SENSE OF THE CITY

AN ALTERNATE APPROACH TO URBANISM

Edited by Mirko Zardini

with essays by

Wolfgang Schivelbusch
Norman Pressman
Emily Thompson
Mirko Zardini
Constance Classen
David Howes

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AIR OF TH

Increasingly the whole world has come to smell alike: gasoline, detergents, plumbing, and junk foods coalesce into the catholic smog of our age.

Ivan Illich, 1995

E CITY

LONDON, THE BIG SMOKE, 5TH TO 10TH DECEMBER 1952

As it turned out, one of my tours of duty coincided almost exactly with the great smog, 5th to 10th December. As we now know, but did not at the time, the borough of Westminster in which we were situated was the part of London where the fog was most dense. As for my personal recollection of the smog itself, at its worst it had the effect of completely disorientating me in a part of London I knew well, so that I lost my way on a minor errand from the Middlesex Hospital to Oxford Street, 400 yards away. To get my bearings and to discover where I was, I had to creep on the pavement along the walls of the buildings, to the next corner, to read the name of the street. I do not recall any smell, but I do remember an eerie silence as there was little or no traffic. Visibility was less than three yards, and it was bitterly cold.

Donald Acheson, 2010

LONDON, 1 December 1952.
Ted Russell, Office workers holding scarves to their faces to protect themselves from the smog.


BUS STOP
59
59
159
163

LONDON, 5 December 1952
Don Price: Morning traffic at Blackfriars, almost at a standstill because of the blanket of smog

LONDON, 6 December 1952
Monty Fresco: A man guiding a London bus through thick fog with a flaming torch

LONDON, 21 November 1954
John Pratt, lab assistant at the Fuel Research Station's 40-foot-high section, with a filter taken from an air conditioning plant in London. After just one night's use, it was discoloured by the impurities and smog in the air.

LONDON, 8 January 1956
A policeman wearing a mask as protection against the severe smog which virtually blacked out the capital. Visibility was reduced to a maximum of five yards.

AIR OF THE CITY

As a concentration of activities and people, the contemporary city also comprises a concentration of odours, even if they are no longer comparable to those of medieval, Renaissance, or 18th-century cities. On the one hand, we find "a new mix of gasoline, detergents, plumbing, and junk food," and on the other, the odours of the refuse that often, in the *bidonville*, the slum, and the *favela*, accumulates in open-air dumps, dotted with fires sending up plumes of foul smoke.

Smells that are now universal and specific smells, produced by particular activities, sources of energy, aromas and spices, plants, flowers, animals, and garbage overlay one another, forming landscapes of smell that are invisible, but nonetheless present and real. Dogs are much better able to recognize these *smellscapes* than humans.

After trying to eliminate dirt and garbage from the ground, municipalities set out to rid the air of odours and impurities. We have renounced the utopian idea of a socially, politically, and economically perfect city, but not the promise of a perfectly clean and sanitized environment with pure air for breathing. Where we have succeeded, for example with air conditioning systems for large indoor communal spaces, the lack of any olfactory interest has been so profoundly disappointing that we have reintroduced artificial odours, like the ones to be found in our shopping malls.

Very often, however, we have purified the air only of its visible pollution, soot and smog, leaving intact airborne chemical substances that escape our notice precisely because they are not only invisible but also odourless. So we worry about our health, consulting reports on the quality of the air. At the same time, dust, the obsession of the modern city, has not gone away. No longer perceptible, it is present in a more insidious form, so fine that it is invisible to the eye.

Thus, among the many kinds of well-being to which we aspire, we cannot forget our physical well-being, but neither should we neglect our mental health or the health of our senses, such as the pleasure we take in a particular scent or odour.

No one may keep running for more than four (4) minutes the motor of a vehicle parked outdoors, save when the motor is used to carry out work outside the vehicle, or when the outside temperature is lower than –10°C.

City of Montréal, *By-law No. 44: Air Purification*, Section 9.01 (20 December 1976).

Fresh Air Cart Mask. Multiple made for the 1985 Matta-Clark exhibition at the Museum of Contemporary Art, Chicago

NEW YORK, 1972
Gordon Matta-Clark, Fresh Air Cart performance

This antipollution performance took place on 8 September 1972 in the Wall Street district, and one week later at 42nd Street and Vanderbilt Avenue. Matta-Clark constructed a small vehicle equipped with an oxygen tank and masks so that passersby could be offered a mix of 79% nitrogen and 21% oxygen.

DR. RICHARD B. DUANE, JR.
108 EAST 67TH STREET
NEW YORK 21, N.Y.
RHINELANDER 4-3090

August 22, 1972

Mr. Gordon Matta
28 East 4th Street
New York, N.Y.

Dear Gordon:

In answer to your questions:

1) Pure oxygen, to some people with impaired respiratory function, can, even in hospital, be fatal as it can "turn off" their anoxia respiratory drive. By offering this - indiscriminately to the general public - you would be practicing medicine without a license and liable to all sorts of legal actions.

2) In view of #1, #2 does not pertain.

3) We spoke of the very real dangers of cross-contamination with organism such as Serratia marcescens, Proteus, Pseudomonas, etc. and the methods to prevent this. Very expensive.

Better forget this project and try to clean the air around us.

Very sincerely yours,

RBD

Richard B. Duane, Jr., M.D.

RBD/dah

Letter from Dr. Richard B. Duane to Gordon Matta-Clark, dated 22 August 1972, regarding Matta-Clark's plan to offer the public oxygen

BAD ODOURS

The Régie autonome des transports parisiens (RATP) was faced with the problem of bad odours. In 1993, an odour nuisance treatment team was set up. Once the most obtrusively bad odours were eliminated, the metro was to camouflage the rest with a good smell: improving the underground transportation environment became a top priority. The technical department responsible for cleaning the metro introduced a fragrance evocative of the "smell of clean" into the solution used to clean the floors of the metro system's underground stations and terminals: 640,000 square metres in all. The fragrance enhanced the sense of cleanliness by improving the overall perception of the environment.

Roger-Henri Guerrand, 2004

TOKYO, 2000
Peter Marlow (Magnum)


AERA
査定で損しない
悟太郎 総理を目指す仰天シナリオ
設備投資ふやした会社
ヤンキース松井 雄姿への道
フセイン地下施設は日本製

Most people have used the medicinal-smelling artificial vanilla flavoring for so long that they have no idea what real vanilla extract tastes and smells like.

Diane Ackerman, 1995

Different artificial smells: Subway, Lavender, Tar, Natural Gas, Bakery, Garbage, and Asphalt; Symrise, 2005


Lavender
AB11566
Lot:682B10
06/08/2005


Tar
A05.9021
Lot:682F03
06/20/2005


Garbage
A05.9002
Lot:682F04
06/20/2005


Asphalt
A05.9000
Lot:682F02
06/20/2005

KFC (Kentucky Fried Chicken) is but one example of the smell of food being vented into the air, often by specialized diffusing technology, to travel far beyond its source, following people, meeting them unawares, flaring their nostrils even when out of sight of the scent's origin. Circulating through the streets, occupying a neighborhood, lurking around corners in the mall and other indoor marketplaces, these odours are out for a stroll, trolling for potential customers to entice.

Jim Drobnick, 2004

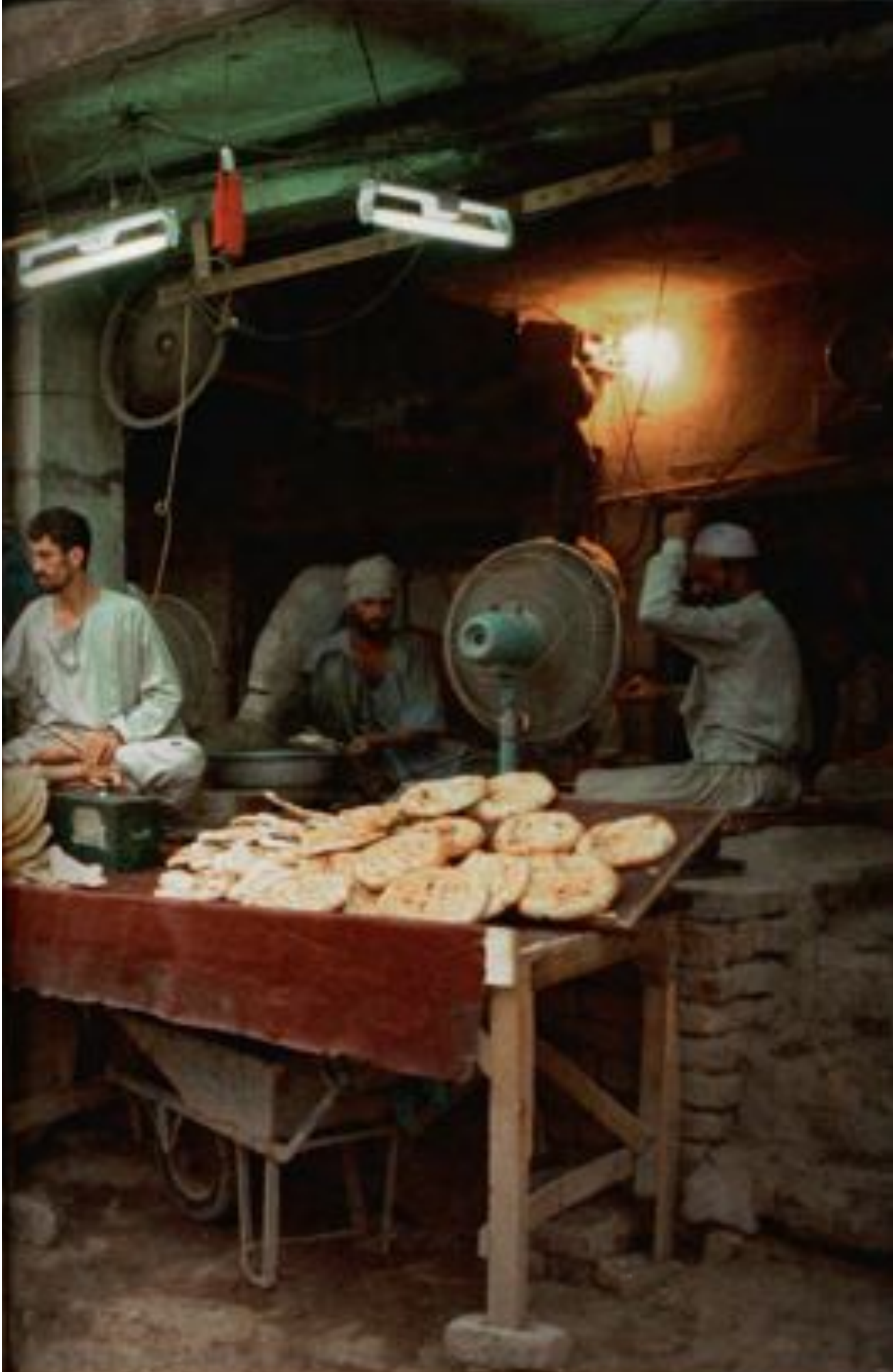
Stills from the Industry on Parade Film Collection, 1957
First air-conditioned shopping center: Southdale Regional
Shopping Center, Minneapolis, Minnesota

The streets of nineteenth-century London were full of poor girls selling small bouquets of violets and lavender.... Violets contain ionone, which short-circuits our sense of smell. The flower continues to exude its fragrance, but we lose the ability to smell it.

