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Elisée Reclus
The History of Cities
1905

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The natural attractive force of the soil tends normally to distribute human beings rhythmically across the entire earth. In the modern period, we encounter a seemingly opposing force that concentrates hundreds of thousands or even millions of people in certain circumscribed areas surrounding markets, palaces, forums, and parliaments. Towns were already of considerable size at the outset of the age of railroads. Now, they develop into immense cities, vast agglomerations of aligned houses, crisscrossed by an infinite network of streets, alleyways, boulevards, and avenues. During the day, a grayish dome of smoke hangs over them, while at night a glow radiates outward, illuminating the sky. People were astounded by the Babylons and Ninevehs of ancient times. However, our modern Babylons, which are both cursed and celebrated, are much larger, more complex, and more teeming with humanity and gigantic machinery. Rousseau, deploring the degradation of so many country people who disappeared into the big cities, calls them “abysses” that swallow up humanity, whereas Herder sees in them “the entrenched camps of civilization.” And here is how Ruskin judges them, attacking above all the largest if

not the most hideous of today's cities, the capital of the immense British Empire:

The first of all English games is making money... So all that great foul city of London there,—rattling, growling, smoking, stinking,—a ghastly heap of fermenting brickwork, pouring out poison at every pore,—you fancy it is a city of work? Not a street of it! It is a great city of play; very nasty play, and very hard play, but still play. It is ... a huge billiard table without the cloth, and with pockets as deep as the bottomless pit; but mainly a billiard table, after all.¹

All the railing against cities by their critics is justified, as are all the encomiums of those who glorify them. How much lifeblood has gone to waste or even been destroyed by hatred, in these cities of foul air, deadly contagion, and chaotic struggle! But is it not also out of these confluences of humanity that new ideas have burst forth, new works have been born, and the revolutions that have delivered humanity from its gangrenous senility have erupted? “There is an infernal vat upon the earth,” proclaims Barbier.² And for his part, Hugo glorifies this same Paris in enthusiastic verse: “Paris is the mother city! ... Where generations come / To feed themselves with ideas!”³

The divergent tendencies of cities toward both good and evil is prefigured in the passions and will of those who flee the small towns and countryside for the big city, sometimes finding there a

¹ John Ruskin, *The Crown of Wild Olive* (New York: Thomas Y. Crowell, n.d.), 28–29.

² Auguste Barbier (1805–82) was a satirical poet and writer, and a member of the French Academy. His poem “La cuve” is a rant against the evils and horrors of urban life. See Auguste Barbier, “La cuve,” in *Iambes et poèmes* (Paris: P. Mascagna, 1840), 91–92.

³ See Victor Hugo, “A l’Arc de Triomphe” (*Les voix intérieures*), *Œuvres poétiques*, ed. Pierre Albouy (Paris: Pléiade, 1964), 1:936–48.

larger life, sometimes decline and death. But in addition to these bold forerunners who proceed resolutely toward some modern Babylon, we must count those—and they are legion—who are drawn toward centers of population and deposited there like alluvium carried by the current to be cast upon the beaches. These include peasants evicted from their plot of land for the benefit of a wealthy speculator or at the whim of a lord who decides to turn their fields into a pasture or hunting ground; servants who are summoned from the country by the city-dwellers; wet-nurses called to breast-feed infants in place of their mothers; workers, soldiers, employees, and civil servants who are transferred to the big city; and, in general, all those who in obedience to their masters, or indeed to that most imperious of masters, economic necessity, inevitably swell the urban population.

How pleasant are the words of the moralistic landowners who advise the country people to remain attached to the land, while by their actions they uproot those very peasants and create for them the living conditions that compel them to flee toward the city. Who put an end to the commons? Who reduced and then abolished entirely the rights of usufruct? Who clear-cut the forests and the moors, depriving the peasant of the fuel he needed? Who built walls around property to mark well the establishment of a landed aristocracy? And when large industry was born, did the landowner not abandon the country miller and the humble village artisans? And when the peasant no longer has any communal lands, when he is deprived of his small industries, when all his resources are diminished at the same time that his needs and expenses grow, is his inevitable flight to the city so surprising? The landowner no longer employs full-time agricultural labor, so the worker is ruined by unemployment and forced into exile. When the proprietor needs hands for the grape harvest, he no longer looks to the old tenants of his land, but to the men of the “mobile army”—to the Irish,

the Flemish, the “Gavaches,”⁴ and to the anonymous workers who come from who knows where, whose birthplace, language, and customs are unknown, and who will soon disappear without leaving a trace.

Thus the immigrants drawn in multitudes toward the maelstrom of the cities obey a law that is more powerful than their own wills. Their own caprice plays only a very subordinate role in generating the force that attracts them. The relatively small number of escapees from the countryside who voluntarily head for the cities can be divided into several distinct groups. Though all may go in search of happiness, personal gain, and greater satisfaction in their emotional lives, the meaning of these ideals varies completely from individual to individual. Many of them succumb to a kind of dread that seems inexplicable. One gazes in amazement at one of their cottages, superbly situated in the mountains of the Jura, the Pyrenees, or the Cévennes. The legal owner has allowed it to fall into ruin, even though it seems to possess all the qualities that would cause one to cherish it. Alongside the dwelling rises the ancestral tree, shading the roof. Nearby, a spring of pure water gushes forth from an undulation in the meadow. Everything that can be seen from the threshold—the garden, the meadow, the fields, the groves—belonged to the family, and evidently still does. But the family now consists only of two elderly persons trying to devote their remaining energies to the farming and the household chores. In spite of this, everything perishes. The marsh encroaches on the meadow, weeds invade the paths and the flowerbeds, the harvest shrinks from year to year, and the roofs of the barns and granaries cave in. When the old people are gone, the house will collapse. But do they not have a single family member—a son, a grandson, or nephew—who might continue the work of their ancestors, as they

⁴ A term applied to immigrants from northern France who settled in the Dropt Valley and around Monségur after the Hundred Years’ War. During the nineteenth century many *gavaches* came down from the mountains to work as “estivandiers,” or seasonal workers, in wheat-producing areas.

tieth century, that city has only a seventh of the population of the British Isles. It is not at all impossible that some day it will have a third or a fourth of the inhabitants, especially since London is not only the center of attraction in Great Britain and Ireland, but also the most important commercial center in Europe and a large part of the colonial world. We should not be surprised at the imminent development of urban agglomerations of ten to twenty million inhabitants in the lower Thames valley, at the mouth of the Hudson, or in other centers of attraction. Indeed, we should prepare ourselves to accept such phenomena as a normal part of social life. The growth of great foci of attraction cannot be checked until an equilibrium is established between the force of attraction of the various centers on the inhabitants of the intermediate spaces. But the movement will certainly not stop then. It will be transformed more and more into a constant exchange of population between cities, a phenomenon that can already be observed and that can be compared to the circulation of the blood in the human body. There is no doubt that this new mode of functioning will give birth to new organisms, and cities, which have already been renewed so many times, will be reborn again with a new character that will correspond to the whole of social and economic evolution.

tryside. In an enlightened society that resolutely wills a renaissance of humanity by means of a life in the open country, such a revolution, the likes of which have never been seen before, would surely be a real possibility. If we estimate the area of the habitable lands that are pleasant and healthy at only one hundred million square kilometers, then two houses per square kilometer, with seven or eight occupants in each, would be adequate to house all of humanity. However, human nature, whose first law is sociability, would never adapt to such a dispersion. Certainly, we need the rustling of trees and the babbling of brooks, but we also require association with other people and, indeed, with all people. The entire globe becomes for humanity a great city that alone can satisfy us.

