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Quant

The Public Realm
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The cities everyone wants to live in would be clean and safe, possess efficient public services, support a dynamic economy, provide cultural stimulation, and help heal society's divisions of race, class, and ethnicity. These are not the cities we live in. This is so in part because the city is not its own master; cities can fail on all these counts due to national government policy or to social ills and economic forces beyond local control. Still, something has gone wrong, radically wrong, in our conception of what a city itself should be.

It's fair to say that most of my professional colleagues share at least the fear that the art of designing cities declined drastically in the course of the 20th century. The vernacular environments of earlier times have proved more flexible, sustainable, and stimulating than those designed more recently -- which is a paradox. Today's planner has an arsenal of technological tools, from lighting and heating to structural support to materials for buildings and public spaces, which urbanists even a hundred years ago could not begin to imagine. We have many more tools than in the past, but these resources we don't use very creatively.

This is a dilemma which has vexed and defeated me throughout my scholarly and practical career. I've wanted to learn from the past but not succumb to nostalgia; looking forward has proved difficult for me, as for others; individual, innovative projects today prove difficult to bed into the fabric of cities, and incorporate into the very idea of what a city should be. I've come to think that the way forward lies in urbanists stepping out of our professional confines, drawing on other disciplines, no matter how amateurishly. I'm grateful to the BMW Herbert Quant Foundation for providing this opportunity to think outside the box.
In this essay I try to do so by drawing a contrast between two kinds of systems, one closed, the other open. By a closed system I mean a system in harmonious equilibrium, by an open system I mean a system in unstable evolution. My argument is that the closed system has paralysed urbanism, while the open system might free it.

There is nothing new in the general contrast I am drawing between these two systems. The contrast was first made by Norbert Weiner, the grandfather of systems theory, and elaborated by Nicholas Luhmann, its more recent pater familias. In our own day, geneticists like Richard Lewontin and Stephen Gould have made use of this contrast to explore the structure of open systems in the process of evolution; in quite different ways they have sought to show that instability contains in fact a structure -- or rather, many structures -- which respond to uncertainty and coordinate change. To these evolutionary structures, they have contrasted harmoniously balanced environments which are in fact stagnant.

To the novelist, there would be nothing odd about these biological insights: uncertainty, surprise, and the coordination of change are the basic ingredients of narrative. But these ingredients of the open system produce an image of cities which indeed may seem strange. Open and closed systems alter the way we think about the public realm of cities, and within the public realm, how we think about planning and shaping the city in the future as well as its existing condition.

It's not modesty which prompts me to underline that I am neither a biologist nor a systems-analyst; rather, as I know from many inter-disciplinary efforts, there is a danger in applying ideas from one sphere of knowledge to another. We may imagine that the insights of one domain can solve problems in another; this sort of application-thinking neglects the fact that something happens to the knowledge in the process of crossing borders. In the pages that follow, I've tried to pay attention to these border crossings, and I hope my readers who are natural scientists are repaid thereby: our understanding of open systems in cities, designed by human beings, ought migrate back, feed back, to alter the understanding of natural environments.

The Point of Departure: the Public Realm

The public realm can be simply defined as a place where strangers meet. The difference between public and private lies in the amount of knowledge one person or group has about others; in the private realm, as in a family, one knows others well and close up, whereas in a public realm one does not; incomplete knowledge joins to anonymity in the public realm.

The public realm is, more over, a place. Traditionally, this place could be defined in terms of physical ground, which is why discussions of the public realm have been, again traditionally, linked to cities; the public realm could be identified by the squares, major streets, theatres, cafes, lecture hall, government assemblies, or stock exchanges where strangers would be likely to meet. Today, communications technologies have radically altered the sense of place;

the public realm can be found in cyber-space as much as physically on the ground.

The most important fact about the public realm is what happens in it. Gathering together strangers enables certain kinds of activities which cannot happen, or do not happen as well, in the intimate private realm. In public, people can access unfamiliar knowledge, expanding the horizons of their information. Markets depend on these expanding horizons of information. In public, people can discuss and debate with people who may not share the same assumptions or the same interests. Democratic government depends on such exchanges between strangers. The public realm offers people a chance to lighten the pressures for conformity, of fitting into a fixed role in the social order; anonymity and impersonality provide a milieu for more individual development. This promise of turning a fresh personal page among strangers has lured many migrants to cities.

There have been in modern times three schools of thought seeking to make sense of the public realm. The first is identified with the writings of Hannah Arendt, particularly in her book The Human Condition. Arendt thinks about the public realm mostly in terms of politics, though politics broadly conceived. She imagines an ideal realm in which people can discuss and debate freely and equally; to do so they need to cut loose from their particular, private circumstances in order to discuss and debate. The ideal is puissant: whatever people's origins, gender, style of life, class, they should have an equal voice as citizens; private circumstances have no place in the public realm. It was from this vigorous ideal that she challenged in Nazi Germany nationality or race as the basis of citizenship. Today in Western democracies she reads as the foe of identity-politics.

Arendt's celebration of citizens free and equal due to their anonymity found a particular home in cities. She is the advocate par excellence of the urban center -- the agora in ancient Athens, the Uffici piazza in medieval Florence, Trafalgar Square in modern London. Her measure of urban space is in terms of its density, since she believed that density produced the freedom of anonymity; she was, I think, willfully blind to the violence embodied by Nazi crowds just because of her passionate conviction that anonymity sets people free from circumstance. Despite that blindness, her views of the public realm have powerfully influenced urbanists to think of the city as something more than a mosaic of local communities, the whole greater than the sum of its parts, that greater whole to be located whenever and wherever a city establishes a vibrant, dense center.

The second school of thinking about the public realm can be identified with Jurgen Habermas, and most particularly with his early book Knowledge and Human Interests. The Habermasian picture of the public realm is in some ways richer than that of Arendt because he does not want to exclude personal work identities and question of class; the public realm is tied to those economic interests. He also has a difference sense of where "the public" can be found: it is not necessarily tied to a town center. The mass-produced newspapers which first appeared in the 18th Century are, for instance, in his view a public realm, their pages incitements to a wide readership to think and talk about what they read; in today's cities, an internet cafe would be more likely to excite him than Trafalgar Square. By "public space" he means in fact any medium, occasion, or event which prompts open communication between strangers; if he is more practically-minded about people's circumstance, in this emphasis on communicative process he is less physically-orientated than Arendt.

