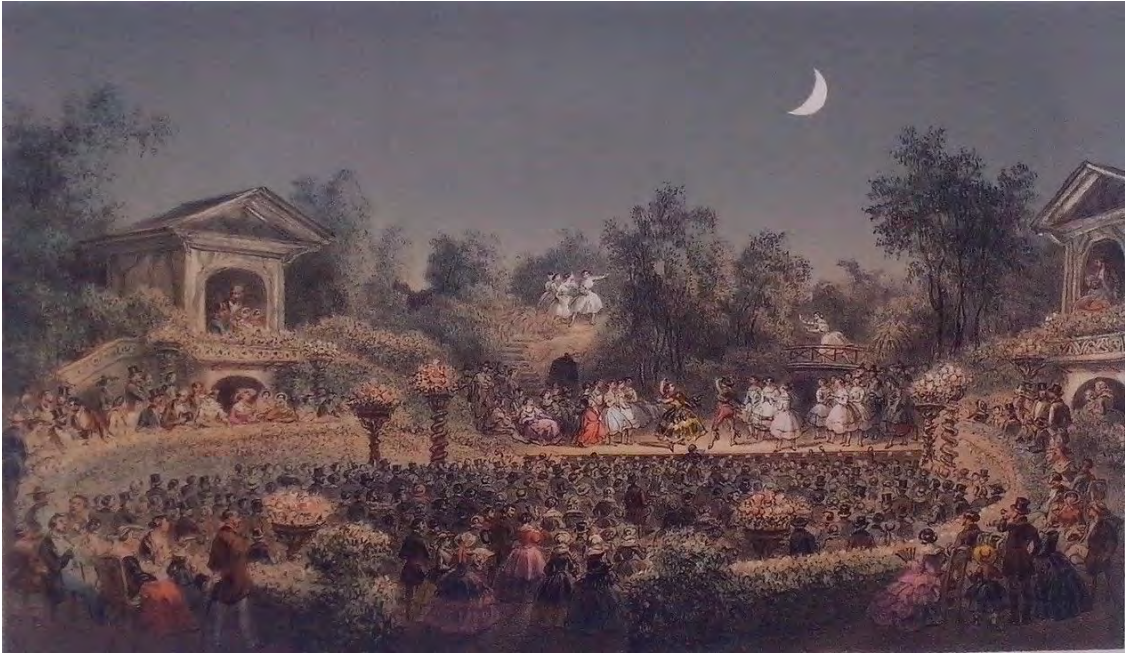


Figure 5.1
View of the Théâtre des Fleurs, Pré-Catelan, Bois de Boulogne,
1860. Chromolithograph by Deroy from "France en Miniature,"
Pl. 240. BNF.

The Théâtre des Fleurs was the crown jewel of the Pré-Catelan, a privately run amusement garden inside the Bois de Boulogne. The amphitheater ensconced the audience in foliage and vegetation while gas lamps lit the night.



Figure 5.2
Long section of the Théâtre des Fleurs, Pré-Catelan.
From Alphand, *Promenades*.

The stage was disposed in the form of an irregular landscape garden in miniature, blending with the landscape of the Bois de Boulogne outside. Concealed passages and caverns provided discrete entrances and exits for actors and dancers.