It cannot be assumed that today's immense agglomerations of structures have reached the greatest expansion imaginable. The truth is quite to the contrary. In countries of recent colonization, where people group together spontaneously according to modern interests and tastes, cities have much greater populations proportionally than those of the old countries of Europe. Some of the large centers of growth have as much as a quarter, a third, or even half the population of the entire country. In relation to the area from which it draws its population, Melbourne is a larger city than London because the surrounding population is more mobile and because it has not been necessary, as in England, to tear it away from the countryside in which it was rooted for centuries. However, this unusual concentration of population found in Australian cities stems to a large degree from the division of the land in the countryside into vast estates in which the immigrants were unable to find a place. They were driven from the *latifundia* toward the capitals.²⁶ In any case, the process of transplantation becomes progressively easier, and London will be able to continue its growth with a smaller expenditure of energy. At the beginning of the twen-

²⁶ J. Denain-Darrays, *Questions diplomatiques et coloniales*, Feb. 1, 1903. [Reclus' note]

themselves do? Yes, they have a son, but he despises the land. He has become a policeman in some distant town, taking pleasure in rounding up drunks and handing out tickets. When his parents die, he will not know what to do with the ancestral fields. They will fall fallow and a great landlord will purchase them, or rather get them for a song, to round out his hunting grounds.

If these were the only causes of the remarkable expansion of cities, they would become nothing more than social cancers, and one might justly curse them, as the Hebrew prophets once cursed ancient Babylon. Growing by the day or even by the hour, like octopuses extending their long tentacles into the countryside, these cities indeed seem to be monsters, gigantic vampires draining the blood from men. But every phenomenon is complex. The wicked, depraved, and decadent will consume and corrupt themselves more rapidly in a milieu obsessed with pleasure or indeed fallen into decay. However, there are others with better motives, who wish to learn, who seek opportunities to think, to improve themselves, to blossom into writers or artists or even the apostles of some truth. They turn reverently toward museums, schools, and libraries, and renew their ideals through contact with others who are equally in the thrall of great things. Are they not also immigrants to the cities, and is it not thanks to them that the chariot of civilization continues to move forward through the ages? When cities grow, humanity progresses, and when they shrink, the social body is threatened with regression into barbarism.

Without having studied the question, one might easily imagine that cities are distributed randomly. And in fact, a number of accounts depict the founders of cities leaving to fate the choice of a site on which to settle and build protective walls. The course of the flight of birds, the spot on which a stag was hunted down and taken, or the point at which a ship ran aground determined where a city was to be constructed. Thus the capital of Iceland, Reykjavik, is sup-

posed to have been founded according to the will of the gods.⁵ In 874, the fugitive Ingolfur came in sight of Iceland and cast into the water the wooden images that served as his household idols. He sought vainly to follow their course, but they eluded him, and he had to establish a temporary camp on the shore. Three years later, he rediscovered the sacred pieces of wood, and moved his settlement to a nearby site, which turned out to be as favorably situated as possible in this formidable “Land of Ice.”⁶

If the earth were completely uniform in relief, in the quality of its soil, and in its climatic conditions, cities would be distributed in geometrical positions, so to speak. Mutual attraction, social instinct, and convenience for trade would have given rise to them at equal distances from one another. Given a region that is flat, that has no natural obstacles, rivers, or ports, that is situated in a particularly favorable manner, and that is not divided into separate political states, the largest city would be constructed precisely at the center of the country. The secondary cities would be distributed at equal intervals around it, spaced rhythmically. Each of these would have its own planetary system of smaller towns, and each of these its retinue of villages. On a uniform plain, the interval between the various urban agglomerations should be the normal distance of a day’s walk. The number of leagues that could be covered by the average walker between dawn and dusk—that is to say, between twelve and fifteen, corresponding to the hours of the day—constitutes the usual distance between towns. The domestication of animals, then the invention of the wheel and finally machines have

⁵ Labonne, *Annuaire du Club alpin*, 1886. [Reclus’ note]

⁶ Ingolfur Arnarsson was the first settler of Iceland. After being banished from Norway he set sail for Iceland. He brought along the posts from the high seat, or throne, of his home in Norway. On sighting land, he threw the pillars into the sea and asked the gods to wash them ashore at the appropriate spot for a settlement. He lost sight of the pillars and built a farm on the southeast coast. The posts were finally located along the coast to the west, and the settlement was moved to a spot that was given the Norse name “Reykjavik,” or “Bay of Smoke,” after the geothermal steam that rose there.

population. Left with diminishing space for their fields and farmhouses, they are forced into more and more intensive labor. Shepherds become farmers, and farmers in turn become gardeners. Demographic maps show clearly the progression of this phenomenon, in which one finds an annular distribution of rural population turning to horticulture. Thus the city of Bayreuth is encircled by a zone with a population density of 109 persons per square kilometer. Around Bamberg, the density reaches 180, even though the terrain onto which this mass of people is crowded was originally of little value. As a mixture of sand and peat, it was only suitable for growing conifers; nevertheless, it has been transformed into garden soil of unsurpassed quality.²⁴ In the Mediterranean region, one finds that the love of the city does not so much increase the population of the countryside around the cities as depopulate it. The great privilege of participating in the discussion of the public interest has traditionally turned everyone into a city-dweller. The appeal of the agora, as in Greece, and of municipal life, as in Italy, draws the inhabitants toward the central square, where the affairs of the community are discussed, more often along the public walkways than in the resounding chambers of the city hall. Accordingly, in Provence the small landowner, rather than living among his fields, remains an inveterate city-dweller. Though he might even own a farmhouse or a country house, he refuses to live on his rural estate, but rather resides in the city, from which he can go for an outing to visit his fruit trees and do the picking. The work in the countryside is for him a secondary concern.²⁵

It is quite natural that many should react against the awful swallowing up of people, the wholesale degradation of character, and the widespread corruption of the naïve souls who brew in the “infernal vat.” Accordingly, some reformers call for the destruction of cities and the voluntary return of the entire population to the coun-

²⁴ Chr. Sandler, *Volks-Karten*, 1. [Reclus’ note]

²⁵ Edmond Demolins, *Les Français d’aujourd’hui*, 106, 107. [Reclus’ note]

leged who live in the Garden Cities, and the good will of all the philanthropists in the world is not sufficient to conjure away the antagonism that exists between Capital and Labor.