Diane Ackerman, 1990

Following pages: KISUKI, Japan, 1960
Chris Steele-Perkins (Magnum): One of the 100 best cherry blossom locations in Japan

PP. 203–03 PESHAWAR, Pakistan, 2001
Thomas Dworzak (Magnum): A bakery at Bord market



All smell is, if it be intense, immediate disease.

Edwin Chadwick, 1846

BUENOS AIRES, 2021
Ferdinando Scianna (Magnum) © In a slaughterhouse

THE DEODORIZED CITY: BATTLING URBAN STENCH IN THE NINETEENTH CENTURY

Constance Classen

Charles Dickens was once described by his office clerk as "a man who lived a lot by his nose. He always seemed to be smelling things."[1] One of the things Dickens learned by his nose was that in nineteenth-century London, rain had none of the fragrant, revitalizing characteristics it had in the countryside. As he described it in his novel *Little Dorrit*: "In the country, the rain would have developed a thousand fresh scents, and every drop would have had its bright association with some beautiful form of growth or life. In the city, it developed only foul stale smells, and was a sickly, lukewarm, dirt-stained, wretched addition to the gutters."[2] The reasons why urban showers only led to foul odours had been detailed a century earlier by Jonathan Swift in a poem entitled "A Description of a City Shower":

> Now from all parts the swelling kennels [gutters] flow
> And bear their trophies with them as they go:
> Filth of all hue and odour seem to vie
> What street they sailed from, by their sight and smell…
> Sweepings from butchers' stalls, dung, guts, and blood,
> Drown'd puppies, sinking sprats, all drench'd in mud,
> Dead cats and turnips-tops come tumbling down the flood.[3]

The malodorous filthiness of the streets of London—and indeed of most cities of the eighteenth and nineteenth centuries—was caused by numerous factors. One was the irregular collection of garbage, or, as it was euphemistically termed—"dust." The result was that streets often provided the most convenient place to dispose of household rubbish. Streets were also often used as public toilets and cesspools. Indeed the custom of emptying chamber pots from bedroom windows into the street below resulted in many an unwary passerby receiving an unpleasant soaking. Another contributor to urban filth was the abundant presence within the city of slaughterhouses and related trades, "such as gut-spinning, tallow-melting, bladder-blowing, and paunch-cleansing," as one nineteenth-century report put it.[4] Until the second half of the nineteenth century, almost anyone could set up a slaughterhouse almost anywhere in London, and a considerable amount of the resulting offal ended up in the surrounding streets. Furthermore, in order to arrive at the slaughterhouses, herds of animals were driven through the city. These animals, together with the thousands of cows kept in city dairies and the thousands of horses used for pulling cabs and carriages, contributed a potent reek of manure to the urban smellscape.[5]

Not surprisingly, therefore, the only refreshment to the sense of smell afforded by a city shower in Dickens' day was that it might wash away some of the accumulated filth on the streets. However, this was but a temporary solution to urban stench, not only because the streets quickly refilled with waste, but also because their malodorous contents were washed into nearby rivers, which consequently became little more than open sewers in their passage through cities. A London newspaper declared in 1855: "Whatever we go, whatsoever we eat or drink within the circle of London, we find tainted with the Thames... No one having eyes, nose, or taste, can look upon the Thames and not be convinced that its waters are, year by year, and day by day, getting fouler and more pestilential."[6]

Stinking streets and rivers were by no means purely a modern urban blight. As far back as 1357, King Edward had remarked that "When passing along the water of the Thames we have beheld dung and other filth accumulated in diverse places in the said City upon the bank of the river aforesaid and also perceived the fumes and other abominable stenches arising therefrom."[7] The problem was greatly intensified in modernity by the enormous increase in the population of cities. Particularly serious was the absence of any organized sewage system. Most houses in the mid-nineteenth century had cesspools, some of which had grown so large over the years that they could almost be called sea-lakes. Traditionally, the nightsoil men, as they were called, had emptied cesspools and sold the contents to farmers as manure. But as cities grew larger, farms grew more inaccessible. Moreover, in the mid-nineteenth century, guano from South America became available to farmers as a cheap fertilizer. In consequence, many urban cesspools were rarely emptied and ended up leaking into the surrounding ground and even into the houses themselves. (In fact, cesspools were often built to leak, so as to require emptying less often.) The problem was exacerbated in working-class districts by overcrowding. In these districts, houses meant to accommodate one family, housed one or more per room, not excluding the kitchen. Nineteenth-century medical officers and sanitary reformers who toured such neighbourhoods described hellish scenes of overflowing cesspools, mountains of manure, and heaps of garbage. One official wrote: "In pursuance of my duties, from time to time, I have visited many places where filth was lying scattered about the rooms, vaults, cellars, areas, and yards, so thick, and so deep, that it was hardly possible to move for it. I have also seen in such places human beings living and sleeping in [cellar] rooms with filth from overflowing cesspools exuding through and running down the walls and over the floors."[8]

The stench produced by these appalling conditions was intensified by the customary lack of ventilation. Many tenement houses were built back-to-back, and certain streets of workers' housing in

London could only be reached by underground tunnels, as they were completely enclosed by surrounding houses. Furthermore, a tax on windows led to the construction of housing with as few windows as possible. Although the tax was repealed in 1851, the windowless buildings to which it had given rise remained, to house and steal in the unfortunate poor for many long years afterwards. A physician, describing one such abode in 1848, noted that "The horrible stench which polluted the place seemed to be closed in hermetically; not a breath of fresh air reached them—all was abominable."[7]

The filthy, malodorous conditions of many English boarding houses were matched by those abroad. Honoré de Balzac's 1835 account of the stench of a Parisian boarding house is often taken as indicative of his unusual sensitivity to smell (like Dickens, Balzac also "lived a lot by his nose"): "It smells stuffy, mouldy, rancid; it is chilly, clammy to breathe, permeates one's clothing; it leaves the stale taste of a room where people have been eating; it stinks of backstairs, scullery, workhouse."[8] Nonetheless, compared to the realities of many of the lodgings of the poor, Balzac's description might rather be read as a delicate understatement of the case.

If it had been only the poor who suffered from urban stench, perhaps little would have been done to ameliorate the situation. Despite the belief of earnest reformers that clean water, fresh air, and Christianity could purify the poor, body and soul, it was widely believed that dirt, immorality, and poverty were a natural and inevitable combination. A nineteenth-century perfumer even went so far as to conclude that the working classes tolerated malodour because they had a faulty sense of smell: "Among the lower orders, bad smells are little heeded; in fact, 'noses have they, but they smell not'; and the result is, a continuance to live in an atmosphere laden with poisonous odours, whereas anyone with the least power of smelling retained shuns such odours, as they would anything else that is vile or pernicious."[9] As if to prove the point, many of the efforts to clean the urban environment were met with public riots. This was partly because waste constituted the livelihood of many workers, such as cesspool cleaners, street sweepers, and rag pickers, and partly because the poor feared—with good reason—that when a neighbourhood was cleaned of filth, they would be the next to be evicted.

While particularly bad in the working-class districts, the accumulation of waste and its resultant stench was a city-wide problem from which no one was immune. In an attempt to ameliorate the problem, more houses in London were connected to sewers that emptied into the Thames. This transition, however, led one sanitary reformer to assert that "the Thames is now made a great cesspool instead of each person having one of his own."[10]

Many angrily denounced the dumping of sewage into rivers, not on the grounds of pollution, but because they thought it a waste of

a valuable resource. In a letter to the *Times*, a London alderman decried "the gradual but sure exhaustion of the soil of Great Britain by our new sanitary arrangements, which permit the excrements (really the food) of fifteen million people, who inhabit our towns and cities, to flow wastefully into our rivers."[13] In France, Victor Hugo similarly condemned the loss of productivity entailed in letting manure be carried away to the sea:

> Those heaps of garbage at the corners of the stone blocks, these tumbrils of mire jolting through the streets at night, these horrid scavengers' carts, these fetid streams of subterranean slime which the pavement hides from you, do you know what all this is? It is the flowering meadow . . . it is perfumed hay, it is golden corn, it is bread on your table, it is warm blood in your veins, it is health, it is joy, it is life.[14]

It was also occasionally perfume, as farms that were manured with sewage grew, along with vegetables, aromatic plants used in perfumery. Indeed, the corks for perfume bottles were often salvaged from the innumerable bottle corks found floating in the sewers.[15]

While Hugo and others lamented a vast fertile resource being washed away to the sea, the great problem for most cities was precisely that the sewage dumped into their rivers was not taken far enough away. As a London paper claimed in 1855: "The abominations, the corruptions we pour into the Thames are not, as some falsely say, carried away into the sea. The sea rejects the loathsome tribute, and heaves it back again with every flow. Here, in the heart of the doomed city, it accumulates and destroys."[16]

In the hot, dry summer of 1858, the reek of the Thames was so strong that it drove legislators from Parliament, holding handkerchiefs to their noses. While many Victorians preferred not to discuss the indelicate subject of fecal stench, the Great Stink, as it was called, overcame their reticence. The *City Press* reported "gentility is at an end—it stinks; and whoso once inhales the stink can never forget it and can count himself lucky if he live to remember it."[17] Here we find expressed the widespread belief that foul odours were not only unpleasant, they were dangerous to one's health. It was this association of disease with stench and filth, rather than concerns over repugnant odours or squalid living conditions, which would provide the main impetus to the nineteenth-century sanitary reform movement.