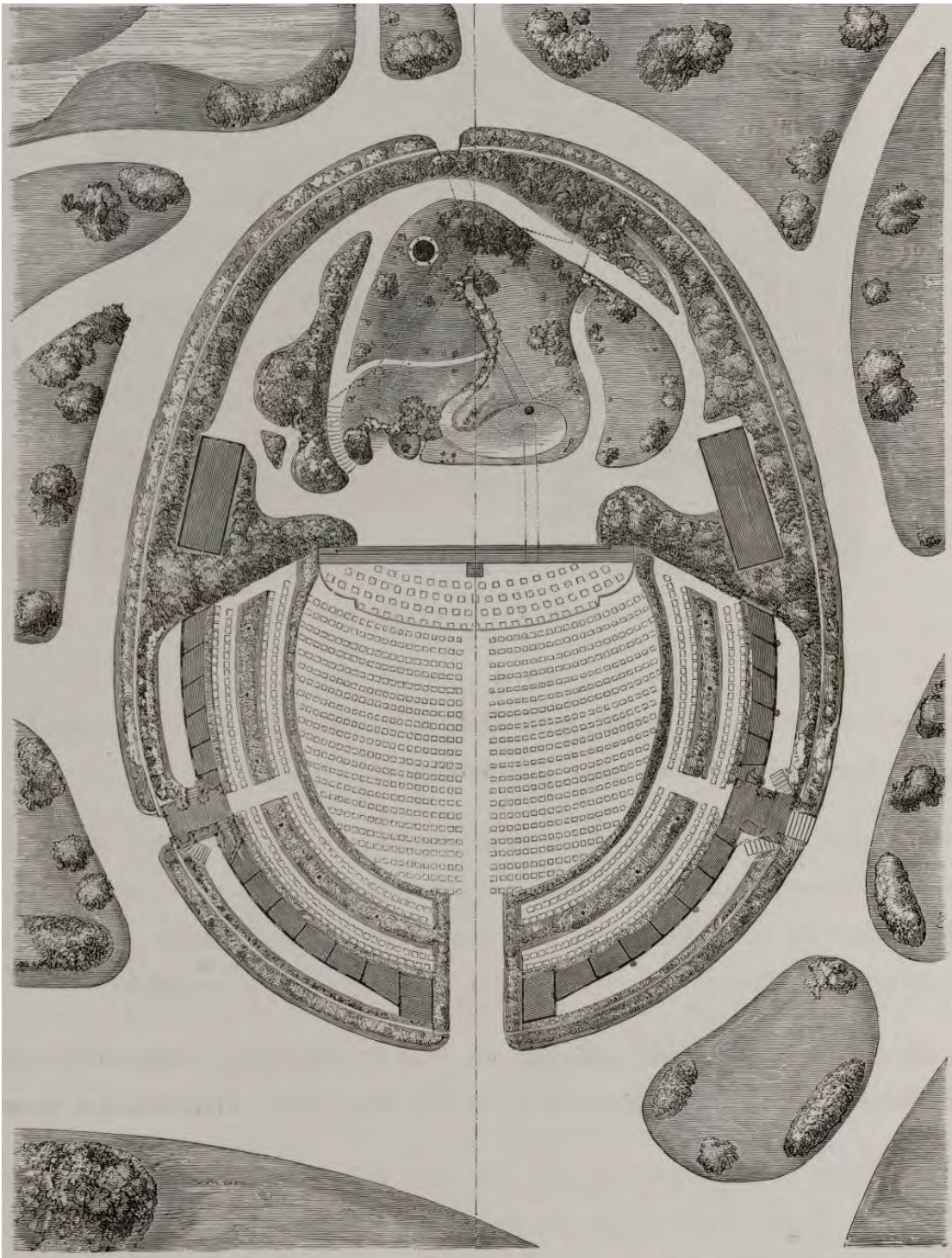


Figure 5.3
Alphand, Plan of the Théâtre des Fleurs, Pré-Catelan.

The stage décor gave “the impression of a background without limits,” according to Alphand, dissolving the spatial and conceptual frame that normally delimits the space of theatrical play.



Figure 5.4

Premier of *Gentleman of the Mountain* at the Théâtre de la Porte-Saint-Martin, 1860. BNF. The scenographic decor transgressed the proscenium frame to occupy part of the orchestra in a production of Lockroy and Dumas's *Gentleman of the Mountain*.



Figure 5.5

Eighth scene of *Bas de Cuir*, Théâtre de la Gaîté, 1866. BNF. A production of the *Leatherstocking Tales* contained a “natural water effect” to animate the scene of the Hudson River.



Figure 5.6
 “Promenade de Longchamps.” Scribe, *Les Trois Nicolas*, 1858. BnF.

The opening scene of the play was set in the new promenade of the Bois de Boulogne.



Figure 5.7
 Halévy, *The Magician*, Dance of the butterflies and dragonflies. 1858.

The end of the first act of Halévy’s opera was set in an enchanted wood near a placid moonlit lake, not unlike the new lakes in the Bois de Boulogne.

