IMMINENT COMMONS:

URBAN QUESTIONS FOR THE NEAR FUTURE

SEOUL BIENNALE
OF ARCHITECTURE
AND URBANISM
2017

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IMMINENT URBAN COMMONS

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RECYCLING

Since the eighteenth century when the Western world became human-centered, humankind has not ceased to evolve, and so too has the very concept of the human. In 1933, Le Corbusier and a few other members of the CIAM issued *The Athens Charter*, a document aimed at orchestrating the emerging technologies of the built environment into a proposal for the future of cities.[1] A classification of human activities became the vertebral spine of this proposal, structured around four urban functions: work, residence, leisure, and transport. This functional classification has structured urban planning policies ever since, but its human-centered approach appears now to be unable to address the problems of our age.

In the Anthropocene, humans have become capable of modifying natural ecosystems, geological structures, and even the climate; we have become so powerful that it is increasingly difficult to delimit the natural from the artificial. As the most populated human environment, cities are a central focus of these transformations, and yet, none of these concerns seems to have permeated the tools that we use to plan cities. The urban planning disciplines remain primarily conceived around human functions, despite the fact that the crucial questions they need to address—air pollution, rising water levels, drought, the heat island effect, deforestation, biodiversity, food security, automated work, inequality...— are primarily driven by concerns that, for the first time in history, transcend human societies and threaten the very survival of the planet. The economic, political, and technological drivers of modern urbanism—the mass integration of production, employment, and consumption; the separation of work, dwelling, recreation, and transportation; the division between the natural and the artificial—are no longer effective at addressing the urgent questions cities are facing today. Likewise, the traditional urban instruments such as plazas, streets, and neighborhoods have been commodified by neo-liberal practices and have become ineffective at addressing the new urban collectives and constituencies, both human and nonhuman, which populate contemporary cities.

1. Le Corbusier, Jean Giraudoux, and Jeanne de Villeneuve, *La Charte d'Athènes* (Paris: Plon, 1943).

POSTHUMAN COSMOLOGIES

The agency that cities have in the construction of the Anthropocene is something that can no longer be ignored. We are assisting in a veritable paradigm change, one that requires a reformulation of the cosmologies upon which the contemporary tools of urbanism have been constructed. Arcane technologies and rituals of the urban were often based on mythological references. Ancient cosmologies were mechanisms of comprehending the natural world which enabled cultures to understand and operate within the natural environment. The oldest ones predated human settlements and were aimed at explicating natural phenomena and regulating the modes of relation between humans and nature. As the urban environment became increasingly controlled by human agency, cosmologies were discarded as systems of urban knowledge and governance. Typology and monumentality became primary tools for urbanism, with the structure of human relations prevailing over the physical and material determinations of the environment. The *affairs of cities (politika)* became an entirely artificial endeavor.

The current prevalence of artificial environments and politics—cities—has tended to naturalize technology while de-politicizing nature. However, the pressing nature of ecological concerns and the scale of technological developments call for the imminent city to re-politicize both nature and technology and construct new urban cosmologies which can support the development of new urban sensibilities. An entirely new set of urban technologies have since appeared, radically transforming urban protocols and experiences: smartphones, GPS, electromobility, and biotechnology. Yet, these technologies still remain largely outside the practices of urban planners and designers, which remain trapped in the humanistic precepts of modern urbanism.

Far from producing urbanity, urban functionalism has dismantled the *commons* and undermined urban democracy. Clichés, such as the relevance of public spaces as guarantors of urban communities and urban democracy, are as problematic as the inability of architects and

urban planners to quantify the implications of density and urban form in the energy consumption or the determination of urban micro-climates. The idea that architects and urban designers can find effective agency in the distribution of human functions—such as work and domesticity— is at best naïve. Cities have become sources of extreme inequality and environmental degradation (in contempt not only of the *demos*, but also of all of the nonhuman constituencies that exist in cities), and these are even threatening the subsistence of cities and are pointing at insurmountable contradictions at the core of the current modes of economic integration. Theorists like Jeremy Rifkin and Paul Mason argue that we are already entering a post-capitalist world in which politics are shifting from a focus on capital and labor to a focus on energy and resources, and they have proposed new economies: shared economies of zero marginal costs driven by new technologies: peer-to-peer organizations enhanced by pervasive computation, sustainable energy sources, and carbon-neutral technologies.[2]

As the largest human habitat, cities have become the epicenters of global warming, air pollution, and a variety of ecological malaises. Naomi Klein has pointed at the fundamental opposition between capitalist growth and the limited natural resources of the earth, and questioned the capacity of capitalist regimes to resolve an imminent ecological catastrophe.[3] The decline of capitalism has loaded urban ecologies and technologies with unprecedented political relevance. Cities have now become a crucial intersection between ecology, technology, and politics where the equation between wealth, labor, resources, and energy has to be reset to address the shortcomings of neo-liberal economies.

2. Jeremy Rifkin, *The Zero Marginal Cost Society: The Internet of Things, the Collaborative Commons, and the Eclipse of Capitalism* (London: Macmillan, 2014. Paul Mason, *Post Capitalism: A Guide to Our Future* (London: Allen Lane, 2015); and Paul Mason, "The End of Capitalism Has Begun," *The Guardian*, 17 July 2015, http://www.theguardian.com/books/2015/jul/17/postcapitalism-end-of-capitalism-begun.

3. Naomi Klein, *This Changes Everything: Capitalism vs. the Climate* (New York: Simon & Schuster, 2014).

ECOLOGIES AND TECHNOLOGIES RATHER THAN FUNCTIONS

Does this scenario, determined by the rise of the Anthropocene and the crisis of neo-liberal capitalism, imply that the work of urbanists and architects has become futile? That the new commons will be entirely developed within social media? Has urbanism been expelled from politics, and is it now at the mercy of securitization and capital redistribution? On the contrary, some economists[4] argue that urban planning, housing, and real estate hold the key to resolving urban inequality.[5] Cities precede the installation of political systems, and have systematically outlasted them, often constituting themselves in mechanisms of resistance to power. For cities to become devices for the common good rather than instruments producing and implementing power structures (and often inequality or ecological destruction), urban practices need to locate resources and technologies at their core. Rather than splitting urban life into functions easily captured by power, we should try to identify first where the *imminent urban commons* are and how to reconstruct them as instruments of devolution and ecological awareness, constructed transversally across technologies and resources. We have tried to outline what those might be, and how they may become the source of a revision of urban practices.

It appears inevitable that urban practices of the immediate future will address these emerging fields to locate the new urban commons. Urban planning based on human functions has now become a mechanism to divide and to exert power rather than to produce urbanity. A new set of urban instruments will need to be developed to address these imminent posthuman commons, which we have tried to identify and classify. Like any other classification it probably

4. Matthew Rognlie, "Deciphering the Fall and Rise in the Net Capital Share," BPEA Conference draft, March 19–20, 2015; http://www.brookings.edu/~/media/projects/bpea/spring-2015/2015a_rognlie.pdf, accessed 5 October 2016.

5. Thomas Piketty, *Capital in the Twenty-First Century* (Cambridge, MA: Belknap Press: An Imprint of Harvard University Press, 2014).

Mumbai by Ibai Rigby

has lacks and contradictions, but it also serves as a basis for further discussion and development. For the purpose of the structuring of the Seoul Biennale 2017, we have identified commons that relate to natural resources and their ecologies, and other commons which emerge from technological developments which will imply new urban collectives, regulations and governance.