And yet he shares with her a certain idealization. He believes that the free flow of communication gradually breeds awareness of the interests of others; the nature of different interests gradually comes to the fore, rather than simple assertions of one's own self-interest. From this communication flow there eventuates shared understandings and common purposes. Critics of the blogosphere like Cass Sunstein observe that its endless, unfettered, self-assertive communications make a mess of the Habermasian ideal. Yet that ideal has an enduring value for urbanists, simply because it raises questions about how much strangers learn about one another's interests and needs, where and whenever they meet; it has cautioned planners that simply mixing people or mixed-use does not translate into better mutual understanding. Unlike Arendt, then, Habermas wants people in public to account economic, ethnic, and cultural circumstances; like her, he wants the public eventually to rise above them.

The third approach to the public realm is represented by the writings of the anthropologist Clifford Geertz, the sociologist Erving Goffman and my own work. Academics have labelled us the "performative school," which, stripped of the jargon, means simply that all three of us have focused on how people express themselves to strangers. Our point of departure is less political and more cultural than either Arendt or Habermas. We are interested in the street clothing, customs of greeting, rituals of dining and drinking, ways of avoiding eye contact, the places people crowd together and the places where they keep their distance, when people feel free to talk to strangers and when they do not, the bodily gestures which excite a stranger's sexual interest and the bodily signals which forbid it -- it is from these minutiae of behavior that a public realm is composed. The theatre has, for this reason, served all three of us as a vehicle for understanding behavior in public, an anthropological method which compares expression on stage and street -- one reason why another label, the "dramaturgical school," has been applied to this approach to the public realm. The claims of public culture, however tagged, are straight-forward: engaging in expressive behavior is one of the ways in which where we live matters to us.

In my own case, focusing as a scholar on the anthropological culture of the public realm has enabled me to do a particular kind of practical planning work. This has been to enter into a dialogue with architects about how buildings and spaces are used, inhabited -- that is, to

make a bridge between the visual and the social. The dialogue consists in asking in what ways and how well a particular building project allows people to "adopt" buildings in the sense of using them as vehicles for social expression. The danger here, and one I have often succumbed to, is treating buildings as the equivalent of scenography, as a stage set. Even if that danger is avoided, the results of this collaborative approach to public space lead in a different direction than that of either Arendt or Habermas. Often the building or open space easiest for people to adopt are small-scale, local in character, so that this version of the public realm does not privilege the large, dense scale as Arendt does. Again, this anthropological approach does not lead to the political end Habermas seeks, that of increasing mutual enlightenment. Like all culture, urban culture makes for another sort of human bond, that of ritual.

The contrast between open and closed systems animates each of these three ways of defining the public realm. Closed systems are the obvious enemy of Arendtian politics and Habermassian communication. In his most recent writings, Jurgen Habermas has stressed that the freedom to evolve found in the natural order should be reflected in the political order; in particular, he has criticised "unnatural" legal norms which stress the immobile sacredness of written constitutions. The open system figures in Arendt's philosophy, too, in what she called "natality," the fact that polities follow a cycle of life and death paralleling the biological arc. Both the pure-politics and the interest-communication versions of the public realm stress, that is, feed-back and the revisions which systematic feed-back entails.

The cultural case is odder. "Systemic" and "dramatic" seems properties at odds with each other: formal conventions rule in performance on stage and rituals in the street; feed-back and mutation of form at the moment of performance seems weird in the actor's realm. "By cybernetics," Norbert Weiner declared, "I mean the revision of information through the exchange of information." But on stage, the actor or musician has memorized a set text; in the street, rituals are behaviors which people repeat time after time; in both realms presentation and representation dominate, rather than cybernetic information exchange.

But this misfit is deceiving -- at least I've come to this conclusion by the practical collaborations I've had with architects and planners. It is possible to contrive places and spaces which allow for the gradual evolution and opening up of rituals of behavior, so that people experience both form and change. Understanding systems both natural and cultural seems to me a promising way to move this perhaps odd marriage forward; the pages which follow are a first attempt to do so.

Closure: The Basic Principle

The basic principle of a closed system is over-determined form. The key word in this principle is "over-determined" rather than "form." Some measure of definition and determination is necessary to give form to things in built environments as in the natural world. In a closed system, however, structures cannot modulate in response to changing conditions, or do not allow experiment in their procedures and processes. In the scheme of evolution biology, closure occurs when a species proves incapable of adaptation to a new environment; dinosaurs, for instance, proved incapable of adapting in form to suddenly-changed conditions in temperature and light; so far as is currently understood, their respitory and circulatory systems were too rigidly fixed to adapt.

In the human environment of the city, over-determination both of the city's visual forms and its social functions can have a similar "dinosaur-effect." This danger is particularly acute in the rapidly-growing cities today of the developing world; the placement, shape, and function of many buildings and streets in Shanghai ten years ago often makes little sense a decade later as the city has expanded; the buildings have therefore to be torn down, the streets erased. In some cases this is simply too expensive, and in all cases wasteful; the dead dinosaur which human beings have built then begins to deaden the space around it. Over-determined form in human society is usually the result of regimes of power, seeking permanent control. Rigidity is equated, usually falsely, with the regime's security. In urbanism, however, closure is somewhat special; rigidity can be equated with the purity of form.

The great, compelling instance of this equation which dominated 20th Century urbanism was Le Corbusier's 'Plan Voisin' in the mid 1920's for Paris. The architect conceived of replacing a large swath of the historic centre of Paris, in the Marais, with uniform, X-shaped buildings; the architecture was meant to mimic the industrial manufacture of other objects. As a planner, Corbusier sough to eliminate street life on the ground plane, Le Corbusier's 'Plan Voisin' for Paris circa 1920 giving over this horizontal dimension to circulation and traffic; the Plan Voisin aimed literally to raise up the city, to colonize the vertical dimension. The sub-text of both architecture and urbanism was that, at this point in his labours, Corbusier hated the unregulated disorder of street-life; the street, he wrote, is "impure." From fear of impurity came a more general insistence on the virtue of master planning: all the elements of Voisin -- economic, architectural, and social -- were meant to be codified in advance of use. Dystopia? If so, also reality. The Plan Voisin's building-type shaped public housing from Chicago to Moscow, housing estates which came to resemble warehouses for the poor. Corbusier's intended destruction of vibrant street life was realized in suburban growth for the middles classes, with the replacement of high streets by mono-function shopping malls, by gated communities, by schools and hospitals built as isolated campuses. Over-determined pre-planning on this model has become endemic in modern urbanism: the proliferation of zoning regulations in the 20th Century is, for instance, unprecedented in the history of European urban design.