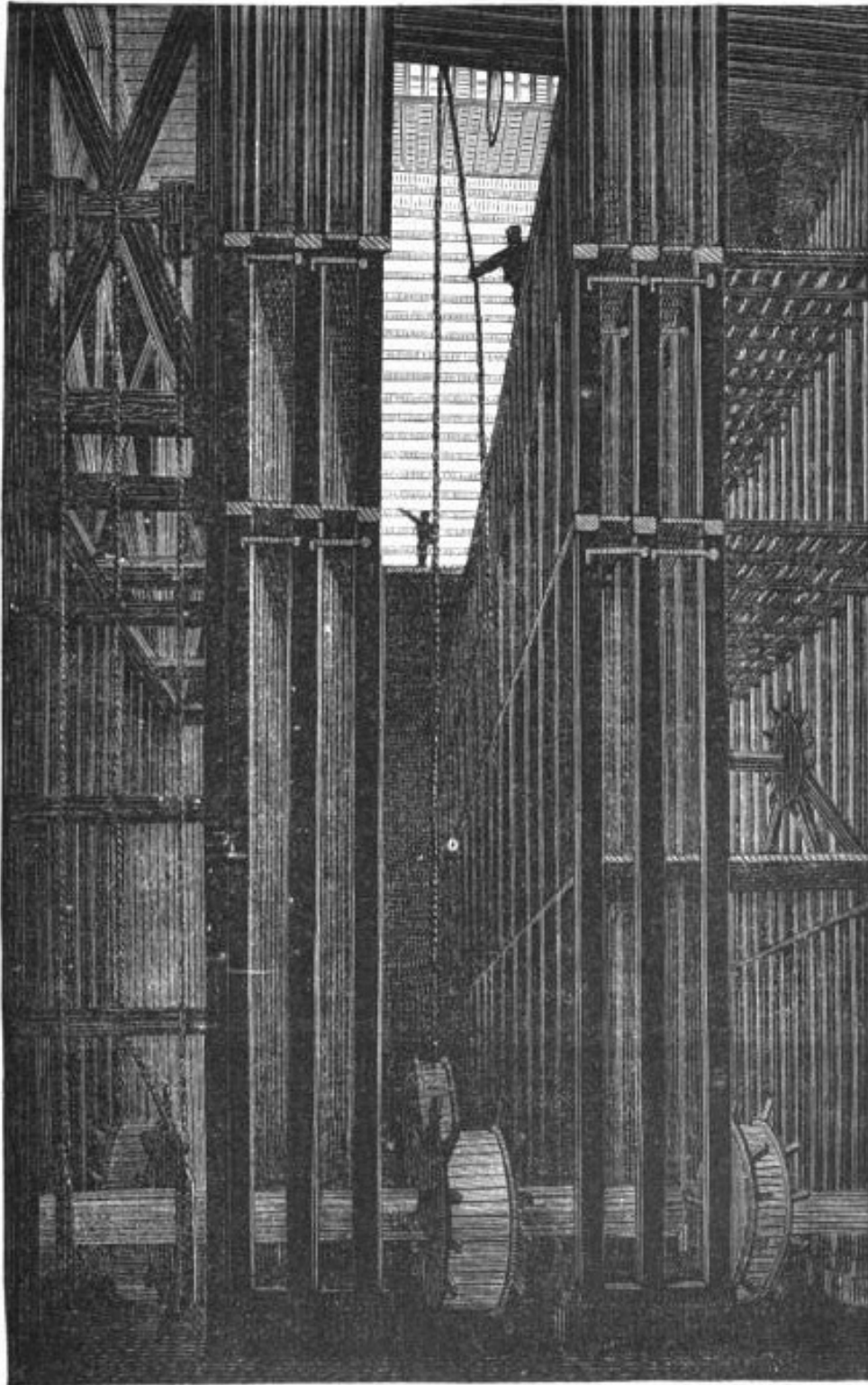


Figure 5.8
Below the stage. From Moynet, *L'envers du théâtre*, 1873.

This book was premised on the notion that spectators would enjoy discovering the behind-the-scenes almost as much as watching the spectacle itself.

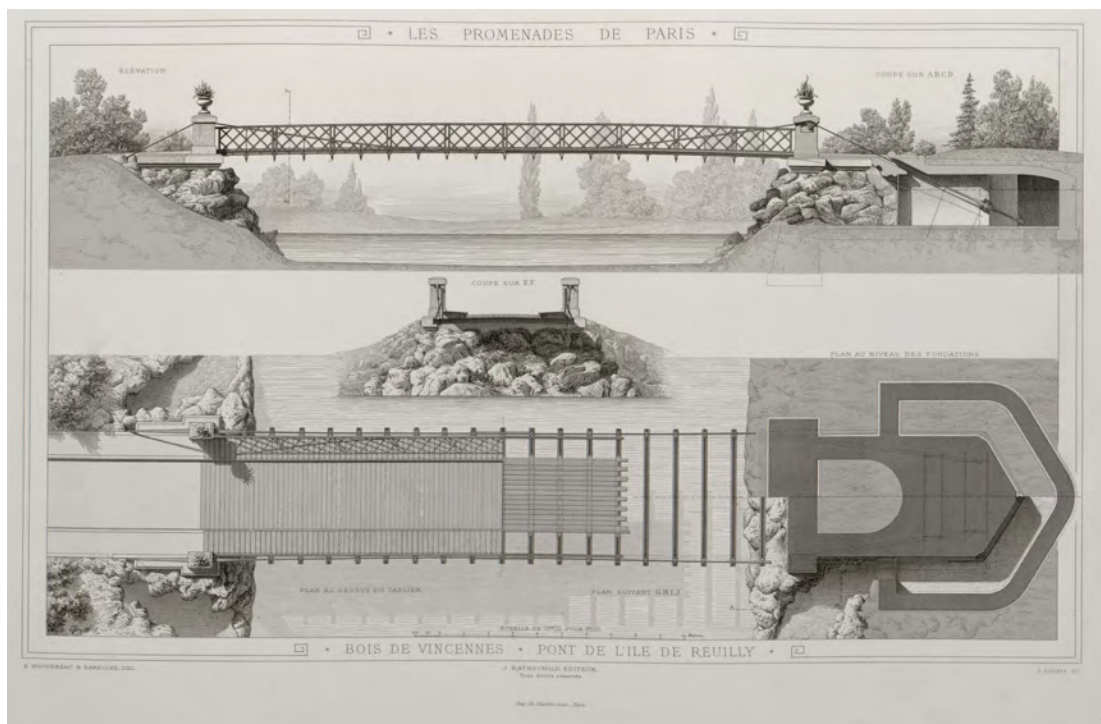


Figure 5.9
Alphand, Bridge of the Isle of Reuilly, Bois de Vincennes.

The exposed cables of the suspension bridge hints at the play of physical and structural forces, yet the concrete abutments are masked with piles of rustic boulders and capped with urns of flowers. It suggests not a battle between structure and ornament, but a performed synthesis between the image of nature and the image of technology.



Figure 5.10
Suspension bridge abutment, Parc des Buttes-Chaumont.
Photograph by author, Dec. 2012.

One kind of artifice (structural technology) is masked with another (naturalistic rockwork) in the abutment of the bridge.



Figure 5.11
Gustave Le Gray, View of rocks at Fontainebleau, c. 1850s. BnF.



Figure 5.12
Eugène Cuvelier, View of the forest of Fontainebleau, c.1860s. Metropolitan Museum of Art.

Early photographers followed the Barbizon painters into the forest of Fontainebleau to make landscape views.



Figure 5.13
Winter foliage, Parc des Buttes-
Chaumont. Photograph by author,
Dec. 2012.

Even in December, the park is full of variety of color, texture, and other sensory aspects.



Figure 5.14
Winter foliage, Parc des Buttes-
Chaumont. Photograph by author,
Dec. 2012.

Different parts of the park have different types of vegetal décor.