The other five commons that we propose here are related to the technological developments which are opening alternative forms of urban community. These commons become opportunities for new urban practices to pervade institutional, bureaucratic, and market mechanisms, and operate mostly on a micropolitical scale. Technologies can be considered extensions of human capacities, which have developed a posthuman life on their own—or as McLuhan writes in *Understanding Media*, "technologies are self-amputations of our own organs."[6] *Sensing, communicating, moving, producing, and consuming* have developed disembodied, collective *modes of existence*,[7] which have transcended their human origin. The "human scale" of the city planners resembles a nostalgic reference to something that does not matter any longer.[8] With the emergence of these technologies we seem to be engaging on a *micropolitical* scale of operation.

6. Marshall McLuhan, *Understanding Media* (London: Routledge Classics, 2001).

7. Thie idea of the *modes of existence* of technical objects is taken from Gilbert Simondon's definition. Gilbert Simondon, On the Mode of Existence of Technical Objects: Part One, trans. Ninian Mellamphy, University of Western Ontario, June 1980, Duke University.

8. "With the arrival of electric technology, man extended, or set outside himself, a live model of the central nervous system itself."
"It is to the railroad that the American city owes its abstract grid layout the nonorganic separation of production, consumption and residence. It is the motorcar that scrambled the abstract shape of the industrial town, mixing up its separated functions to a degree that has frustrated and baffled both planner and citizen. ... Metropolitan space is equally irrelevant for the telephone, the telegraph, the radio, and television. What the town planners call 'the human scale' in discussing ideal urban spaces is equally unrelated to these electric forms. Our electric-extensions of ourselves simply by-pass space and time and create problems of human involvement and organization for which there is no precedent." McLuhan, "The Gadget Lover," in Ibid., 127.

We live in an age marked by vast technological developments and ecological concerns which need to be incorporated effectively into the conception and design of cities, taking into account wider global ecologies. The micropolitical scale of new technologies and the cosmopolitical scale of new ecologies will replace the *human* scale of traditional urban politics. The arcane natural elements and the artificially enhanced sensibilities, collectivities, logistics, and metabolic processes enabled by emerging technologies should become the central concern of a posthuman urbanism: an urbanism that is focused on the ecologies and economies of elements and milieus, where cities are designed to engage with much broader concerns than the delivery of organizations that are merely responding to human activities, as if independent from the milieus, the climates, the topographies where they take place , and the tools through which they become implemented. An update of the modernist human-centered functionalities that still form the vertebral spine of urban practice is now urgently needed.

AIR

Air is, as Naomi Klein has stated, the element that most intimately binds all humans on earth together. While the ozone depletion from CFCs represented a shocking and imminent threat, the effects of other air-borne pollutants have been less conspicuous. Seven million people die every year from exposure to air-induced diseases.[1] Despite increased awareness of these problems, air quality in cities seem to have gotten worse over the last few decades. According to an October 2016 UNICEF report, "300 million children live in areas with extremely toxic levels of air pollution" and "approximately 2 billion children live in areas where pollution levels exceed the minimum air quality standards set by the World Health Organization."[2] With this exposure comes increased instances of respiratory disease, asthma, and other ailments. The risk of airborne disease outbreaks is a constant threat in transportation centers, a location which could help infections to spread globally, and the threat to cities of global warming and the associated sea-level rises is a constant reminder of the importance of managing air.

But increasing air quality and decreasing polluted air conditions requires regulation. With cities as the densest location of human populations, cleaning air, moving polluted air away from city streets, preventing air stagnation, and improving airflow between buildings are central to preserving the rights of urban citizens to common resources. Since the early twentieth century, buildings and cities have developed the ability to delimit, filter, and qualify air. However, as toxic emissions continue to rise every year, these abilities are becoming ever more urgent and politically charged. While air is a universally needed resource, it is extremely difficult to quantify, visualize, sense, and model. For this reason, it has been historically difficult to regulate, and policies

1. World Health Organization, news release, March 2014, http://www.who.int/mediacentre/news/re-leases/2014/air-pollution/en/, accessed 5 October 2016.

2. UNICEF, *Clear the Air for Children*, October 2016, http://www.unicef.org/publications/files/UNICEF_Clear_the_Air_for_Children_30_Oct_2016.pdf.

for improving urban air quality are still in their infancy. Quantifying air movement and quality has been an obstacle historically to creating policies to regulate its use, and the lack of regulatory frameworks on air quality has led to rampant pollution. The freedom to sacrifice clean air essentially functions as a corporate subsidy. Naomi Klein has called this "the theft of the sky."[3] The emerging technologies of sensing and computational modelling will enable the development of effective tools to manage the air common.

Historically, an intuitive understanding of airflow drove much of related urban policies. Planners could guess that larger street widths and breaking up monolithic street fronts would improve airflow and reduce urban canyons. However, years of improvement in simulation and airflow modeling are beginning to show scientifically how air moves through cities, what prevents it from doing so, and how to improve urban air quality conditions through planning. Besides improving regulatory conditions on industries which impact global air quality on the whole, the rights of citizens to improved air quality need to be addressed through planning and building regulation.

The ability to sense pollution with scientific instruments came long after the ability to sense phenomena such as airflow, barometric pressure, and wind speed. However, the threat of sick air was long known and long feared. Prior to the development of germ theory, the accepted belief was that diseases such as cholera or the black death could be spread through "bad air" that emanated from rotting organic matter.[4] This "miasmatic theory" remained popular from the Middle Ages until the late nineteenth century, when it became accepted knowledge that outbreaks of microorganisms lead to disease. Whatever the cause, air was seen as both a bringer of life and a potential harbinger of disease, epidemics, and other pathogens. Since the chlorine and mustard gas attacks of World War I, the danger of toxic air and the threat of air

3. Klein, *This Changes Everything*, p. 60.

4. John M. Last, ed., *A Dictionary of Public Health* (Oxford: Oxford University Press, 2007).

contamination became well known and widely feared.[5] At that moment, air became vividly understood as a dangerous milieu subject to weaponization and a carrier of disease and pollution.[6]

The first legislation to regulate urban smog and air pollution emerged in the late nineteenth century. In the United States, municipal legislation appeared in 1881 in Chicago, Illinois, and Cincinnati, Ohio; the first state legislation appeared in 1910 and 1912 in Boston, Massachusetts, and Providence, Rhode Island. But the first federal air pollution law did not appear until 1955.[7] In London, the first attempt to regulate smog dates from the early twentieth century, with the introduction of the 1926 Public Health Act and the Clean Air Act of 1956 (following the deadly 1952 "Great Smog" in London, which was blamed for thousands of deaths).[8]

These regulations were followed closely by visionary urban proposals: around the time of the first legislation for smoke abatement, Sir Ebenezer Howard published *To-morrow: A Peaceful Path to Real Reform*, republished in 1902 under its more popular title: *Garden Cities of To-morrow*.[9] These Garden Cities would promote healthy airflow by limiting industrial growth and spacing development to provide open spaces and public parks as well as wide boulevards. Howard's original text was partially focused on alleviating social divisions, improving health conditions for the working class who were forced to live and work in unhealthy urban environments.

5. During World War I, it was realized that "the enemy's environment, the space occupied by him, could be destroyed" through the poisoning of the air itself. See Peter Sloterdijk, "Atmospheric Politics," in Bruno Latour and Peter Weibel, eds., *Making Things Public* (Cambridge, MA: MIT Press, 2005), 945.

6. Peter Sloterdijk, *Terror from the Air*, trans. Amy Patton, and Steve Corcoran (Los Angeles: Semiotext(e), 2009), p. 16.

7. Arthur C. Stern, emeritus professor, University of North Carolina, Chapel Hill, NC, "History of Air Pollution Legislation in the United States," *Journal of the Air Pollution Control Association* (March 2012): 44.