One result of over-determination is that modern urban environments decay much more quickly than urban fabric inherited from the past. The average life-span of new public housing in Britain is now forty years; the average life-span of new skyscrapers in New York is thirty-five years. The reasons do not lie in poor building construction, but rather in rigid specification, one in which the structures become absolutely fit-for-purpose. As uses change, habitation evolves, the buildings are then destroyed rather than adapted. The result of over-specification of form and function is to make the modern urban environment peculiarly susceptible to decay. Still, on paper it could be claimed that the visual order of cities has gained clarity and purity in form and use, but this claim, too is suspect. In practice, building standardization and the proliferation of bureaucratic regulations have disabled local innovation and growth, frozen the city in time.

I don't wish to engage in the critic's pleasurable exercise of architect-bashing. The 'Plan Voisin' is a symptom of a deeper set of assumptions. At its deepest, the assumption of closure is that understanding comes before action: you need to know what you are doing before doing it. In general this assumption serves power and control; in the particularities of urbanism, closure means making total sense of a building or project in advance of its habitation and use. Aesthetic purity of form can thereby be gained, to be sure, as well as a concrete product, but if the process of pre-determination proceeds too far the result is a loss of adaptive capacity and environmental vitality.

Closure: the two correlates

Two correlates follow from over-determined form: equilibrium and integration. These are not yawn-inducing abstractions. Both the public and professional planners now subscribe to the mantra of making "sustainable environments" without thinking hard enough about what sustainability entails. We might imagine a sustainable environment to be harmoniously balanced and for all its parts to fit together efficiently; we would thus define sustainability in terms of equilibrium and integration. In the use of natural resources like petrol and water these seem only sensible standards. But in social systems they are not.

Equilibrium in a social order can sacrifice dissent for the sake of harmony. In any system where balance is the goal, further, the parts have to add up to an equal weight. The first observation applies to politics, the second to planning. In the second, the desire for balance puts pressure on policy-makers not to "over-commit," to avoid "sucking resources into a black hole" -- such is the language of recent reforms of the health service, familiar again to urban planners in the ways infrastructure resources for transport get allocated. The limits on doing any one thing really well are set by the fear of neglecting other tasks. In a balanced system, a little bit of everything happens all at once.

The value of integration suffers from the same two dangers. If every person in a system has a place in an overall design, one consequence can be to reject voices or experiences which are contestatory or disorienting. The emphasis on integration also puts a bar on experiment; as the inventor of the computer icon, John Seely Brown, once remarked, every technological advance poses at the moment of its birth a threat of disruption and dysfunction to a larger system. In urban planning, the threat of experiment has seemed terrible to the authorities, and one reason why innovation is usually buried under a mountain of rules; authority wants to insure that nothing sticks out or offends. The logic of integration is to diminish in value things that don't fit in.

Of course advocates of clean air intend none of this, but it's important to understand the heavy baggage with which "sustainability" is saddled. That weight is authority's horror of disorder; both the values of harmony and integration can become instruments of repression. Seen in this light, balance and integration are the correlates of over-determined form; rigid rules and structures promise to deliver them.

This light may seem to be neo-liberal in its cast. Today, resistance to environmental reform comes mostly from zealots for an unrestrained free-market economy. The ideological battle is of little to us in thinking what the future of cities should be; our question is what the rules for design should be, rather than whether there should be rules at all. We want rules which open up the environment to change rather than stabilize it, and this means assessing, in professional practice, whether a set of planning regulations or a building design is too prescriptive, and so prevents adaptation and evolution through use; we want structures which follows Norbert Weiner's cybernetic insistence on self-revision. In a closed system, such internal change proves impossible, in an open system, built form proves capable of metamorphosis. Put abstractly, the built form should sustain the transforming work of time. The issue of building in context perhaps brings this abstraction to life.

Context

"Context" is the urbanist's equivalent to the biologist's term "habitat." Both refer to the ensemble of organisms sharing a physical space. Social context refers to who inhabits the habitat; in design, context means the ensemble of buildings which already exist when the designer sets to work.

The architect or planner can be choose to treat these buildings as living presences or as inert physical objects. In Corbusier's model the claims of context were weak, the habitat of already-existing buildings mere mess. It would seem that paying attention to context would produce a more open system of design. But "contextualism" can produce closure by paying the wrong sort of attention to time.

Simulation of past buildings or urban forms in new construction is a wrong sort of way to attend to time; simulation could be branded, if you like labels, "closed contextualism," meaning simply that the designer is trying to create the illusion that nothing disruptive has been built, the new buildings are meant to seem simply more of the habitat which has always been in place -- simply children of the past. In public spaces, this kind of simulation has appeared most often on the facades of office buildings and hotels, which appear indeed strange children, since over a forty-story sealed box of a building are applied cornices, pilasters, and other decorative details from eras in which the buildings were three to six storeys, and in which these decorative details had a functional purpose. Such buildings are theatrical in the sense they wear the past like a costume or a mask on stage.

A more profound instance of simulation appears in the massive development project called Battery Park City in lower Manhattan, near the site of the World Trade Center destroyed in the terrorist attack of September 11, 2001. Battery Park City was constructed long before this disaster, in the 1980s and 1990s, to create a more mixed neighborhood amid the office towers. The architecture itself looks like other domestic architecture of the modern era; simulation of a fundamental sort occurs here in the layout of the ensemble of buildings.

The project has been built according to a grid plan which echoes the Manhattan grid first laid down in the city in 1811. Stanton Eckstut, the principle planner of this neighborhood, set the credo of his work directly against Le Corbusier's Plan Voisin: " ... the first priority is the well-designed street."[ ] His impulse to imitate the existing street pattern has led to other planning moves which also imitate the city's past; these re-create the Manhattan street wall, and in low-rise construction mimic the variety of town-house facades on the upper East and West Side side-streets. The over-all plan has a five-point list of principles: "1. thinking small; 2. using what exists; 3. integrating; 4. using streets to create place; 5. establishing design guidelines."[ ]

This is contextual planning. It sounds seductive and is: the list of buzz-words provides the model for many urbanists working today, because these guidelines seem to promise more diversity and complexity in the urban habitat than the Corbusian version. But diversity is accomplished here all at once; it is instant diversity, diversity by decree. The streets which Battery Park City imitates achieved their diversity of facade, on the contrary, because they filled in slowly, over the course of several generations, each generation adding its own tastes in design to the street. More over, variations in internal building form and the relation of the low centers of blocks to their tall vertical edges came about as a result in diversity of economic fortune and usage over the course of those generations; the streets look complex because they reflect the accumulation of differences in how people lived on them.

