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The Space of Controversies:

New Geographies: We would like to discuss some of the distinctions and separations between the human and the nonhuman, and between the built and the unbuilt, in view of how we have come to see the city in these distinctions between the "urban" and the "environmental." We inhabit an urban world in ways that stretch beyond the boundaries of the city, so can we make these distinctions between nature and culture?

Bruno Latour: If the argument is about human and nonhuman architecture, then urbanism is a good case to show the inanity of making the distinction because no architect has ever made a clear distinction about people moving through things and things that make people move; architectural practice has always been at this intersection. Now the theory of architecture, like all mod-

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ern theories, says exactly the opposite. But as it is usually the case with architects, they are interested in practice and not so interested in the theory of what they do. That is the problem with architects, in my connection with them. The practice is extremely interesting and the theory is sometimes very superficial, and it changes very fast. More exactly, the practice of building seems to me more interesting.

So what would a non-modern building be? I have no idea. Rem Koolhaas uses the term "hypermodern." Architects are going to use a different theory everyday. They eat a theory for breakfast and then go and get another one, so it is very difficult to venture into a theoretical discussion with architects.

NG: Can you elaborate on this—research on the practice of architecture as opposed to research in architectural theory?

BL: It is a problem with theory, and it is precisely following the idea of the modern. It is very difficult to work with a theory that accepts a huge disconnect with the modernist movement, which is supposed to increase the distinction between the human and the nonhuman, and the practice, which has always done the opposite. So it is quite paradoxical. The city is a good case. There are still people who talk about human-centered social theory, while in reality there are gigantic cities that are built and bounded—"spheres of gigantic proportion," as Peter Sloterdijk says. So if you follow the theory, or if you conceive of

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the city as being in the city like the "flâneur" or the loiterer, it is very odd because it is so contradictory to what the practice of building cities is about. The whole construction and building of a material world is much more interesting than anything related to the loiterer or the "flâneur," so again the theory, because of a weakness in philosophical reasoning and the lack of inquiry, never captures what is so interesting in the field of urbanism: the practical connection between the large scale and the modification of human and non-human connections. Urban theorists talk about it, but apart from few classics like Lewis Mumford or William Cronon's book on Chicago, it is very rare. Theory is very strange tool to envision modernism, which is what we are discussing here.

NG: You discuss politics as about things. "It's not a sphere, a profession, an occupation only, but mainly a concern for things which are brought to the attention of a public." Can you elaborate on your understanding of politics in relation to space?

BL: For a philosopher, space is a series of coexistence or cohabitations. I made the argument that we are moving from the time of time to the time of space. So in the time of time, which was really the modernist dream, you destroy the past and then you have something else. And even more today, we are doing the work of leveling down everything. But now we are in the time of space in the sense that cohabitation of all of the things that were supposed to be past are now simultaneously present. I think that is a very big change for designers—in the large sense of the word—because now you have to create the conditions of cohabitation, of building a completely new space where you have to breathe. Are you aware of Sloterdijk's work? Sloterdijk is the thinker of architecture. That answers the first part.

The second part is that design is ideally placed to deal with object-oriented politics. I am talking about political theory as being about procedures: legal organizations, representation, modes of representation, etc. But if you look at what people actually feel about politics, it is always about things; it is about what I call "matters of concern." It is always about subways, houses, landscapes, pollution, industries. Politics is always connected to spatial issues, and political theory is always about humans representing these issues, but the issue itself is difficult to represent. And of course design, the things that architects do (managing projects, landscaping, re-landscaping, re-shaping, making buildings, etc.) are political in the sense that they represent an evolving issue—that is, all the stakeholders can change their minds according to the change of the moving objects. That is what I call object-oriented politics.

The practical and visualizing tools of architects are extremely important and engage big projects to think about architectural design in this very question of inhabiting the space of controversies. Architecture as a practical and visualizing tool, and the way it is situated in a panorama of techniques for the politics of things is very important. It is central, because it has some tools that political language does not have—that is, visualizing tools. And the digitalization age has been transforming architecture from a fixed space and moving people toward a mobile image of people and things. The digital age brings forth the notion of project and not object, which was very difficult to articulate before, when people were still talking about buildings as being static, contrasted with moving things—like people. I think, from what I feel from talking to architects or reading architect theorists such as Albena Yaneva, that this notion is radically changing, because now the notion of buildings as fixed elements (and that something else moves) is actually disappearing. Now you can actually articulate the movement of the building through digital tools. For the architect, a building is a project, not an object. It is easier to articulate now. Architecture is now about the building as a contentious object. In many ways metaphors of politics are moving into metaphors of architecture, largely because of the ecological crisis. You have to redo the architecture of space: a "crystal palace," as Sloterdijk uses the metaphor. We are all inhabiting a "crystal palace" of some sort.

