

The Interoperative

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Infrastructure can be wielded as a means of promoting the common good (Fig. 1) or as an institutional weapon of exploitation.¹ Regardless of how a particular infrastructure is represented, it is not always clear which role it plays at any given moment. Usually it is being used for multiple interrelated performances simultaneously and these uses are subject to ongoing negotiations between multiple interests. While the highways, bridges, and dams funded by international economic interests and built in outlying regions—such as the Amazon—play a role that is difficult to conceive of as being anything other than dev-

astatingly exploitative, the public parks and greenways of the world's major cities also clearly serve economic functions while delivering a variety of benefits to the common good. Whether in an urban or rural context, infrastructure can be conceived of as opportunistic and multilayered, serving explicit functions of enabling mobility, energy, and communications—but also potentially prioritizing access to light, air, and water: creating open space for social gathering and spatial continuity for ecological habitats. This is true whether infrastructure is regarded as a public space or as private commodity. Semipublic spaces now proliferate in major cities. Of course, the term “semipublic space” is effectively a euphemism for “private property,” and while this trend might be criticized, there are also examples of these spaces being used in such a way as to provide alternative *commons* when the public are denied their right of free access to public space.

For instance, when the Occupy Wall Street movement in New York City was prohibited from gathering in public space on Wall Street itself, the protesters instead inhabited nearby Zuccotti Park. A small granite plaza in proximity to the New York Stock Exchange, Zuccotti Park is one of over five hundred “bonus plazas” built in the city—privately owned public parks created according to a little-known law established in 1961, the result of a compromise struck between the city and prop-

erty developers. The law states that should developers desire to build a taller skyscraper than zoning would otherwise allow, they can construct a compensatory plaza that provides “light and air” for passersby: the taller the building they desire, the bigger the plaza they must build. These bonus plazas are generally required to be open twenty-four hours a day, barring a safety issue, and they are governed by specific regulations in the zoning law. Among other particulars, the law states that the layout of such plazas must provide easy pedestrian circulation throughout the space, and, thereby, promote public use.

Indeed, this was effectively the case at Zuccotti Park from the arrival of protesters there on September 17, 2011 until police forcefully evicted them in an early morning raid on November 15. (Fig. 2) When protesters initially occupied the park in September, the only rules visibly posted there were, “No Skateboarding, No Rollerblading, No Bicycling.” Subsequent to their arrival, Brookfield Office Properties, the owner of the site, made public an additional set of rules banning everything from erecting tents and tarps to lying on the benches, although these rules were not enforced until the November police raid. Then barricades and police presence were established to discourage protesters from returning, and those who chose to enter the park were subjected to search and had to pass through one of two checkpoints monitored by police.

This situation persisted until, on January, 2012, civil rights groups filed a complaint with the city's building department, asserting that the barricades were in violation of the city's zoning law since they restricted public access to the park—stating that by allowing the barricades to exist the city was failing to enforce the law. The barricades were removed the following day, and open access to the park was again provided.²

The Highline Park in New York is also a “semipublic space” and generated controversy when park officials brought in police to arrest an artist selling his work there. It was reported that the artist Robert A. Lederman was arrested around the West Fourteenth Street section of the High Line, and was issued five summonses—two of which were criminal. It turns out this particular artist, president of an organization named Artists' Response to Illegal State Tactics, has a history of pushing the boundaries. Having previously been arrested forty-one times for similar infractions under the Giuliani administration, he was ultimately the plaintiff in a case in which both state and federal courts sided with him, citing the First Amendment and ruling that New York City could not require permits for artists in parks. The incident drew a great deal of publicity, being widely reported in the *New York Times* and elsewhere, prompting the city's Department of Parks and Recreation to issue the following statement:

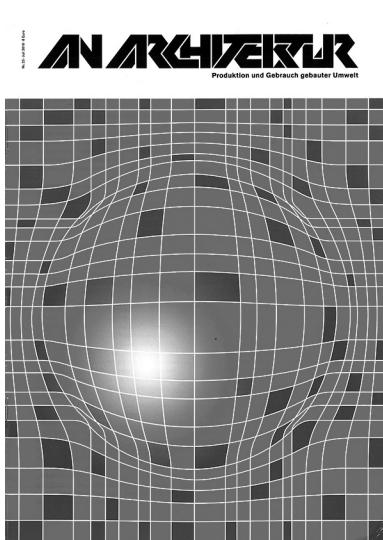


Fig. 1: An Architektur: On the Commons, deals with the fundamental reality of land as the basis for the accumulation of wealth, highlighting the historic processes by which the privatization of land has occurred and illustrating how these processes can be engaged to create public space as the basis of just infrastructure for the city.