8. B. Goodall, *Dictionary of Human Geography* (London: Penguin, 1987).

9. E. Howard, *Garden Cities of To-morrow* (London: S. Sonnenschein & Co, 1902), 2–7.

Luke Howard's *The Climate of London*, first published in 1818, was one of the first books which connected urban planning to meteorological phenomena in a comprehensive way. Howard described three factors which climatically differentiate the city from the country: convection, radiation, and evaporation. These three factors remain today some of the most relevant concerns for cities combating urban heat island effects.[10]

Consolidating the path initiated by Howard, the second edition of *Das Stadtklima* (*The Climate of Cities*), published in 1956 by Dr. P. Albert Kratzer, was perhaps the first accessible and comprehensive book dedicated to urban airflow and microclimatology.[11] This book was a compilation of research completed over the last half century, mostly conducted by German architects, climatologists, and urban planners. In the foreword, Kratzer stated that he hoped the book would "prove not only a useful tool in the hands of city planners and builders but also a lucid and instructive work on their climate for all interested city-dwellers"—illustrating his dedication to making the topic of urban microclimatology accessible to all. Kratzer understood the importance of the air common and dedicated the book —and his career as an urban planner in Stuttgart—to urban airflow, the heat island effect, downdrafts, and other common air concerns.

But neither Howard nor Kratzer had the tools to visualize, measure, and model these phenomena so that policies could be established. The possibilities we have today to make CFD models of air movement in cities or to visualize heat with thermal cameras will certainly enable us to

10. "[T]he country presents for the most part a plain surface, which radiates freely to the sky, — the city, in great part, a collection of vertical surfaces, which reflect on each other the heat they respectively acquire: the country is freely swept by the light winds of summer, — the city, from its construction, greatly impedes their passage, except at a certain height above the buildings: the country has an almost inexhaustible store of moisture to supply its evaporation — that of the city is very speedily exhausted, even after heavy rain." Luke Howard, *The Climate of London* (1818; repr., The International Institute for Urban Climate, 1833), 9–10; http://www.urban-climate.org/documents/LukeHoward_Climate-of-London-V1.pdf.

11. Albert Kratzer, *Das Stadtklima* (Braunschweig: Friedr. Vieweg and Sohn, 1956).

set up policies for cities to improve air quality and environmental comfort, giving design an active role in the management of this common.

The destructive consequences of increasing atmospheric carbon dioxide levels on our planet have been slow to materialize and have been manifested in subtle ways. According to NASA's Goddard Institute for Space Studies, average global temperatures have risen roughly 0.8 degrees Celsius since 1880 (with almost two-thirds of the warming having occurred since 1975), mostly due to heat-trapping greenhouse gasses such as carbon dioxide.[12] While this may not seem like much, the threat of further warming outlines an existential crisis for the human species. While governments around the world attempt to limit our warming to 2.0 degrees Celsius, the World Bank has stated that we are on track for a 4.0 degrees Celsius of global average temperature increase by the end of the twenty-first century, stating that there is "no certainty that adaptation to a 4°C world is possible."[13]

As the most concentrated human habitats, cities are at the center of these concerns. Besides using massive amounts of energy which contribute to global warming, some of the most fundamental issues for cities today are mitigating the effects of smog on urban inhabitants and dealing with rising sea levels and other effects of climate change. Not only will major metropolitan areas be at risk for serious flooding in the near future due to rising sea levels, but these cities will be hubs for populations displaced by global warming. As discussed earlier, the effects of smog on urban populations has been well known since the dawn of the Industrial Revolution, and legislation to mitigate it, as well as architectural and urban strategies for dissipating it, have been developing for over a century.[14]

12. NASA Goddard Institute for Space Studies, https://www.giss.nasa.gov/, accessed 5 May 2017.

13. World Bank, "New Report Examines Risks of 4 Degree Hotter World by End of Century," 18 November 2012, http://www.worldbank.org/en/news/press-release/2012/11/18/new-report-examines-risks-of-degree-hotter-world-by-end-of-century.

14. For example, the Coal Smoke Abatement Society (CSAS) was formed in 1898. See Peter Thorsheim, *Inventing Pollution: Coal, Smoke, and Culture in Britain since 1800* (Athens, OH: Ohio University Press, 2006), 103.

New technologies being developed enable cities to increase air exchange rates and natural ventilation, both at the scale of buildings and city-wide. Climate-altering technologies such as pollution mitigation, cloud seeding, carbon sequestration, and adiabatic cooling are some of the instruments being developed to mitigate anthropogenic effects on climate and to forge a contemporary *cosmopolitics* of air to bring about both new cultural constructs and design opportunities. Filtering and purifying technologies such as HEPA filters, activated carbon filters, titanium dioxide photocatalytic air purification, and gas phase advanced oxidation are developing on a scale to address air pollution. However, addressing the source of many of these toxins remains a contentious issue in a legal vacuum.

As instrumentation to model and visualize air has developed, air regulation has increased. The greater the degree to which we can see the effect we are having on air, the more precise the regulations will become. Air regulation has always been intimately connected to its visualization, which provides evidence to phenomena which we could understand only intuitively a few decades ago.

AIR INFRASTRUCTURES FOR THE COMMON

Nerea Calvillo

INTRODUCTION

Since the Industrial Revolution, urban air has been an artificial environment, the space where the gases and particles released by combustion processes to generate energy and power merge with the atmosphere. This is the reason it has been identified as one of the indicators of the Anthropocene. According to Peter Sloterdijk, it was not until World War I, when the Germans used toxic gas as a weapon, that the air was actually designed (2005, 2009). However, as architectural historian Reyner Banham explored in *The Architecture of the Well-Tempered Environment* (1969), the air—and, even more, air pollution, it could be argued—has been mostly absent from debates over architecture and urban design from architecture and urban debates. How can we, as architects, start dealing with it? What do we need to know about the air in order to operate in it? Can we think about "air design" (Sloterdijk 2009), and if so, which tools need to be developed? To respond to these questions, and drawing on Science and Technology Studies (STS) and feminist literature, I have been thinking about urban air as a complex sociotechnical assemblage (Farías and Benders 2010) in order to acknowledge its materiality, its effects, its bodies, and politics. If, as a heuristic, we considered this aerial sociotechnical assemblage as a city, what would its urbanisms be?

COMMON INFRASTRUCTURES

The atmosphere is the (sometimes) invisible dump of capitalist practices, but it is also a fundamental component of human and more than human life, that which makes us breathers. We inhale and exhale thousands of times a day, and still we take the air for granted. However, the more polluted the air is becoming globally, the more its image is shifting from an infinite, resilient

space with never-ending waste-absorption capacities to a limited resource that needs to be taken care of. For this reason it has been conceptualized as one of the global commons (see Helfrich 2008; Klein 2014). And, as this book's introduction also suggests, we need infrastructures to deal with the global commons, as part of the "imminent urban commons."

When thinking about urban air infrastructures, some practical difficulties emerge. The air is a relational entity, with components that react among themselves, with the weather, or with any material that gets suspended in it. This implies that the air is different at neighborhood, national, and global scales. It may operate at the same time as a large-scale set of actors and spaces, such as the aviation space—which has been conceived as a "cosmopolitan commons" (Disco and Kranakis 2013)—and as spaces produced through the collaboration and communication of local communities, such as community gardens—named as "urban commons" (Eizenberg 2012). The air is also (mostly) invisible, inapprehensible, uncontrollable, and unlimitable—qualities that pose difficulties for conceptualizing and managing it. It also travels with the wind, very far away, carrying seeds, ashes, microbes, dust, or radiation to places where they may not be expected or wanted.