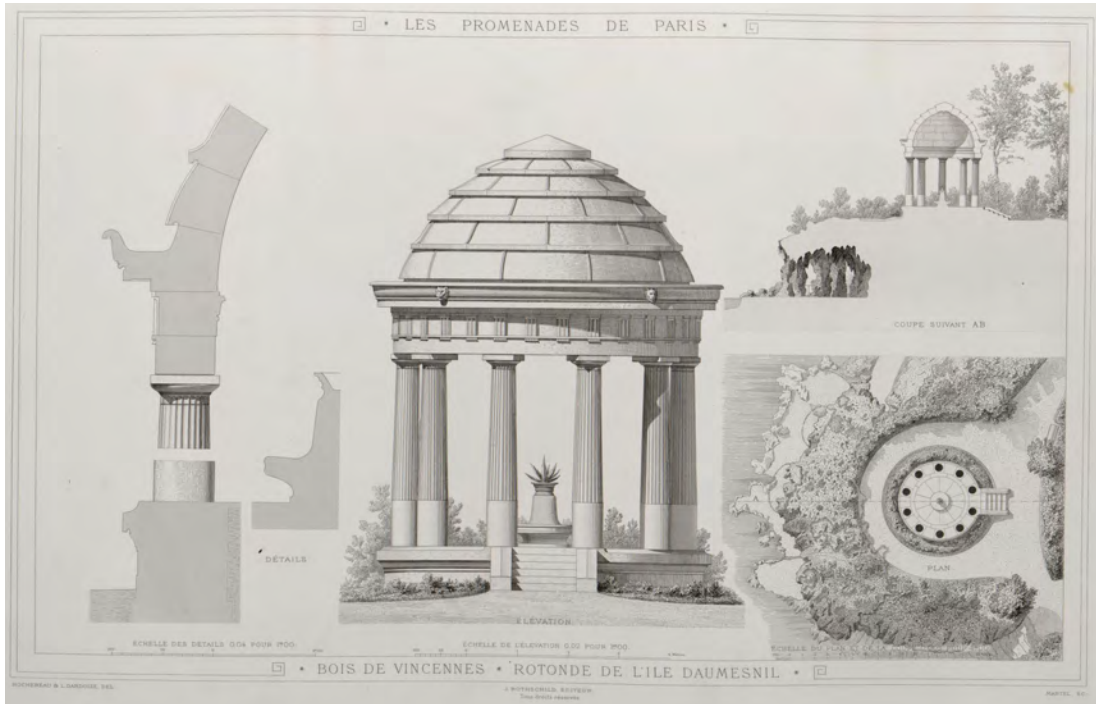
Figure 5.15
Parc Monceau, river and bridge.
Photograph by Charles Marville,
1862, SF MOMA.

This footbridge of brick and stone, designed by Davioud, has a markedly monumental aspect, seemingly at odds with Alphand's plea to make bridges proportional to the size of the watercourse that they cross.



Figure 5.16
Elevation and plan of the rotunda or temple, Parc des Buttes-Chaumont.
Designed by Gabriel Davioud. From
Alphand, *Promenades*.

The circular temple has many precedents in the picturesque gardens of Europe, but Davioud's modern version at the Buttes-Chaumont contains only implicit, not explicit mythological reference, along with vegetal motifs. More important than iconography is its position at the top of the cliff, which makes it an obvious destination and viewing platform.



Figures 5.17, 5.18

Davioud's temple and grotto of the Île de Reuilly, Bois de Vincennes. Top: engraving from Alphand, *Promenades*. Above: photo by author, May 2015.

The neoclassical Doric temple evokes nature in the manner of Laugier's hypothetical "primitive hut." Its regular geometry and pale stone contrasts with dank and rough grotto below.



Figure 5.19
Candelabras designed by Gabriel Davioud.
From Alphand, *Promenades*.

The mass-produced candelabras, top, vary according to whether they are placed along a street, outside an important building, or on a pedestrian island of a plaza. Public urinals, below, took numerous configurations, incorporating signage boards and gaslights, but unfortunately no provision for women.



Figure 6.1
View of the Parc Monceau, Turkish Tents, 1779 engraving by
Delafosse after Carmontelle

At the Jardin Monceau, Carmontelle created a *theatrum mundi*, a scenographic representation of the world in miniature, for the Duc de Chartres.



Figure 6.2
 Parc des Buttes-Chaumont, needle and rock. From Alphand, *Promenades*.
 The sculpted cliff recalls the chalk cliffs of Étretat on the coast of Normandy.



Source gallica.bnf.fr / Bibliothèque nationale de France

Figure 6.3
 The needle and natural rock arch of Étretat, Normandy. Maurice, 1928.

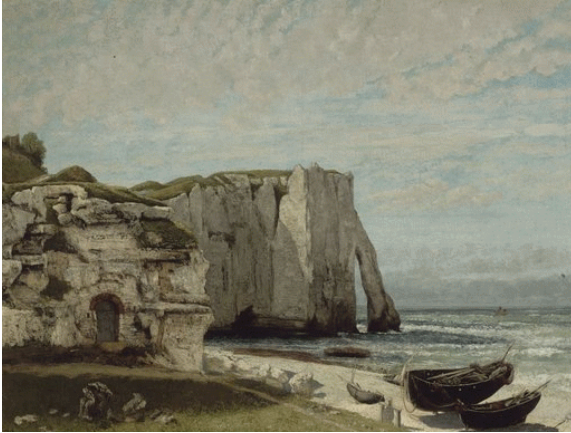


Figure 6.4
Gustave Courbet, *The Cliffs at Étretat after the Storm*.
RMN-Grand Palais (Musée d'Orsay).

Courbet returned to the Norman coast several times to paint the chalk cliffs.