Closure's vice of over-determined form re-appears, in new clothing, in Battery Park City: the simulation of diversity fails to bring the spaces to life. This failure is apparent in the play-ground spaces reserved for children; infants cavorting in the carefully raked sandboxes are happy enough, but older children seem unhappy, both the basket-ball courts and attractive youth centres being usually empty. These are spaces not created by the children themselves, in time, through their own use. The spaces contrast to playgrounds like those at the corner of 6th Avenue and 3rd Street, places kids reach by subway as well as on foot. Iron mesh fences frame these courts for basketball, with only a few straggly trees. Trucks and honking taxis struggling up 6th Avenue create a deafening volume of sound which combines with the portable radios tuned to Latin or to rapping beats. Everything in these crowded playgrounds is hard surface. But they are places made by and through participation. In terms of time's context, the most salient fact about this vitality is that the kids are playing in a space meant for other purposes; they have made this tar strip their own through appropriation, using the space in ways not intended in the past.

In one of his novels, the writer James Salter speaks of an idealised American family living "an illustration of life rather than life itself."[ ] In urbanism, simulation is hardly an American phenomenon; Shanghai is building today an entirely new quarter of the city which looks variously like an American suburb, like the 16th arrondissment in Paris, and like pre-war Munich. Simulation has guided the building of entire cities like Buenos Aires at the turn of the 19th Century, modelled on Haussmann's Paris and baroque Rome. "Illustrations of life" are in a way naturally seductive; we are drawn to what has worked for others, before. "Life itself" takes time more seriously; we cannot simply repeat what came before and expect it to work for us; time subverts, alters, de-stabilizes; in natural history, this is evolution's guiding law.

Simulation is not an innocent visual practice. Judgment is clouded over by the sense of a fait long accompli, about which one can do nothing. Closure of a political sort occurs; that is, by arousing the illusion that a building or plan has always been there, the very presence of the structure is made legitimate. As designers, we know that "context" is often used as a weapon to fight innovation. In the larger scheme of systems theory, mechanical repetition serves similarly as a value which does battle with experiment.

In cultural analysis, anthropologists have long recognized that rituals themselves are not static, instead evolving over the course of time in a dialogue with material changes. To take an instance in Christian religious ritual, the wines and wafers used in celebrating the Eucharist changed in the 17th, when new trade routes brought to Europe wines lower in alcoholic contact, and trade itself improved the dried biscuit; the result was to diminish this ritual as a symbolic meal. Living traditions are in the same way in a constant state of alteration. In urbanism we need therefore to discover those spatial and architectural forms which acknowledge past or existing conditions on the ground, as Corbusian urbanism did not, yet permit those conditions to modulate, as simulation and historicism does not. This is not

an insoluble quest.

Borders and Boundaries

One spatial distinction which helps us engage actively with the changing context of time lies in the difference between borders and boundaries. This is an important distinction in the natural world. In natural ecologies, borders are the zones in a habitat where organisms become more inter-active, due to the meeting of different species or physical conditions. The boundary is a limit; a territory beyond a particular species does stray. So these are two different kinds of edge. For instance, in the border-edge where the shoreline of a lake meets solid land there is an active zone of exchange; here is where organisms find and feed off other organisms. The same is true of temperature layers within a lake: where layer meets layer defines the zone of the most intense biological activity. Whereas the boundary is a guarded territory, as established by prides of lions or packs of wolves.

Not surprisingly, it is at the borderline where the work of natural selection is the most intense; time is productive of evolutionary change in this edge condition. The boundary establishes closure through inactivity, by things petering out, not happening; to say that the edge-as-border is a more open condition means it is more full of events in time.

This spatial distinction in natural ecologies relates to a difference in the structure of cells themselves. It is the difference between a cell wall and cell membrane, the cell wall's function being that of a container holding things in, the membrane being at once porous and resistant, letting matter flow in and out of the cell, but selectively, so that the cell can retain what it needs for nourishment. This is an ambiguous distinction at the cellular level, in part because cell linings can sometimes switch function; again a wholly-sealed wall would cause the cell to die. But the difference, in degree, between wall and membrane is important for our understanding of "openness" as a condition: never simply free flow, it resembles the membrane in combining porosity and resistance. This combination marks the experience organisms have ecologically at the border's edge, and defines the condition of openness in human systems. Urban design provides examples of how porosity and resistance can combine.

The walls around traditional cities would seem an unlikely instance of the border/membrane condition. Until the invention of artillery, people sheltered behind walls when attacked; the gates in walls also served to regulate commerce coming into cities, often being the place in which taxes were collected. Yet the massive medieval walls such as those surviving in Aix-en-Provence or in Rome furnish perhaps misleading visual evidence. On both sides of the Aix-en-Provence wall were to be found sites for unregulated development in the city; houses were built on both sides of these medieval walls; informal markets selling black-market or untaxed goods sprung up nestled against them; the zone of the wall was where heretics, foreign exiles, and other misfits tended to gravitate, again far from the controls of the center. In social practice, then, such walls functioned as border/membranes, both porous and resistant.

The devil in modern urban planning is that the contrary condition of the inert, closed boundary, constructed by a much less solid and fixed sort of wall. Highways cut through cities are the obvious example: crossing through six or eight lanes of traffic is perilous; the sides of highways in cities tend to become withered spaces; these invisible walls infamously have been used to mark off the territories separating the rich from the poor, or race from race. Porosity is lacking. Put as a general rule, in 20th planning motion has served as the instrument for making boundaries rather than borders.

There are obvious remedies for boundary-making, some of these remedies simple, others technologically advanced. The simple solution is pedestrianization -- perhaps too simple, as banishing traffic tends to homogenize urban space, pedestrian zones becoming shopping malls rather than serving the complex needs of production and work as well as consumption. Experiments in Stuttgart and Bogota in mixing complex activities within pedestrianized space have seen the steady, necessary return of traffic. A more promising way of avoiding motion-walls makes use of sophisticated technology like computerized bollards, mechanical pistons dug into the street which remain down when service and commuter traffic needs to flow, go up in mid-day and at night, times when pedestrian use makes more sense. This is but one example of how technology could be used in the future to convert boundaries to borders within the city.