Long before these experiments of our own day, we find in many villages of our ancestors touching evidence of the quest for a beauty that could only be satisfied by the creation of a harmonious whole. One can cite notably the communities of the Polabians,²¹ a people of Slavic origin who live in the valley of the Jeeze, a branch of the Elbe in Hanover. All the houses are spaced around a central oval plaza containing a small pond, a grove of oaks and lime trees, and some stone tables and benches. Each dwelling is dominated by a high gable supported by a projecting framework. Its facade is turned toward the plaza, and above the door there is an inscription with moral and biographical import. The greenery of their rear gardens joins together to form a beautiful circle of trees, interrupted only by the road linking the plaza with the highway. Along this main route connecting the village with the others, one finds the church, the school, and the inn.²²

The density of population in certain big cities, notably certain neighborhoods of Paris, has reached a level of over a thousand inhabitants per hectare. Prague is even more crowded. The swelling human population seems to have reached its greatest concentration in New York, which in 1896 had a density of 1860 persons per hectare over a total area of 130 hectares.²³ Except where the military engineers have created zones around cities where dwellings are prohibited, the countryside is covered with houses and villas. In addition, the farmers are drawn toward their natural center, moving in ever closer to what is now a continuous mass of urban development and creating in the surrounding area a ring of dense

²¹ The name given to certain East Slavic tribes who settled in northeastern Germany during the late first millennium C.e. The name comes from the Old Slavic *po*, meaning “on the banks of” and “Laba,” the Slavic name for the Elba.

²² Dr. Tetzner, *Globus*, April 7, 1900. [Reclus’ note]

²³ Lawrence Corthell, *Revue Scientifique*, June 27, 1896, 815. [Reclus’ note]

modified, either gradually or abruptly, these early measurements. The gait of the horse, and later the turn of the axle determined the normal distance between the great gathering places of humanity. The average interval between villages is measured by the distance covered by a farmer pushing his wheelbarrow full of hay or grain. A supply of water for the cattle, the convenient transportation of the fruits of the earth—such factors determine the site of the stable, the granary, and the cottage.

In a number of countries that have been populated for a long time, and in which the distribution of the urban population is still in accord with the original distances, one finds beneath the apparent disorder of cities an underlying order of distribution that was clearly determined long ago by the footsteps of walkers. In the “Middle Flower,”⁷ in Russia, where railways are a relatively recent creation, and even in France, one can observe the astounding regularity with which the urban agglomerations were distributed before mining and industry came to disturb the natural equilibrium of population.⁸ Thus Paris, the capital of France, is surrounded, in the direction of the country’s borders and coastlines, by cities that are second only to itself in importance: Bordeaux, Nantes, Rouen, Lille, Nancy, and Lyons. The ancient Phoenician and later Greek city of Marseilles owes its origins to a different phase of history from that of the cities that were Gallic and then French. Nevertheless, its position corresponds to theirs since it is situated at the Mediterranean extremity of a radius that is twice the distance between Paris and the great urban planets in its orbit. Between the capital and the secondary administrative centers, cities of considerable though lesser importance, such as Orléans, Tours, Poitiers, and Angoulême, were founded. These were established at approximately equal intervals, for they are separated by

⁷ China was traditionally called “the Middle Kingdom” or “the Middle Flower” because of its supposed location at the center of the earth’s surface.

⁸ Gobert, *le Gerotype*. [Reclus’ note]

a double daily traveling distance, that is, between twenty-five and thirty leagues. Finally, halfway between these tertiary centers, modest towns such as Etampes, Amboise, Châtellerault, Ruffec, and Libourne took shape. Their locations marked an average day's traveling distance. Thus the traveler crossing France found alternately a town that was a simple resting place and a town with all the amenities. The first was adequate for the traveler on foot, while the second was suitable for the rider. On almost all the highways, the rhythmic distribution of cities occurs in the same manner, through a natural cadence regulated by the pace of men, horses, and carriages.

The irregularities in the network of settlements are all explained by such factors as the contour of the land, the course of rivers, and the thousand variations of geography. In the first place, the nature of the soil determines where people choose sites for their dwellings. The village can only spring up where the stalk sprouts. People turn away from barren heaths, masses of gravel, and heavy clays that are difficult to plough, and rush immediately and spontaneously to areas of loose soil that is easy to work. They also avoid low, moist regions, although these have an exceptional fertility. The history of agriculture shows that these soft alluviums repel people because of their unhealthiness. They have been cultivated through collective efforts that only become possible when humanity has advanced considerably.

Terrain that is too uneven and soil that is too arid also fail to attract population, thereby preventing or delaying the establishment of cities. Glaciers, snow, and cold winds expel people, so to speak, from the harsh mountain valleys. The natural tendency is to found cities immediately outside such forbidding regions, at the first favorable spot available—for example, just at the entrance to a valley. Every stream has its riparian city in the lowlands, where the riverbed suddenly widens and divides into a multitude of branches through the gravels. Every double, triple, or quadruple confluence of valleys gives rise to a large agglomeration whose size is pro-

thousand inhabitants each year. This is not because it is becoming less prosperous, but on the contrary, because its rich textile manufacturers and other industrialists have extended their sphere of activity to all the surrounding *départements*, and even as far as the Alps—anywhere that waterfalls and rapids offer them the energy resources they require.

To judge things correctly, we must recognize that every question of municipal governance is inseparable from the social question itself. Will we see the day when all people without exception can breathe fresh air, enjoy the full sunlight, delight in the pleasant shade, savor the fragrance of roses, and generously provide for their families without fearing that they cannot put food on the table? When this day comes, and only then, cities will be able to realize their ideal and transform themselves in a manner that corresponds exactly to the needs and desires of all. They will finally become perfectly healthy and beautiful organic bodies.