NG: What about if we are to think at the city scale? Our practice deals with buildings as entities, but also with the city and the larger landscape, and transport infrastructures like bridges and highways.

BL: Bridges are very interesting. In *Making Things Public*, we have a chapter about bridges by Bojidar Yanev, who is the head of New York public bridges.² Bridges are actually one of the oldest "things" in the literal sense of the word "thing." The original notion of "thing" is actually a bridge.

We are increasingly under the influence of all this literature about the legal design, political assembling of bridges—seen by Cicero as "remparts" or walls

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of a city (see the paper by Oleg Kharkodin in *Making Things Public* ³). So the whole political role is object-oriented, and has always been object-oriented, turning around *things*. Architects know that, but they know and they do not, it is always the problem, just the way we think about building as projects, the whole question of the aesthetics of architectural visualization is extremely interesting. When I worked with *Domus*, the architecture magazine, for several years, there was initially an effort to be innovative in the way we photographed the building space. At first, when Stefano Boeri was there, they tried innovative ways of precisely showing simultaneously the city, the building, the people, the project, and movement. I enjoyed talking with studio architects, because they have more dynamic and symmetric (in my understanding of the word) ways of dealing with contentious issues.

I was in a very good architecture studio in Houston recently, where they are practically doing science studies, but they are just giving it another name. They were working on redesigning part of the Florida coast. Science studies with much better skills than we have, because they know how to visualize, they know how to gather masses of data, and they know how to simulate alternative scenarios, which is very interesting. This is why my project on "Mapping Controversies" includes architects from the Architecture School of Manchester, because we want to bring in the skills of visualization, to visualize controversies-space, controversies-web space. We also include geographers from Lausanne. There are two work packages: one work package is to integrate geography and architecture, and a second package is to use visualizing skills of both disciplines to visualize space in which controversies (I mean things and matters of concern) are made visible to the people who use the web, because a space of controversy is a great mystery. We live in controversies and yet we do not know how to spatialize them.

We cannot think that we are in the time of time as we did in the past, and that things will disappear behind us as we move forward, in a great movement of modernism and modernization. Now we cannot move forward because our past is attached to us, and it is also in front of us. Ecology, the price of energy—look at what is happening with carbon-neutral buildings; certainly the things that were behind us are now in front of us. Now, when we design, we have to think about being politically correct, carbon-neutral, etc. Design is changing completely—to tie together so many things and kinds of things. So the big issue is to represent these matters of concern, and the way I see it is

related to the ancient question of design in the literal sense of "designo," which has been so efficient in architectural history since the sixteenth-century. We need those skills now, but no longer only the skills of drawing a 3-D Euclidian space. It is building in the controversies-space. What is it to build a contentious project in a non-Euclidian space—the space we live now in? When I ask this to architects, they want to show me CAD design, but a CAD design is a sixteenth-century space, invented four centuries ago. So no, it is not a CAD design. Architecture and geography skills are very good at creating the space where controversy is visible, but it is not the perspective space, it is something completely different. It is a space inhabited by matters of concern, not matters of fact. So the whole aesthetics of representing buildings and representing cities, the whole idea of seeing, is in question.

I was trying to convince the architect who did the "Senseable City," Carlo Ratti, that it was very odd to present a city from above, I mean who is seeing cities from above? Birds? In the virtual book I did on Paris, I have been trying to be innovative in the way one experiences a city. One never actually sees the city, which is one of the things that Albena Yaneva discusses in studying a building by Koolhaas, that one never sees a building as a whole. You do not see it when it is not there, and once it is made, you do not see it because it is just opaque. So the opacity of a building is a very interesting characteristic. How do you show the opaque buildings? When it is being built? When it is being projected? When it is complete and operating? All of these questions are fascinating. What is registered, of all those questions, in the theory of architecture? I do not know, but these are the questions I am interested in discussing with architects.

NG: Let's discuss issues of representation. Both in *Making Things Public* and *Iconoclash*,7 you address issues of representation. What is the power of the image in invigorating a critical project? You seem interested in both representing and inhabiting these controversial spaces. How does that change representation, and how does representation change that project?