The design of buildings is likely to prove a tougher case. Take the wall made of plate-glass -- steel-framed plate-glass a ubiquitous material in modern architecture, walls of framed glass used now almost universally in office construction. On the ground plane you see what's inside the building, but you can't touch, smell, or hear anything within; the plates are usually articulated so that there is only one, regulated, entrance within. Plate-glass walls thus make for boundaries rather than borders. As with the sides lining highways, nothing much develops on either side of these transparent walls; as in Norman Foster's new City Hall for London, dead space develops on both sides of the wall, the political activities within the building are invisible outside. By contrast, the 19th Century architect Louis Sullivan used much more primitive forms of plate glass more flexibly, as invitations to gather, to enter a building or to dwell at its edge; his plate glass panels functioned as porous walls.

Making buildings more porous will be one of the great challenges of 21rst Century architecture; porosity could make buildings more truly urban. Energy concerns are already pushing architects to stop making "sealed glass boxes," in the apt phrase of Reyner Banham. Building security could be served by other technical means than isolation of the structure as a

whole from its environs, technology as simple as electronic keys to offices or step-elevators which open up more public spaces within buildings. To his credit, Le Corbusier, like Frank Lloyd Wright envisioning a "mile-high city" imagined the possibility of such internal porosity above the ground plane, but both architects lacked the technology to realize this condition. Now we have it, but have yet to use the technology to transform boundaries into borders within buildings.

Water plays a particular role in defining the difference between boundaries and borders. Up to the 1950s, the existence and shape of waterways has supported the economy and determined the shape of cities like Bombay, Shanghai, Istanbul, London, and New York -- water the material, urban medium for trade and circulation. But the docks and warehouses and water itself held little aesthetic interest for urban designers; water was just the utilitarian substance of the trading city.

In the early 19th Century functional watery scenes began to be valued aesthetically, as when the European Magazine described in 1802 the original West India Docks in London of which Canary Wharf now forms a part: "...nothing can be conceived more beautiful than the dock. The water is of the necessary depth; its surface {thanks to the locks is} as smooth as a mirror, presents to eye a haven secure from storms." This view expressed, if you like, a porous join between commerce and aesthetics. But the join came to be contested among urban designers, expressed by the American urbanist Daniel Burnham in 1909: "the viewing of water is a solitary act, the regard of nothingness; in viewing water man turns his back, literally, on the conditions which support his life." Burnham realized this view in the design he made for Chicago's lake-front in that same year; the places where water meets land are visually important but socially neutral; Burnham put parks, promenades and other low-density uses at the join of water and land.

This watery aesthetic provides another insight into how inert boundaries are created in cities: viewing space is opposed to working space. The divorce between art and work is hardly unique to architecture. The two aesthetics appear in painting during the latter 19th Century, impressionist painters frequently depicting the Parisian suburb of Argenteuil in scenes which mix factories with people picnicking or promenading, while post-impressionist painters removed scenes of pleasure from the industrial landscape.

The cultural analysis of space in theatrical terms helps us understand the implications of "the view." This is the domain of spectatorship, the point of view of someone sitting in an audience.

Monumental buildings have always marked cities, most notably religious shrines and palaces, monuments to be looked at in awe; up to modern times these monuments were meant equally to be used; the spectator of the monumental building was also an actor in it. Even so spectacular a construction as Louis XIV's Versailles was filled with tradesmen and trades not at all reflecting royal splendour; the great medieval cathedrals were also productive centers for the propagation and distribution of herbal medicines, as an easy mixture of the sacred and the profane.

In the 19th Century, monumental urbanism changed course. The major buildings in the city came to be conceived as objects to be looked at, to be viewed, as would other theatrical spectacle; this was, for instance, the principle guiding the construction of the Ringstrasse in Vienna. The boundary between exterior and interior grew more defined in terms of inside and outside; the public at large was imagined on the outside, viewing the exterior without the expectation of penetrating the structure. The spectacular architecture we call today "starchitecture" makes use of this same theatricality which positions the viewer outside, a spectator divorced from the inner workings of the building; the most arresting current example is Rem Koolhaus' CCTV building in Shanghai, a guarded fortress isolated in open space meant to be appreciated from afar; Norman Foster's 30 St. Mary's Axe [the so-called "gherkin"] functions in the same way.

These are monuments to be looked at rather than magnets attracting people within. When, in The Fall of Public Man, I first began to think about the implications of spectator architecture and space, these built objects seemed to me to indicate a more general malaise in modern society, that of passive spectatorship. [In the performing arts, especially music, the malaise has been long evident, in music which can be heard but not played by the listener.] I sought to infer from the passivity induced by the city's built environment some explanation for other forms of passive spectatorship, as in televised politics -- inferences consummated by my colleague Guy Debord in his book Society of the Spectacle. I would now focus more on the physical boundary, the outer envelope, separating the spectator of buildings from their habitation, a boundary-condition which permits people only to look at rather than be in monumental public space.

As applied to water, in Europe the most massive building project based on this divide is the Docklands project just now coming to completion along the Thames. The project seeks to recover water views and give them economic value, by filling in the lining between land and water; the structures facing out to the water are connected to one another by filigrees of road and railway. The buildings are high-density inside but outside the public spaces seem, to many of their inhabitants as well as to professional observers, curiously empty, because the buildings are positioned just as Burnham imagined the urban strollers along his promenade to be orientated, turning their backs on one another, and on the fabric of city behind, to look out at the water. The water is pure spectacle, its only spectators the very rich who can afford the view.

I'd make one sweeping claim about "the view." It signals one of modern capitalism's great dilemmas, the divide between the utilitarian and the aesthetic. In the planner's water-realm, the consequences of this divide are grave. New water-edge projects in Bombay propose, for instance, to evict a mass of small-scale businesses and pavement dweller's from the waterfront; the justification offered by the developer's is in part visual, that of "cleaning up" the view by reducing the density of people and complexity of uses. The offer of visual pleasure at the cost of mixed social and economic use afflicts similar proposals in Buenos Aires and London -- all children in form of Burnham's Plan, all leading to social exclusion in the name of visual pleasure.

Because exclusion and eviction are so deeply rooted in capitalism, it may be beyond the humane planner's power to make boundaries into boundaries at the scale of projects like these water-side projects. At a smaller scale, the urbanist may have more freedom to maneuver. But at this scale, he or she needs to be more self-critical in order to create membrane/borders.