This is the avowed goal of the Garden City.²⁰ Indeed, intelligent industrialists and innovative architects have succeeded in creating in England, where urban blight has been the most hideous, a certain number of centers in which conditions are equally healthy for all, including the poor as much as the rich. Port Sunlight, Bourneville, and Letchworth certainly offer a pleasant alternative to the slums of Liverpool, Manchester, and similar cities. The low mortality rates for these new towns rival those of the most opulent neighborhoods of our great capitals—only ten to twelve deaths annually per thousand inhabitants. But it is still the privi-

²⁰ The Garden City was an idea popularized by the town planner Sir Ebenezer Howard (1850–1928) and applied in several communities in England. The Garden City was designed to express such values as human scale, efficiency, beauty, and social cooperation. With a park and public buildings at the center, a green belt at the circumference, and extensive public space, the community was to combine the best features of urban and rural life. Howard's ideas are best known from his book *Garden Cities of To-morrow*, ed. F.J. Osborn (London: Faber and Faber, 1946). This work was first published in 1898 as *Tomorrow: A Peaceful Path to Real Reform*.

Moreover, the cleaning-up of urban centers gives rise to a number of other problems, apart from that of smoke, that should be on the whole easy to solve. Unfortunately, we are far from having found effective and standardized methods for the disposal of sewage and household garbage, and for the purification of sewage water, either by chemical treatment or by its rational use in agriculture, and too many municipalities seem not even to be concerned with such questions. The adoption of road surfaces that produce neither dust nor mud, and, in general, the efficient organization of transportation, also have an important influence on public health.

Many indicators show that the flow of rural population toward the cities could come to a halt or even reverse direction. First of all, the high rent in urban areas naturally causes workers to move to the outer suburbs, and the bosses of industry can only encourage this exodus, since it will lead to a decrease in the cost of labor. The bicycle, the morning trams, and commuter trains have allowed many thousands of factory and office workers to find more affordable housing in an atmosphere that is less polluted with carbonic acid. Thus in Belgium the rural communes in many districts have maintained their population, thanks to the use of “weekly coupons.” In 1900 there were no less than 150,000 workers who spent nights and Sundays in their villages, but traveled even fifty kilometers, at a weekly cost of two francs twenty-five centimes, to work every weekday in a workshop or factory in some distant city. But this is a spurious solution since the head of the family exhausts himself through long journeys, bad meals, and shortened nights of rest, and besides, the villages have the same health and sanitation problems as the cities.¹⁹

And this is not all. The electricity generated by waterpower tends to replace coal as an energy source, so that factories are scattered along waterways. Thus Lyons, despite the strong attraction of its industry and arts, nevertheless shrinks by several

portional, all things being equal, to the volume of water carried by the convergent riverbeds. Could any site for a city be more naturally determined than that of Saragossa, which is in the middle of the course of the Ebro, at the junction of the double valley through which the Gállego and the Huerva flow? Similarly, the city of Toulouse, the metropolis of the Midi of France, occupies a site that even a child could have pointed out as a likely meeting place for peoples, just where the river becomes navigable, below the confluence of the upper Garonne, the Ariège, and the Hers. At the two western corners of Switzerland, Basel and Geneva were built at the crossroads of the great paths followed by migrating peoples. And on the southern slope of the Alps, every valley without exception has at its entrance a guardian town. Powerful cities such as Milan and so many others mark points of geographical convergence. The upper valley of the Po, constituting three-quarters of an immense circle, has at its natural center the city of Turin.

On the lower course of the river the establishment of cities is determined by conditions analogous to those that prevail at the middle. It occurs at the headland of two streams, at the ramification of three or four navigable waterways or natural routes that come together, or at the point on a river where it intersects with natural land routes leading in various other directions. In addition, other groups settle at necessary stopping places, such as rapids, waterfalls, or rocky gorges, where boats drop anchor and where merchandise is transshipped. The straits of rivers and any spots where the crossing from bank to bank is particularly easy are also appropriate for the site of a village or even a town, if there are additional advantages besides the narrowing of the river. If a marked bend in a waterway brings its valley into close proximity to a large center of activity situated in another basin, this can also attract a large number of settlers. Accordingly, Orléans had to be built on the bank of the Loire conducive to expansion toward the north in

¹⁹ Emile Vandervelde, *L'Exode rural*. [Reclus' note]

the direction of Paris, and Tsaritsin⁹ is located at the place where the Volga is closest to the Don. Finally, on every river the vital point par excellence is the area around its mouth, where the rising sea stops and supports the upper current and where the smaller boats, carried by the current of fresh water, naturally meet the seagoing vessels coming in with the tide. In the hydrographic organization, this meeting place can be compared to the collar of a tree between the aerial vegetation and the underground root system. This is the normal pattern for the large European tidal seaports such as Hamburg, London, Antwerp, and Bordeaux.

The irregularities of the coastline also affect the distribution of cities. Certain sandy shorelines with little variation, inaccessible to ships except on those rare days of complete calm, are avoided by people from inland as well as by those who sail the seas. Thus the 220-kilometer coastline that runs in a straight line from the estuary of the Gironde to the mouth of the Adour has not a single town other than little Arcachon, which is no more than a simple bathing spot and resort, situated away from the shore within a rampart formed by the dunes of Cape Ferret. Similarly, the impressive barrier islands that follow the Atlantic coast of the Carolinas allow access between Norfolk and Wilmington only to a few poor towns that carry on a hazardous trade with considerable difficulty. In other coastal regions, islands and islets, rocks, promontories, and peninsulas multiply the thousand jagged edges and gashes of the escarpments. These similarly prevent the birth of towns, despite the advantages offered by deep and well-protected waters. Where coastlines are too violent and tempestuous, only a small number of people will be able to settle easily. The most favorable sites are those that have a temperate climate and are accessible from both land and sea, by ships and vehicles of all kinds.

In contrast to the regular coast of the Landes, which is almost devoid of towns and villages, one can point to the Mediterranean

⁹ Later Stalingrad (1925–61), and now Volgograd.

healthy blood does not once again freely circulate throughout the organism.

How very far are so many of today's cities from such a future state of well-being and beauty. A chart published in the city directory of St. Petersburg for 1892 gives a striking example of the manner in which such a large capital city can consume human lives. Starting with the year 1754, when the population was about 150,000, over the next 126 years the rate of growth increased to the point that there were 950,000 inhabitants. However, the hypothetical rate of change, calculated according to mortality and not taking into account immigration, results in a loss of 50,000. Births do not outnumber deaths even slightly until 1885, a year of extensive sanitation projects. And across the world, how many cities, like Budapest, Lima, and Rio de Janeiro, would be on the road to quick destruction were it not for the people from the country who come to take the place of those who die! If Parisian families die out after two or three generations, is it not the pernicious odor of the city that gets to them? If young Polish Jews fail the military physicals in much greater numbers than young people of other nationalities, should the blame not be placed on the cities that condemn them to stagnate in poverty-stricken ghettos?