Very often, in our times, the air is polluted, which makes palpable its pharmakon condition of being a cure or a danger depending on its concentrations. One immediate response to this fact would be to advocate for air-cleaning infrastructures. But how does one clean a global circulating entity when the economic system that has set up this situation does not seem to be changing soon? Understanding that this endeavor is almost impossible, would it not be more effective to aim for a nonpolluting approach instead? Deep structural changes are needed to shift from a cleaning approach towards a nonpolluting situation, and that is what we should aim for. But as Lauren Berlant has argued (2016), in the meantime we need forms to deal with the transition, which may involve, among other things, inhabiting polluted sites.

There is also a conceptual difficulty when having to think about the infrastructures required to engage with a commons. What kind of infrastructures are we talking about, and what do we exactly mean by "commons"? Infrastructures are not only technological devices—bridges, roads, sensors, or satellites, for instance—but, as STS have well demonstrated, they are also sociotechnical assemblages composed by hard, soft, human, and nonhuman entities, situated and networked in different ways (Graham and Marvin 2009; Leigh and Bowker 2006; Schick and Winthereik 2016; Star 1999). Here we will focus on the infrastructures able to engage with the different materialities of air, which also take into consideration and engage openly with their social implications, and which allow us to manage the "terms of transition that alter the harder and softer, tighter and looser infrastructures of sociality itself" (Berlant 2016: 394).

The commons is also an unruly concept, as it takes various forms and approaches depending on the context and author. It usually brings together resources, property rights, and regulations, but one of the problems of relating the commons to limited resource management is that the

discussion ends up being about economy and costs. Frequently, the infrastructures designed to deal with toxic air are framed from this perspective, from monitoring technologies to understand "how much more" it can be polluted, to infrastructures to clean the polluted air, such as carbon sequestration or titian dioxide paint. These approaches may partially contribute to remediating the particles' concentrations, but they are clearly not addressing the causes, the emission of pollutants. Carbon markets were set in place to regulate emissions, but they are not achieving the desired effects: on the one hand, global emissions have not been reduced; and on the other, the highest-emitting companies, mostly multinationals, are continuing to pollute at the same amount and are even making money through the carbon market (Banner 2008). So maybe we need to amplify our idea of the commons from an economy-based management of resources to include cultural, social, and political values, to initiate "the transformation of some fundamental aspects of everyday life, social practices and organization, and thinking" (Eizenberg 2012: 779). Then, in which other ways can an infrastructure *of* a common (the air) also be an infrastructure *for* an expanded idea of the common, one that addresses other forms of being together?

With this last question comes another problem, because as Berlant (2016) argues, the incontestable desired common often reinforces an idea of the collective based on agreement (or at least on dialogue) and belonging (to a community, a state). Considering the challenges that these idealistic approaches imply in terms of who belongs and how they belong to that common—inspired in nonsovereign critiques, for instance—I follow Berlant in her proposal of focusing instead on proximity and detection, as "the experience of affect, of being receptive, in real time" (2016: 402). In our context of industrial toxicity, financial insecurity, and permanent war, how do we start thinking about infrastructures to deal with the air that will also enable these other forms of cohabitation?

Philosopher Marina Garcés (2013) argues that due to the complexity of this context, thinking about "what to do" can be paralyzing. Therefore, she suggests thinking instead about how to change our modes of dealing with things, with each other, and with the world. Whereas previously these modes were focused on representation and action, she proposes to shift towards attention and treatment (Garcés 2013). Following Garcés, we may want to conceive infrastructures that deal with the toxic air in a common world, and instead of asking what to do with the polluted air, aim to test whether there are other modes of paying attention to it that involve forms of treatment other than cleaning. But again, as Berlant (2016) argues, while infrastructures for the commons acknowledge a broken world, they also trigger new ways of living in it. I take this as an invitation to speculate, which is the only possible way of dealing with our troubled times, as Donna Haraway (2016) also suggests. So overall, I'm interested in speculating on what air design can do to engage with the urbanisms of the air, what it can mean to care for the environment, and more specifically, to care for air pollution. In other words, I intend to speculate through any possible format what "air design" can do to deal with the Anthropocene.
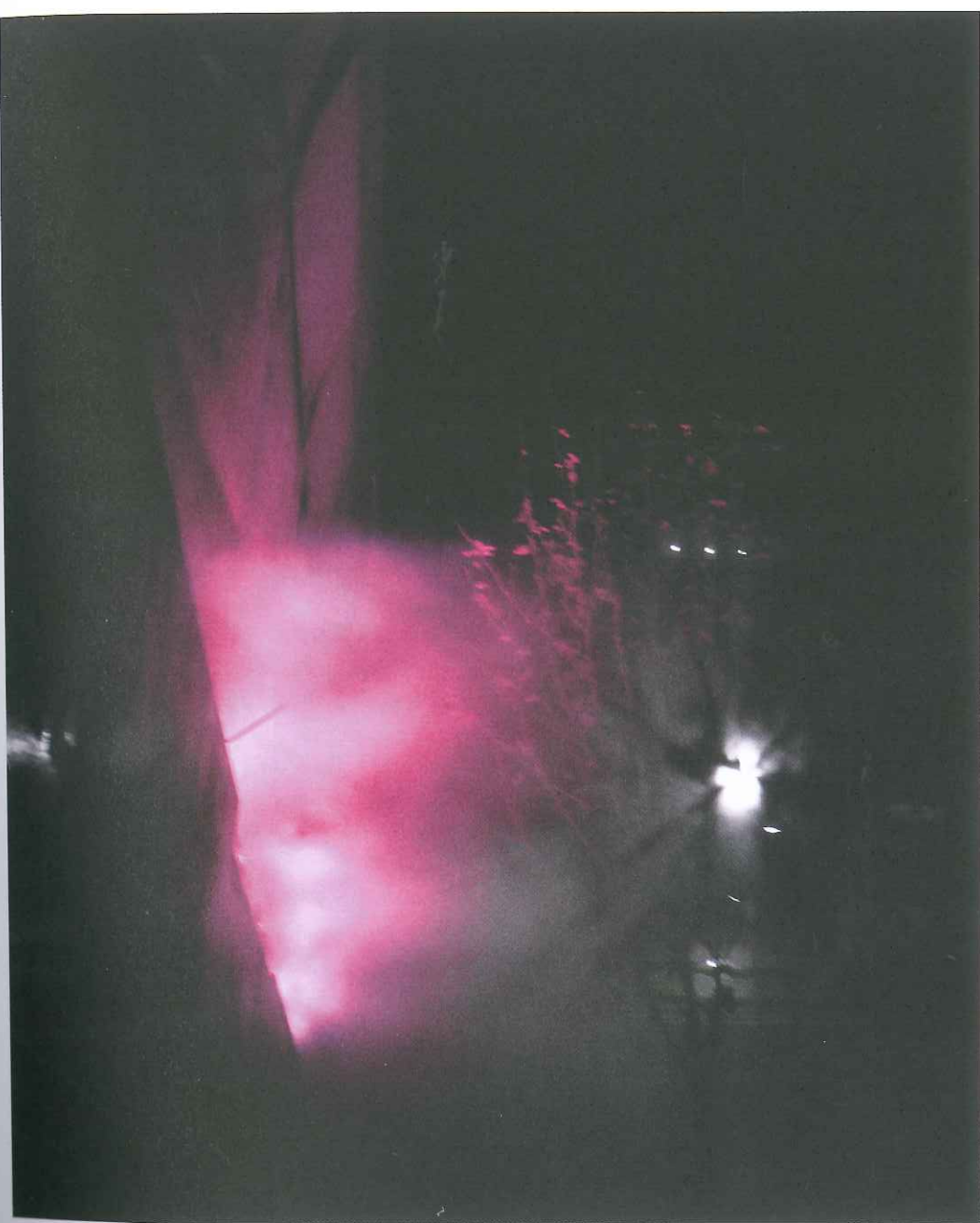
"In the Air", 2008

TOPOGRAPHIC INFRASTRUCTURES TO SENSE THE AIR/ENVIRONMENTAL INFRASTRUCTURES

Some scholars, including architects, geographers, sociologists, and anthropologists, have been thinking about the infrastructures of the air and commons. Geographer Derek McCormack (2016) coined the concept of "stratospheric infrastructures" as a means to understand the stratosphere as an infrastructure itself (as the space through which other elements such as balloons can navigate), but also to name infrastructures that operate in the stratosphere. This aerial space is more or less stable and homogeneous, quite different from the urban air that is in contact with the ground, the troposphere layer of the atmosphere. This air, the one which surrounds us, is messier, dirtier, more volatile, and performs as the mirror of our daily lives. Maybe, in alignment with McCormack, we could refer to this air/infrastructure entity as a "tropospheric infrastructure" to help us better think about its qualities.