When we imagine where the life of a community is to be found, we usually look for it in the center of a community; when we want to strengthen community life, we try to intensify life at the center. In reflecting on my own planning experience, I know why projects at the local scale should have dwelt on establishing a center for community life: most poor people in cities suffer for lack of it. In the history of immigrant communities in London, for example, central places like coffee shops, restaurants, money-transfer shops, or even mosques weaken their hold if immigrants remain in one place for more than one generation. So finding or establishing the center becomes a planner's recipe for social cohesion. Emphasis on the centre, however, may lead the designer him or herself to neglect the edge condition, treating it as inert, lifeless -- one version of the boundary. This strategy means that exchange between different racial, ethnic, or class communities is diminished. By privileging the center, community-based planning can thus weaken the complex interactions necessary to join up the different human groups the city contains.

Let me give as an example just such a failure of my own in my professional practice. Some years ago I was involved in plans for creating a market to serve the Hispanic community of Spanish Harlem in New York. This community, one of the poorest in the city, lies above 96th Street on Manhattan's Upper East Side. Just below 96th Street, in an abrupt shift, lies one of the richest communities in the world, running from 96th down to 59th Street, comparable to Mayfair in London or the 7th Arrondissement in Paris. 96th Street itself could function either as a boundary or a border. We planners chose to locate La Marqueta in the center of Spanish Harlem twenty blocks away, in the very center of the community, and to regard 96th Street as a dead edge, where nothing much happens. We chose wrongly. Had we located the market on that street, we might have encouraged activity which brought the rich and the poor into some daily, commercial contact.

Wiser planners have since learned from our mistake, and on the West Side of Manhattan sought to locate new community resources at the edges between communities, in order, as it were, to open the gates between different racial and economic communities. Our imagination of the importance of the centre proved isolating; their understanding of the value of the edge and border has proved integrating.
I don't mean to paint in sum a Panglossian picture the value of borders over boundaries in cities. Borders can serve as tense, combative zones rather than friendly sites of exchange -- evoking some of the predatory activities along borders in natural ecologies. Planners and clients have to make a hard choice: is isolation and segregation better than the risks entailed in interaction? It's worth recalling that a cell membrane is resistant as well as porous; in cultural terms, these means communities have to decide what they can't share with others as well as what they can. But this is a decision which, in my view, should result after the experience of from exposure to difference, rather than flight from contact. Where buildings are sited, the claims which buildings make to views, the very materials of which buildings are made, all are the urbanist's professional contribution to the experience of stimulation at the edge.

Thus far in this essay I've drawn analogies between the natural and the built environment to establish the differences between a closed and an open system. At this point, I need to make a break in this procedure -- at least, I can find no simple natural analogy to hand to explain a great paradox of urban experience, a very sensate, physical experience which smudges the distinction between "closed" and "open."

Difference and Indifference

This smudge concerns the combination of difference and indifference in everyday life. Cities are meant to be places which concentrate different races, social classes, ethnicities, life-styles; the mixture of difference has seemed to writers on cities from Aristotle to Hannah Arendt to stimulate people in crowds. It is more largely the very essence of an open system that difference should provoke; again from Aristotle to Arendt, the ideal public realm has appeared one in which people react to, learn from, people who are unlike themselves. Yet even when we are exposed to differences, we may not react to them. To make the cursed combination of difference and indifference clear, I'd like to offer a rather prosaic example.

As long as I've lived in New York I've liked walking, avoiding subways or taxis whenever I can. These days I usually walk from my apartment in Greenwich Village up to midtown on the East Side to eat, an amble of about three miles. There are plenty of restaurants in the Village but none quite like those just above the United Nations, in the side streets of the Fifties. They are

French but not fashionable; food is still prepared with butter and lard and cream, the patrons are bulky and comfortable, the menu seldom changes.

To reach the French restaurants I have to pass through a drug preserve east of my apartment. Ten years ago junkie use to sell to junkie here; in the morning stone men lay on park benches or in doorways; they slept immobile under the influence of the drugs, sometimes having spread newspapers out on the pavement as mattresses. The dulled heroin addicts now are gone, replaced by addict-dealers in cocaine. The cocaine dealers are never still, their arms are jerky, they pace and pace; in their electric nervousness, they radiate more danger than the old stoned men. But the sight of these short-circuiting bodies, while disturbing, is not too disturbing, if I also keep moving.

Along Third Avenue, abruptly above Fourteenth Street, there appear six blocks or so of white brick apartment houses built in the 1950s and 1960s; the people who live here are, for instance, buyers for department stores, women who began in New York as secretaries and may or may not have become something more but kept at their jobs. It is a neighborhood also of single bald men, in commerce and sales, not at the top but walking confidently enough to the delis and tobacco stands lining Third Avenue. All the food sold in shops here is sold in small cans and single portions; it is possible in the Korean groceries to buy half a lettuce.

"By 'modernity'" Baudelaire wrote, "I mean the ephemeral, the fugitive, the contingent ..." Suddenly this solitary, solid world vanishes. In the upper Twenties along Lexington Avenue bags of spices lie in ranks with the shops run by Indians and Pakistanis; when the doors are open in spring and fall, the combined scents waft out to the street, but like most of the ethnic enclaves in New York these sensuous sights and smells are not beacons to the outside world. In the Indian shops few of the bags of spice are identified by explanatory labels; the tourists who, upon asking for an explanation of the mysterious bags, will be smilingly informed by perfectly polite shopkeepers that one is "hot spice" or another an "imported ingredient." The shop owners stand in their doorways in summer, making jokes or comments -- could it possibly be about us? -- which are met by their neighbors with the faintest parting of the lips, the slight smile that acknowledges more, and perhaps more condemns, than a loud laugh.

The final lap of my quest for French food in New York takes me through Murray Hill, in the avenues above 34th Street. Here the office blocks of Manhattan begin to reign, and with them a different time-geography. Packed with people during the day, these streets are empty at night; the few residential blocks above 34th street are also deserted at night, the neighborhood feeling like a place where people sleep at home but otherwise do not spend much time there. This stretch of New York seems lacking in a warm, cuddly sense of community, the built fabric and the rhythms of the hours be-speaking a zone of mere functional relations, mutual indifference.