And in how many cities does the sky seem to be draped with a funeral veil! On entering a hazy city such as Manchester, Seraing, Essen, Le Creusot, or Pittsburgh, one can see clearly how the works of Lilliputian humans are capable of tarnishing the sunlight and profaning the beauty of nature. If a very minute quantity of coal dust escapes from combustion and produces a continuous layer of haze a fraction of a millimeter in thickness, this suffices, especially if there is fog, to counteract the light of the sun.¹⁸ The impenetrable atmosphere that sometimes weighs on the city of London is justly famous.

¹⁸ Ch. Dufour, Bulletin de la Soc. Vaudoise des Sciences Naturelles, juin-sept. 1895, 145. [Reclus' note]

towers, pinnacles, and belvederes, while the horrible filth and stench are removed. The street that was formerly bedecked with tattered rags now contains balconies decorated with flowers and foliage. The city reemerges fresh and new, just as in a garden a trampled flower springs back with the stem and soil undisturbed.

But in a society in which people cannot depend on having enough bread to eat, in which the poor and even the starving make up a large part of the population of every large city, it is no more than a halfway measure to transform unhealthy neighborhoods if the unfortunate people who previously inhabited them find themselves thrown out of their former hovels only to go in search of new ones in the suburbs, merely moving the poisonous emanations a certain distance away. Even if the council members of a city were without exception men of impeccable taste and every restoration or rebuilding were carried out in a manner that is beyond reproach, there would still exist everywhere the painful and disastrous contrast between wealth and poverty, which is the inevitable result of inequality, the antagonism that cuts the social body in half. The counterpart to the arrogantly imposing neighborhoods is the sordid dwellings that, behind their low and leaning outer walls, conceal slimy courtyards and unsightly piles of stones and scraps of wood. Even in cities in which the administrators try to veil all these horrors hypocritically by hiding them behind decent whitewashed fences, the misery breaks through nonetheless. Behind them, death carries out its work even more cruelly than elsewhere. Is there among our modern cities a single one that does not have its Whitechapel or its Mile End Road?¹⁷ As beautiful and imposing as an urban agglomeration may be in its entirety, it always has its open or hidden vices, its defects, and its chronic sicknesses. These will lead inevitably to death if

¹⁷ Mile End Road and Whitechapel are in London's East End, noted in the nineteenth century for its poverty, crime, and industrial blight, in addition to its vibrant ethnic neighborhoods and radical politics.

coastline of Languedoc between the delta of the Rhone and the mouth of the Aude. In this region the large centers of population are found in closer proximity than they are on average anywhere else in France, even though the density of population per square kilometer is no greater than that of the country as a whole. The explanation for this string of cities is to be found in the geographical features of the countryside. The route that those traveling from Italy used to follow to reach Spain or Aquitaine had to avoid both the steep mountains of the interior and the marshes, salt lakes, and mouths of rivers along the coast. The steep, sparsely populated, and rather inhospitable upland area that borders the mountainous wall of the Cévennes to the south begins in the vicinity of the sea. Historically, movement through the region has thus shifted to a route that follows the Mediterranean coast. On the other hand, trade requires points of access, whether they be the mouth of a river such as the Aude or the Hérault, or else a cove artificially protected by jetties. Such considerations are responsible for the establishment of Narbonne, which enjoyed a period of world power when it was the most populous city of Gaul; Béziers, which prospered during the Phoenician period and which remains one of the great agricultural markets of France; Agde, the Greek town, which was succeeded in importance by Sète, another town with Hellenic origins; and Montpellier, the intellectual capital of the Midi, where the Saracens and the Jews were the precursors of the Renaissance. Beyond, other towns crowd together. The ancient Nîmes, sitting beside its fountain, is linked with the Rhone through the three cities of Avignon, Beaucaire, and Arles.

All natural conditions, including agricultural, geographical, and climatic ones, influence the development of cities, whether for better or for worse. Every natural advantage increases their powers of attraction, and every disadvantage diminishes them. Given the exact same historical environments, the size of cities would be directly proportional to the sum of their natural endowments. However, two cities, one in Africa and the other in Europe, might

have similar natural environments yet differ considerably from one another because the context of their historical evolution is so different. Nevertheless, there will be similarities in their destinies. And just as celestial bodies affect one another, neighboring urban centers mutually influence one another. They may either work together because they offer complementary advantages, as is the case with the commercial city of Liverpool and the manufacturing city of Manchester, or harm one another when they each have the same benefits to offer. The latter is the case with Bordeaux, on the Garonne, and Libourne, on the Dordogne, which are situated not far apart, on the two sides of the "Entre-deux-Mers." Libourne could have offered almost identical services to trade; however, its proximity to Bordeaux hurt its chances. Devoured by its rival, it lost virtually all its maritime significance and has no importance today other than as a stopping place for travelers.

Another remarkable phenomenon that should be noted is the ability of geographical forces, much like those of heat and electricity, to act at a distance, producing effects far from their source. Thus a city may rise up on a certain site as the result of various factors that make it preferable to sites closer to that source. One can cite the examples of three Mediterranean ports located where river deltas have created conditions that are particularly appropriate for trading cities. Despite its distance from the Nile, Alexandria serves as the commercial center for the entire river basin, while Venice is the port for the Paduan plain, and Marseilles, for the valley of the Rhone. And though Odessa is twenty kilometers from the mouth of the Dnieper, it still oversees the river's trade.

In addition to the qualities of the climate and the soil, those of the subsoil sometimes exercise a decisive influence. A city may rise up suddenly at a seemingly inhospitable spot, thanks to the area's subterranean wealth in building stones, clay for molding and sculpting, chemicals, various metals, and combustible minerals. Thus Potosí, Cerro de Pasco, and Virginia City have sprung up in regions that, apart from the presence of silver deposits, could never have sup-

its own life, its particular qualities, its distinct countenance. With what great reverence architects should look upon it! It is an assault on the collective personality embodied in the city to destroy its individuality in order to litter it with unimaginative structures and monuments that clash with its present character and its past history! The true art is to adapt the contemporary city to the demands of modern labor while preserving all the picturesque, unique, and beautiful qualities it has inherited from past centuries. We must learn how to sustain the life of the city and endow it with perfect health and utility, in the same way that loving hands restore the well-being of a sick person.