Other scholars have proposed different forms of thinking about infrastructures that suggest other ways of living together. Some have focused on infrastructures' capacity to make controversies public, and therefore to raise matters of concern (Latour and Weibel 2005). Along these lines, Domínguez Rubio and Fogué (2013) have suggested that it is the visibility of the infrastructure itself that provides its political capacities. And yet, both of these approaches require some sort of dialogue—even if agonistic—among humans. For anthropologist Alberto Corsín (2014), a different approach to make infrastructures common is to open their hardware, an approach inspired by the software open source movement, where the common is achieved by collectively designing and/or building infrastructures. All of these approaches so far involve belonging to some sort of community or neighborhood, or require participants' being socially entitled to speak. And therefore, as Berlant (2016) reminds us, these proposals potentially leave some humans and other entities on the side.

Understanding the potential and capacities of these proposals, I would like to speculate on another one, one of infrastructures of sensation. Instead of making visible, let's say, a controversy about the concentration of air or gases, these infrastructures would make us pay attention to other aspects of the air through embodied practices or forms of sensation. They may not require dialogue or discussion, but would necessitate recognizing the differences in the air and in what surrounds us, human or more-than-human. These differences would reflect the uneven distribution of pollution, in spaces and in bodies, and its different effects across agents.

An infrastructure of sensation is just one of the many proposals that could be envisioned from this framework. This approach provides us with other forms of knowing the air which, even if not quantitative, are fundamental for our practice as architects. And it reminds us that the different neighborhoods that compose the urbanisms of air are made out of air, people, plants, and buildings, and with them, power relations and politics. Maybe speculating on common infrastructures could help us to test other forms of redistribution of the excess of some gases and particles suspended in the air.

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PROTEST LANDSCAPES:
SCENES OF UPHEAVAL ON THE GROUND [1]

David Gissen

Citizens of Madrid and Lisbon leaving large piles of garbage at the entryway to the city's banks, French farmers dumping manure in front of Parisian government buildings, Peruvian farmers blocking city roadways with enormous piles of rocks … These seemingly unrelated formations made in recent years are the latest manifestation of "protest" landscapes. They are forms of protest because they are made as statements that agitate for an alternative political future; and they are landscapes because their authors fashion them as both things and potential scenes made with materials on the ground. In many iterations, these protest landscapes might be one of the more provocative realizations of landscape in the contemporary city and its surroundings, but one that has not been named as such or closely examined as a genre. Made during moments of revolt and protest, these barricades, mounds, and heaps are typically positioned *against* the existing iconography and utility of the city and countryside. These landscapes, which can be traced to early modernity, are a critical component of recent contemporary culture, and several offer another physical manifestation of the early twenty-first-century networks of revolt within the contemporary city.

Within the long and contemporary history of landscapes, the protest landscape offers both a compelling counterpoint and a surprising extension of the aesthetic politics and disciplinary concerns of those who make claims to the urban and ex-urban ground more generally. While the word "landscape" has become generalized to describe any assemblage of things,
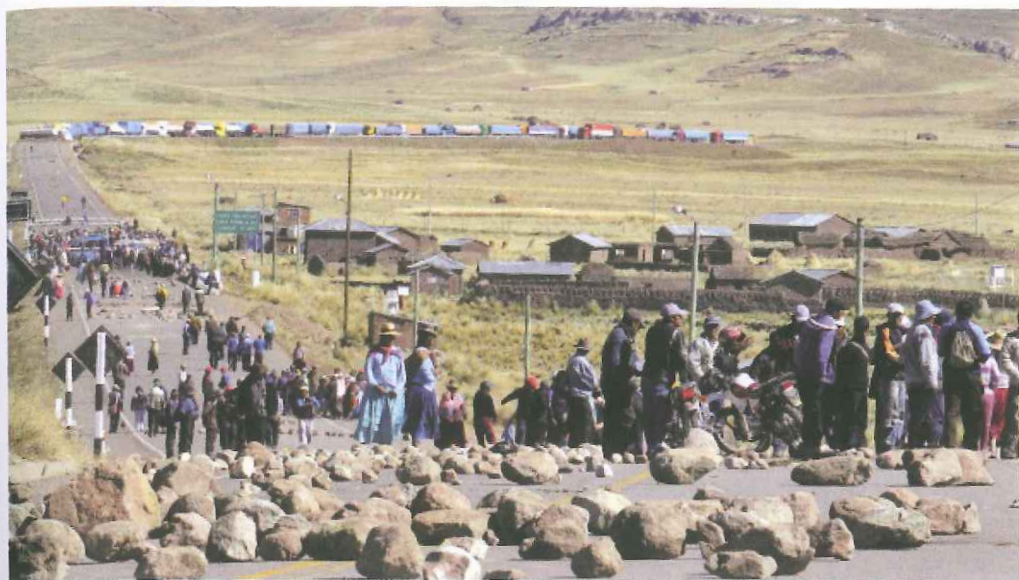
what I call "landscape aesthetics" and "disciplinarity" are a set of practices and sensibilities that have origins tied to eighteenth- and nineteenth-century architecture and art practices and that have extended into virtually every conception of urban space.[2] Within this particular history, landscapes—whether one speaks of picturesque landscapes in eighteenth-century England, nineteenth-century parks such as Central Park, or contemporary parks in Madrid—are places for specific instrumental activities tied to scenes and objects that create arguments out of the ground. "Landscape" is thus a term of use and politics as much as it is a term of topography and nature. I believe protest landscapes offer a confrontation to this tradition from within, as their authors and planners must operate within the conceptions of ground and nature formulated within an older disciplinary history and that permeate any city or given landscape.

Things which we might call "landscapes" that were made as acts of modern protest have an even longer history, traceable to the early modern history of the large town and city. In Paris, for example, barricade construction as a radicalized extension of urban political bargaining commenced in the sixteenth century; the fabrication of mounds as a form of urban protest and agitation can be traced quite early in France and reached a monumental moment in the years following the 1789 revolution. But what I see as the conjunction between modern protest and

2. See e.g. Malcolm Andrews, *Landscape and Western Art* (New York: Oxford University Press, 1999). For a competing definition of "landscape," see W. J. T. Mitchell, ed., *Landscape and Power* (Chicago: University of Chicago Press, 2002).