BL: "Critical" is not the sort of mode in which I am trying to see these sort of things, because "critical" means that you accept the premise of representation, and you try get some distance or see behind or go in the back door, but this still means that you do not touch the representation proper, and that is

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very clear in critical science. So "critical" is not the way I would put it. This is exactly what I meant before. Can we modify our representational skills and tools so that we move from the Euclidian space—by which I mean the implication that whenever one talks about materiality, one begins to draw as in the sixteenth-century? And then you are stuck because where do you put time? Where do you put people? Where do you put decay? Where do you put use? You do not know. So then you become critical and you say this is a bad representation because we cannot put all of the interesting stuff into it, and then you start to be the "flâneur," capturing all the little things and leaving the whole pot of interesting things alone. So I think the common question for architects and designers is: How do you represent?

It is very striking how poor, in terms of visualizing ability, innovation is suddenly. It is a great disappointment that Second Life is boringly similar to "first life." It is amazing that every sixteenth-century artist was better at designing second life than we are today. You are just moving with your avatars, but it is very limited in terms of visual field. All those inventions do not go beyond a certain dumbed-down version of the sixteenth-century treatises on spatial 3-D representation. So can we use these techniques, which are extremely powerful, to explore not a critique of space but a space where controversy is rife? We have this notion that a building is a project and a moving thing; it is not a space, it is a flow of time. So why is it so difficult to represent in terms of visualizing skills? So it is not images—and by representation, I always mean art, science and politics, it is always the three together in which I am interested. So my attempt is to say that the web now, in the relatively short period that it has existed, might be one of the ways in which these three types of representations can be put all together.

NG: Do you mind clarifying "controversies?" Is it connected with the political?

BL: No. "Controversies" is a very general term to describe the fact that we have moved from matters of fact to matters of concern. That is linked to the end of modernism. In the modernist project you could stabilize most of it by saying that the matters of fact part is essentially solved, and then we disagree, but when we disagree it is about opinions, political opinions, religions, art, and so on. But the basis, 90 percent of our world, is matters of fact, and of course the problem now is that the basis has disappeared because every mat-

ter of fact is becoming a matter of concern. It is very difficult now to find matters of fact. In the exhibition for *Making Things Public*, we were actually looking for a way to do a little installation about what we would have called "the last matters of fact." We wanted the installation to be about the last matters of fact, but we could not find one. Every time I was proposing one, in the end, it was not one! Every single factual statement now becomes a matter of concern. I am sure that this tea, for instance, is immediately associated with poor children in India. So suddenly these poor children in India are attached to your tea. It is the same with scientific issues; they become more and more contentious. The more science extends, the more contentious it becomes, because it is coextensive to whole fields of practice.

NG: Perhaps this is a good time to move on to the issues of scale. In *Reassembling the Social*, you suggest that scale is the actor's own achievement. Rather than scale being set up *before* doing a study, that *scaling*, *spacing*, and *contextualizing*—the very framing activity—should be brought into the foreground. How do you see this dynamic relationship of actor, scale, and content-context as a tool to reflect on "New Geographies?"

BL: Yes, it is a good question, the issue of representation and the issue of scale are the two big things that are interesting to discuss with architects and geographers. Because you cannot discuss these things with sociologists and social scientists, as they are absolutely not understandable to them. Scale is built on the definition of society itself, so beside the fact that there is a zoom that you can go from the large scale to the small scale, one moves into economics, sociology, psychology and it is absolutely impossible to move on. But, of course, scale is what is produced, not what you should have as your own meta-language to describe it. Scale is the most variable thing to analyze—it is in the hands of the actors because they constantly move scale. This is what is so ridiculous about the idea that when you are an urbanist you see everything, as they say, over a large scale, because you never have a large scale, you just look at a piece of paper of some size and you have a whole city there.

It is much more interesting in architecture and urbanism because there are skills to produce a whole series of intermediary steps full of models. Yaneva did a very interesting study of modes of building in architectural studios, precisely the way variation of scale is achieved, and this is the case for all sorts of

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practices.⁹ It can be having a little camera inside a scheme model, Photoshop manipulations, but even when the thing is built, the scale still varies enormously. "Localizing the Global" (one of the chapters of *Reassembling the Social*) is quite easy to do because every big space will always be in-situ. Once the whole building is built, however, you still have to visualize the whole building in an office, or in other technical elements.

"Redistributing the Local" (the next chapter in the same book) is more difficult, because we see a slight asymmetry. Even in the book, where I am trying to be completely symmetrical on this issue, but it is not completely true. Distribution on the local is slightly more difficult to trace, but the idea is that you replace the question of scale by the question of connection, and it is a connection that you follow. So there are lots of mechanisms that are very interesting for collaboration between social theory and architecture. But contextualizing is slightly more difficult to follow with localized things than global ones. Every time you speak about global things, you are always somewhere, in an office, inside with a visualizing tool in your hands, the demonstration is easy to make; the other aspect is that every locus is actually completely distributed and coming from a completely different range of both space and time. The former is counter-intuitive but easy to demonstrate. The latter is counter-intuitive and not so easy to demonstrate. But the result, of course, is that scale becomes what circulates.