And yet not. This impersonal environment is the most stable, and crime-free, zone in the city. Impersonality is said to be the social acme of indifference, yet the neighborhood is prized by its peculiar mixture of many widows and widowers, poor Hispanics, homosexual couples, doctors working at a nearby hospital, and diplomats at the United Nations. People seem to prize its anonymity. "Stadt Luft macht frei" runs an old German adage; freedom seems here tied to that anonymity, the freedom of being left alone. And it's here that I've sighted at last La Toche restaurant, so unfashionable, so quiet, so pleasurable. The mixture of difference and indifference feels like all of this, spanning scenes of drugged degradation to a more pleasurable, free anonymity. The social fragments crowd together along the spaces of the street but do not interact, an observation which applies also to the observer; if something begins to disturb or touch me, I need only keep walking to stop feeling.

The problem of the monumental view is thus not restricted to monuments; some of the same elements of disconnection appear in quite mundane, everyday experience. But not exactly in the same way. The theatre of the monumental view perforce renders its viewer passive spectators of an awe-inspiring scene or object. What results from mixing difference and indifference during the course of an ordinary walk, with all its parade of variety, is a peculiar sort of neutralization. Daily routines, Hannah Arendt once provocatively observed, leave little trace in consciousness; people come to treat these routines as just natural, and so rather neutral in value over the course of time. More pointedly, the urbanist Kevin Lynch argued, in The Image of the City, that everyday rhythms of walking are superficial stimulations which recede in value unless something threatening occurs in their course. Both comments, put another way, are that ordinary experience doesn't much register if it lacks disruptive drama.

Perhaps in natural habitats the same mixture of difference and indifference can be observed among species mixed together but have no business with each other; in the human habitat, however, this mixture has great significance. It can express both the vices of the closed system and a virtue of the open system.

The element of closure here is this mutual neutrality is more largely the experience of the races, who live segregated lives close together, and of social classes, who mix but do not socialize in New York or other large cities. The combination of difference and indifference casts a shadow over the value of diversity which has oriented the practical work of enlightened planning: in building new housing or organizing schools, planners want to mix together different ethnic groups and social classes, yet a large number of studies document that these social ingredients do not then chemically interact. The sheer presence of diversity does little to counter mutual indifference.

This seemingly inert mixture relates to a classic problem in social theory, first described by Alexis de Tocqueville in the second volume of Democracy in America. Tocqueville characterizes social indifference as follows:

Each person, withdrawn into himself, behaves as though he is a stranger to the destiny of all the others. His children and his good friends constitute for him the whole of the human species. As for his transactions with his fellow citizens, he may mix among them, but he sees them not; he touches them, but does not feel them; he exists only in himself and for himself alone. And if on these terms there remains in his mind a sense of family, there no longer remains a sense of society.

To rescue people from this indifference, Tocqueville favored encouraging people to join voluntary associations like churches, political campaigns, or sports groups, voluntary connections called by researchers like Robert Putnam today a person's "social capital." This is an impoverished concept. No one chooses their families, and only a small elite can choose not to work -- life's two strongest bonds. Voluntary commitments within the work-place are increasingly feeble: many members of British, German, and American union negatively report that the union is as distant from their everyday lives as management.

Urban planning has therefore sought other ways than voluntary affiliation to strengthen social cohesion. In a more directive and tangible way, planners have sought to increase the pressure on a mixed multitude of people to respond to one another; in urban planning this raising of pressure has focused notably on the spatial design of streets.

In the New York example above I described a linear, sequential display of difference along the urban street. To increase the pressure of interaction, Alan Jacobs, the chief planner for the city of San Francisco in the 1980s, sought to strengthen the side walls of the street line, so that the street has no "gap teeth" -- that is, no empty spaces between buildings, forming instead a continuous wall -- and that the height of these walls is uniform; the space is thus meant to be compressed. The "Jacob's Rule" in planning seeks to limit the height of buildings to the cone of vision of a pedestrian on the ground, about eight storeys; this planning tool privileges horizontality rather than verticality. Present-day San Francisco has benefited from Jacobs' work, which has guided planners in Berlin and in Istanbul; San Francisco's urban fabric is more coherent, and someone more sociable than he found it -- but only somewhat. Spatial engineering in the form of the pressurized street cannot alone induce people to interact; the teeming streets I've described in New York show the social limits of this planning strategy. Put in formal terms, diversity and intensity of the street provides a necessary but not sufficient condition for social cohesion; people remain closed off from one another.

This is the negative side. Viewed more positively, the mixture of difference and indifference can be described as cosmopolitanism. In social science this term does not refer to chic clothing or suave manners; it names more fundamentally a sense of comfort and security in the midst of strangers. The essence of this comfort I think can be explained as follows: cosmopolitanism consists of stimulation by the presence of others but not identification with them.

This definition is hardly original; it derives from Georg Simmel, the sociological god-father for a positive view of cosmopolitanism -- Simmel printing the social positive, I think, of 19th Century anti-Semitic prejudices against the wandering, deracinated Jew. Stimulation without identification is a force drawing social outcasts to cities; the city can suspend the need to belong. When the writer Willa Cather first moved to New York with her lesbian partner, she wrote to a friend, "It's exciting but more important at last I can breathe." In another vein, diasporic communities can gain economic stimulation in a city without having to erase themselves as a cultural group -- this is a version of what the sociologist Craig Calhoun has called "rooted cosmopolitanism."

This vein of cosmopolitanism addresses a fundamental social fact. Cities grow through in-migration much more than through internal population increase. Migration to cities is what has created the giant metropolitan agglomerations of modern Mexico City [with about 18 million inhabitants]; as Shanghai, [destined to become similar in numbers] a shared language and national culture does little to erase the sense of mutual foreignness in the city. The mutual foreignness cased by in-migration is neither modern nor restricted to the developing world; Europe in the 18th Century experienced a spurt of urban growth on the same terms: London, which contained about 315,000 people in 1632, and 750,000 people by 1750; Paris spurted in one generation from 1750 to 1786 from a half million to 720,000; these numbers may appear trivial now but seemed seismatic shifts at the time, and for the same reason as today; growth in both cities occurred principally by the in-migration of young people. In the past, as in the presence, anonymity protects migrants; this is obviously the case for illegal immigrants but also true of strangers with papers; anonymity in the sense of not being singled out for special notice has long been what James Scott calls a "weapon of the weak."