Protesters blocking the road to a mining project with boulders, Yorohoco, Desaguadero, Peru-Bolivia border, May 16, 2011

modern notions of landscape are further entangled with their mediation and mass representation, and are thus tied to a more recent and modern history, sometime between the end of the nineteenth century and the beginning of the twentieth century. Numerous European historians describe the 1871 revolt *La Commune de Paris* as the origins of modern revolt, and examining the numerous productions and photographic representations of its landscapes of barricades, debris, and rubble, its destruction of urban iconography, its appropriation of urban networks to radically different and expressive ends, one might consider it the origin site of the modern protest landscape. The activities of the Commune overturned and subverted the Second Empire's vision of the city. And the photography of the ruins and rubble from this revolt enabled a type of reflection on the Commune's actions—a type of reflection seemingly impossible within the parameters of revolt itself. This photographic documentation further enabled the repetition of and association with certain key contemporary acts within the Commune—for example, within the pamphlets of the Situationist International to the more recent events of the Occupy movement.

In terms of politics, one can locate the contemporary manifestations and production of protest landscapes across a wide political range. While many protest landscapes are certainly produced as

A barricade during the Paris Commune, boulevard Voltaire and boulevard Richard-Lenoir, 1871

politically leftist acts against State and municipal governments, if we accept the definitions above, we must also acknowledge their appearance in a more ideologically diffuse political anarchism and rightward leaning libertarianism. Nevertheless, virtually all of the examples examined in this essay were made in response to the continual reach of neo-liberal economics via state-level policies that led to often acute transformations in the relationship to nature and the ground more generally—in agricultural enterprises, urban waste, or resource mining. And while calling these things "protest landscapes" implies roots in the cities and spaces of continental Europe, the protest landscape is found across a global geography of various cities and towns. But rather than simply offer an overview of or ultimatum on the protest landscape's geographic and political character, my goal here, as is clear already, is to identify it as a category of landscape in the first place. I believe this statement contains its own political possibilities, and I ultimately wish to position it in such a way that we can rethink those disciplines that make claims for the future landscapes of the contemporary city.

The Vendôme Column in ruins, Paris, 1871. Hippolyte-Auguste Collard

Protest landscapes are disruptive; they offer moments of anti-iconography and—most critically—the sublimity of repulsion as a form of revolt. In January 2014, Thierry Borne, the manager of a stable complex in the Rhône-Alps, parked a large semitrailer in front of the French National Assembly in Paris with the words "Hollande et toute la classe politique dehors!" (Hollande and the entire political class out!) painted on its side. He then proceeded to dump several tons of horse manure out of the back of the truck into a large pile adjacent to the monumental steps of this government building.[3] This action was an urban version of a type of protest landscape that has appeared in numerous iterations in French rural capitals. In recent years, French farmers and agricultural workers have resorted to dumping manure at local state administrative buildings as a method of protest that brings the fetishized labor of the countryside to the attention of the city centers where changes in legislation that impact their enterprises are made. In 2014, the entryway to a government office in rural France was literally buried in manure by the local farming cooperatives.

In conducting this absurd action at the National Assembly, Borne constructed a temporary and visceral landscape that figuratively associated politicians with "shit," while introducing a stench familiar in the countryside and that wafted through the political center of the city. In photographs of his arrest, one sees police officers and guards wrinkling their noses in the presence of the enormous pile—a contemporary and more fantastical iteration of what historian Vittoria di Palma describes as the key experience of "disgust" that drove a more polite pastoral aesthetic within the notion of proper landscapes.[4] Such notions of disgust in this context also create a potential entryway into the more explicitly *anti-pastoral* experience fashioned by Borne, in which the labor of the countryside is presented as a noncommodifiable aspect of urban experience—a disruption both in the urban view of the countryside and in the mechanics of urban ecology. One must acknowledge these aesthetic aspects of the landscape of protest as a critical component—a confrontation with by-products of a contemporary urbanism.

In this particular iteration—representative of others—the protest landscape also becomes a regurgitation of the eighteenth-century concept of the "sublime" as political expression. Within the landscape sublime, one felt the unsettling pleasure embedded within one's experience of a frightening landscape, and this experience could be equally conveyed in art and literature. The romantic notions embedded in such aesthetic theories are related to the aforementioned confrontation with fetishization; one hypothetically engages in a sublime confrontation with what fell out of view—the space of the factory, the ecological waste products of the industrialization of food and agriculture. But the sublimity of several protest landscapes extends beyond this romanticist politics of revelation, beyond simply seeing massive amounts of waste; they also offer opportunities to engage in disruptive acts—blocking traffic, introducing piles of offensive matter

3. See e.g. "Fumier devant l'Assemblée: Thierry Borne porte plainte contre les policiers," France Info, 18 January 2014, http://france3-regions.francetvinfo.fr/rhone-alpes/2014/01/18/fumier-devant-l-assemblee-thierry-borne-porte-plainte-contre-les-policiers-397611.html (last accessed on 25 January 2015).

4. Vittoria Di Palma, *Wasteland: A History* (New Haven, CT: Yale University Press, 2014).

as a symbol against power in bureaucratic spaces, and explicit uses of humor against the self-seriousness of urban monumentality. We can understand the protest landscape as a "landscape" not only because of its form, not only because people make protest landscapes out of matter that lies on the ground and represent them as landscapes, but also because the reactions they are meant to convey in those viewing these landscapes and the representations of individuals as they view them offer a parallel realm of sense that overturns a more traditional conception of landscape. While these protest landscapes can be strange—seemingly too far outside the genre "landscape"—they nonetheless resonate with the historically conceptualized aspects of landscape experience.

REPETITION

Protest landscapes are seemingly, and often endlessly, repeated. We might understand barricades or heaps as repetitive unauthored social acts, but that might deny the self-awareness of the various movements and individuals who create these protest landscapes. As stated above, photography plays a critical role in enabling us to understand protest landscapes as realms for reflection and contemplation, but photography also enables these structures to inspire imitators. The protest landscape becomes radical not only through the radical actions of their creators but through interrelated repetitions and photographic distributions of them that position these landscapes as real and potential threats to urban order. The circulation within media of these landscapes remains a critical component of their contemporary representation. The recent Instagram/Twitter hashtag "#tubasuraalbanco ("your garbage to the bank") accompanied photographs of the very large piles of trash dumped by people in Madrid at various banks, and these photos were a critical factor leading to the repetition of this action in several locations around the city.

#Tubasuraalbanco has its roots in the November 2012 garbage worker strike that followed the state-mandated layoff of 1,143 garbage workers and a 40% proposed pay reduction as part of a measure to privatize garbage collection. As garbage collectors went on strike in Madrid, trash quickly amassed in overflowing containers and became strewn around numerous streets and public spaces. In response to the crisis, the collectives that had formed around the socialistic 15M protests of 2011 responded to the escalating trash problem by dumping trash at banks—because the banks were blamed for promoting policies that led to the initial economic crisis. The groups posted photographs of the trash piles accompanied with statements such as "Put it in the safe with the rest." Hundreds of photos of trash piles at Spanish banks emerged in the ensuing days on Instagram, Twitter, and Facebook, and the action played a role in the favorable labor agreement reached between the workers and the garbage companies two weeks after the strike. In February 2013, when garbage workers went on strike in Lisbon due to similar reasons, activists used photos of the original Madrid action to call for an action in Lisbon, named #OLixoAos-Bancos, where it enjoyed a similar mass appeal and representative power. Again, numerous images of garbage piled at bank entryways appeared in various forms of social media networks.[5]

5. See TuBasuraAlBanco http://ccaa.elpais.com/ccaa/2013/11/13/madrid/1384333518_867444.html and https://www.facebook.com/TuBasuraAlBanco?fref=ts (last accessed January 25, 2015).