Figure 6.5
Edouard Riou, *Sea cavern and grotto*. From Jules Verne,
Voyage au centre de la terre



Figure 6.6
Alphand, *Parc des Buttes-Chaumont, grotto*.
The cavern was a remnant of the former quarry,
further shaped and structurally reinforced to form
the grotto with cascade.



Figure 6.7
Masonry Bridge, Parc des Buttes-Chaumont. Photo by author, Dec. 2012.

At 20 meters high, this bridge conjured “violent death,” according to the Surrealist writer Aragon.



Figure 6.8
Joseph Mallord William Turner, Little Devil's Bridge over the Russ, Switzerland, 1809.
Metropolitan Museum of Art.

Narrow, vertiginous “devil’s bridges” were built throughout the Alps and the Pyrenees from the Middle Ages, becoming the subject of legends, folklore, and landscape imagery.



Figure 6.9
Christian Wilhelm Ernst Dietrich, Falls
of the Aniene at Tivoli, c.1745-50

Painters and architects from western Europe made the pilgrimage to the ancient acropolis of Tivoli, where the remnants of the ancient Roman Temple of Vesta, dedicated to the Tiburtine Sibyl (oracle), overlook the falls of the Aniene River.



Figure 6.10
Richard Mique, Temple of Love, Petit Trianon, Versailles, 1777-78.
Photo by author, May 2015.

In one of numerous architectural reinterpretations of the Tivoli temple, Richard Mique designed a Temple of Love for Marie-Antoinette, situated on an island surrounded by a *rivière anglaise*.



Figure 6.11

A. Laborde, Temple of Méréville. From Laborde, 1808. Designed by Bélanger with advice from Hubert Robert.

Laborde's homage to Tivoli was relatively faithful to the proportions of the original, and also, to the extent possible, the hilltop siting.



Figure 6.12

Davioud, Temple, Parc des Buttes-Chaumont. Photo by author, May 2015.

Davioud's temple departs widely from the proportions of the Tivoli original, but makes the most of the promontory site and forms a contrast between regular geometry of the architecture and the rugged cliff face (also sculpted).



Figure 6.13
Parc des Buttes-Chaumont, source in the retaining wall of the Rue Botzaris. Photo by author, Dec. 2012.

Alphand and Darcel directed waters from a new Belleville reservoir southeast of the site into the park to form a multi-part cascade. The stream issues from an opening in the retaining wall below the Rue Botzaris (pictured), begins a rapid descent into the park, and ultimately pours into the cavernous grotto through a hole in the rock before flowing calmly down the rills into the lake .

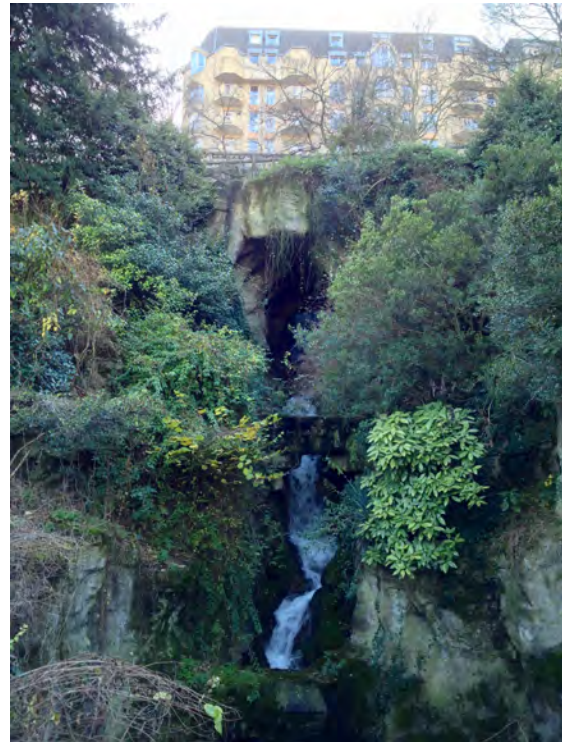


Figure 6.14
Parc des Buttes-Chaumont, cascade. Photo by author, Dec. 2012.



Figure 6.15

Daudenard, Siege of Paris – Fire at the petroleum depot of the Buttes-Chaumont. September 1870. BnF.

During the Prussian siege, a fire broke out the lakebed, which had been drained and used to stockpile barrels. Citizens reportedly organized themselves spontaneously to snuff out the fire by piling earth on it. Alphanand was a military officer during the conflict with Prussia.



Figure 6.16
Alpaca. From Geoffroy Saint-Hilaire, *Acclimatation et domestication*. BNF.

Opened in 1860, the acclimatization garden was zoo intended for the express purpose of domesticating exotic species for French economic and cultural benefit.