Now I am saying this, but unfortunately Google Earth is breaking my argument. In Google Earth, people get so used to the idea of zoom. They believe that they are actually zooming as if they were God and they were moving toward or away from Earth. That is unfortunate, because just at a time when my argument had a slight chance of being understood—that scale is always local—Google Earth arrives and breaks everything and reinforces the Euclidian metaphors that circulating through space at all scales is possible. And it is not because it is actually just pixels. But it is so powerful and so well done that we are going to get another dose of modernist theory, precisely at the wrong time.

NG: So you see materiality as a means to address scale?

BL: It is one of the things, but there lots of things that circulate other than matter, like clichés, opinions. Comparing all the things that circulate in localiz-

ing a place is slightly more difficult to demonstrate than localizing the global. Because information technologies are so omnipresent, powerful and so easy to follow, you just follow the light. If someone says: "I have a theory about the Earth being round," it only takes five minutes to go to the place where the Earth is seen through astronomers or satellite connections.

NG: Does representation complicate this link? Do you think it is possible?

BL: Yes, I think it is possible, in large part because of information technology. One thing that is very simple to do is to visualize clichés, rumors, which before were so immaterial that you took them as context. Now you can follow them one by one. The web is a powerful tool; one can follow the dissemination from one blog to the other. As Gabriel Tarde, my hero of social theory, says: "We cannot do sociology nor study economics if we cannot follow conversations." Now we can. Now we can easily track local connections, so the more information technology we have, the easier this argument I am making is provable, except for Google Earth.

NG: Building on the issues of scale, and in the *Politics of Nature*, you propose to rethink *phusis* (nature), *polis* (city), and *logos* (discourse).¹⁰ Can you elaborate on that, particularly as it informs design?

BL: This is a slightly more abstract version of what we just discussed, because this book is an entirely architectural book. It is about the architecture of a parliament of things, but again, Sloterdijk might be more useful here because it is a problem of design. Where are we when the Earth becomes not the environment, but rather what we have to be artificially producing? It is a matter of design. If you extend design to the idea of producing "biological species" and place them into an entirely re-done "natural park," and so on. The Nobel Prize was given to these guys on the climate—it is a shame. The idea that you have to bring *phusis*, culture, politics together, this was our argument, but it is ridiculous to make it now because they got the Nobel Peace Prize and not for science! It is such an ominous geopolitical issue that the Nobel Peace Prize is actually given to people who organize something to vote on climate change, or at least to vote on the probability of climate change. So now the interesting question is: How do we do it? What is the parliament of things? That was what

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I was trying to do in this book, but no one really took it seriously because it was too abstract. So I suggest that people now shift to Sloterdijk because it is easier to absorb, especially with the architecture, though I still think that my argument has some advantage.

On this large question of design, the idea that we have to redesign the Earth is the big question, and of course, who is the designer and what are the new processes produced by design are also big questions. When you hear James Lovelock saying that we have to go from 9 billion humans to 500 million humans, the question of design is not the same! The big political questions are all about that type of design. But it goes at an incredible speed. If you think about the speed at which politics is now about things, it is amazing. Since We Have Never Been Modern, 11 everything has changed, and now my odd argument is completely common sense. So in terms of theory, this issue is solved. What is more interesting now is a political question like: Who is designing it?

Of course there are many things—like questions for political scientists, for ecologists of course, lawyers, architects, it is a very interesting task, but the general idea that humans and nonhumans are connected, that the divide between nature and culture is a very strange moment in history which is past, I will not spend a minute making it again. This is why I am interested in these practical tools because I think they are moving much further in the theory, which I also like to do. So how can we build these very small things? How do you build a web space that is adjusted to matters of concerns? I think these questions are really important, rather than fighting again for the big theory that nature and culture is one thing.

NG: Can you elaborate on your interest in virtual space and web space?

BL: I am working on the assumption that it takes several decades before a new medium is actually used to its potential, and that we are still very far from using the web in an interesting way. So far, it is just more of the same. It is like the first train, when it took us almost thirty years to realize that we could have coaches and corridors, so I have the same feelings with the web. Presently, it is just pages after pages; things are the same as real space. So my argument is: Can we use these tools so that they actually achieve what they are good at, which might not be reproducing pages but allowing for something else to come up?