Fig. 2: Occupy Wall Street protesters in "tent city" on November 10, 2011, five days prior to the police raid.

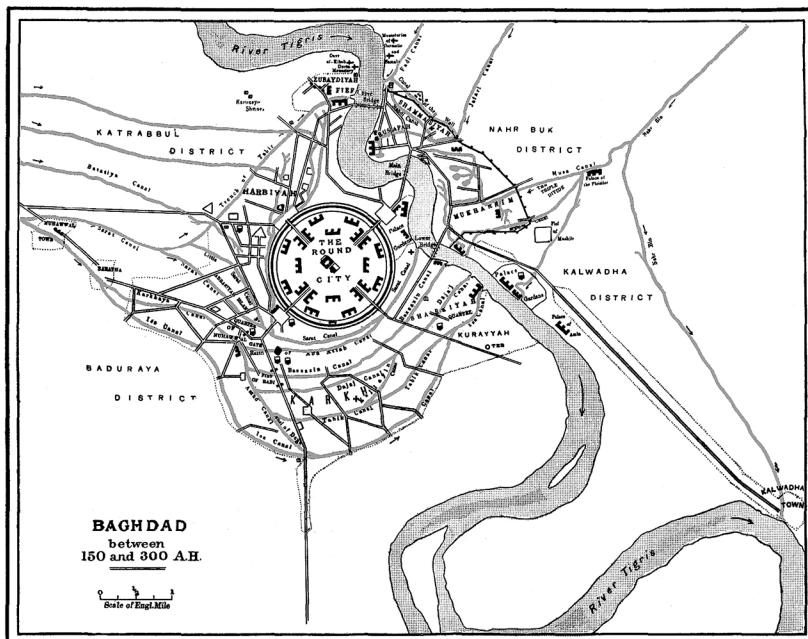


Fig. 3: The "Round City" of Baghdad between A.D. 767 and 912, as drawn by William Muir, 1883

The High Line is a unique public space, a thin elevated corridor at less than three acres with pathways as narrow as eight feet wide in some places. Many activities are prohibited. These include biking, skateboarding, throwing a baseball or a Frisbee, or walking a dog. The High Line can receive as many as 25,000 visitors on a busy day, walking along its long linear surface surrounded by fragile new plantings. Mr. Lederman and other vendors are able to ply their trade in hundreds of New York City parks and on hundreds of miles of city streets, where visitors can linger and enjoy their wares.³

After his release, Lederman vowed to return to vend his art on the High Line, and he did so—only to be arrested again by Park Enforcement Patrol officers. The current city administration then stepped in. Lederman was personally contacted by the Parks Commissioner, who informed him that he would not be arrested again, that the charges against him were dropped, and that the Parks Commission had begun developing terms by which to accommodate artists and other First Amendment-protected vendors on the High Line.⁴ Clearly, the struggle over infrastructure and public space is an ongoing negotiation. In contrast to the relatively amicable outcome in the case of the High Line, following the six-month anniversary of the Occupy Wall Street Protests hundreds of protesters were again evicted from Zuccotti Park. Seventy-

three arrests were made by police, who used batons and tear gas in dealing with the crowd, dramatically illustrating the sometimes emphatic nature of this struggle.⁵ Among the perennial questions that persist is under what circumstances the rights of one group or interest are to be diminished by that of another, and whether infrastructure, by virtue of its interoperability, can be an effective means by which to reconcile disparate interests.

As designers, we talk about space, not politics—but we are aware that the two are interrelated. As distinct from visionary cities of the future, we are particularly interested in learning from the urbanizing processes at work in the day-to-day creation of real cities and the role of infrastructure in these processes. In his final book, *The City Shaped*, Spiro Kostof wrote:

"...many cities come about without benefit of designers, or once designed, set about instantly to adapt themselves to the rituals of everyday life and the vagaries of history. Who designed Athens or Calcutta? How many people beyond the immediate entourage and time of its founder, the caliph al-Mansur, experienced the famous round city of Baghdad? 'It hardly ever lived in the perfect shape conceived for it,' Oleg Grabar writes; 'even during the lifetime of al-Mansur suburbs were added, the carefully drawn internal divisions broke down, and the Round City became only part of the enormous



Fig. 4: Demolition charges used to remove a mountain ridge to establish faster Internet communications infrastructure between New York and Chicago.

