MICHAEL SORKIN: What, at the end of the day, isn’t research? I assume any broadening of experience—whether accidental or deliberate—meets the general categorical criteria. Reading (or writing) Proust, a Situationist derive, a wine tasting, a sketch, a wet finger to the wind, smashing atoms, shining Luminol on the carpet to illuminate the bloody trace (we’re addicted to that TV program Forensic Files at our house) all surely lie within the territory of investigation. Should we make distinctions? Of course! So, let me invent some categories or, since I’m winging it here on short notice, probably reinvent.

There is a kind of “pure” research that thrives on a buildup of the speculative and elaborates itself via continuous overlays of augmented experience. This is the territory of, among other things, psycho-geography, of a simple setting out, of a sensitized set of observations and interactions that are the typical purview of the flaneur. Here research is structured as narrative and the researcher is in the position of reader. Things proceed directionally, surprises occur, the anticipated is sometimes realized, and the conclusion marks a moment when one has, at least provisionally, completed the whole of something. That whole is then subject to ongoing revision, recollection, and analysis. Such research is especially interested in the context of the city, given that it can never be completely read because of both its extent and of its perpetual state of flux. Any reading of the city is thus a form of patch dynamic investigation, artificially constrained and distorted, an assertion that the city is always multiple. This can be highly useful to the accretion of ideas about the atmospheric, of the conditions that define action and intervention.

Perhaps the most familiar and traditional form of architectural and urban research is operational, research that involves the test of some system or principle against a form of regulated and benchmarked reality. This is comparable to what happens in a wind tunnel or on a shake table and it focuses not on the fundamentals of invention but on refinement of something that’s already conceived but, at least provisionally, short of “optimal.” What camber in the wing produces the most lift at low speeds? What kind of gasket most effectively seals against the rain? Depending on its motives, this can easily cross various political and ethical thresholds. The time and motion studies of Frederick Jackson Taylor, while conducted under the aura of that old bugbear of “scientific objectivity” had the result of helping engender the Chaplin-esque nightmare of modern times, the rigorous regulation of workers and their more efficient exploitation by the bosses. On the other hand, the operational research of Masters and Johnson may have had more salutary results although here, too, possibility also readily links itself to imperatives to perform against desire.

Hypothetical research is, again, an “impure” category but it’s different from the idea of speculation I’ve just proposed in having more teleological oomph. Unlike speculative research, it’s an ideation that is engaged with the chain of action, with the outcome of something unforeseen or unwanted. In the face of the “false consciousness” that Marx spoke of, these kinds of research aim to open a window on what is in fact taking place and what can’t be foreseen. Which is another way of saying that one of the purposes of research is to be the first to say ‘I didn’t see that coming.’

A symposium with speakers Orit Halpern, Andrés Jaque, Hod Lipson and Michael Sorkin; organized by Esteban de Backer, David Isaac Hecht, Alejandro Stein and Che-Wei Yeh; and led by moderators Janette Kim, Diana Martinez, Leah Meisterlin and Susanne Schindler.

The full transcript.

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in itself, of a kind with investigative botany or interior geographer. Her interrogate and interpret images that are propagated as shadows of something investigation. This may is subject to committed to its inerrancy. This is how space opens for one paradigm to completely neutral. Pile capillary computer. Form begins wherever you find it, and configuration of the stain from yesterday's coffee cup on the drawing, the trace of evidence or the techniques of inquiry differ but because there is age.

This conference was called under the banner of forensic research, and everything I know about this I've learned either from TV or from Eyal Weizman and his collaborators. I'm not sure why this was chosen for your title but it does carry the imputation of criminality, of the practices of unearthing evidence to be weighed in a judicial setting. While all research is subject to evaluation and analysis, forensics is a special case, less for its methods than for the kinds of outcomes it is meant to support. A forensic investigation must be distinguished, for example, from an archaeological one not because the standards of evidence or the techniques of inquiry differ but because there is invariably an ethical valence to its conclusions. I would caution against a too promiscuous use of this concept lest we diffuse its vital relationship to justice. Post-occupancy analysis, for one, is both linked and other.

But back to form. Over the past couple of decades, a major problematic in defining the meaning of the research people like us do has surely been found in the widespread reverse engineering of formal authority as the outcome of the generative procedures that produce it. To be sure, we've moved on from the days when the certification was simply a random collusion of personal, historical, or other "facts"—capturing the precise configuration of the stain from yesterday's coffee cup on the drawing, the trace of capillary action and the minute puckering of the page yielding the project—to the more automated forms of parametricism, which are too often held to be ipso facto all right. We likewise remain overly infected with that Dutch disease, too impressed with data, which itself becomes a form of automation, and rely too much on its certifications to sanctify some tedious singularity or another, pretending that statistical intelligence is somehow completely neutral. Pile it on and the project authentically ensues. Basta! Genug! Get over
The eternal issue for formal research—what distinguishes it from “formalism”—is the question of how its meanings are attached. For architecture and urbanism, “looks good” is an important but insufficient criterion. Any inhabited work that lives in the space we share (the planet) must be vetted not simply for its contents but for its effects. This research into the meaning of the outcomes of research itself might fit into the operational variety but in a highly expanded version. The examples offered before were technical, but architecture’s effects cannot, in fact, be isolated from the social—indeed, the ethical. Whether this devolves on program (the AIA is still happy to have you design gas chambers), materiality, or the role building plays in distributive justice and, indeed, in the very idea of collectivity, it is central to our practice. If you ignore this, you are a bad architect. Research on real outcomes is a medium through which we establish both our relevance and our virtue.