Incredible as it might seem to most city dwellers today, in the early nineteenth century, drinking water often came straight from nearby rivers—the same rivers that were known as open sewers. The companies that piped in the water conveniently took it from that section of the river that passed through the city, which also happened

to be the most polluted part of the river. No method of filtration was used. Foul as such water might seem today, most urban dwellers were only too happy to get their share of it. Water was not piped into houses, and usually there was only one standpipe of water per street—and that might only run for an hour a day. Little wonder that the working classes of London were known as the Great Unwashed. An alternative means of procuring water was from wells, but the water provided by these was in many cases no purer than that which came from the river. City wells were often shallow and received the drainage from the surrounding soil, which was, as often as not, saturated with the leaked contents of cesspools and other waste products. With good reason, the well water of London was said to smell like sewer water. When water was unavailable from pipe or well or rain barrel, the last resource for housewives was to dip buckets into the mucky ditch in the street.

It took many years and many deaths, but gradually people realized that there was a link between the quality of their drinking water and the frequency and virulency of cholera epidemics in the nineteenth century. A first step was taken in London in 1852, when water companies using the Thames were ordered to remove their intake pipes from the city and to filter the water they supplied. The next steps were to construct an adequate sewage system, establish an efficient means of garbage disposal, and regulate the operation of noxious industries such as slaughterhouses. Since many private interests were involved, these steps were not taken easily. Obliging homeowners to connect their houses to a sewage system, for example, was said to infringe on their property rights. Restricting the operations of businesses was considered to interfere with the right of free enterprise. Dr. John Simon noted in a report he made to the London Commissioners of Sewers in 1854: "When your orders are addressed to some owner of objectionable property which is a constant source of nuisance, or disease, or death; when you would force one person to refrain from tainting the general atmosphere with the results of an offensive occupation .... you will be reminded of the 'rights of property' and of 'an Englishman's inviolable claim to do as he will with his own.'"[28] Dr. Simon pleaded that "the factory chimney that eclipses the light of heaven with unbroken clouds of smoke, the [tallow] melting house that nauseates an entire parish, the slaughterhouse that forms round itself a circle of dangerous disease—these surely are not private but *public* affairs."[29] Such pleas, however, were often overridden by the seemingly more powerful argument that employment and economic growth must take precedence over "niceties" of cleanliness.

The arguments that raged over sanitary reform in nineteenth-century England were also debated in other countries, most notably France. Already in the eighteenth century, the foul odours of Paris

could be perceived at a considerable distance from the city. On a visit to France, the great English sanitary reformer Edwin Chadwick tried to convince Napoleon III that combatting urban stench was a task worthy of an emperor: "They say that Augustus found Rome a city of brick, and left it a city of marble. If your Majesty, finding Paris fair above, will leave it sweet below, you will more than rival the first emperor of Rome."[20]

The proposal perhaps appealed to Napoleon III, as he did indeed support the construction of a comprehensive sewage system for Paris. As well as being attracted by visions of imperial glory, the emperor probably also was wooed by Chadwick's argument that cleaning up the city would help calm the social unrest that had resulted in riots and revolts. Identified as the poor were with dirt and stench, the suppression of the latter metaphorically entailed the suppression of the former. One French reformer declared, for instance, that "Prostitutes are just as inevitable in an urban district as are sewers, dumps, and refuse heaps. The authorities should take the same approach to each."[21] The old, dysfunctional Parisian sewers had been described by Victor Hugo in *Les Misérables* as an underground haunt of both lowlife and revolutionaries. The new sewage system, under the charge of Baron Haussmann, the same official who had created the French capital's wide boulevards, was to be efficient and state regulated. The orderliness of the new underground system mirrored the orderliness of the newly-designed city above. So respectable did the sewers become that public tours were offered. Ventilation and the rapid movement of water ensured that malodour was kept to a minimum, and the Parisian sewer went from being a dark den of subversion to being a bourgeois spectacle. (Present-day tourists to Paris may also descend into the "Sewer Museum.") Victor Hugo observed in 1862: "Today, the sewer is clean, cold, upright, proper.... One can almost see clearly in it. The mire is well-behaved."[22]

As originally designed by Haussmann, the Parisian sewers carried only street and household water. Later in the nineteenth century, another system was constructed to carry human waste. At the same time, French engineers experimented with different ways of treating or recycling sewage, so that by the end of the nineteenth century, untreated sewage was no longer being dumped in the Seine. The streets of Paris were further sanitized by regulations requiring residents to place their garbage in cans, which were regularly emptied by municipal garbage collectors. (The name of the man who created the new laws concerning garbage collection, Poubelle, became the French word for garbage can.)

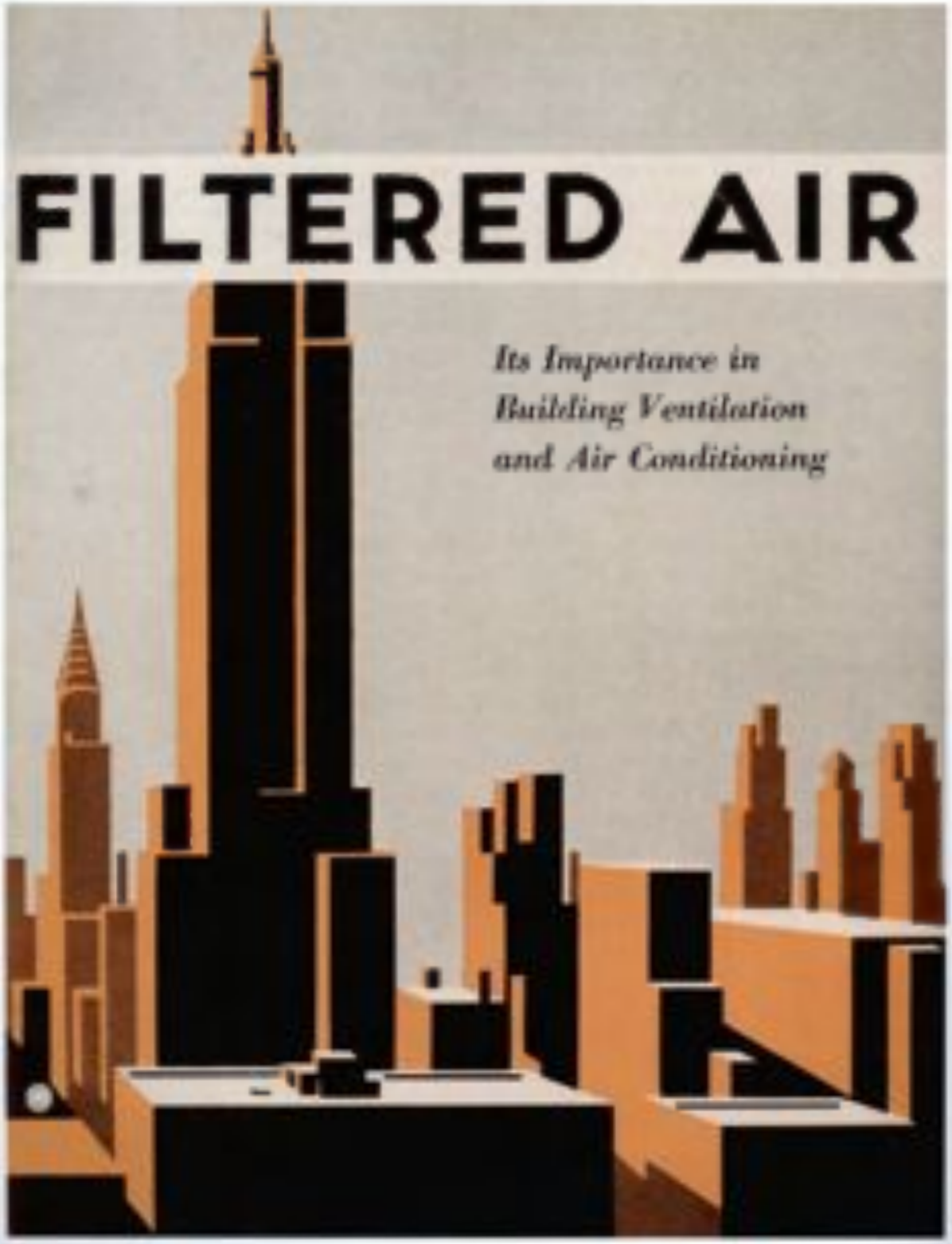
A similar sequence of events occurred in London and other major cities in Europe and elsewhere. Networks of sewers were constructed underground. Zoning regulations placed slaughterhouses, garbage

dumps, and cemeteries outside of cities. As for the overcrowding of the working classes, which in many cities had led to notoriously filthy slums, this was eased by the spread of railroads. Whereas previously, workers had been obliged to live near their workplace, no matter how loathsome the available accommodations, cheap railroad fares meant they could seek better lodging further away and commute. While it would certainly contribute its share to the pollution of the environment, the automobile, invented in the late nineteenth century, would ensure that horses and their manure disappeared from city streets.