Thus in Edinburgh, intelligent men who are at once artists and scientists have undertaken the restoration of the splendid thoroughfare called High Street, which extends from Edinburgh Castle to Holyrood Palace, joining the two main sections of the old city. On the departure of King James for England, it was abandoned immediately by all the parasites of the court: chamberlains, soldiers, pleasure-seekers, purveyors, and lawyers. This avenue of sumptuous mansions then had new residents, for the poor moved in, doing their best to adapt the huge rooms by dividing them up with crude partitions. Two hundred years after the desertion of the street, it had become a collection of hovels with foul-smelling courtyards and tiny rooms infested with fever. The populace, clothed in filthy rags and constantly covered with mud, consisted in large part of the infirm, the scrofulous, and the anemic. The elegant vices of the court were succeeded by the most repugnant public ones. It is these awful cesspools that the renovators have attacked, gradually transforming each house, reinstalling the wide staircases, restoring the large rooms with monumental fireplaces, bringing an abundance of fresh air and light everywhere, supplying plenty of water to even the humblest attic, and adding bas-reliefs and decorative details to the bare walls of buildings. The picturesque qualities of old structures are respectfully preserved, and are even accentuated by means of

nience. It is true that cities, like states, have rulers whose milieu induces them to place their own self-interest above everything else. We have nevertheless achieved a great deal if we know what can be done so that some day the urban organism will function automatically to provide food, pure water, heat, light, energy, and ideas; to distribute equipment; and to dispose of useless or harmful materials. This ideal is still far from being realized. Still, many cities have already become healthy enough so that the average quality of life exceeds that of many rural areas in which the inhabitants constantly breathe the odor of rot and manure, and remain in primitive ignorance of basic hygiene.

The level of consciousness present in urban life is also expressed in a concern for art. Like Athens in ancient times, and like Florence, Nuremberg, and the other free cities of the Middle Ages, every modern city seeks to beautify itself. Even the most humble village has a bell tower, a column, or a sculptured fountain. But how sad and dreary is this art in general, concocted by highly certified professors under the supervision of a committee of incompetents whose pretentiousness is directly proportional to their ignorance. True art is always spontaneous and can never adapt itself to the dictates of a public works commission. These smallminded city council members often proceed in the style of the Roman General Mummius, who enthusiastically commanded his soldiers to repaint every damaged picture. They imagine that symmetry will achieve beauty, and think that identical reproductions will give their towns a Parthenon or a St. Mark's. In Europe we have a city whose very buildings render it preeminently banal—namely, the vast city of Munich, which contains many scrupulous imitations of Greek and Byzantine monuments, masterpieces that lack their appropriate environment, atmosphere, soil, and people.

Even if the imitators were able to produce monuments that were exact copies of their models, their works would be no less contrary to nature. A building can be understood only in relation to the conditions of time and space that gave rise to it. Each city has

ported a city. Merthyr Tidfil, Le Creusot, Essen, Liège, and Scranton are creations of coal mines. Formerly unused forces of nature are now giving birth to new cities in places that were once shunned, such as at the foot of a waterfall, as in the case of Ottawa, or in mountainous areas that are now within reach of electrical lines, as in the valleys of Switzerland. Every advancement by man creates points of vitality in unexpected places, much as a new organ creates its own nerve centers. What rapid changes in the distribution of cities are in store when man will have become the master of aeronautics and aviation! Just as man now seeks new sites along seacoasts that are most capable of handling the coming and going of ships, in the future he will feel as if he were carried like an eagle toward the summits from which his view can embrace the infinity of space.

To the degree that the sphere of human consciousness expands and interactions occur across much greater distances, cities become members of a greater organism. To the particular advantages that caused their birth, they add assets of a more general nature that may allow them to play a major role in history. Thus Rome, Paris, and Berlin have never ceased to gain new causes of growth, including growth itself.¹⁰ Can we not say this of London, today the largest city in the world? The principal cause of its prosperity is its location as a port, being situated at the head of maritime navigation of the Thames. This has allowed the city, which became the capital of the United Kingdom, to develop various assets that might otherwise have remained mere possibilities, never to be realized. Thus, advancing further and further in relation to the rest of the world, London has ended up becoming the central point that is on the whole most easily accessible from every corner of the earth.

As cities develop, it often happens that the growth or decline of these great organisms moves irregularly, by fits and starts caused

¹⁰ J. G. Kohl, *Die geographische Lage der Hauptstädte Europas*. [Reclus' note]

by rapid historical change. To take the example of London again, one can see that at the outset, the local advantages of the city, while having a certain importance, could not in themselves explain the rank that it has achieved among the world's cities. Many conditions were most favorable to London in helping it prevail in its struggle with other English cities for survival. It is located on a plain that is clearly bordered on the north by protective hills. It is on the banks of a great river and at the confluence of another smaller waterway. And it is positioned at the very point where the rise and fall of tides facilitates the alternation of navigational direction and the loading and unloading of merchandise. However, these local advantages would never have realized their true value had the Romans not chosen this site as the central convergence of the routes extending in every direction across the southern half of the great island. The British Rome could only rise up on the site chosen as the center of this network. But when the Roman legions had to abandon Albion and all the "high streets" constructed between the military posts and the country's port were deserted, Londinium thereby lost all of its importance. It became no more than a simple British village, reduced, like so many others, to dependence on its purely local assets, and for two hundred years it was completely ignored by history.¹¹ In order for the city to regain its significance, it was necessary that it reestablish its relationship to the continent.

The development of capital cities is to a large extent artificial. Administrative favors, the demands of courtiers and courtesans, civil servants, police, soldiers, and the self-interested multitude that crowds around the "ten thousand at the top," give capitals certain peculiar qualities that prevent them from being studied as typical urban centers. It is easier to comprehend the life of those cities whose histories depend almost entirely on their geographical environment. No study is more fruitful than

¹¹ Gomme, *Village Communities*, 48, 51; Green, *The Making of England*, 118. [Reclus' note]

in the factories, can one imagine a filthier atmosphere? Other less blackened cities are still almost as hideous because of the railroads, which have taken over streets, squares, and walkways, and send locomotives snorting and hissing by, scattering the crowds in their path. In fact, some of the most beautiful sites on earth have been desecrated. Thus in Buffalo people try in vain to walk along the banks of the superb Niagara River, running into foundries, railway crossings, muddy canals, piles of gravel and garbage, and all the other refuse of the city.

Barbarous speculation has also ruined the streets by creating subdivisions on which contractors build large districts, planned beforehand by architects who have never even visited the site, much less gone to the trouble of consulting the future inhabitants. They erect a Gothic church for the Episcopalians, a Romanesque structure for the Presbyterians, and finally a sort of Pantheon for the Baptists. They lay out the streets in squares and diamonds, varying bizarrely the geometrical design of the public squares and the style of the houses, while religiously saving the most valuable corners for the most unsavory drinking establishments. These are contrived cities that are based on the most banal concepts and that always betray in some manner the ostentatious arrogance of their creators.