La basura donde debe estar #TuBasuraAlBanco #Alcorcón, ahora si que #Bankia ha quedado bien decorada

Vía @digitalalcorcon: La basura se sigue acumulando #Alcorcón Foto: C/ Fuenlabrada. #tubasuraalbanco #huelgabasura

Like Thierry Borne's action, #Tubasuraalbanco befouls urban spaces as an act of association and damning critique. But what makes #Tubasuraalbanco so compelling is that its propagators understood that photographing these piles of garbage in numerous locations would visualize both the actual reality and an alternative, fantastical urban ecological reality. The participants in #Tubasuraalbanco subvert the function of a bank, but in so doing, they also subvert the perverse and late-modern urban ecological frameworks of the modern city, which historian Antoine Picon once mockingly characterized as an "anxious landscape" extending from shopping mall to the landfill.[6] #Tubasuraalbanco brought the most hidden aspects of this ecology (garbage and refuse) into the "clean" iconographic and instrumental sites of finance that underpin the relationship between consumerism and trash. One can view #Tubasuraalbanco as an abject confrontation against finance and a performative act of solidarity with labor as much as a landscape montage that juxtaposed two spaces at opposite ends of the urban spatio-financial structure—the bank and the dump.

ACTION

When such protest landscapes are realized, they represent a compelling notion of landscape formed through action as much as a protest created through a transformation of the conditions of landscape—the surface through which economic realities are mobilized. This variant of the "production of nature" potentially challenges not only how we understand the production of

6. Antoine Picon, "Anxious Landscapes: From the Ruin to Rust," *Grey Room* (2000): 65–83.

Tweet posted during protests in Madrid with the hashtag #TuBasuraAlBanco (Your Garbage to the Bank), February 1, 2014

protest but also the character of the urban landscape in production.[7] Beginning in the mid-1990s and continuing today, a series of protests have swept Peru, Argentina, and Bolivia in response to a range of governmental reforms, from changes in government workers' pay, privatization efforts in national rural electrical utilities, and changing environmental practices among the countries' numerous foreign and state mining conglomerates. These seemingly diverse causes share a concern over shifting neo-liberal policies of governance and their economic and environmental effects, and are intimately tied to the types of economic transformations railed against in the protests in Madrid and Lisbon. One of the key examples of such activity was the action in 2004 by a group of northeastern Peruvian farmers who fashioned large fields of stones across the roadways around Cajamarca, effectively forming impassible barricades to automobile traffic. This was a protest against the government's plans to issue the U.S.-owned Newmont mining company a permit to mine the nearby Cerro Quilish mountain, which would have had a devastating impact on the farmers' water supply. In the face of the protest's intensity and the extent of the barricade construction, the government interceded and denied Newmont a license to mine the mountain.[8]

As political theorist Moisés Arce has noted, in addition to the content of these various Peruvian protests, what made these protests unique was that they entailed a shift from traditions of strikes and street protests to barricade construction. More specifically, they extended the action and activity of protest from the workplace to the landscape. Typically, the Peruvian barricades were built from rocks strewn across rural roadways often 50 to 100 yards deep, which effectively made roads impassable by truck and therefore shut down country to city trade. Like #Tubasuraalbanco, the barricades were the result of earlier actions across a wide geography. Between 1997 and 2002, 4,676 road blockades were formed on roadways throughout Argentina—an incredible figure.[9] In both countries, the road blockade has emerged as a key and surprisingly effective manifestation of economic protest and negotiation due to the way it disrupts *all* activity along the roads. Such actions represent a considerable shift in understanding the techniques of political action and negotiations for environmental and workplace reform. They also more directly represent key shifts in our understanding of the potential politics of ecological activism. Against the very real possibility of their farmland being transformed into unproductive land as a result of the environmental fall-out from mining operations, the farmers surrounding Cerro Quilish briefly transformed the area's roadways into an analogous landscape—a temporary wasteland. As in the other examples cited above, the late-modern urbanized space "of flows" is transformed into a more stagnant reality.

7. Neil Smith, *Uneven Development: Nature, Capital, and the Production of Space* (Athens: University of Georgia Press, 2008).

8. See Moisés Arce, "The Repoliticization of Collective Action after Neoliberalism in Peru," *Latin American Politics and Society* 50(3) (2008): 36–7. See also Gaston R. Gordillo, *Rubble: The Afterlife of Destruction* (Durham: Duke University Press).

9. Arce, "The Repoliticization of Collective Action," 40–41.

LANDSCAPE

"Landscape"—broadly defined—is a realm that presents particular obstacles to the rather impressive *expressive* politics and actions throughout this short essay. In the context of landscape, I use the term "expressive actions" to describe those activities and formations that can be realized both alongside and potentially outside of preconstruction, representational instruments.

This includes technical drawings and plans and bureaucratic planning, not to mention the biggest preconstruction representational instrument of them all—money. I would argue that the expressive limitations of our understanding of landscape are primarily due to both the considerable infrastructural scales at which the word "landscape" tends to be utilized in the English language and how it is realized as a public discipline—the labor and capital involved in working with its materials. And yet, without overstating the point, action and activity are what appear to rival representational instruments so well in the range of actions that I call protest landscapes.

Today, numerous landscape architects argue that the political future of the urban landscape is to be found either in explicitly ecological projects or in what is termed "landscape urbanism," where land-

Farmers spraying liquid manure on riot policemen during a protest over soaring fuel prices, Dijon, France, June 2, 2008

scape becomes embedded in a city's or countryside's infrastructural network.[10] In the South American context, Harvard University's Graduate School of Design has engaged in an ambitious effort to use landscape urbanism concepts to address many of the environmental concerns over land use, water, and resource allocation which were voiced in the protests briefly described above.[11] Both ecological landscape and landscape urbanism offer clear appeals to the profession, as they mark shifts away from the decorative roles that nature often takes in cities and its surroundings, and they place the designers and producers of landscapes in a position to have a determining influence on urbanization.

But the protest landscape suggests that the political expressiveness of the ground might lie in additional possibilities—additional practices that are outside these disciplinary self-reflections. Again, this idea requires some more thought, but a group of Peruvian farmers rolling rocks down a hill to form a highway barricade, a group of students turning several cars over on their side, and the explosive force of a monument falling into a pile of detritus outside Kiev represent an idea of politics found in landscape. I doubt one could easily incorporate these manifestations into one discipline, but that tension offers another moment for disciplinary reflection—not at all unique to landscape. In the late 1960s, early 1970s and more recently, architects and organizations found a certain expressive, serial architectural action and politics via the creation of inflatable architecture, deployable furnishings, and other forms of quickly made experimental structures. In landscape, the analogous object to such forms of "instant" architecture is the heap. The protest landscape, which is formed through the intersections of nature-matter, action, repetition, and mediation, differs from other political landscape formations found within both a discipline that lays claim to the urban landscape and our understanding of what the experience of landscape might become in the contemporary city. Nevertheless, those of us reading this essay may not be the actors who reproduce these artifacts; we may not all literally be on the barricades, so to speak, but we must all understand these creations as belonging to both a category of thought known as politics and a category of thought called landscape. Protest landscapes are arguments for a different type of realization of nature both within and outside the city—one that speaks of a larger representational territory and those tied to it. The productions that can be realized from the explicit intermingling of politics and landscape have an outline somewhere on the ground and somewhere in the immediate future.

10. Charles Waldheim, ed., *The Landscape Urbanism Reader* (New York: Princeton Architectural Press, 2012)
11. See The South America Project, http://www.sap-network.org/ (accessed 25 June 2015).