The deodorization of the modern city was a slow, difficult process, and did not proceed everywhere at the same pace. Old habits of dumping garbage and waste into the streets persisted well into the twentieth century. In her recollections of a working-class childhood in early-twentieth-century Paris, Madeleine Henrey describes chamber pots being emptied out of windows, as though a sanitary revolution had never taken place.[15]

Even in the twenty-first century, urban sanitization is hardly a fait accompli. While the street is no longer the customary receptacle for household refuse, littering remains a problem in cities today. Certainly the "smarting fogs" described by Dickens in some of his work, which left people "blinking, wheezing and choking," have hardly disappeared from the cityscape.[16] Nor can one rely on late-nineteenth-century sewer systems to dispose of urban waste indefinitely. In fact, the inadequacy of the Victorian sewer system in present-day London means that raw sewage is once again regularly being pumped into the Thames. Since in London the same sewers carry both rainwater and human waste, heavy rainfalls cause hundreds of thousands of tons of untreated sewage to overflow into the river. One such overflow in August of 2004 killed some 10,000 fish, which could be seen floating on the tide outside the House of Commons. It cannot, therefore, be assumed that the scenes of urban filth described by writers such as Dickens and Swift are safely buried in the past. Another "Great Stink" may be just around the corner.[17]

1 Philip Collins, "Dickens and London," in *The Victorian City: Images and Realities*, vol. 2, eds. H. J. Dyos and Michael Wolff (London: Routledge & Kegan Paul, 1973), 537.
2 Charles Dickens, *Little Dorrit* (London: Collins, n.d.), 38.
3 Jonathan Swift, "A Description of a City Shower," in *The Poems of Jonathan Swift*, ed. H. Williams (Oxford: Clarendon, 1958), vol. 1, 139.
4 Henry Jephson, *The Sanitary Evolution of London* (New York: Arno Press, 1978), 241.
5 John Hogg, *London As It Is* (London: John Macrone, 1837), 202.
6 Jephson, 77.
7 Stephen Halliday, *The Great Stink of London: Sir Joseph Bazalgette and the Cleansing of the Victorian Capital* (Gloucestershire: Sutton, 1999), 30.
8 Jephson, 10.
9 Ibid., 38.
10 Honoré de Balzac, *Père Goriot*, trans. A. J. Krailsheimer (Oxford: Oxford University Press, 1991), 5.
11 Charles H. Piesse, *Piesse's Art of Perfumery* (London: Piesse and Lubin, 1891), 33.
12 Jephson, 109.
13 Donald Reid, *Paris Sewers and Sewermen: Realities and Representations* (Cambridge, MA: Harvard University Press, 1991), 53.
14 Victor Hugo, *Les Misérables*, trans. C. Wilbour (New York, Modern Library, n.d.), 1064.
15 Jephson, 77.
16 Reid, 44.
17 Jephson, 71.
18 Ibid., 61.
19 Ibid., 40.
20 Reid, 36–38.
21 Ibid., 33.
22 Ibid., 48.
23 Madeleine Hanna, "Seamstress and Marketwoman: Working Women in Early Twentieth-Century Paris," in *The Book of Touch*, ed. C. Classen (Oxford: Berg, 2005).
24 Collins, 541.
25 For further reading, see Alain Corbin, *The Foul and the Fragrant: Odor and the French Social Imagination*, trans. M. Kochan, R. Porter and C. Prendergast (Cambridge, MA: Harvard University Press, 1986), and Constance Classen, David Howes, and Anthony Synnott, *Aroma: The Cultural History of Smell* (London: Routledge, 1994).



Filtered Air: Its Importance in Building Ventilation and Air Conditioning
AMERICAN Air Filter Company, Inc., 1931

The perception of the city as a place that must be constantly washed is of recent origin. It appears at the time of the Enlightenment.... The city is suddenly perceived as an evil-smelling space. For the first time in history, the utopia of the odorless city appears.

Ivan Illich, 1985

Controls for Air Conditioning
Barber-Colman Company, 1937

Toridheet Air Conditioning Furnace: Completely Automatic Oil Heat, Humidification & Air Circulation
Cleveland Steel Products, 1929–1939

SMELLSCAPES

Whether natural, related to the local flora and fauna, or artificial, in the sense of revealing the presence and activities of man, odour constitutes an essential component of the character of a place. There really are smellscapes. The moment you get off the airplane, Korea smells of kimchi *(pickled cabbage with garlic and hot pepper), Tahiti smells of its indigenous gardenias, Dakar smells of dried fish: for natives or frequent visitors, this guarantees an emotional response of the "Proustian experience" variety; for newcomers, it results in a more or less pleasant shock because of its unfamiliarity. Almost everything still remains to be understood in this area... A whole segment of a society's imaginative world is revealed in the odour of its environment.*

Jean-Robert Pitte, 1991

We have trouble representing odours in space, essentially because they are invisible. Only the visual data of architecture can be represented. Since space, where we live, consists of air, light, humidity, temperature, and smells—all of which are invisible, transparent things—it cannot be drawn.

In short, we represent only the materiality of things, that which is solid and visible, and space is not material. We draw the boundaries of space, the walls, but not space itself, the living environment in the centre. If we consider space to be a true living environment and all of its components to be important, then we should represent smells and sounds, air temperature and humidity.

Marc Cramilla, 2004

In the period of which we speak, there reigned in the cities a stench barely conceivable to us modern men and women. The streets stank of manure, the courtyards of urine, the stairwells stank of moldering wood and rat droppings… The stench of sulfur rose from the chimneys, the stench of caustic lyes from the tanneries, and from the slaughterhouses came the stench of congealed blood. People stank of sweat and unwashed clothes… The rivers stank, the marketplaces stank, it stank beneath the bridges and in the palaces.

Patrick Süskind, 1985

The body's spatial requirements were to be determined by measurement of exhalations. And the necessary spacings were to be governed by the forms of sensory intolerance we have already noted. Conversely, over the next few decades, this creation of distance was to entail increasing specialization; eventually, it was assumed, it would eliminate the confusion of smells that often reigned in both public and private space.

Alain Corbin, 1986

STUTTGART, c. 1983
Richard Droste: Air conditioning vents of the Staatsgalerie, designed by James Stirling and Michael Wilford

STUTTGART, c. 1983
Timothy Hursley: Air conditioning vents of the Staatsgalerie, aerial view

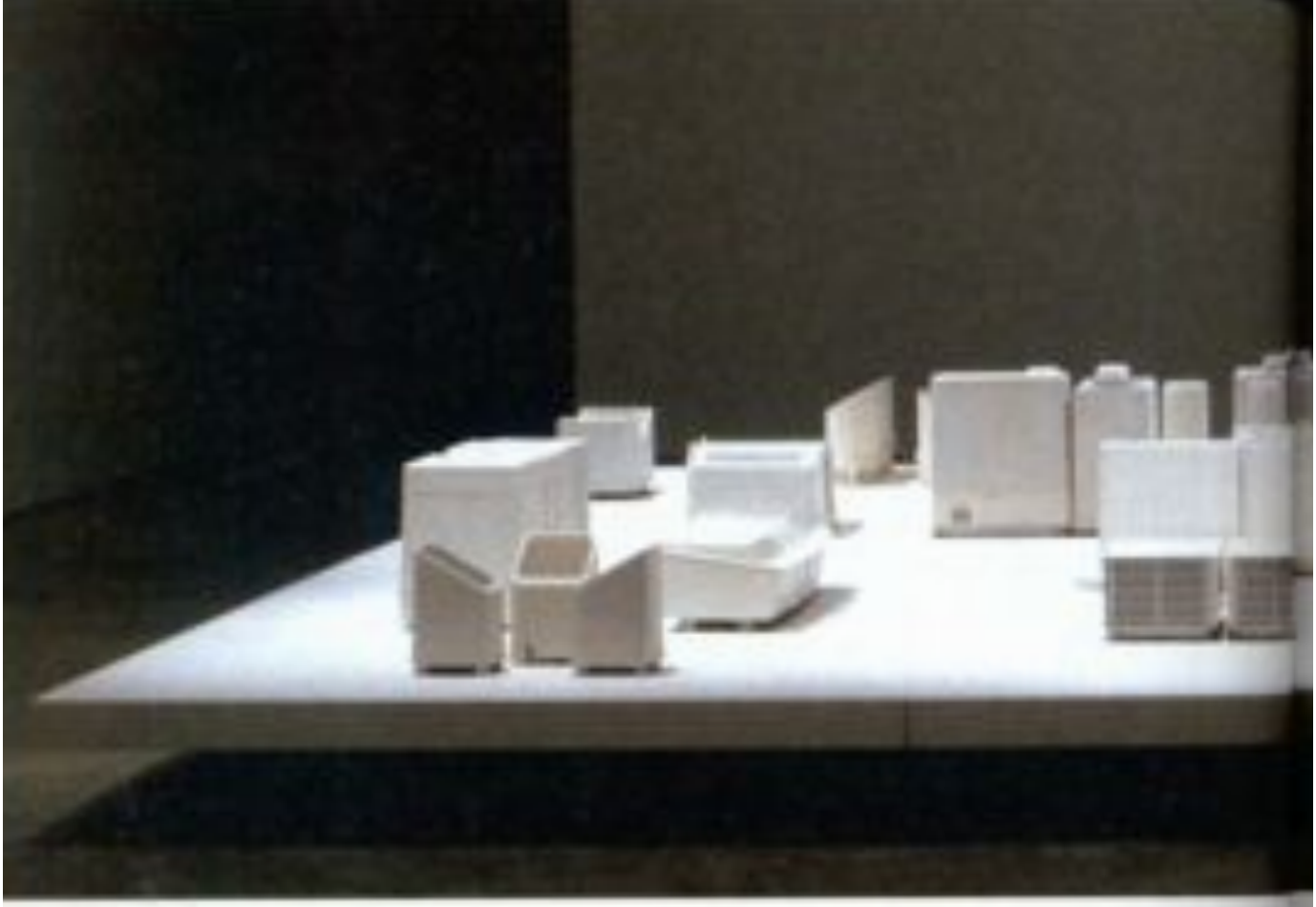
On one trip in the late fall of 1902, Carrier had to wait for a train in Pittsburgh. It was evening, the temperature was in the low thirties, and the railway platform was wrapped in a dense fog. As Carrier paced back and forth, waiting for his train, he began thinking about fog. As he thought he got the "flash of genius," as patent experts put it, that eventually resulted in "dewpoint control," which became the fundamental basis of the entire air conditioning industry.... Carrier's "Apparatus for Treating Air" was the world's first spray-type air conditioning equipment. It was designed to humidify or dehumidify air, heating water for the first and cooling it for the second. The use of spray water for humidifying was readily accepted, but Carrier's idea of dehumidifying air by using water was so revolutionary that it was greeted with incredulity and, in some cases, with ridicule.... Willis Carrier had many dreams for the industry he founded. Some of these seemed almost fantastic at the time. Most of his dreams came true, however—and during his lifetime. A few—like the air conditioned streets he once prophesied and the air conditioning of whole cities from a central plant—have not come yet.