I assume that the fact of a conference like this—and the choice to hold it in this slightly “unofficial” and social rather than academic space—suggest that the idea of research—and its role in design practices—is sufficiently contested in both method and purpose to be worth discussing. I suspect that we’re here today because this school is in a moment of transition and that a series of former research paradigms are increasingly under interrogation. One of these would seem to be that computational style that used to so characterize Columbia and its erstwhile reputation as a Vatican of the digital. We’re certainly emerging from an era in which anything with even a whiff of electronics appeared especially creditable to many and the implicit skepticism of this event seems helpful in establishing a ranking of utility and value in our methods.

Parametricism—which continues to range the field—seems to embody something like research for two reasons. First, it’s a generative system based on variable parameters, and second, it produces a range of formal variations that can satisfy them to a quantifiably greater and lesser degree. The abuse that arises from the method fixes on parameters of quality, those that seek to automate judgment about distinctions within the field of variations the computer coughs up. Given that these distinctions tend almost invariably to be about fundamentally technical matters—energy use, wind resistance, view capture, typological variation, and so on—parametricism’s artistic, social, and ethical character must be willfully (or arbitrarily) embedded in the algorithms that produced the shape. Thus, we assume that a building that conserves energy or makes efficient use of materials is functioning ethically in a world of scarce and unevenly distributed resources. Could be.

On the other hand, we all know that what this technology truly liberates is an array of weird and otherwise undrawable—even unconceivable—shapes and surfaces. This, too, is research, but here it’s primarily artistic, occupying a space in which anything allegedly goes. This is fraught territory. Architects and urbanists have long sought to arrogate the virtues and authority of the scientific but—more often than not—this tends to be merely metaphorical appropriation. Modernism loved the idea—the fantasy—that its architecture arose directly from the solution to the technical problems to which social questions could allegedly be reduced and that its formal production had a pure inevitability about it. That a penchant for steamers and aircraft was really a matter of taste—and additionally reified the class system modernity allegedly sought to overthrow—was easily ignored, given their compelling form and capacities and their consonant, ship-shape, habitability.

But the scientistic metaphors keep shifting both as a matter of chic—the structure of the atom is displaced by the double helix is displaced by dark matter and string theory—and as a matter of how the scientific disciplines assume special cultural relevance. Here, there’s often a narcissistic schism as architects attempt to inflate the relevance of the arcane, when seemingly more modest forms of investigation are more apt to the actual problems. Our own special technical issues are focused on questions of the environment and on that large set of issues subsumed under the rubric of sustainability. But what does this have to do with the income gap? What does the careful research that yields the 260-squarefoot factory-built micro-unit mean at the, if you will, larger scale?

Sorry if this prelude has been endless, but on to my own research! Janette has asked me to speak about three particular projects which she seems to think fit particularly well into the frame of this conference. The first is a little book I wrote years ago called Local Code. That was a prelude to a career in software, which has more of the mark of a bygone era. But your questions are welcome.
This was both a piece of research and a protocol for further investigation. It purports to be the building code for an imaginary city and thus took the format of a utopia. The constraint that I set myself in writing it was to describe the city in purely physical terms such that its social performativity was understood entirely by association. This is characteristic of architectural utopias generally and their appeal lies in this inversion. One of the reasons the city is such an attractive subject for speculation and analysis is that it so complexly maps a variety of human relations in the substance and timbre of its forms. A utopia reverses this by speculating that a particular set of forms will conduce some idealized set of social relations. Utopias and dystopias—my book may very well have been either or both—share this inversion, which is actually a double inversion since the armature for utopia is always the existing city and the society that produced it.

This utopian fallacy—that these phenomena are truly reversible or commutative—has plagued us for millennia, and its implications have ranged from the sinister to the silly. Among the latter are the neo-traditionalists who believe that good form prompts good behavior—which is surely true to a degree if certain other criteria—I like access and choice—are filled. Their problem is less in their mechanism than in the specific character of the fantasy, a delusional pre-modern order ruled by princes and architects in which the plebs are simply happy to be of service.

The baby that is too often tossed with the utopian bathwater is the master plan. Redolent of patriarchy and coercion, any such representation that dares to speak its name too often finds itself on the index of irredeemably fascist ideas. So, I do feel obliged to offer a few reasons why so much of my research and practice is bound up with the production of such plans. First, I do not believe that any act of the imagination should be forbidden. Second, I do not believe in the death of the author. Intentions count: The way work is deployed is critical and not something for which an author can disclaim all responsibility. This is as true of city planning as it is of kiddie porn. Third, thinking through some form of invention that has its ultimate expression in its own growth opens wide the logic of research that speculates on such implications and it’s irresponsible to ignore them. Fourth, big plans are being implemented and we’ve worked professionally on a number of them, including a bunch in China. In an exponentially growing urban environment, new cities must happen and it’s best that they be the product of the most thoughtful research and analysis. This is not the same argument as “if we don’t do this, somebody worse will,” but perhaps a cousin. Making the environment less bad, however, is far from a reprehensible exercise. Finally, the myth of a genuinely democratic informality—the presumed alternative—both patronizes those for whom no other resource is available and misreads the results. Urban research needs to engage the dialectic of induction and deduction to find solutions for which neither is capable.

The second project Janette Kim was interested in is a book series we’ve recently organized called “The Next Helsinki.” This had its origins as a riposte to the competition staged by the Guggenheim Museum for a branch operation it hopes to build (with Finnish money) on a particularly prime site on the Helsinki harbor. We used the “competition” format to “crowdsource”—to research—a series of suggestions about a future for the city in which many find the state subsidy of such multinational Starbucks’ culture anathema. Our group—Checkpoint Helsinki, the Global Ultra-Luxury Faction, and Terreform—is now in process of reviewing the hundreds of terrific submissions we’ve received. Stay tuned.