In any case, every new city immediately constitutes, by its configuration of dwellings, a collective organism. Each cell seeks to develop in perfect health, as is necessary for the health of the whole. History demonstrates that sickness is no respecter of persons; the palace is in danger when the plague rages through the slums. No municipality can ignore the importance of the thorough rehabilitation of the city through street cleaning; the establishment of parks with lawns, flowers, and large shade trees; the rapid disposal of all refuse; and the supply of an abundance of pure water to every house in every neighborhood. In this regard, the cities of the most advanced countries are in friendly competition to test and put into practice various procedures to improve cleanliness and conve-

a mere glance at the map of a fortified town shows it to be ugly, hideous, and in complete conflict with their environment. Rather than embracing the contours of the land and freely extending its arms into the countryside, it seems as if its limbs are amputated and its vital organs stricken. Just look at the sad outward appearance of cities such as Strasbourg, Metz, and Lille! The latter is so narrowly confined within its ramparts that it had to overflow, so to speak, these military restraints. Roubaix and Tourcoing adjoin the fortified center, and today an attempt is made to merge the three elements into a harmonious whole by means of wide boulevards. Despite its beautiful buildings, its graceful promenades, and the charm of its people, Paris is another city that is marred by a harsh ring of fortifications. If the city had been freed from this unpleasant oval of broken lines, it would have grown organically, in an aesthetically pleasing and rational manner. It would have followed the more elegant contours given to it by life itself.

Another cause of ugliness in our modern cities is the invasion of large manufacturing industries. Almost every urban agglomeration is darkened with one or two areas that bristle with stinking smokestacks and are crisscrossed by gloomy streets lined with hulking structures whose walls are either completely blank or are riddled with countless depressingly uniform windows. The ground shakes under the weight of trucks and freight trains and from the effects of machinery in motion. There are so many cities, especially in young America, where the air is almost unbreathable, where everything that one encounters—the soil, the roads, the walls, the sky— seems to exude mud and soot! One can only recall with horror and disgust a mining community like the endlessly winding Scranton, whose seventy thousand inhabitants lack even a single hectare of filthy grass or sooty foliage to soothe their eyes after all the hideousness of the factory. Or consider the enormous Pittsburgh, with its semi-circular crown of elevated districts that flame and fume. Although the natives claim that the streets have become cleaner and the view clearer since the introduction of natural gas

the biography of a city whose appearance, even more than its historical records, allows one to observe the successive changes that have unfolded from century to century, following a certain rhythm.

In the mind's eye one can visualize the huts of the fisherman and gardener beside one another. Two or three farms are scattered across the landscape and a millwheel turns under the weight of the tumbling water. Later, a watchtower rises upon the hill. On the other side of the river, the prow of a ferry touches the shore, and another hut is built. Beside the boatman's cottage, an inn and a shop beckon travelers and passers-by. Then a market rises up on the leveled terrace nearby. A widening path, which is increasingly beaten by the footsteps of men and animals, descends from the plain to the river, while a winding trail cuts through the hillside. Future roads begin to take shape in the trodden grass of the fields, and houses occupy the four corners of the crossroads. The chapel becomes a church, the watchtower a fortified castle, a barracks, or a palace. The village grows into a town and then a city.

The correct way to study an urban agglomeration that has gone through a long period of historical development is to examine it in detail, paying careful attention to the conditions of its growth. One should begin with the place that was its cradle, a site almost always consecrated by legend, and end with today's factories and garbage dumps.

Each city has its unique individuality, its own life, its own countenance, tragic and sorrowful in some cases, joyful and lively in others. Successive generations have left each with its distinctive character. And each constitutes a collective personality whose impression on each separate person may be good or bad, hostile or benevolent. But the city is also a very complex individual, and each of its various neighborhoods is distinguished from the others by its own particular nature. The systematic study of cities, which examines both their historical development and the social values expressed in their public and private architecture, allows one to judge them

as one judges individuals. One can note the dominant elements in a city's character and judge the extent to which its influence has on the whole been either useful or detrimental to the progress of the populace that lives within its sphere of activity. Many cities are quite obviously devoted to work, but some of these differ markedly from others, according to whether local businesses operate in a normal or a pathological manner: whether they develop in conditions of peace, relative equality, and mutual tolerance, or whether they are instead carried away by the turmoil of furious competition, chaotic speculation, and brutal exploitation of the working class. Some cities can be seen immediately to be banal, bourgeois, routine, lacking in originality, and lifeless. Others are clearly designed for domination and overwhelm the surrounding countryside. They are tools of conquest and oppression, and on seeing them one experiences feelings of spontaneous horror and dread. Other cities seem completely antiquated even in their modern sections. They are places of shadow, mystery, and fear, where one feels overcome by feelings of another age. On the other hand, some cities seem eternally young. They inspire joy, their humblest structure has originality, the homes are cheerful, and the inhabitants have a poetic air and contribute to humanity their own, unique way of life. Finally, there are all the cities that have many faces, in which each social class is found in distinct neighborhoods that reflect its condition, and where attitudes and language change only slowly over the centuries. There are so many unhappy places that would make one weep!

The differences between cities are exhibited clearly in their respective modes of growth. Cities extend their suburbs outward along the highways, like tentacles that reach out in the direction of the greatest land commerce. Similarly, if a city runs along a river, its growth extends along the banks, where the boats anchor and unload. There is sometimes a striking contrast between two neighborhoods along a river that seem equally suited for human habitation, but which differ markedly because of the direction

They level whole hamlets and villages to replace them with widely scattered caretakers' huts.

One should mention, among the cities that are partially or entirely artificial and do not fulfill the real needs of industrial societies, those cities created for war, or at least those built in recent times by large centralized states. This was not the case when the city included the entire tribe or constituted the natural core of the nation. It was then absolutely necessary for defense to build ramparts that followed exactly the exterior outline of the neighborhoods, and to build watchtowers at the corners. In this period, the citadel, where all the citizens took refuge in times of grave danger, also served as the temple, and was built at the summit of the guardian hill, a monument made sacred with statues of the gods. In the case of cities like Athens, Megara, and Corinth, which consisted of two separated sections, it was necessary to protect the connecting road with long parallel walls. The arrangement of the fortifications was determined by the nature of the landscape and blended in a harmonious and picturesque manner with the countryside.

But in our day of extreme division of labor, in which military forces have become practically independent of the nation and no civilian would dare to interfere in questions of strategy, most of the fortified cities have extremely ugly contours. They have not the slightest attunement to the undulations of the landscape but instead cut up the landscape along lines that are offensive to the eye. The Italian engineers of the Renaissance, and later Vauban and his emulators, at least tried to design the outline of their fortified sites with the goal of perfect symmetry. Some of their works take the form of a starred cross with rays and gems. The white walls of their bastions and redans¹⁶ contrast consistently with the calm quietude of the shady countryside. But our modern sites no longer aspire to beauty. This goal never enters the minds of the builders. Indeed,

¹⁶ V-shaped works, usually projecting from a fortified line.

canals, railways, transportation links, and intellectual exchanges. Geography is not an unchanging thing, but rather something that makes and remakes itself constantly. It is continually modified by the actions of men.