Margaret Ingels, 1952

Air Conditioning, Refrigeration, Heating
Carrier Corporation, 1938

Margaret Ingels, Willis Haviland Carrier: Father of Air Conditioning, Garden City: Country Life Press, 1952

NEW YORK, 1950
Ezra Stoller: View from the interior of the Seagram Building
out to the East River



An Te Liu, Airborne, 2000

Several air conditioning units (coolers and purifiers) are placed together here on a platform to suggest a scale model or a bird's eye view of a modernist city. Plugged in, the appliances are reminiscent of the type of buildings notorious for being hermetically sealed and having controlled-air interiors. The constant buzz of the units serves as a grating reminder of the contradiction between the noise-cleansing and climate-polluting effects of the equipment.

Theodor Horydczak, Electric Institute of Washington
Potomac Electric Power Company
Air Conditioning Displays 1 and 2, c. 1932–c. 1959

Le Corbusier's proposition to maintain a temperature of 18°C in buildings in all parts of the world [is] irrespective of local need or preference.

Reyner Banham, 1969

Sandal-wood.

Almond.

Patchouly.

Orange.

G. W. Septimus Piesse, *The Art of Perfumery, and the Methods of Obtaining the Odours of Plants* (Philadelphia: Lindsay and Blakiston, 1857).

The Biofilter Wall is a 9-by-11-metre vertical wall built in the University's central atrium. Using the plants' natural respiratory properties, this living wall is designed to cool the building air in summer and act as a humidifier in winter. The polluted indoor air is drawn through sedge-plant-covered surfaces, and is cleaned as it goes through the biofilter.

GUELPH, Ontario, 2008
The Indoor Air Biofilter, by Air Quality Solutions Ltd., at the University of Guelph-Humber

The primary building material is water. Water is pumped from the lake, filtered and then shot as a fine mist through a dense array of high-pressure nozzles; the resulting fog is an interplay of natural and man-made forces. A "smart weather system" reads the temperature, humidity, and wind speed/direction, processing the data in a computer that regulates the water pressure to the 31,500 fog-creating nozzles, continually adjusting to the changing climate conditions.

Elizabeth Diller and Ricardo Scofidio, 2002

YVERDON-LES-BAINS, Switzerland, Expo 2002
Diller + Scofidio: Inside Blur Building

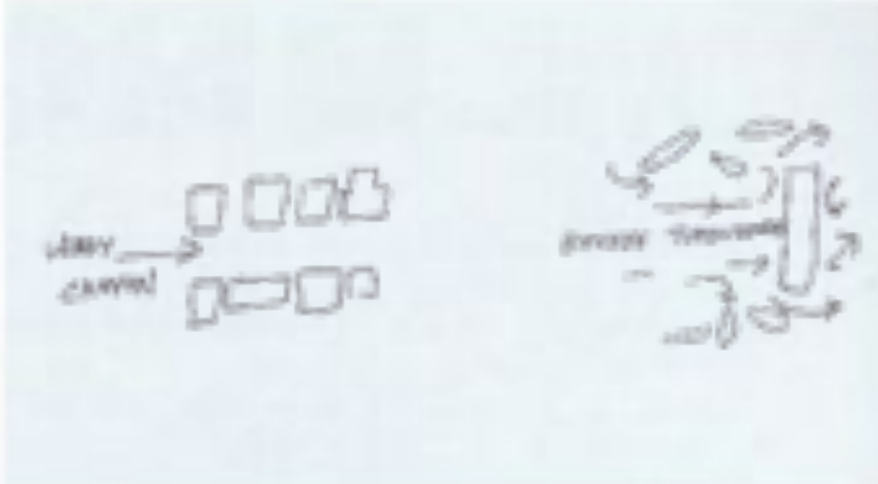
FLORENCE, 2009
Atelier Jean Nouvel, CNA Hotel
Patrick Blanc: Green wall

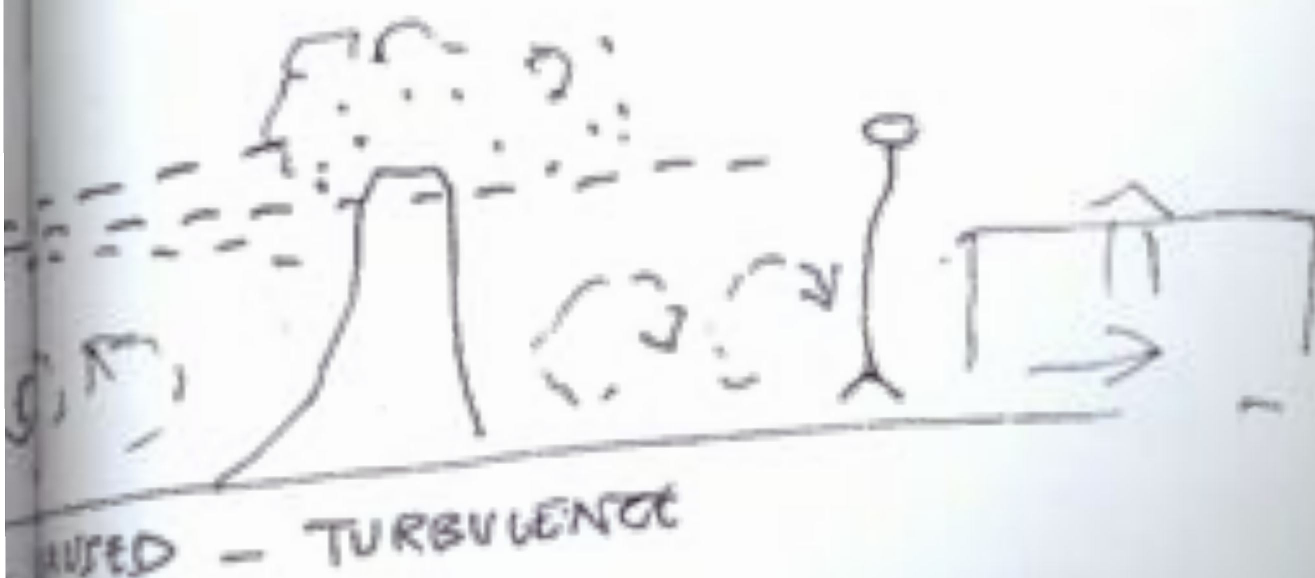
The green wall is 18 metres high and 1.8 metres deep. It is organized into three layers on PVC and felt, and is built on a steel structure attached to the facade. The wall allows for the distribution of water, accommodates the growth of roots, and includes about twenty plants per square metre.

Following pages: **PARIS, 31 December 2000**
Philippe Rahm and Jean-Gilles Décosterd
Saisons nomades, Ozorama, Fondation Cartier pour l'art contemporain
Paradise now!
Creation of the smell of paradise: Christopher Sheldrake,
with Christine Nagel

Mental, physical,
and sensory well-being is required.

Cedric Price, 2000





Above and following pages: Cedric Price "A Lung for Midtown Manhattan"
Entry in the New York: CCA Competition for the Design of Cities
New York, 1999; Montréal, 2000–2001

A LUNG FOR

CITIES HAVE A FUTURE DEPENDENT ON GROWTH AND CHANGE, TOGETHER WITH THE QUALITY OF THEIR OCCUPANCY

NEW YORK CITY HAS A PARTICULAR NATURE, WHICH IS 'PRIDE IN THE NEW'

NEW YORK CITY IS IDEALLY SUITED TO THE OPPORTUNITY OF ESTABLISHING A NEW QUALITY OF THE 21ST CENTURY WHICH MUST BE SHARED BY ALL ITS CITIZENS AND ENJOYED BY ITS VISITORS