The third project Janette wanted mentioned is a book series we’ve launched under the imprint UR (urban research). This is being organized via Terreform, the nonprofit center I founded in 2005 to do both “traditional” research and to be an instrument for intervention in urban situations as a means of raising—or at least shifting—expectations. The key to this is that we always operate without a “client,” working on behalf of some definition of the commonweal. Our model is the amicus curiae brief, a statement of legal interest by someone who is not an official party to a particular case but who has an interest in some larger point of law or process. Such briefs often involve research into unexpected precedents and unconventional arguments. The purpose of the UR series is both to be a form of mutual aid for fellow-traveling urban explorers to serially limn a constantly expanding field of the urban, to defamiliarize the terrain of urban research and design. We now have close to thirty books in the pipeline and our first tranche—including a book about post-Sandy retrofits for New York, a dystopian fantasy about the year 2100, a study of the potential for finding constructive effects of the Columbia expansion on Upper
Finally, I would like to mention the largest piece of research we’re doing at Terreform, a project called New York City (Steady) State. This is a thought experiment that seeks to investigate the limits of self-reliance the city might “practically” achieve. That is, we are trying to find out whether our ecological footprint might become co-terminus with our political boundaries, whether it’s possible to have an environmental revolution in five boroughs. We’ve broken the research into a series of “respiratory functions”—food, waste, water, air, climate, energy, construction, movement, manufacture, etc.—and are looking at each from supply and demand sides. Our aim is both to test the marginal costs and morphological implications of a condition of autarky achieved via a process of progressive import substitution and to compile a useful encyclopedia of the forms and practices that cities striving to take greater responsibility for their interactions with the planet might utilize.

Of course, it’s another utopia and one deeply implicated in speculation about—for want of a better word—questions of “lifestyle.” This begins in a predicate that begs the question of the equitable distribution of global resources and continues down to the fine grain of personal autonomy. We know that it will be far easier to grow enough food for us all if everyone’s vegan. We know that movement can be best facilitated if everyone can walk to work. But this means that neighborhoods will perform be integrated by class, that the barista and the banker both must be nearby. The historic beef with the utopian form is that we worry about the centralized authorities and the coercions needed to realize it in some form of all-at-once. Our critique is therefore not simply addressed to the depredations of First World exploitation and to the all-at-once formats of, let us say, agribusiness but to the representation of the happiness of contingency. Our preference for CSAs, victory gardens, and local artisans is tested against exigent numbers and difficult climates and spaces. This gives rise not to starvation or the death of cuisine but to a politics of association that ripples from compaction in forms of free association. When we look at the possibilities of spatial recapture and sociability via collective cooking or dining, it isn’t to impose some repressive Stalinist fantasy of forced cooperation—a diet of spuds and Stoli—but to see through the prism of the Chinese deliveryman trotting up the stairs from the kind of shared kitchen that genuinely expands our time and experience.

As soon as we get this into a legible framework, we’ll get it out there as both a book and a wiki so that the seeds of our research can flourish under the cultivating auspices of all of you!

ANDRÉS JAQUE: I would like to talk about some of the projects we have been doing over the past few years, starting with a project that we call PHANTOM. Mies as Rendered Society. Even though we tend to perceive Mies van der Rohe’s Barcelona Pavilion as something that only has one floor, those who reconstructed it in the 80s built a basement. To me it’s very important to see that basement. Through it, the Barcelona Pavilion produces and conveys knowledge. We tend to think of research as something that precedes architecture. But I think it’s important to see how architecture is actually engaged in presenting evidence; and in producing, communicating and testing knowledge. The pavilion does this by making distinctions between the ordinary—for instance, what happened to be in the basement—and the exceptional.

When the original pavilion opened, the German ambassador called it a piece of Germany—the Weimar Republic—that had been brought to Barcelona. The pavilion takes something from one place and moves it to another, as evidence, so another audience can experience it. This is exactly what happens in laboratories. It is important to see the difference between what happens upstairs and downstairs. To produce one, we need the other.

In the basement we can see the remains of failed experiments from upstairs. For instance, Plexiglas panels from the bottom of the dark reflecting pool above were removed because they curved due to overexposure to the sun. They were stored below to present the building as though it has been created at once, directly from Mies’ head into matter. This is very peculiar, in my opinion, because it means we need to hide the experiments and tentative steps that are needed to produce material realities.
I love these basement remnants. They have a certain beauty that reflects the things we could discover in Mies’ architecture. Mies is present in them, but in a different way than he appears upstairs. For instance, we see downstairs the velvet curtains that have faded out. Upstairs, they are dark red. But when they start to fade, they are taken to the basement. In cosmo-political terms it’s super-interesting. Everything influenced by nature is hidden—ordinary things like the office, the place where the employees do the dishes and eat, and even the place where the cat Niebla, who removes mice from the upper floor, lives.

So, in terms of methodology, we worked in a forensic way even though there was no crime (well, there was a certain crime, because all these things were removed from the upper floor). We looked carefully at what’s kept in the basement and tried to reconstruct a story by interviewing people who work in the pavilion. We interviewed Victor, the manager; Roy and Isabel, the architects in charge of the maintenance of the building; Fernando Ramos and Cristian Cirici, the architects who reconstructed the building; and Manuela, one of the cleaning ladies. All of the realities removed from Mies’ idealized experience created evidence that circulated in the networks of the building. The basement removes anything that would suggest that this exceptional piece of architecture actually comes from the ordinary world.

What we did then was to remix things, to trouble this dialectic between the extraordinary and the ordinary a bit. We brought evidence upstairs. We made it possible to see the realities and social connections that make the pavilion possible.