The cosmopolitan planner's practical dilemma is how to involve migrants economically and politically in the city without inflicting on them a cultural loss. Pressure to integrate does so; integration is a more coercive pressure than adaptation. My version of cosmopolitanism names something positive in the psychology of migration, views the migrant as more than a hapless victim of necessity. A distinction first drawn by Adam Smith, in the Theory of Moral Sentiments, helps elucidate this positive view. Sympathy he understood as identification with the ways of life, and particularly the suffering of another, as in the adage "treat thy neighbor as thyself." Empathy he took to be a different kind of regard: curiosity about lives the

observer cannot pretend to understand. Empathy of the Smithian sort is the positive experience migrants can have of a foreign city.

In sum, the mixture of difference and indifference can be treated as a sign of malaise, or as a positive. Viewed negatively, the evidence of my walk is of fragmentation; viewed positively, as a gathering of information. On the negative side, I suffered from the lack of social cohesion; on the positive side, I was stimulated by places where I do not belong and people who were not like me. In sociological jargon, "social distance" was my negative problem, while this same social distance provided me, positively, a sense of freedom and comfort in the midst of strangers; I was attentive but not involved. In planning terms, here are two different goals for what should happen at the membrane/border between communities in the city: on the one hand, the effort would be to diminish differences at these edges through social exchange; on the other, the goal would be exposure to difference, awareness of it.

There are enormous political stakes in making such distinctions. As I write, the British government is engaged in a campaign for "Britishness," a campaign largely aimed at Muslims living in large British cities, the government demanding more social integration, less assertion of otherness. This campaign is tinged with xenophobia and intolerance -- but, as is the British way now, tinged lightly and sweetly; the government promise is that people who feel more integrated in Britain will feel better about themselves. Politically-correct hostility to such proposals will not suffice; research has shown that second-generation urban Muslims do indeed suffer from a sense of isolation and exclusion, even if they have been upwardly mobile in terms of jobs and income; they harbor social expectations of inclusion the first generation of immigrants could not.

The ambiguities of cosmopolitanism have spoken most to me in understanding the public realm, practically as well as analytically. The projects which involved me in New York, London, Beirut, and Johannesburg all addressed migrants who could only survive by becoming skilled cosmopolitans. Space, place, and built form matter to them in navigating the city; they have had to become adept in transcending boundaries, dwelling in borders, both in their work lives and in their dealings with already-established locals. Harmony and integration are foreign subjects to these migrants. The public realm, in its impersonality and anonymity has offered to them a space of survival, whether they are undocumented or possessed papers. The spatial context which matters to them most is the crack, the "gap tooth" in the urban fabric where they can find a place to dwell. The migrants who do not prosper suffer from an inward-turned sense of community; these are people then subject to exploitation, eviction or dispersal, lacking the social knowledge as well as the economic resource to cope with the outer world. The migrant cosmopolitans who survive well have become, literally, skilled actors; they have learned the rituals of what Erving Goffmann calls "the presentation of self in everyday life" so that they can communicate with strangers. They are skilled at living in time, at home with change. In the developing world, they are the city's future; perhaps these migrant cosmopolitans are also, in the developed world, a model for how to inhabit the city well.

The Public Realm as Open System

My aim, as I declared at the outset, was to understand "openness" as a systematic property, rather than as a vague virtue. Openness, I've argued, is not the same as formless. In the public realm, openness can be defined in terms of built fabric and its context; in the focus on membrane/borders rather than boundaries or centres; in the response of urbanites to difference, and to anonymity. Openness can be planned, as in the flexible use of building materials like glass, in transport technologies as minute as the automated bollard, in the porosity of monumental buildings, or in access to natural resources like water. That aspect of the public realm which seems most determinate, its cultural rituals and practices, can also be open rather than closed; migrant cosmopolitans can make it so. Bridging all these aspect of openness is the dimension of time, evolutionary time which challenges the closed, over-determination of form and its correlates of equilibrium and integration.

Perhaps the clearest way to summarize my argument is to say that the public realm is a process.

Still, I've decided to leave a more philosophical conclusion to this essay incomplete, pending our conference discussion. As a provocation for that discussion I'd like to add a final thought on the relation between architecture and society.

Almost all the work we do in designing a building or urban space relies on specification. We specify as precisely as possible what a project will look like and cost, we also specify how the construction will function. It's hard to sell projects by using words like "might" or "possibly" or "I don't know." Clients paying the bills need specification, and the public wants it -- whether the public is a planning body or a citizen's group.

Indeterminate is equated with impractical.

This equation is the very essence of the closed system; the equation can only be challenged by showing when, how, and why specification can itself prove impracticable. This proof has been vouchsafed in the development of computer hardware and software in the last generation; technological advance occurred through creation of and investment in machines and programmes whose use was not initially clear, whose specification was loose. Work on the built environment has failed to evince the same innovative energy. There is lots of construction; most of it is, as Alejandro Zaero-Pola argues in another paper for this

conference, low-risk and standardized.

One way for architects to behave more like Silicon Valley engineers is to explore incomplete form. Incomplete form is a credo in other arts as well as computer technology, notably in jazz improvisation, or in sculpture purposely left unfinished, or in poetry which, to use Wallace Steven's phrase, "engineers only the fragment." The architect Peter Eisenman has sought to evoke something of the same spirit in the term "light architecture," meaning a building designed so that it can be added to or revised internally in the course of time.

In the history of cities, this possibility was realized most often in fact by buildings whose structure was simple enough to permit adaptation. For instance, the "shoe-box" buildings in Britain of the Georgian era permitted this adaptation; box was added to box in the 18th Century as London grew, either along the sides or ends of the box. Today large buildings are technically more complex, but this engineering complexity can aid rather than inhibit flexibility.

The guidelines for constructing an incomplete form are fairly clear: the structural skeleton is conceived as a series of cores rather than a single core; the elements of the skeleton are designed to permit "hinge" addition; building skins are made easily detachable from the skeleton; the space immediately around the building is treated as colonizable ground, rather than protected as viewing space for the building as an object. The materials and structural technologies all exist which permit buildings to change shape in these ways in time, but are not used well; as designers, we remain the prisoners of specification.

My parting thought is that asserting the value of incomplete form is a political act architects should perform in the public realm. This means asserting not only the beauty of unfinished objects but also their practicality. Buildings left incomplete, partially unprogrammed are structures which can truly be sustainable in time; the flexible building would help end the current wasteful cycle which marries construction and demolition. Asserting the value of incomplete built forms is a political act because it confronts the desire for fixity; it asserts, in steel, glass, and fiber-optic cable that the public realm is a process.