SUCH QUALITY SHOULD BE RECOGNIZED TO BE BENEFICIAL TO ALL

THE UNIQUE BEARS NO COMPARISON

NEW YORK CITY IS STRONG AND GENEROUS ENOUGH TO ACHIEVE THIS

THE QUALITY IS COMPREHENSIVE AND CONTINUOUS IMPROVEMENT OF ITS CITIZENS' HEALTH

MENTAL, PHYSICAL, AND SENSORY WELL-BEING IS REQUIRED

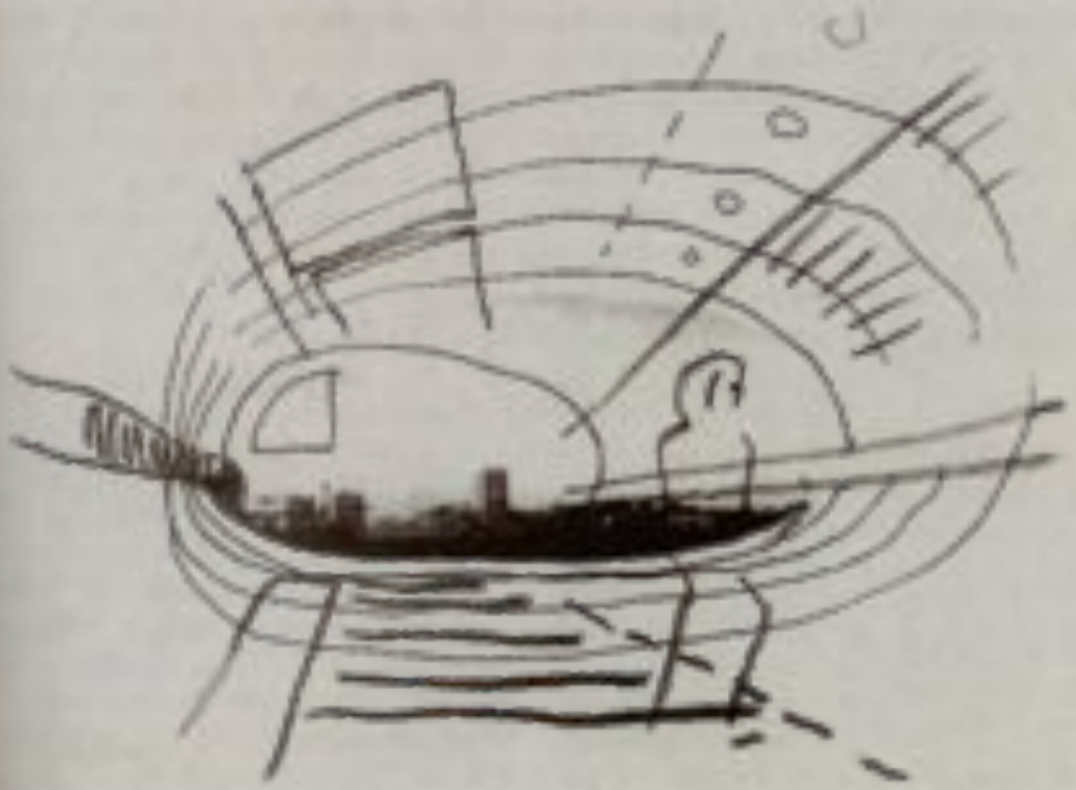
SUCH A QUALITY MAY WELL CONSTITUTE THE FUTURE DEFINITION OF THE 21ST-CENTURY CITY

THE SITE CHOSEN FOR THE CCA COMPETITION IS IDEAL FOR SUCH A CRUCIAL WORKING, LIVING TEST

THE TIMING IS CRITICAL – THE OPPORTUNITY IS UNIQUE AND WILL OCCUR ONCE ONLY

A STRATEGY FOR CITIES WILL BE ESTABLISHED

MIDTOWN MANHATTAN



Technology is the answer, but WHAT was the question?

Cedric Price

ARCHITECTURE OF THE SENSES

David Howes

An intense new focus on the cultural life of the senses is sweeping the human sciences[1] and crossing over into other disciplines, including architecture and urban studies. This revolution in the study of perception highlights the fact that the senses are constructed and lived differently in different societies and periods. The perceptual is cultural and political, and not simply (as psychologists and neuroscientists would have it) a matter of cognitive processes or neurological mechanisms located in the individual subject.

The sociality of the senses and sensations is brought out well in the following quote from Constance Classen's "Foundations for an Anthropology of the Senses," which introduces the key notion of the "sensory model" as a cultural and historical formation:

> When we examine the meanings associated with various sensory faculties and sensations in *different* cultures we find a cornucopia of potent sensory symbolisms. Sight may be linked to reason or to witchcraft, taste may be used as a metaphor for aesthetic discrimination or for sexual experience, an odour may signify sanctity or sin, political power or social exclusion. Together, these sensory meanings and values form the sensory model espoused by a society, according to which the members of that society 'make sense' of the world, or translate sensory perceptions and concepts into a particular 'worldview.' There will likely be challenges to this model from within the society, persons and groups who differ on certain sensory values, yet this model will provide the basic perceptual paradigm to be followed or resisted.[2]

The emergence of sensory studies, as this dynamic new area of inquiry could be called, has come at the end of a long series of turns in the human sciences. For instance, in addition to the openings described in the text "Sensory Stirrings," (p. 332) there was the linguistic turn of the 1960s and 70s inspired by Saussurian linguistics (and Wittgenstein's notion of language games) that gave us the idea of culture as "structured like a language" or "text" and of knowledge as a function of "discourse." This was followed by the pictorial turn of the 1980s, which emphasized the role of visual imagery in human communication—particularly in our "civilization of the image"—and gave rise to the ever-expanding field of visual culture studies. The 1990s witnessed two new developments: the corporeal turn, which introduced the notion of "embodiment" as a paradigm for cultural analysis, and the material turn, which directed attention to the physical infrastructure of the social world, giving birth to material culture studies.

While these different turns represent important shifts in models of interpretation, the emergent focus on the cultural life of the senses is more in the nature of a revolution. That is, the sensorial

revolution in the human sciences encompasses and builds on the insights of each of these approaches, but also seeks to correct for their excesses—offsetting the verbocentrism of the linguistic turn, the visualism of the pictorial turn, the materialism of the material turn, for the latter shift occludes the multisensoriality of objects and architectures even as it stresses their physicality—by emphasizing the dynamic, relational (intersensory, multimedia) nature of our everyday engagement with the world. In this essay, I would like to trace some expressions of the sensorial revolution in the fields of human geography, social history, urban anthropology, and finally architecture, in order to show what a focus on the senses can contribute to our understanding of the physical and built environment. In place of "reading" or "visualizing" the city (or analyzing it as the "materialization" of a given set of social values), this essay delves into the significance of "sensing" the city through multiple sensory modalities.

Geography of the Senses

In *Landscapes of the Mind*, geographer J. Douglas Porteous notes that: "Notwithstanding the holistic nature of environmental experience, few researchers have attempted to interpret it in a holistic [or multisensory] manner."[1] He is critical of the planning literature that pays lip service to the notion of the multisensoriality of the urban landscape, but then quickly descends into a discussion of merely visual aesthetics, and he is particularly critical of the trend towards satellite-generated data produced by remote-sensing. Porteous himself advocates a return to a "ground-truthing" mode of exploration for geoscientists and travellers alike, which he calls "intimate-sensing."

> Remote sensing is clean, cold, detached, easy. Intimate sensing, especially in the Third World, is complex, difficult, and often filthy. The world is found to be untidy rather than neat. But intimate sensing is rich, warm, involved . . . and the rewards involve dimensions other than the intellectual."

Porteous discloses, in intimate detail, how our sense of space and the character of place are conditioned by the diverse deliverances and interplay of the senses. Different senses produce different takes on the same space, and while auditory and olfactory perception are discontinuous and fragmentary in character, tactile perception is aggregative, and visual perception is detached and summative. Breaking up the idea of landscape into a multiplicity of sound-, smell- (and other sensory as well as imaginary) scapes, Porteous presents an analysis of the acoustic ambience of the city of Vancouver, and a redolent (if stereotypical) description of the "peculiar smell" of India: "half-corrupt, half-aromatic, a mixture of dung, sweat, heat, dust, rotting vegetation, [oil] and spices."[2]

Landscapes of the Mind is indeed rich in "non-intellectual rewards," though Porteous's account remains open to criticism for the way in which it essentializes the senses by failing to inquire into how the sensorium is constructed in the *actual* cultures of the geographic areas on which he trains our attention. For example, while the Western observer who walks down a swampy Bangkok slum lane will find his or her nostrils assailed by the stench of rotting refuse, local residents find meaning in such effluvia, because they understand the smells in cyclical, rather than purely spatial, terms. That is, those inhabitants who have migrated to the city from rural areas relate to the garbage and to its smells in terms deriving from the olfactory cycle in the rural environment, where "the odious smell of refuse, through ecological recycling, ... [becomes] the pleasant smell of the life-giving fertilizer."[6]

The Senses in History

Sensory history seeks to enliven the dry bones of history and put us in touch with the past through the analysis of the sensory practices and ideologies that produced the distinctive sensibilities of different historical periods. For example, one leading study reconstructs the acoustic world of Elizabethan England, another explores the varieties of haptic experience in Renaissance culture, while a third, entitled *The Foul and the Fragrant*, gives us a whiff of pre- and post-revolutionary France.[7]

One of the most prominent themes of this literature is the separation of sight from the other senses in the sensory model of modernity. In premodernity, the senses were considered as a set, and each sense was correlated to a different element: sight to fire and light, hearing to air, smell to vapour, taste to water, and touch to earth.[8] All of the senses, like all of the elements, were integral to the epistemology and ontology of the universe. This elemental understanding of the architecture of the senses came undone during the Enlightenment, when the association of vision with reason became entrenched, and the progressive rationalization of society became identified with the increasing visualization of society and space.

In *Seeing Like a State*, social theorist James Scott exposes how modern statecraft depends on rendering complex living realities "legible" through the use of cadastral maps and miniature models of towns and cities.[9] These maps and models have the effect of simplifying and remaking that which they represent in the interests of large-scale social engineering. Formal, geometric simplicity and functional separation and efficiency (i.e., zoned spaces) would become the new standard for urban design, marginalizing all of the spontaneous ways in which actual human subjects create order and make sense of the city. It is one of the grand ironies of modernity that the grand plans rarely achieved their intended effects, and often

contributed to disorder instead of curbing it. This is because the "tunnel vision" of the modern state is no substitute for the "eyes on the street" of neighbourhood residents, as Jane Jacobs exposed in her well-known treatise, *The Death and Life of Great American Cities*.[8] Multiple or cross-uses of spaces, rather than single-purpose zones, represent a far more effective means of promoting informal social order because of the "foot traffic" they generate and concomitant opportunities for monitoring the conduct of one's fellow citizens, not to mention enjoying their company. Jacobs achieved her insights by sensing the city as a pedestrian would, rather than seeing it from an airplane as God and the planners are wont to do.

According to Scott, the paradigm case of modernizing vision imposing its logic on the organization of urban space is Brasília, the administrative city par excellence. With its great voids between superquadra, and strictly geometric and egalitarian facades, Brasília realized the "formal order and functional segregation [envisioned by its planners] ... at the cost of a sensorily impoverished and monotonous environment."[11] First-generation residents of this model city coined the term *brasília*, meaning roughly Brasil(ia) itis, to connote their traumatic reaction to–and rejection of–the placelessness and anonymity of life in the capital city.