I would like to talk now about a different project. Ikea is probably the most important architectural agent these days. Their capacity to produce architectural experience, everywhere, is huge, and the messages it sends intensively shape the way we see daily life. We looked at the 2007 ad campaign that claimed the house as an independent republic, or a “kingdom.” Domesticity was seen as isolated from many of the processes by which the social is disputed and constructed. It’s as though you leave behind all the conventions of the outer world when you arrive at home, and somehow gain political independence there.

We interviewed many people to study how they develop their own domesticity. We found that Ikea produces a reality that is not universal; people actually engaged in political projects from their living rooms, kitchens, bathrooms or bedrooms. Domesticity is less an independent republic for these people than the center of many political engagements. One of the people we interviewed was Bertha, who came from a tiny village to a squat for lesbian women. She organized the architecture in a way that produced an upper space for intimacy—where the residents could minimize the risk of changing the way they relate to their bodies or to their sexuality—and a ground floor that promoted a transformation of the way the neighborhood sees lesbianism. The process of finding her sexuality and even her body could never have happened without this space. Now Bertha is actually a male, and the whole transformation of her—of his—body is related to his association with a very particular architectural device: this squat.

We saw many other examples, including Maddie, who transformed her TV room into a hairdressing salon as a space for sociality in Long Island City. By making an archive of similar cases, we could counterbalance the depiction of reality prescribed by Ikea. We could see that research played a political role by bringing forward alternatives to mainstream messages. Architecture has a long tradition of producing research as a political tool, bringing diversity and alternatives to particular domains and discourses. It’s very important for me that research is about making things visible. By accounting for the way domesticity is produced, we could recognize how the material reality of architecture had been produced.

In another counterproject, my office documented examples of “ordinary urbanism” in the Lavapiés neighborhood of Madrid. We looked at a Mooride community. The males, often from Touba in Senegal, maximize their working capacity by moving to places like Madrid, Barcelona, Paris and London. There they can sell fake Louis Vuitton bags, among many other things, in the street. And they send money, mostly to women, people with disabilities and children remaining in Touba. Though we tend to think of things like digital calculability and parametrics as methods that belong to advanced architects, this community was constructed around calculability and certain kinds of parametric thinking.
For instance, the men had to find a neighborhood they could navigate without the subway, where police detain illegal immigrants without much effort. They had to find a way to construct a neighborhood that could bring the Mouride men together. A mosque with front parlors, among other places, would allow them to buy and sell things. All this makes it possible to reduce the risk of operating in places like Paris or Madrid, and make it possible to send money to Touba.

I think this is very important. Knowledge, research and calculability are socially distributed. Access to power has to do with the capacity of a group to get organized, to produce knowledge, to measure certain realities, to recognize calculabilities and to operate with them; and to construct an urban form, even a performative one like this one.

This is a project most architects probably know: Cidade da Cultura de Galicia by Peter Eisenman Architects. We were asked to create a wooden fence to hide the construction site, a fence that could be perceived as nice and friendly by the neighbors who were totally mad because the ecosystem they loved so much was being transformed into a construction site full of dirty, brown mud. The process and implications of construction were to be totally invisible. We proposed to do the opposite. We proposed twelve actions that we called, of course, in a provocative way, Twelve Actions to Make Peter Eisenman Transparent. We wanted to make transparent, for instance, the amount of money that was already spent (this feature was removed from the project for very obvious reasons). We made visible the scope of each construction company operating there. Signs placed on all trucks coming from and going to the building site showed the extension of the building site within the landscape, or within the project’s territory. So, we could see, for instance, that marble was brought all the way from Italy to Galicia, one of the biggest producers of marble in the world. All of these kinds of things transformed aesthetic and technical decisions into social concerns in a material way.

The idea was to think of knowledge not as something that clarifies decision-making among designers but as something that could socialize knowledge and enable an audience the opportunity to discuss technical decisions. At one moment, there was a problem in the construction site, and people from the blue construction company were working on the yellow side. We asked the architects or engineers on site why this happened and they said, “Well, they shouldn’t. The security plan doesn’t enable them to do that. It’s illegal to do that.” But others, such as the retired people who spent a lot of time looking at the building site, noticed there was an agreement between the blue and yellow workers to help each other when they had a big job. This kind of agreement was totally invisible and unaccounted for in the official intelligence of the building managers, but was distributed socially among the people. At a recent presentation at NYU, Orit, you described how infrastructures of smart cities tried to bring knowledge to the ground in a way that was not political. It’s similar to what we’re dealing with, but we were trying to actually politicize the way knowledge circulated in this building site.

The production of knowledge also has to do with certain devices: for instance, architecture. In our design for an elderly residency for Catholic priests, we decided to introduce devices that enabled people to measure certain realities. By measuring basic things like rainfall, they could participate in the making of many things and join in discussions in order to make them functional. I was very interested in the way Norgie Maris describes eco-homes as devices that promote the discussion of an ecological ethos among the people dwelling in them. Just as the remote control is a device that makes people discuss the switching of channels, we thought this could happen through undefined boundaries between pieces of garden assigned to each neighbor. The neighbors dealt with this as a kind of political ground. I love one photograph we took of the neighbors, because even though they look unhappy, it shows precisely the kind of social rendering that makes knowledge, and research, political.