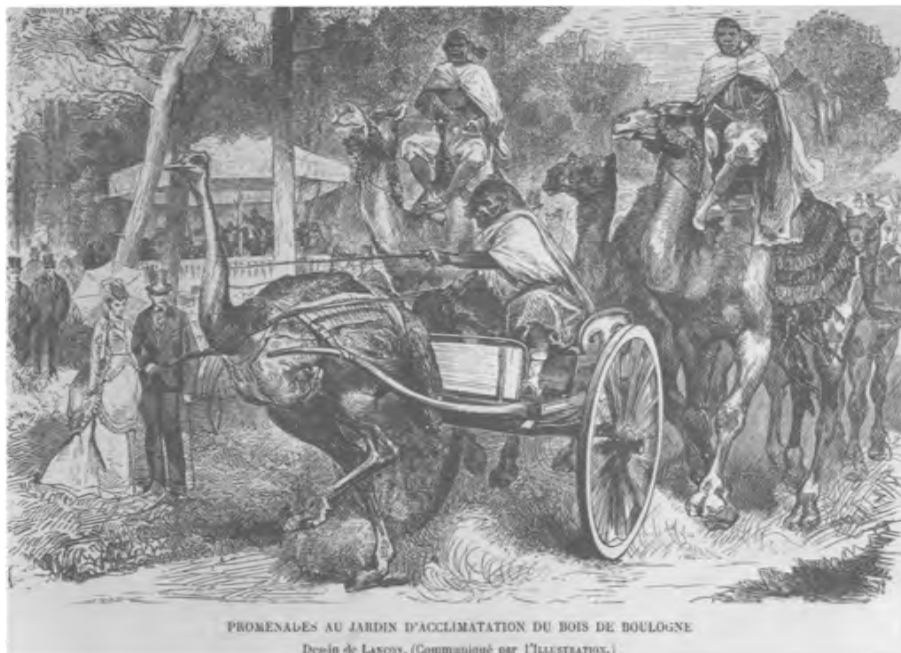


Figure 6.17
"Promenades au jardin d'acclimatation, Bois de Boulogne." From Pierre-Amedée Peichot, *Le jardin d'acclimatation Illustré*, 1873. (In Anderson, "Climates of Opinion," 1992).

Ostriches, camels, silkworms, pollinator insects, wild donkeys, rheas, and llamas were among the foreign species bred in the garden.



Figure 6.18
 “Aspect général du jardin zoologique d’acclimatation.” *L’Illustration* 13 Oct 1860. Brown University Library.

The naturalesque design of the animal habitats would supposedly satisfy the animals’ needs, as well as please the eyes of visitors, though critics expressed doubt on both accounts.



Figure 6.19
 Site plan of the jardin d’acclimatation, Bois de Boulogne. From Alphand, *Promenades*.

Although the acclimatization garden was privately run and financed through a concession with the city, Barillet-Deschamps designed the gardens, matching the style of the surrounding Bois de Boulogne and the earlier Pré-Catelan.



Figure 6.20
"Eden." Engraving by Freeman, from Arthur Mangin, *Histoire des jardins anciens et modernes*, 1887.

The fantasy of a totally harmonious nature was a significant point of reference for both garden art and the acclimatization movement in the late-nineteenth century.

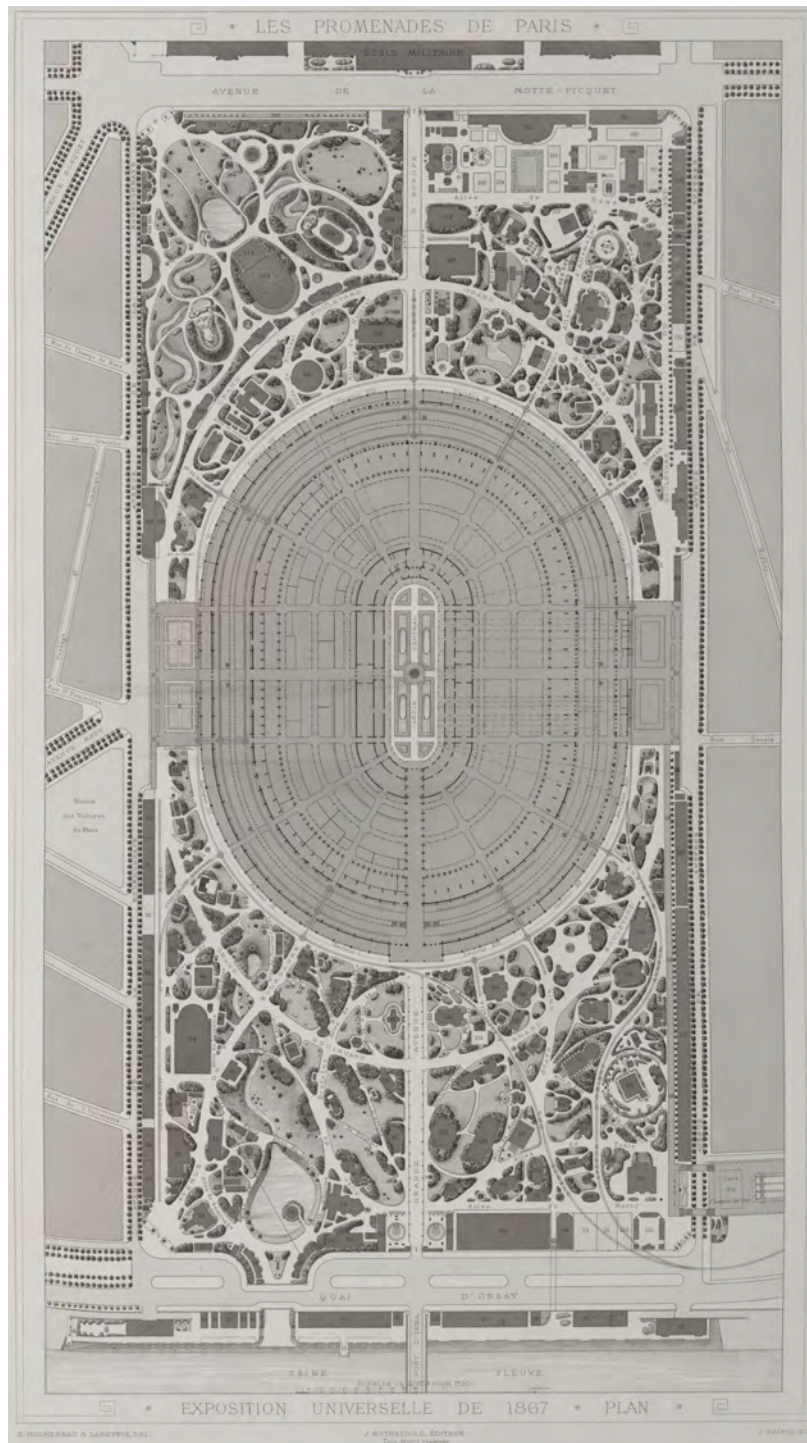


Figure 6.21
Site plan of the *Exposition universelle* of 1867, Champ de Mars, from Alphand, *Promenades*.