Many of the themes in Scott's *Seeing Like a State* are echoed and amplified in *Flesh and Stone* by Richard Sennett, another academic at odds with the sensory order of modernity. Sennett sets out to write "a history of the city told through people's bodily experience ... from ancient Athens to modern New York." He laments "the sensory deprivation which seems to curse most modern buildings; the dullness, the monotony, and the tactile sterility which afflicts the urban environment."[12] Sennett lays the blame for this condition on the phenomenon of urban sprawl, which gives rise to the dispersal of the population to the discontinuous geography of suburbia, and the way in which modern "technologies of motion," such as cars and highways, elevators, and movie theatres, function like sheaths or cocoons–transporting us effortlessly from point to point, while at the same time insulating our bodies from physical stimuli. Sennett detects a pervasive fear of touch behind these developments which, by giving us "freedom from resistance," only serve to increase our passivity and diminish our capacities for empathy or meaningful engagement in public life (the domain of alterity). Sennett holds up the example of ancient Athens, where life was lived out of doors, at least by men, and nakedness was not uncommon in public (at the Olympic games, in the public baths), as a culture that honoured the dignity and diversity of bodies. "What will make modern people more aware of each other, more physically responsive?" Sennett asks.[13] No determinate answer is forthcoming from the guided walk he takes us on from Athens, via medieval Paris, Renaissance Venice,

and other sites down to Greenwich Village (his own cul-de-sac), but the implication is that only a revolution in the senses will bring about the desired revolution in society.

In the work of social theorists such as Scott and Sennett, social critique and architectural critique begin with sensory critique. The senses become the sentinels or theoreticians of society and space.[9] This sensualization of theory, which resists the traditional identification of theorizing with "gazing upon" (in Greek, *theorein*) some object, opens up many avenues for sensing the city in bold and potentially liberating new ways. In the next section, we shall explore how refiguring the senses is not an exclusive preserve of academics, but a vital dimension of everyday practice.

Street Sense: Sensory Ethnography and the City

Statue Square in Central Hong Kong, with its looming bank towers, is a monument to the vibrant business culture of one of Asia's "miracle" economies. Of a Sunday, however, when Central is empty of business people and closed to traffic, it acquires a very different atmosphere, as upwards of 300,000 Filipino domestic workers flock to the city core and transform it into a space of leisure and pleasure with a distinctive Filipino flavour. As urban ethnographer Lisa Law relates in "Home Cooking," melodic cries of "peso, peso, pesooooo!" ring out from informal currency-exchangers; there are long, chattering lines at public telephones as the women take turns phoning home; beauticians set up shop on the sidewalks to offer manicures and hairdos; groups of friends pose for photographs and read out letters from distant loved ones; the smell of clove cigarettes scents the air; and, the open ground floor of the Hong Kong and Shanghai Bank becomes crowded with women seated on straw mats eating *pinakit* or *adobo*. Such food represents "exotic" cuisine in the eyes of the Chinese, but it is food that exudes the aromas and textures of "home" for the Filipinas themselves, who eat it with their hands instead of chopsticks, because this is said to enhance its flavour. Central Hong Kong becomes the spectacle known as "Little Manila" for a day—a conscious invention of home-away-from-home for those who, as live-in domestic workers, are forced to abide by Chinese cultural conventions for the rest of the week.

This "domestication," as it were, of public space by the domestic workforce is denounced on aesthetic and hygienic grounds by the members of the dominant society in letters to local newspapers. They would prefer their servants to remain out of sight (and smell), and not interfere with the image Hong Kong wishes to project of itself as a global financial centre, all the while ignoring the role that migrant workers, and not just bankers, have played in Hong Kong's commercial success. This conflict within Hong Kong society, over the sensuous (re)construction of space by the migrant workers

during their leisure hours, testifies to the politics of differing (dominant/subaltern) sensory strategies for making sense of the same place, and calls attention to the multicultural tensions embedded in the city's urban fabric.

Lisa Law observes that "the senses are often assumed to be an intrinsic property of the body—a natural and unmediated aspect of human *being*," whereas her analysis of the "production of an alternative sensorium" in the case of Central/Little Manilla suggests that "the senses are far from innocent: the senses are a situated practice that can shed light on the way bodies experience different spaces of culture."[15] The senses are political. This point is further illustrated by another landmark work in the new urban anthropology, Christoph Neidhart's fascinating study of the senses under and after Socialism in *Russia's Carnival: The Smells, Sights, and Sounds of Transition*. Neidhart begins by tracing the visible fallout of the transition from a centrally-planned to a market economy in Post-Soviet society. Under Socialism, Russian architecture was reduced to "the assembly of prefabricated concrete elements organized by the ministry of construction"; Soviet cities looked grey and faceless, except for the red banners with the heroic portraits of Marx and Lenin that adorned public buildings; and there were no apparent fashion trends, since everyone aspired to the same standard of "cloth-coat proletarian respectability" and individualism was viewed with suspicion.[16] In the wake of the carnival-revolution of 1991 led by Boris Yeltsin, images of Western models (Claudia Schiffer, the Marlboro Man) have replaced those of Marx and Lenin; "newly erected buildings display a great and often confusing variety of styles"; and state uniforms have been exchanged for suits and printed dresses.[17] Not only the look, but the fit and texture of Russian clothing has changed dramatically as a result of the influx of Western imports: shoes that do not pinch and are waterproof instead of soaking up water, and summer shirts of cotton instead of Soviet polyester, which is said to have had the suppleness of a shower curtain. Just as Russian apparel has "come a long way" in the Post-Soviet era, so have the self-perceptions of those who wear it, according to Neidhart.

A new olfactory regime has also taken shape. "Soviet streets smelled of diesel and dust, Soviet houses of cabbage and chlorine, ... staircases were musky and reeked of garbage and cat urine," whereas in Post-Soviet society, many industrial plants have shut down, leading to a corresponding diminution in air pollution, and numerous Western-style home and cosmetic products, including deodorants and perfumes, have come on the market, with the result that many people no longer give off the smell of their homes.[18] In the sphere of cuisine, the burgeoning number of restaurants boasting Western-style menus with a clear order of dishes (there was

no temporal order to the traditional Russian way of dining) has spelled the end of the longstanding equation of sausage and vodka with well-being; indeed, according to Neidhart, "by eating foreign food, Russians [have] learned to accept and even like the diversity of the world."[19]

It is in the domain of sound that the most extreme manifestations of the transition have registered. "The Soviet power wanted to reach its subjects anywhere, anytime, and so created a system of loudspeakers and radios."[20] The fixed-wire radios in Soviet hotel rooms could be turned down, but not off, and were limited to state-sponsored channels that broadcast news of what ought to happen (in the eyes of the State), not what was happening. The radios were even rumoured to be two-way systems, so that the state could eavesdrop on its citizens. Acoustic privacy was at a minimum. In the Post-Soviet era, the state monopoly over the sound waves has been broken, and formerly underground sounds, such as jazz and rock, can be heard anywhere, anytime, and at a volume that drowns out the voice of the state. Nor is there any longer the same reticence about conversing openly with foreigners in hotel rooms, or elsewhere.

The answer to the question with which Neidhart opens his sensory ethnography of contemporary life in the former USSR: "Is [Russian] democracy visible?" would thus appear to be a resounding yes. The senses are indeed "subjected to new and very different sensations," and "the increasing plurality in appearances" would seem to indicate that the transition is irreversible.[21] Nevertheless, there is evidence of countertendencies to the unilinear progression towards a greater diversity and refinement of sensations that Neidhart sketches, such as the rise of *Ostalgie* in the former German Democratic Republic, namely, people preferring Soviet-made goods to western imports because of their "cruder" sensory qualities and identity-confirming characteristics (an identity now lost).[22] The sensorial revolution since the fall of the Wall is not over yet.

Architecture of the Senses

How might the insights (inscents, insounds, etc.) of the emergent fields of sensory geography, sensory history, and sensory ethnography be employed by architects and urban planners? How might the architecture of the senses—i.e., the study of the cultural construction of the sensorium in different times and places—help inspire an architecture for the senses? It bears noting that in the 1960s architects and urban planners were already sensitized to this issue, if only partially, by the works of Marshall McLuhan and E. T. Hall, who introduced the notions of "sense-ratio" and "proxemics," respectively.[23] It is only in recent years, however, that the theorization of an architecture of and for the senses has begun to receive serious attention, thanks to a growing series of works in sensory architecture, and the

staging of exhibitions, such as the current one, on the sensory qualities of the material world and their social significance.

The sensorial revolution in architecture is apparent in even the most visualist of treatises, such as Witold Rybczynski's *The Look of Architecture* which, for all its emphasis on retinal impressions, on "style," nevertheless acknowledges that: "Although architecture is often defined in terms of abstractions such as space, light and volume, buildings are above all physical artifacts. The experience of architecture is palpable: the grain of wood, the veined surface of marble, the cold precision of steel, the textured pattern of brick."[24] In other words (my own words), the essence of a building lies in the articulation of its materials and in the atmosphere it condenses in its substance, and this is something that no picture can convey, as Rybczynski also insists, which is another point at odds with the whole visualist thrust of his thesis on style as being the thing in architecture.[25]

Juhani Pallasmaa goes further in *The Eyes of the Skin*. He proclaims that: "Architecture is the art of reconciliation between ourselves and the world, and this mediation takes place through the senses"—all of the senses, playing off and into each other.[26] He holds up the work of his Finnish countryman Alvar Aalto as an example of what he calls "sensory realism," on account of the richness of its textures and acoustics, and as a precursor of the current aspiration for a "haptic architecture." Haptic architecture, as anticipated by Aalto and theorized by Pallasmaa, aspires to plasticity, tactility, and intimacy in a bold rebuke to Modernist architecture's striving for clarity, transparency, and weightlessness. The opacity and solidity of Aalto's sensuous structures would likely appeal to Richard Sennett's sensibilities, on account of the resistance they afford.