In open discussions about science popularization, there is an interesting example: you go on the web to an amazing site called JOVE [http://www.jove.com/] where scientists put visualizations of their experiments. It is a YouTube for scientists! So why would you have a glossary when you can have a visualization of the phenomenon of which you can become virtual witness? So virtual witnessing is certainly one of the many little things where you see that now this medium is really original because you cannot do that in paper or text. This is the way I grade my students. If their web site is printable, it is a bad site. But if you use some of the many tools—and there are thousands of them—in a productive way, adjustable to intellectual enterprise or controversy, then you begin to produce true web originality.

NG: Did you understand the "Paris: Invisible City" project as a metaspace and space of new connections?

BL: I was interested in doing an experiment of printing an impossible-to-read book, and then doing an impossible-to-read web site, to frustrate traditional ways of vision, and to force television. This requires you resist the temptation of Google Earth. So I did this in two forms: I did a printed version that we did not manage to sell, and I was interested in doing the same thing on the web, with the help of a very interesting young artist who did the web site, Patricia Reed. It is about the unreadibility of the book and the unreadability of the web site, which are really interesting. I like the web site because it does things better than the printed book. It is a very small experiment that forces you to go from a step to another step through all of the intermediary steps.

NG: This leads to our last question concerning public space. How can we talk of the politics of public space in transnational geographies?

BL: What are transnational geographies?

NG: Geographies where it is difficult to identify traditional borders. How can we talk about a public space, or a common ground, when things are borderless?

BL: Are they borderless or do they have lots of different borders at different places? These are different topics. My feeling is that things are not borderless.

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Waters do not have the same borders as fish, cities, commerce, and every commerce has a different border. On the contrary, I think that public space is now becoming a central topic.

Geographers have always been good at being transnational in a way, and inventing varying scales and layers of representation. That is a great thing about geography: it is physical and human. So you have physical geography and human geography in the same department, which never happened with sociology. Unfortunately there is no "physical sociology," and that is why sociology is so poor because it never actually had a counter-part in the same department. Geography is the physical sociology, so to speak.

I think what is really interesting is that if you now take rivers, the many complexities of how to represent an angry river. Every river is a political agency. In my research consortium we have a friend, Cordulla Kropp, who did a Ph.D. on the river that goes through Munich, and how it changes kilometer by kilometer. So there is a modernist river for half of Munich, but then the same river is also a post-modernist river. It is so post-modernized that every element is redone: recreational space, replanting of trees, etc. It is in the center of Munich, but is still allowed to meander, which is a post-modernist gesture for a river, right? At the same time, rivers still need to produce electricity, so it goes straight. How you represent a river as an agent is a very interesting question. I do not know any river now that is not a contentious issue. In France, we even have a law to represent rivers politically. We actually have an institutional organ for river representation. But when you go to this parliament of rivers, which is the literal word they use, the representational tools from hydrography and geography are extremely disconnected with this question. So you have masses of maps in a traditional sense, which are critically informative but not necessarily what is needed to represent river in this political river assembly, and that is precisely where all these questions of controversy mapping comes from. In the phrase "controversy mapping," the word "mapping" is not metaphorical but literal. We want to be able to help the citizens of this new parliament of things to have the representational skills that are at the level of the issues. That is very much something that is common among geographers and architects.

- I. Bruno Latour and Peter Weibel, Making Things Public: Atmospheres of Democracy (MIT Press, Cambridge, 2005).
- 2. Bojidar Yanev, "Who is Minding the Bridges," in Ibid., 548-553.
- 3. Oleg Kharkhordin, "Things as Res publicae," in Ibid., 280-289.
- 4. MACOSPOL, see http://www.demoscience.org.
- tual/EN/index.html.
- 6. Albena Yaneva, "Scaling Up and Down: Extraction Trials in Architectural Design," Social Studies of Science 6: 35 (2005): 867-894.

- 7. Bruno Latour, and Peter Weibel. Iconoclash: Beyond the Image Wars in Science, Religion and Art (MIT Press: Cambridge, 2002).
- 8. Bruno Latour, Reassembling the Social: An Introduction to Actor-Network-Theory (Oxford University Press, Oxford, 2005).
- 9. Yaneva, "Scaling Up and Down."
- 10. Bruno, Latour, Politics of Nature: How to Bring the 5. Paris: Invisible City, http://www.bruno-latour.fr/vir- Sciences into Democracy, translated by Catherine Porter (Harvard University Press, Cambridge,
 - II. Bruno Latour, We Have Never Been Modern (Harvard University Press, Cambridge, 1993).