And I would like to finish this talk with Escaravox, the mobile infrastructures we created for the Matadero Madrid cultural center. The project deals with the making of material devices. And it has to do with power and with the availability of resources to those who work at the margins. Cultural centers, or contemporary art centers, are distributed in Spain like laboratories. Some of the things they do could be described as research—they have a role in the production of knowledge and culture.
We were asked to create shade in the courtyard of one of these cultural centers, in Madrid. We proposed to make them movable, and to reassemble them with things like projectors, speakers and furniture—things to be left at the disposal of anyone to use without being invited to do so. Situations could be provided from the recombination of these technologies. In a way, this is not that different from the network of different architectures and objects that we saw in the Mooride community. These devices could be reconfigured for communication and the production of certain performances, like lecturing, having discussions, presenting books, playing music or whatever. We didn’t have that much of a budget, so we had to reassemble things that were mass-produced, like irrigation systems or garbage bags. This way, we could save money to buy projectors and speakers. Orit, I was very interested in the way you addressed the need to work with different resources and different technologies. We engineered relationships between the offline and the online to provoke people to start using these devices. Of all the architectural initiatives installed here, ours is probably the one that’s most resilient. Many have disappeared already, even though they resulted from major investments. Ours is the cheapest one, but it succeeded. Now an average of 500 people go there every night during the summer and spring.

I believe that architecture mediates and prompts engagement in the production of knowledge. It can enable political mobilization of knowledge produced in the margins, and confront mainstream knowledge. Thank you.

SUSANNE SCHINDLER: Thank you both very much. With your presentations, you seem to have solved the age-old question as to what constitutes research in architecture.

Andrés, you see everything as opportunities for research: Commissions for a fence or shading device are ways to produce knowledge. Perhaps there’s really no distinction for you between research and practice, and in each case, there was a budget you worked within. Michael, you made a clear distinction between Michael Sorkin Architect, your practice; and Terraform, your nonprofit; by saying that Terraform, by definition, does not work for clients. Research, according to you, is everything: proposing, analyzing, collecting, observing. Is that right?

But what about the university? We are in a university setting right now. You both teach at universities. Yet neither of you mentioned the role of this institution in your research. Could you speak to the difference between your capacity as a professor and as a practitioner? In particular, how do you fund the research? Could you expand on the relationship of the university, the office, and money?

MS: What an unbelievably crass question! [Laughter] When we started the nonprofit, our fantasy was that our for-profit office would cross-subsidize the nonprofit. Unfortunately, although they are legally distinct, they’re both hemorrhaging money, and Terreform is obliged both to forage and to rely on the kindness of strangers, including volunteers who share our goals. We all have rightful anxiety about the exploitation of interns and we will accept no unpaid intern in the professional office. But our approach in the nonprofit is different. This is work for a cause. We pay a core staff, but I donate my own time and don’t think it’s improper for others to voluntarily help out if they share our commitments.

The university is more problematic. The question I asked myself at the get-go was, “Shouldn’t this Center for Advanced Urban Research live at the university?” The answer was “no.” Part of this had to do with the particularities of my university. And part of it had to do with a more basic idea about setting agendas, controlling outcomes, and sharing responsibilities. This obviously cuts both ways.

Still, I don’t see my own broader “research” project as discontinuous with what I do at CCNY. What I do is what I do and it takes place at different sites and in different registers. But the space of teaching has a sacred character which demands that it be, to a certain degree, out of my control. A large part of teaching is about authorization, giving permission trying to cut people free from constraints and bad habits. I insist on a policy of persuasion rather than prohibition, and sometimes I can’t make the case. There must be much more latitude in the work a student does in the academic context than in a more structured environment, where someone else finally calls the shots and things are more hierarchical within the collective. Although I try to steer my students and offer them encouragement and what I hope is good advice, they must finally find their own direction.
AJ: Your first question has to do with the idea that everything is research. I'm particularly interested in research as something that happens not only among people, but as something in which material devices play a key role.

The work we do in the office looks carefully at the situations in which we get to work. We ask how those situations deal with realities today, and how we could change the way those relationships are produced. The university, I think, is very different. The context of discussions is already constructed by particular questions. Teaching studios—in dialog with other studios and the great number of people who are here today, like Patrick Craine—is about making clear what questions or framework we're working within so it can be conveyed easily to others. For instance, when we taught the Urban Enactments Studio we discovered that we were proposing a slightly different way of recognizing architecture, one more interested in how things are brought together rather than defined individually. For instance, the city was produced in relations that were inter-scalar. You might have breakfast in one place while something related happens at another. We wanted to clarify the process in which students could participate in a discussion of things that happen simultaneously at different scales, and produce new ideas out of it.

This is a process we don't need so much in the office, because we don't have that big a responsibility to other communities. We do talk with clients and stakeholders, but in a way that could recognize the architectural disciplinarity of our discussion, even though we wanted to do something in, say, Madrid's cultural context and not just a response to the architecture field.

MS: To follow up on your point, the reason I'm late is that I had to sit on a review at City College. It was a studio that was very research-oriented and it's important to both evaluate the work as presented as well as to relieve students of too narrow a vision of what constitutes research. In many studios nowadays, there's an assumption was that sufficient research will yield, first, program and second, form. The pedagogical struggle is to try to release students—and this is a broader problem in architecture—from a kind of constraining homology between research and its representation. A certain narrowness of latitude to represent research—as well as the protocols and boundaries of investigation—in the environment of an architecture school must always be questioned. If all research is reduced to a set of graphic inventions, then the core research risks being lost in translation. I think an important measure of teaching is to insist that this reductive response to the substance of research gets you in more trouble than it saves you.

SS: On the question of conventions and modes of representation: You didn't show any visual imagery today. You used, as you said, a convention of a conference, which is a text. You're very eloquent, but we can't attack you because you're not showing any images of anything that we might...

MS: You're falling into exactly the fallacy of...

SS: Well, maybe I am, but... The types of representation your office uses are very different from those of the Office of Political Innovation, which are actually very conventional architectural techniques such as sections, plans and axonometrics. Whereas you referenced rendering, without using the actual word, in your talk. The choice of graphic representation embodies a certain type of knowledge that you choose or choose not to communicate.