Today it is no longer such Caesars who build capitals; they have been succeeded by powerful capitalists, speculators, and presidents of financial syndicates. Construction covering wide areas rises up in just a few months, laid out beautifully and provided with excellent facilities; even the schools, libraries, and museums lack nothing. If the choice of sites is wise, these new creations quickly enter the mainstream of life. Thus Le Creusot, Crewe, Barrow on Furness, Denver, and La Plata have taken their place as centers of population. But if the site is poorly chosen, then the city dies along with the special interests that gave birth to it. Cheyenne, no longer the final stop on the railway, sends its little houses further down the line, and Carson City disappears when the silver mines that attracted people to the forbidding desert around it are exhausted.¹⁵

Not only do the whims of capital sometimes give rise to cities that are doomed by the general interests of society; they also destroy many communities whose inhabitants would be quite content to continue to live there. Do we not see, on the outskirts of many large cities, rich bankers and landowners increasing their domain each year by hundreds of hectares, systematically changing cultivated land into plantations or parks for pheasants or large game?

¹⁵ Reclus overstates his point by using these particular examples. Cheyenne became a boomtown after the Union Pacific Railroad moved into Wyoming but experienced a severe decline when rail service was extended to Colorado, and Denver in particular. Carson City also experienced a boom when the Comstock Lode silver deposits were discovered but lapsed into two decades of depression when the mines were exhausted. This was followed, however, by a new period of boom with the discovery of additional gold, silver, and copper deposits in the area. Much of the history of Western boom towns is outlined in Duane A. Smith's *Rocky Mountain West: Colorado, Wyoming, and Montana, 1859–1915* (Albuquerque: University of New Mexico Press, 1992). See also Russell R. Elliot's *History of Nevada* (Lincoln: University of Nebraska Press, 1973).

of the river's current. Thus, considering the city of Bordeaux spatially, one would conclude immediately that the real center of population should be on the right bank of the river, at a spot where the houses of the small suburb of la Bastide rise up. But here there is a large bend in the Garonne, and consequently the docks are all located along the left bank, following the more rapid current of the river. The side on which the river truly flows also carries the current of commercial and political activity. The population follows the course of the river and avoids the muddy shores of the right bank. Big business did the rest by taking over the suburb, hemming it in with intersecting circles of railroad tracks and crossing gates and defacing it with sheds and warehouses.

It has often been contended that cities have a tendency to grow westward. This phenomenon, of which there are many cases, can be explained very well in the countries of Western Europe and in those with a similar climate. In these countries the prevailing winds blow from the west. The inhabitants of neighborhoods receiving fresh air are less exposed to health hazards than those living on the other side of the city, where the air is polluted when passing over chimneys, sewers, and many thousands or even millions of human beings. Furthermore, one must remember that the rich, the idle, and the artistic who enjoy contemplating the beauties of the heavens have more occasion to do so at dusk than at dawn. They unconsciously follow the direction of the sun in its westerly movement, and take pleasure in the evening at watching it set among the radiant clouds. Yet how many exceptions there are to this normal tendency of cities to grow in the direction of the sun's path! The form and contour of the land, the appeal of beautiful sites, the direction of the currents of waterways, and the growth of neighborhoods parasitical on the needs of industry and commerce often draw people of wealth and leisure to parts of the city other than those that lie to the west. Brussels and Marseilles are two examples of such divergence from the normal model.

By the very fact of its growth and development, the urban agglomeration tends to die, like every organism. It is subject to the ravages of time, and one day discovers that it is old, while other cities are rising up, eager to live their own lives. Doubtless, because of the forces of inertia and routine among its inhabitants, and the powerful attraction that a center exerts over surrounding areas, it still maintains certain enduring qualities. But not only is the urban organism subject to the fatal accidents that befall cities as well as men, it is unable to rejuvenate and recreate itself quickly except by means of ever-greater efforts—and even then it may shrink from this continual necessity. The city must enlarge its streets and squares, rebuild, move or raze its walls, and replace old, outmoded structures with new ones adapted to changing needs.

Whereas a new American city is born fully adapted to its environment, a city like Paris, which is old, congested, and polluted, must constantly reconstruct itself. Because of this continuous effort, the city is at a great disadvantage in the struggle for existence, as compared to new cities such as New York and Chicago. It is for similar reasons that in the basins of the Euphrates and the Nile immense cities like Babylon, Nineveh, and Cairo have successively relocated. Thanks to the advantages of its site, each of these cities has retained its historical importance, at least to some degree. However, they all found it necessary to abandon certain antiquated quarters and move further on in order to avoid the debris, not to mention the stench emanating from garbage piles. In general, the only inhabitants of the site that was forsaken when the city moved on are those in the graves.

Other causes of the death of cities, more decisive because they arise from historical development itself, have struck many formerly famous cities. Conditions similar to those that gave birth to the city have been the cause of its inevitable destruction. Thus the replacement of one highway or crossroads by other roads that are more convenient can result in the elimination of a city that owed its exist-

tence to transportation. Alexandria ruined Pelusium.¹² Cartagena in the West Indies returned Portobello to the solitude of the forest.¹³ The requirements of commerce and the suppression of piracy have changed the location of many cities built on the rocky coast of the Mediterranean. Once they were perched on rugged hills and encircled by thick walls to defend them from warlords and privateers. Now they have come down from their rocky heights and extend along the seashore. Everywhere the *borgo* has become a *marina*. The Piraeus¹⁴ has succeeded the Acropolis.

In our authoritarian societies, in which political institutions have often given preponderant influence to a single will, it has sometimes happened that the whims of a sovereign have placed cities in areas in which they would never have grown up spontaneously. Once established in such unnatural environments, they have only been able to develop at the cost of an enormous loss of vital energy. Thus cities such as Madrid and St. Petersburg were built at great expense, though the original huts and hamlets, left to themselves without the actions of Charles the Fifth and Peter the Great, would never have become the populous cities that they are today. Although these cities were created by despotism, because of men's collective labor they are nevertheless able to live as if they had a normal origin. Though the natural features of the landscape did not destine them to be centers of population, they have become so because of the convergence of highways,

¹² This ancient city, now called Tell el-Farama, was one of Egypt's most important ports.

¹³ Cartagena de Indias is a seaport on the northern coast of Colombia. Portobello, a minor port on the eastern coast of Panama, was once a major center of the Spanish colonial empire. Reclus correctly notes that Portobello declined relative to Cartagena, but it was not because the former was directly displaced by the latter. It declined primarily because the Spanish treasure fleet system, which made it a center of exchange of silver from Peru and goods from Europe, had become obsolete by the eighteenth century. Cartagena's fortunes were affected to a much smaller degree.

¹⁴ The port of Athens.