urban complex of Baghdad.’ (Fig. 3) The...sense in which I use “urban process”...refers, precisely, to physical change through time. The tendency all too often is to see urban form as a finite thing, a closed thing, a complicated object. I want to stress what we know instead to be the case—that a city, however perfect its initial shape, is never complete, never at rest. Thousands of witting and unwitting acts every day alter its lines in ways that are perceptible only over a certain stretch of time. City walls are pulled down and filled in; once rational grids are slowly obscured; a slashing diagonal is run through close grained residential neighborhoods; railroad tracks usurp cemeteries and waterfronts; wars, fires and freeway connectors annihilate city cores... We are recorders of a physicality, then, akin to that of a flowing river or a changing sky. So we will be mindful of urban process, in this sense of the phrase...⁷⁶

There is always the risk that the designers of infrastructure—whether architect, landscape architect, or engineer—become merely *technical enablers* of narrowly focused interests which are all too often intent on purely short-term economic gains. We might imagine that megaprojects like the Three Gorges Dam in China—which along with the “green energy” it provides has had negative social and environmental impacts that are widely acknowledged—are inherently more harmful than, for instance, the infrastructure needed

for internet service. As entrepreneur Kevin Slavin convincingly demonstrates, common sense doesn’t operate on autopilot.⁷⁷ As technology expands the reach and power of private sector infrastructure, Slavin makes the argument that we are living in a world designed for, and increasingly controlled by, algorithms. He warns that by ceding intent and decision to computational optimization we are writing code we can’t understand, with implications we can’t control. He illustrates how these complex programs currently determine everything from espionage tactics, to stock prices, to movie scripts to infrastructure—highlighting the point with footage of the wholesale dynamiting of mountainous regions and their delicate habitats to enable the installation of commercial communications infrastructure. (Fig. 4)

Our intention in using the term “interoperative” as it relates to infrastructure is twofold. First, it is used in the conventional *performative* sense of “the ability of diverse systems and organizations to work together (inter-operate),” both “in a technical systems engineering sense” and “in a broad sense, taking into account social, political, and organizational factors that impact system-to-system performance.”⁷⁸ Second, it is used to refer explicitly to our role as *practitioners* to relate to and to reconcile the diverse objectives of the multiple interests involved in any work of infrastructure, both implicit and explicit. By giving these interests a priority



Fig. 5: After extensive research, granite was selected over concrete for Jubilee Gardens—clearly both materials have real environmental impacts.



Fig. 6: Jubilee Gardens, London – West 8’s plan is the result of a nearly fifteen-year process of negotiations between diverse interest groups. As at Zuccotti Park, skateboarding will not be allowed at Jubilee Gardens—but rather than using signage to communicate this, the design employs rough surfaces that are unsuitable for riding. In broad compensation to that user group, West 8 designs skateparks elsewhere.

alongside those of project financiers, the *performative* interoperability of infrastructure to benefit multiple user groups can be enhanced by the *professional* interoperability of designers. That is to say, we believe in the proactive and imaginative assertion of designers to explicitly champion the reality of interests beyond those financially vested in the work.

In this regard, it is necessary to acknowledge that the disciplines of architecture, landscape architecture, engineering, and construction all operate extensively within the public realm—to reach decisions and to establish finances we have to work with politicians, local citizens, and bureaucracies with quite diverse legal systems. We must deal with outreach, public opinion, interaction, legal sys-

tems, implementation, and compromise. Our disciplines cannot avoid responding to sociopolitical contexts.⁹ While this situation might be regarded as a liability if design intent is fixed on a single, predetermined outcome, it can also be seen as a real opportunity to engage the fluid condition of the city’s evolution and to develop a mindset that can be characterized as “radical contextualism.” Radical, as in

“from the root or source,” is both adjective and noun, while the contextual reading of a given situation is intent on eliciting layers of meaning—a rich array of interrelations, including historic, cultural, anecdotal, and even random inputs.¹⁰ While in the recent past professional specialization and *occupational protectionism* may have made it appear otherwise, we believe the attitude of “radical contextualism” is equally relevant to architects, landscape architects, engineers, and construction industries alike.

Considering both the historic and contemporary phenomenon of the privatization of common resources—whether water, air, and light or mobility, energy, and communications—we believe that infrastructure is fundamental to civilization’s *second nature*: that body and activity of civilization that provides both connection and buffer between “nature” and “city” and community and individual interests.¹¹ Do we, as designers, effectively embrace our conciliatory role in proactively making these resources available to the public? Are we willing to accept our responsibility if we fail to advocate the public good and design infrastructure that fails—in one way or another—to acknowledge context?

Now is the time to get a handle on our intentions, compare them with the *performative* outcomes of our *professional* efforts and, if the two are not convincingly aligned, make a change.

Best, a radical one.