LIVE PROJECTS SEOUL:
WALKING THE COMMONS

Curatorial Statement by
Soo-in Yang, Kyung Jae Kim, and Hyungmin Pai
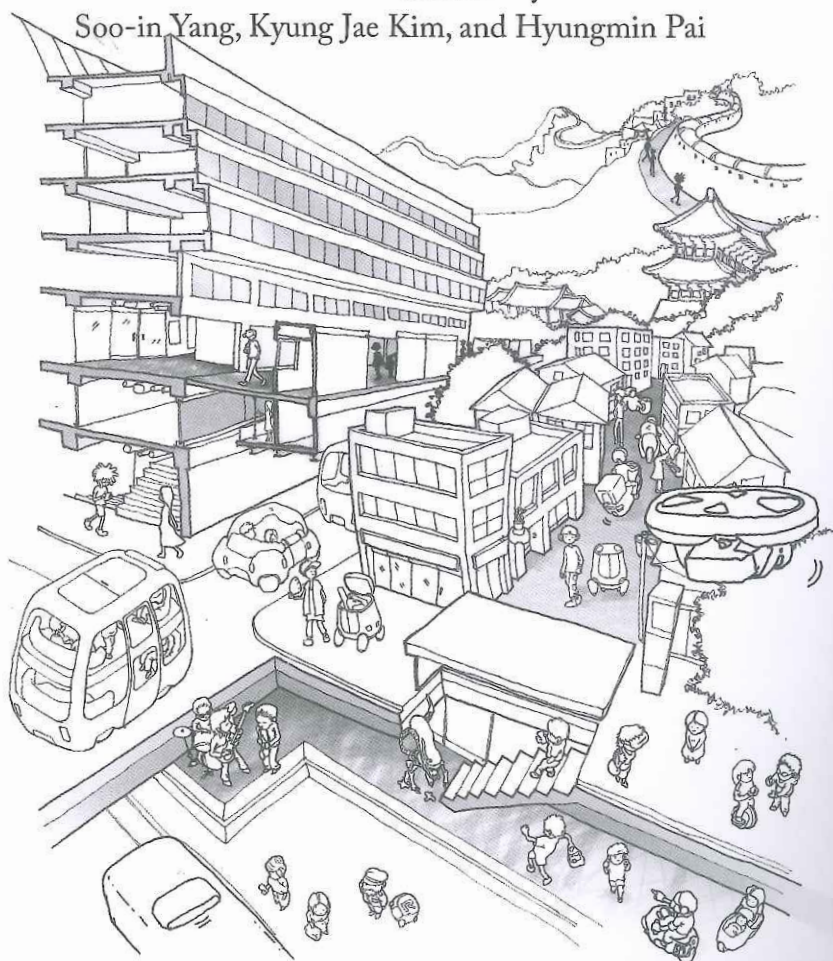
Technology is the answer, but what was the question?
—Cedric Price, 1966

Walking is the most basic means of moving from one point to another. As a practical activity, it serves the role of connecting each means of transportation within a multimodal traffic system. In the near future, with the spread of smart mobility, there will be a fundamental change to walking. Personal mobility is currently growing at an exponential pace. In 2015, the global market for personal mobility devices amounted to 6.5 billion U.S. dollars and by 2023 is expected to reach 12.8 billion U.S. dollars.[1] The advent of autonomous vehicles and smart connections will have a profound impact on our walking patterns. With the development of various modes of transportation responsible for the last mile, walking will become unnecessary even when traveling short distances. The smooth and seamless connection between different means of transportation minimizes the distance and time traveled from one mode to another. Furthermore, autonomous driving technology will maximize transportation efficiency as personalized public transport will provide pick-up services in front of the home. Once out the door, it is more efficient not to walk. Why walk, then? In the imminent age of smart mobility, in the age of the digital sensorium, what constitutes the motivation and experience of walking?

Walking is a culture. Whether we are alone or with friends or in the streets of Seoul or Paris, taking a walk is less an act of necessity and more a type of play in our daily lives. Walking is a sensorial act of constant contact. In addition to the physical movement of arms and legs, we use all the sensory organs, constantly communicating with the surrounding physical environment. We look with our eyes, smell with our noses, feel the humidity and temperature of the air through our skin, and check the condition of the ground with our feet. Walking enables communication with the environment and becomes a process of discovery. We might discover something that was already there but not noticed, and now see and feel it in a new way. It could be the smell of a street vendor, the paving of the sidewalk, the history that permeates a neighborhood, or a process of enlightenment and spirituality. The stroll of Aristotle and his peripatetics in the School of Athens, the pilgrimage to Santiago de Compostela, the philosopher's path in Kyoto, the monk's trek towards the mountain temple of Chiang Mai: these are just a few of the most prominent examples of walking as discovery. During the nineteenth century, the physical environment of the city evolved to allow more contact between cities and the people. With better shoes, street pavement, sanitation, artificial lighting, better air quality, and later on, traffic signals, the modern flaneur was born. In the modern age, walking became a commons because pedestrians came in daily contact with the physical and nonphysical environment of plazas, arcades, and streets. As much as the train, the automobile, and the plane became the essential mechanisms of modernity, walking was an essential mode of discovery and play.

1. Credence Research, "Global Personal Mobility Devices Market—Growth, Future Prospects, Competitive Analysis, and Forecast, 2016–2024," 2017.

Page 424: Soo-in Yang and Kyung Jae Kim, The Four Walking Levels of Seoul (Drawing by Kyung Jae Kim), 2017

The meaning of walking is evolving. If discovery and communication are the precious gifts of walking, then smart mobility brings new dimensions to this process. Personal mobility is granular in nature; its devices operate independently in their own judgment, without being controlled by a large common flow, ideally coming into harmony as part of a moving commons. As smart mobility becomes pervasive, when walking becomes part of an expansive network of information, as augmented sensing and communication become imbedded in the experience of mobility, the walking commons expands beyond the realm of direct physical contact to new forms of collective environmental consciousness. Pedestrian-based neural networks will soon be integrated with AI-based, vehicle-centered traffic control in the transition to a new infrastructure and traffic system. If it is clear that we are moving towards machine-oriented mobility, the question remains why we will want to walk.

EXPERIMENTS IN THE WALKING COMMONS OF SEOUL

After decades of rapid modernist development, Seoul became a city inhospitable to walking and almost devoid of pedestrian plazas. A more recent shift in Seoul Metropolitan Government policy has given birth to various mobility sharing programs, the regeneration of infrastructure, the excavation and recovery of urban walking routes, and the continuous improvement of public transportation systems, all seeking to reinvent Seoul into a walking city. The regeneration of Sewoon Sangga, the Seoul Station area, and Seoullo; the establishment of Gyeongui Line Green Park; the Jongno BRT project; and plans for the reuse of obsolete underground passageways are just a few of the major projects that seek to transform Seoul's existing modern infrastructure into part of a pedestrian-based mobility network. In contrast to previous redevelopment projects in Seoul—based on transportation nodes and large-scale, insular interior spaces—these projects engage history, culture, economic incentive, and technology in a multidimensional experiential and information network. Through projects such as Playable City, Musicity, Brain Flaneur, and Soundline, and in partnership with a variety of mobility projects in Seoul, Walking the Commons intervenes into the fabric of the city to explore the possibilities of an evolving walkable city.

Appropriating infrastructure and smart city technologies to create new connections by injecting play and creativity into the everyday urban fabric, these interactive, participatory installations bring citizens into a social dialogue with their city. In Musicity, for example, pedestrians with GPS applications installed in their personal mobile devices listen to music as they reach a certain area within the city. Musicians are commissioned to compose original tracks in response to a particular building or urban landscape. As part of their walking experience, citizens are inspired to explore the city, musically and architecturally. The Brainwave Flaneur is a project that tracks pedestrian brainwaves in real time. The vast brainwave data generated in particular walking environments are recorded, archived, analyzed, and displayed. Whereas in the past the quality of the walking environment was evaluated with limited data such as sidewalk measurements, the number of building openings, and the density of greenery, it is now possible to use the psychological responses of pedestrians to understand the walking environment.