LEAH MEISTERLIN: I have a follow-up question about academic research, or the role of the university. I find it interesting that you both responded from the perspective of teaching. You addressed architectural research in the studio as a critic rather than addressing the funding aspect of the original question. How do you position the work within an academic context and channel funding through the university toward your research activity?

Of course, research in the university setting is subject to preconceived understandings of what constitutes research activity. There are certain expectations for how outcomes are
defined, measured and verified. The fact that they must, in some way, be reproducible and
speak to disciplines beyond our own causes all kinds of problems for designers given the
kinds of research activities we do. But on the flipside, one thing that architects, students
and practitioners are very good at doing is operationalizing or instrumentalizing
constraints. And vis-à-vis ethical questions, I have in the back of my mind the hope—and
this is where controversy might come in—that bringing our research activity into the
constrained environment of the university would carry with it critical ethical
considerations. It might address the IRB [Institutional Review Board] requirements and be
able to account for human impacts of research. It would compel our field, as any field that
engages in human subject research and receives funding for it, to account for these
questions. If we were to engage in that ethical mandate, we could impart that approach to
our students as well.

DAVID ISAAC HECHT: That’s what we meant by “forensic” in the title of this symposium.
The term references the construction of a public discourse and presentation of what you
produce as evidence in a setting of public authority. So, with regard to the ethical
question, I’d love to ask further how the role of institutional awareness, politics,
construction and history all play.

LM: I do realize what it would do to most of our work if we had to submit our
methodologies and research activities to IRB examination. [Laughter] But I think architects
also specialize in finding opportunity in constraint. Is there an ethical opportunity there?

MS: Obligation, rather than opportunity, I would say. I believe our responsibility as
members of the academy to constantly interrogate the boundaries of the disciplines that
constrain us. Almost all schools—including Columbia are still structured around the
equivalent of the trivium and the quadrivium. Urban design, planning, architecture, real
estate, and—by making Kate Orff the head of urban design—a back door to landscape.
It’s a constant disappointment to me that there is no school in the United States where
some dean or some faculty simply says “fuck it, these boundaries have outlived their
usefulness. Let’s get rid of them.” I say this with particular vehemence because I’m the
head of an urban design program. As a discipline, it’s a complete phony although there’s a
certain everyday utility to the utter vagueness of its boundaries.

I’ve been teaching at the City College for a long time and occasionally teach at one of the
high-priced schools. I’m also at the GSD this term. Not having taught there in a while, I
was amazed at how the incitement—indeed the requirement—to be entrepreneurial has
now become such a deep part of the culture. The general expectation is that the faculty
was to raise corporate money to support their studios! The insinuation of this model into
the academy can only corrupt it. Of course, our universities must rely on private finance.
The problem is the direct link to the curricular nitty-gritty. This is something that I think
we’re obliged not simply to critique but to resist tooth-and-nail. I went back to MIT not so
long ago to give a lecture and there was a giant building donated by the Koch brothers.
What is one to make of that? Are these people buying clean consciences by supporting
cancer research? What does it mean that an architectural studio is sponsored by some
predatory real estate firm? The manufacturer of some unsustainable building material?

Let me also answer Susanne’s earlier question about representational strategies, in
particular about the use of colorful perspectives. I own to liking them, because I also own
to the role of propagandist. If there is, in fact, an ethical dimension to what you do, then it
is your obligation to create the rhetorics that will produce persuasion. In the Downton
Abbey, Upstairs Downstairs theory of the Barcelona Pavilion the rhetoric can easily serve
more to obscure than to reveal. It’s incumbent upon us to unpack and address the
distortions—and utility—of our own means of persuasion. Again, we must rebuff the myth
of correct procedures and the value-free nature of “scientific” research. That’s really all I
was trying to say in today’s talk. Research should be liberation! When you step out the
door and walk down Broadway, it’s research. When you daydream, it’s research! If you are
sitting in an institution that negates the possibility of your profiting, as it were, from the
set of impressions and observations that you make in your quotidian existence, then
you’re in the wrong institution. Fix it!

AUDIENCE [JOHN BUONOCORE]: I was intrigued by the description of forensic that you
gave in terms of the forum. I was in speech and debate in high school, which in the U.S.is
called the National Forensic League—the other NFL. If there’s anything more nerdy than

Andrés, what interests me most in your work is the sense that it engages a material condition. It isn’t just informing research or knowledge about architecture as an understanding about the world. It is the forum in which people can receive and give knowledge. It skirts around the unspoken problem of research, in which a computer engineer is always going to be better at coding than an architect. And an architect is hopefully going to be better at understanding space, or spatial conditions. As the architect researches the effect of other disciplines on space, he or she can lose sight of the fact that space can also assert its own effect. Your research, however, not only sought to understand what influenced the space but also to spatialize the information you uncovered. The signs you attached to the delivery trucks were the material condition that allowed the forum to take place by allowing inhabitants to interact with information. I also think this relates to Orit’s project in which furniture designs allowed people to interact with the cloud. Orit, could you speak to the connection between your work and the idea of the forum as a political engagement with certain aspects of construction?

DIANA MARTINEZ: Since my role is to more formally invite the other speakers in this symposium to participate in a roundtable discussion, Orit and Andrés, would you like to respond?

OH: Andrés’ Barcelona pavilion was an imaginative project, which is to say, it made an intervention into the questions Michael raised about representation. Look at most network diagrams. Why we can’t even think of a different way to imagine the Internet? Some people give these awesome talks where they describe algorithms such as high-speed trading as cheetahs and snakes. There’s this whole bestiary of neat things that people are envisioning in their minds. They’re like the auto poetic, crawling robots Hod just showed us. Isn’t there something kind of sad about how we’re typically envisioning, diagramming or imagining the net?