Alphand and his design team designed a garden city from scratch: a luxuriant picturesque garden studded with eclectic pavilions by different architects. Some of the paths were called boulevards and avenues, according to their orientation, and a temporary spur of the belt railway delivered visitors to the site (lower right). The reserve garden is at upper left.



Figure 6.22

View of the *Exposition universelle* of 1867. Lithograph by Eugene Ciceri, Library of Congress.

The central “omnibus” pavilion, formed of concentric rings of glass-ceilinged galleries, was centered upon a garden.



Figure 6.23

View of the garden exhibition of the Champs-de-Mars, from *Grand album de l'Exposition Universelle 1867*. Brown University Library.

In the reserve garden, Barillet-Deschamps exercised all his powers of garden art with a concentrated display of *vallonement*, cosmopolitan horticulture, flowing water, and artificial rockwork.



Figure 6.24
Fresh-water aquarium
in the exhibition
garden, 1867 World's
Fair. Engraving by Rioud
and Maurand. Brown
University Library.

Artificial rockwork
covered in *stuc-ciment*
was the architecture of
choice to transport
visitors to the
underwater realm.
Semi-reflective glass
allowed the gallery to
remain dark while the
fishtanks were well-lit.



Figure 6.25
View of the garden exhibition with lighthouse, 1867. From *Album de l'Exposition illustrée*, 1867.

The lighthouse, measuring 58 meters tall, was made of cast-iron components. This marvel of modern engineering sprouting from the faux-rustic landscape of ponds and rocks. In the space of the garden, the lighthouse temporarily acquired the status of a civic monument. It foreshadowed the construction of the Tour Eiffel on the same site in 1889.



Figure 6.26
Lighthouse at Roches-Douvres. Photograph
by Jules Declos. From *Les travaux publics
de la France*, 1883. Southern Methodist
University..

The tower's cast-iron components were designed to be disassembled and reassembled. After the fair, it was erected on the Roches-Douvres reef in the English Channel.



Figure 6.27
Egyptian *okel* pavilion on the Champ de Mars. From Chojecki, *L'Égypte à l'Exposition universelle*.

The smooth, boxy forms of the *okel*, which contained shops and workshops around a courtyard, foreshadowed modern European architecture of the twentieth century.



Figure 6.28
Imperial pavilion on the Champ-de-Mars, from *Grand album de l'Exposition Universelle 1867*.

The French Imperial pavilion mixed orientalist and rococo forms and motifs, in a throwback to the eighteenth-century Chinese house at Sanssouci in Potsdam.



Figure 6.29
Lower grotto, Grande Cascade, Bois de Boulogne. Photo by author, May 2015.

Unlike the subsequent grottoes, that of the Grande Cascade is formed of boulders from the forest of Fontainebleau. See also figs. 3.9-3.12, 3.16.



Figure 6.30
Grotto of the Bois de Vincennes. Photo by author, May 2015.



Figure 6.31
Rock and source of the Square des Batignolles. Photo by author, May 2015.

The rock and source, dating from 1862, are now surmounted, fittingly, by a glasshouse containing a single orange tree, reproducing an classical antimony between rustication and enlightened thought.



Figure 6.32
Grotto of the Parc Montsouris.
Photo by author, May 2015.

There is no belvedere to crown this grotto, but there is a simple platform



Figure 6.33
Grotto and belvedere of the aquarium, 1867 *Exposition universelle*.
From *L'exposition universelle de 1867, illustrée*.

The pairing of a dark, wet grotto with a light-filled belvedere was executed in the temporary exhibition garden of the World's Fair.



Figure 6.34
Philosopher's Grotto, Parc de Bagatelle, Bois de Boulogne.
Photo by author, May 2015.

A iron gloriette perches lightly atop the late eighteenth-century Philosopher's Grotto (later known as the Grotto of the Four Winds). The one gestures toward the heavenly light of reason, the other toward the dark bowels of the earth.



Figure 6.35
Rock (1778-1782) and belvedere (1777) in the *jardin anglais*, Petit Trianon, Versailles. Photo by author, May 2015.

This pair of garden *fabriques* by the lake, designed by Richard Mique and Hubert Robert in the 1770s, evokes a contrast between the rustic and the enlightened, the raw and the finished.



Figure 6.36
Elevation of the temple, rock, and cascade at Saint-Leu. From LeRouge, *Jardins anglo-chinois à la mode*, Cahier 12.

The rock and temple form a unity of opposites, the one raw and “unformed” and the other highly “formed” according to geometry. The fact that the rock pile was evidently composed by human hands reveals the true nature of the game.



Figure 6.37
Plan of the rock and grand cascade at Saint-Leu. From LeRouge, *Jardins anglo-chinois à la mode*, Cahier 12.

In addition to the rocks on the ground and the temple up above, Le Rouge shows a “Project for an apartment underwater,” supposedly inspired by Chinese examples.