In *Sensory Design*, Joy Monice Malnar and Frank Vodvarka argue "for an architecture that views the sensory response and memory of human beings as critical functions of the building, and thus vital to the design process."[27] A house should be "constructed of sensation and memory" and not merely function as "a machine for living" (in Le Corbusier's famous phrase). Their book is a compendium of sensory research in aid of an architecture for the senses, and puts forward many inspired (and inspiring) schematics and tools (such as Cave Automatic Virtual Environment, which enables a "multisensory understanding of spatial design") that can be used to design ends. There is, however, at least one very serious problem with Malnar and Vodvarka's attempt to recuperate the senses for architectural practice: In their effort to develop tools for calculating and predicting sensory response, they occasionally lose track of the dual meaning inherent in what it means to "sense" something—be that something a building or another living being. Sensing involves a fusion of sensation *and* signification, of stimulus *and* meaning. Technologies

such as CAVE may enable an understanding of the former, but it takes an ethnographer to grasp the latter. Furthermore, tools such as CAVE occlude the role of some senses in the production of architectural experience, while extending the roles of others (e.g., sight over smell, kinaesthesia over texture), and thus serve to perpetuate certain sensory and social hierarchies.

This is where, it seems to me, the new urban anthropology of the senses, with its emphasis on discerning the meanings and politics of perception, has a key role to play in taking the sensorial revolution in architecture a step further. By foregrounding the role of *all* the senses as mediators of experience, and exploring how different people bring their senses to bear upon the urban environment in culturally conditioned–yet always strategic–ways, sensory ethnography provides a vibrant means for architects and planners to enhance their sense of the polysensoriality of the city and imagine how to design or redesign it in sensuously fitting and stimulating new ways.

1 Thus, the senses mediate between mind and body, idea and object, self and environment. The senses are everywhere.
2 Constance Classen, "Foundations for an Anthropology of the Senses," *International Social Science Journal* 153 (1997): 401, 403.
3 J. Douglas Porteous, *Landscapes of the Mind: Worlds of Sense and Metaphor* (Toronto: University of Toronto Press, 1990), 8. Other landmark studies in the geography of the senses include Paul Rodaway, *Sensuous Geographies* (London: Routledge, 1994), and Yi-Fu Tuan, *Passing Strange and Wonderful* (New York: Kodansha International, 1993).
4 Porteous, 201.
5 Ibid., 24.
6 Erik Cohen, "The Broken Cycle: Smell in a Bangkok Soi (Lane)," *Ethnos* 53 (1988): 37, 38. The cycle being broken in the urban environment, the smells of refuse are not necessarily pleasant to the lane residents, but nor are they intrinsically offensive.
7 Bruce R. Smith, *The Acoustic World of Early Modern England* (Chicago: University of Chicago Press, 1999); Elizabeth Harvey, ed., *Sensible Flesh* (Philadelphia: University of Pennsylvania Press, 2003); Alain Corbin, *The Foul and the Fragrant* (Cambridge, MA: Harvard University Press, 1986).
8 See Louise Vinge, *The Five Senses: Studies in a Literary Tradition* (Lund, Sweden: Royal Society of Letters, 1975); Constance Classen, *The Color of Angels: Cosmology, Gender and the Aesthetic Imagination* (London: Routledge, 1998). These two works trace the changing fortunes of the senses in Western history. On the fate of the elements, such as water, see Ivan Illich, *H2O and the Waters of Forgetfulness* (Dallas: Dallas Institute of Humanities and Culture, 1985).
9 James Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, CT: Yale University Press, 1998).
10 Jane Jacobs, *The Death and Life of Great American Cities* (New York: Vintage Books, 1961).
11 Scott, 126.
12 Richard Sennett, *Flesh and Stone: The Body and the City in Western Civilization* (New York: Norton, 1994), 15.
13 Sennett, 17.
14 On sensualizing theory see David Howes, *Sensual Relations: Engaging the Senses in Culture and Social Theory* (Ann Arbor: University of Michigan Press, 2003), 256 n. 8.
15 Lisa Law, "Home Cooking: Filipino Women and Geographies of the Senses in Hong Kong," in *Empire of the Senses: The Sensual Culture Reader*, ed. D. Howes (Oxford: Berg, 2004), 224.
16 Christoph Neidhart, *Russia's Carnival: The Smells, Sights, and Sounds of Transition* (New York: Rowman and Littlefield, 2003), 33, 34. Other examples of this new genre, which is grounded in the methodology of "participant sensation" (i.e. using the senses as a lens through which to analyze and critique urban experience) include Robert Desjarlais, *Shelter Blues: Sanity and Selfhood among the Homeless* (Philadelphia: University of Pennsylvania Press, 1997); Judith Farquhar, *Appetites: Food and Sex in Postsocialist China* (Durham: Duke University Press, 2002); and Christopher Fletcher, "Dystoposthesia: Emplacing Environmental Sensitivities," in *Empire of the Senses*, ed. D. Howes (Oxford: Berg, 2004).
17 Neidhart, 84.
18 Ibid., 90.
19 Ibid., 100.
20 Ibid., 80.
21 Ibid., 111, 2.
22 See David Howes, "Hyperesthesia, or The Sensual Logic of Late Capitalism," in *Empire of the Senses*, ed. D. Howes (Oxford: Berg, 2004), 284, 294–95.
23 See the discussion of McLuhan and Hall's work in Howes, *Sensual Relations*, xiii–xiv, 14–17, as well as Marshall McLuhan, "Inside the Five Sense Sensorium," in *Empire of the Senses*, ed. D. Howes (Oxford: Berg, 2004), 43 (originally published in *The Canadian Architect*, 1961).
24 Witold Rybczynski, *The Look of Architecture* (New York: The New York Public Library, 2001), 88.
25 Ibid., 13–15.
26 Juhani Pallasmaa, *The Eyes of the Skin: Architecture and the Senses* (London: Academy Editions, 1996), 10.
27 Joy Monice Malnar and Frank Vodvarka, *Sensory Design* (Minneapolis: University of Minnesota Press, 2004), 237.

SENSORY STIRRINGS

The sensorial revolution in the human sciences is a relatively recent phenomenon, coming at the end of a long series of turns—linguistic, pictorial, corporeal, material—as discussed in "Architecture of the Senses." The genealogy of this revolution would not be complete, however, without noting various openings towards the senses in the work of certain leading figures of twentieth-century thought, both social and philosophical. These precursors to the full-bodied, multisensory approach to the study of the human condition (which may be called "sensory studies" for short) include the historians Lucien Febvre and Norbert Elias, the philosophers Maurice Merleau-Ponty and Luce Irigaray, the anthropologist Claude Lévi-Strauss, and the sociologist Georg Simmel.

In 1942, Febvre proposed that a series of fascinating studies could be done on the "sensory underpinnings of thought" in different periods. His own contribution was to sketch how sixteenth-century Europe placed less emphasis on sight and more emphasis on the other senses than did twentieth-century Europe.[1] The historian of manners, Norbert Elias, was another prominent forerunner to the history of sensibilities. In *The Civilizing Process*, based on a study of diverse codes of etiquette, he documented how, in the transition from the middle ages to modernity, physical impulses were curbed and directed inwards, resulting in an "interiorization of the emotions" and progressive individuation of society, as people came to touch themselves, each other, and their food (with the introduction of eating utensils) in an increasingly circumspect manner.

The 1940s also witnessed an important sensory opening in philosophy with the publication of Merleau-Ponty's *Phenomenology of Perception*. Merleau-Ponty challenged the separation of mind from body, and of sight from the other senses as posited by René Descartes. He asserted that it is the flesh that sees (not the soul, as in Descartes), and that all the senses are imbricated in the act of perceiving. While Merleau-Ponty may thus be credited with restoring the body (in all its sensory plenitude) to the philosophy of consciousness, one of the things he failed to consider is how that body is gendered. Irigaray called him on this point, insisting that gender affects perception, and that women, for example, take pleasure more from touching than from looking. Irigaray's position has itself attracted criticism, however, for its essentialism—that is, for its failure to attend to the changing social meaning of practices of touching and looking (and gender itself) down through history.

In *The Savage Mind* (a book dedicated to the memory of Merleau-Ponty), Lévi-Strauss introduced the notion of a "science of the concrete," grounded in the apprehension and classification of things according to their "tangible qualities" of colour, odour, sound, and so forth, in contrast to the suprasensible understanding of the

workings of the universe in terms of mass and velocity that is characteristic of the modern physical sciences. His work had the effect of dispelling the idea of native thought as essentially "prelogical" in character, and also foregrounded the intricate "sensory codes" of myth (as in the famous section entitled "Fugue of the Five Senses" in volume 1 of *Mythologiques*). For all his attention to the sensible, Lévi-Strauss nevertheless remained an intellectual, subordinating his study of the sensory power of myth to tracing the operations of "mind" (*l'esprit*) and ignoring the political dimensions of perception.

Finally, in *Sociologie*, Simmel briefly analyzed the changing role of the senses of smell, sound, and sight in modern life. He observed how olfactory antipathies police racial and class divisions, and also noted how advancing urbanization had brought about a decline in aural communication (e.g., the exchange of greetings) and a rise in visual interaction (e.g., the exchange of glances, or—equally significant—averted gazes). This shift in the balance of the senses had profound implications for the constitution of the modern subject, according to Simmel, since the increased emphasis on purely visual interaction produces feelings of isolation and alienation.[9]

All of the above-mentioned stirrings in the direction of a full-bodied, multisensory approach to the study of the human condition represent important overtures to the field of sensory studies, which is in turn responsible for highlighting the multiple social and political respects in which the senses, as bearers of culture, mediate our experience of the world around us.

David Howes

1 These insights would later be developed by Michel Foucault in his pioneering work on the visual and aural constitution of the modern individual.

9 The question arises whether Simmel's analysis needs to be revised in light of the recent explosion in mobile phone communication. It could also be deepened, some would say, through an infusion of Henri Lefebvre's "rhythmanalysis" and Walter Benjamin's notion of "tactile appropriation" as elaborated by Iain Chambers and Michael Taussig.

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