The Furnishing the Cloud project had dual goals: to get people who are industrial designers to think about how we sense and feel, and to see how media infrastructures actually impact public space. The students had to build imaginary public spaces. They watched ethnographies of how people engaged in public space. If you were to have an informational infrastructure constituted of everything mundane from electric sockets to Wi-Fi networks, what would it mean to allow people to sit and use a laptop in a public space? How would you generate a different combination of a public library and public space?

The students’ job was to do this in tandem with another group that studied infrastructure more broadly. Sometimes the conversation worked really well and sometimes it didn’t. The demo and studio—the teaching mode in architecture and design schools—often mitigate against extensive socioeconomic, ethnographic or historical engagement with a topic, quite frankly.

I see a lot of horrible stuff. I used to work in international development. We had this method called Rapid Rural Assessment, a kind of standard World Bank package. It’s like IDEO sold out. It’s a one-day crash-course analysis of things like whether settlements have thatched roofs or not. Findings are documented on a little sticker; or people draw their day out so we know how they use their time. And then with this information, we’re supposed be community-sensitive once we design, right? The path to hell is paved with good intentions. A serious lab like that would demand extensive time.

These projects raise questions about how we train people. My class spent a lot of time generating an alternative vocabulary for discussing infrastructures. Some terms were quite cliché, like surveillance systems, while others talked about things about infrastructures of ghosts with sound recordings that were kind of out there. We’re still running the class. We will now see how people respond to this material, and whether the responses will change their designs. I hope that helps answer the question in a material way, and questions both how we represent and demand new representational forms. The project creates new taxonomies and new objects. It integrates different modes of research.

AJ: We often ask how to represent things. But if we look at a process that we want to intervene within, there are already forms and representations under discussion, and uses...
of technology that could be empowered or transformed. Architecture or design never happens in a tabula rasa. There’s already a context, tools that have been developed in any field, and other representation methods we can kind of appropriate. The same is true with the use of material devices. So, in my opinion, it is important to connect design with research by describing and detecting material realities that are already happening.

DM: I wanted to think of a way to counter Michael’s statement that “everything is research.” Research has, ideally, an autonomous or new relationship to time. In this sense it allows us to step out of a relentless and accelerating cycle of production and consumption. It allows us to exit the artificial boundaries of a semester. It allows us to let a question drive a timeline. This is a very minimal definition but identifies a boundary that I think is important to set.

MS: Perhaps it might’ve been a little more succinct to say that anything can be research, since there is an ingredient of attuned consciousness that I assume distinguishes research from mere experience. Something that was referenced by Orit’s last couple of comments but has so far remained unsaid is the notion that some fundamental shift in the character of reality is taking place. We are now able to distinguish between so-called material reality and so-called artificial reality. In fact, when I heard you talk about these public spaces, my head was spinning because I did not know whether these were physical or virtual! I don’t know whether I’m being desperately conservative and showing my age, but I think that what we do as architects and urbanists is a last line of defense on behalf of embodiment. If it ain’t embodied, it ain’t architecture. Anyone care to disagree?

DH: I was looking at Hod. His work originates in simulation but then in Shakespeare...

MS: Shakespeare, you say?

DH: There’s a line “It is the east, and Juliet is the sun.” [Laughter] It’s late, but I’ve just been trying to also put it all together. Hod’s work creates an environment of suspended conditions that allow controlled evolution to take place. I’d like to see how that moves from a simulated, controlled condition to something messy, or something that uses chaos as an input.

HL: I often think of architects as the first to adopt many of the technologies engineers are conservative about. For example, in 3-D printing, an area I’m interested in and have done a lot of research in, engineers skeptically asked, “How strong is it?” Meanwhile, architecture departments across the planet have been doing amazing things with that technology. So, on one hand, I see this incredible adoption of new technologies, new ideas and new concepts. But here’s the catch: I go to reviews of work by architecture students at universities. I see incredible avant-garde designs, and it’s wonderful. And then I drive home, and on the way I pass by millions of houses and they all look the same. There’s no innovation whatsoever. It’s as if this incredible creativity vanishes the moment the architect leaves the institution and goes to work in the real world. But I’m hoping that those printers can unleash some of that creativity. Apropos of our discussion on the role of universities, how we get innovation to propagate outside of the university and into the real world. Is it a matter of building codes? Price constraints? Or other places where reality affects a designer? Or is there something else that prevents all this creativity from spilling out to the real world? Of course there are beautiful architectural objects out there. But billions of other houses are all un-innovative. Where is that creativity going?

AUDIENCE [TANG MENGCHAN]: I’m a first-year student here [at GSAPP]. The other students and I have been discussing your question amongst ourselves recently. A fellow student’s professor critiqued his massing model—or conceptual model—as a cliché composition. Yes, it’s probably cliché in school, but if you put it out there and actually build it, it’d be such an unusual thing. Something like that would never happen. I think there’s too much energy and focus on innovation for the sake of innovation in the studio. What if, instead, I propose something 10 percent radical in the studio, and focus more energy on communicating, providing evidence and eventually, as Michael Sorkin suggested, persuading? Learning the skills to persuade and push designs into the real world would create infinitely more impact than the radical and extreme designs we never have the chance to realize out there. Because that’s a zero, if you never build it. If you build something, you slightly push the boundary just a little bit. I think that’s more valuable.
HL: Innovating in a way that can actually transfer to reality is more difficult than innovating without constraints.