Figure 6.38
Sanctuary of Apollo, Delphi, Greece. Photo by author, Sept. 2014.

The ancient Temple of Apollo, the ruins of which are visible upper right, superseded but conserved the older Rock of the Sibyl (foreground) at Delphi, associated with chthonic earth worship and the origin of the world.



Figure 6.39
View of the interior of the grotto of the Parc Monceau, from Alphand, *Promenades*.

The dark and dank grottoes were everything that the boulevard was not. In the grotto of the Parc Monceau (1861), Alphand's team installed artificial stalactites made of concrete or *stuc-ciment* with iron reinforcing rods, an updated version of older techniques.



Figure 6.40
Gustave Courbet, *Source de la Loue*, 1864. Albright Knox Gallery.

Courbet made a series of *Source* paintings in the 1860s, evoking a fecund power of nature in the orifices of the earth.

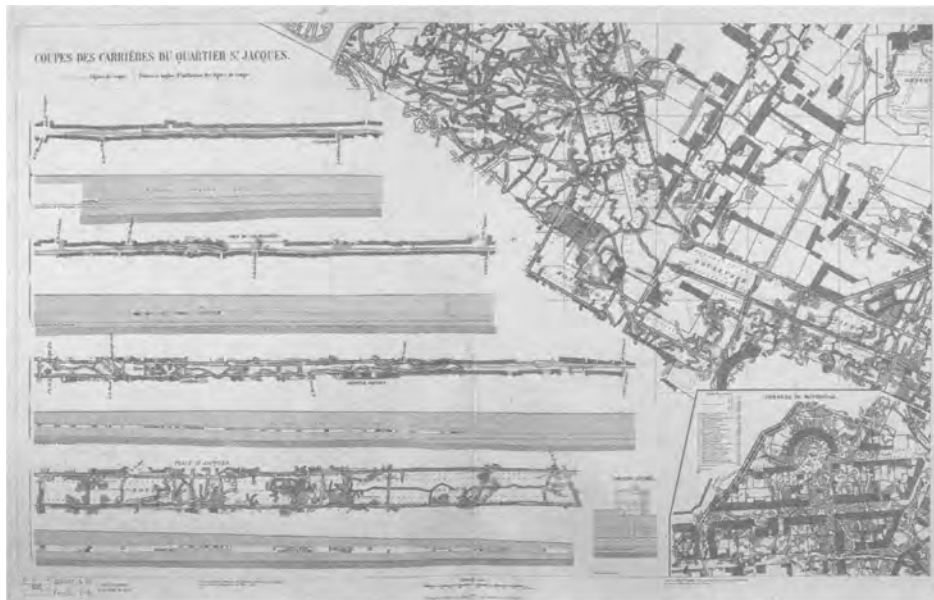


Figure 6.41
Quarries of the Saint-Jacques district in Paris, after Eugene de Fourcy, *Atlas souterrain de la ville de Paris*, 1859. In Picon, "Nineteenth-Century Urban cartography," 2003.

The cartography of the urban underground not only furnished empirical descriptions, but also fueled Parisians' imagination of a hidden world beneath the pavements.

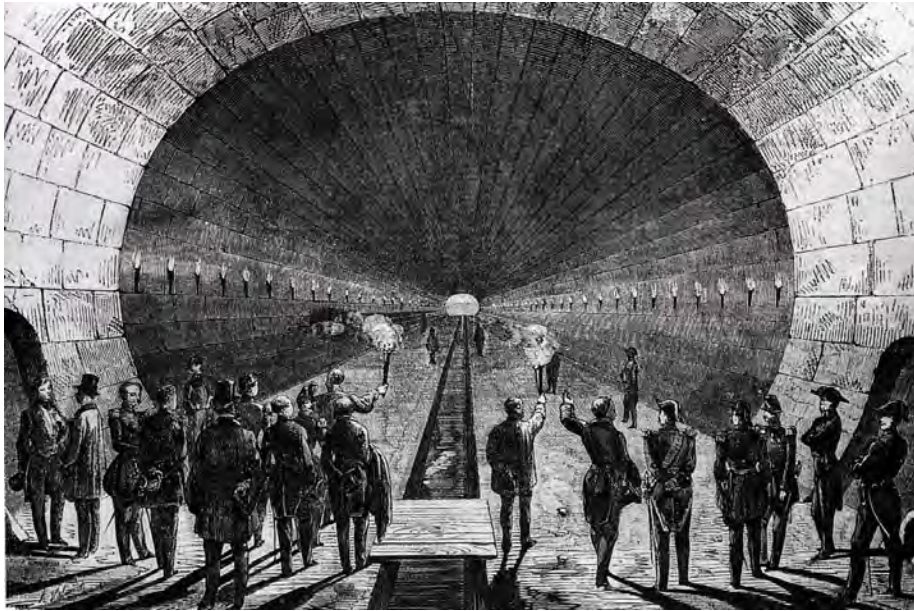


Figure 6.42
View of the *égout ollecteur* (main sewer) beneath of Boulevard de Sébastopol, 1858, from *Le Monde Illustré*.

The new sewers engineered by Belgrade during the Second Empire challenged the old dichotomy of wet (below) and dry (above) by bringing rational geometric order and even gaslight to the traditionally nebulous, dank space of the underground.



Figure 6.43
View of the exterior of the grotto of the Parc Monceau. Photo by author, May 2015

The mound containing the grotto of the Parc Monceau rises conspicuously at the main crossroads of the park, offering an outpost of darkness in the heart of a newly built neighborhood.

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