MS: You've completely bought into the old avant-garde fantasy about the location of innovation. If that old Colonial, Spanish, Dryvit adobe house just happens to be carbon neutral, is that not innovative? You insist that it has to look strange in order to embody innovation?

HL: No, that was innovative a long time ago. I'm looking for something new. The next thing.

LM: I want to return to our earlier conversation. Two points came up earlier in the afternoon. First, you can design an algorithm (if we can use an indirect operational definition of an algorithm in architecture and research, for a moment) with all the rigor and intention in the world, but when you put it out into the world and into a complex environment like a financial market, we cannot always foresee what will emerge as a final product or output. I think this accounts for the sameness or the not-so-innovative results you are seeing. It's not exactly what you would expect, given all the design and research energy happening within the universities, but what is produced in practice.

The second point addresses the necessity of diversity to produce emergent, innovative outcomes. You have to reach a critical threshold of pluralistic inputs—ones that don't just look different but actually function differently.

AJ: It's very important that you're bringing up this topic, and a concern for the way knowledge is transferred from universities. But I think it's happening. We've seen amazing innovations in architecture over the past few decades that transform the way people live. For instance, debates in schools of architecture and landscape architecture have been totally transforming waterfronts in most cities. Or inventions like condominiums massively reshape cities and their social structure. We could go on and on. The question is, what is the relationship between particular innovations and other social forces like, for instance, developers and investors? Many of the trends we see in society affect the way knowledge is transferred out of the university. For instance, there are many more people interested in investing in new condominium towers than in reusing existing housing, which would make them energetically efficient without moving an existing population. This is a political dimension of innovation. For whom and for what kind of society are we innovating? That's a question that could be addressed in universities.

DM: Thank you all for coming and for your wonderful insights.

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Speakers:

Orit Halpern is an assistant professor in History at the New School for Social Research and Lang College. She is also an affiliate of the new Design MA in the Art and Design History and Theory School at Parsons. Her research is on histories of digital media, cybernetics, art and design. Dr. Halpern is author of Beautiful Data: A History of Vision and Reason since 1945.

Andrés Jaque directs Andrés Jaque Architects and the Office for Political Innovation. The architecture office explores the potential of post-foundational politics and symmetrical approaches to the sociology of technology to rethink architectural practices. Jaque is currently Advanced Design Professor at Graduate School of Architecture, Planning and Preservation GSAPP Columbia University.

Hod Lipson is a Columbia University Professor and co-author of the award winning bestseller “Fabricated: The New World of 3D printing”. He is a frequent speaker at high-profile venues such as TED and the National Academies, and speaks on the future of technologies such as 3D printing, Robotics, and Artificial Intelligence.

Michael Sorkin is Principal of the Michael Sorkin Studio, President and founder of Terreform, Distinguished Professor of Architecture and Director of the Graduate Program in Urban Design at CCNY, and architecture critic for The Nation. In 2013, he won the National Design Award for “Design Mind.”
Organizers:

Esteban de Backer received degrees in architecture and environmental sciences from the School of Architecture in Barcelona and UGR, Spain. He worked at No.mad Architects as an Arquia Foundation fellow. As a recipient of the La Caixa Foundation fellowship, de Backer also earned a Master of Science in Architecture at Columbia GSAPP, where he completed the ARPA initiative. He currently works as an architect in New York City and serves as an adjunct faculty at the GSAPP.

David Isaac Hecht is a native of Brooklyn, NY. He has an M.Arch from Columbia GSAPP and a BA in Cognitive Science from Vassar College. David previously worked at the intersection of politics, finance, and philanthropy in New Jersey. He has been a studio TA at GSAPP, a researcher for the Temple Hoyne Buell Center for the Study of American Architecture, a Project Manager at Nodus in the Rockaways. He is currently conducting research for SO-IL in Brooklyn.

Alejandro Stein is an architectural designer and researcher based in New York City. He holds a Master of Architecture degree from Columbia University GSAPP, where he was awarded a Lowenfish Memorial Prize and an ARPA Research Fellowship. His research project conducted under ARPA, entitled Domesticity in the Office Landscape, investigates the potentials of converting the post-war, commercial skyscraper type for residential occupancy.

Mike Che-Wei Yeh is a designer and researcher of parametric design. He received his Master's of Science degree in Advanced Architectural Design from the Columbia University GSAPP, where he received the Lowenfish Memorial Prize. Yeh also earned his Bachelor's degree in Architecture from Tamkang University in Taiwan as a recipient of the Chi-Kun Wang Memorial Prize.

Moderators:

Janette Kim is an architectural designer, researcher and educator based in New York City. She is principal of All of the Above, a design practiced based in Brooklyn, and a faculty member at the Columbia University GSAPP, where she directs the Applied Research Practices in Architecture initiative and the Urban Landscape Lab.

Diana Martinez was the 2014-15 instructor for ARPA, she is a Ph.D. candidate in architectural history and theory at Columbia GSAPP. She has practiced as an architect in San Francisco, Manila and New York. Her research focuses on the role concrete and other industrial materials played in processes of colonization.

Leah Meisterlin is an urbanist, architect, and planner; a sociospatial data scientist, GIS methodologist, and cartographer. Currently, she is a cofounding partner and CEO at Office:MG and a term assistant professor of architecture at Barnard & Columbia. Her research is primarily focused on concurrent issues of spatial justice, informational ethics, and the effects of infrastructural networks on the construction of social and political space. Within this research and in practice, she specializes in human-centric design driven by data-based research methodologies.

Susanne Schindler is an architect and writer focused on the intersection of policy and design in housing. She is lead researcher of House Housing: An Untimely History of Architecture and Real Estate at Columbia’s Buell Center and teaches design at Columbia and Parsons. She is a PhD candidate at ETH Zurich.