When most people think about geography, they think about maps. Lots of maps. Maps with state capitals and national territories, maps showing mountains and rivers, forests and lakes, or maps showing population distributions and migration patterns. And indeed, that isn’t a wholly inaccurate idea of what the field is all about. It is true that modern geography and mapmaking were once inseparable.

Renaissance geographers like Henricius Martellus and Pedro Reinel, having rediscovered Greek texts on geography (most importantly Ptolemy’s Geography), put the ancient knowledge to work in the service of the Spanish and Portuguese empires. Martellus’ maps from the late fifteenth century updated the old Greek cartographic projections to include Marco Polo’s explorations of the East as well as Portuguese forays along the African coast. Reinel’s portolan maps are some of the oldest modern nautical charts. Cartography, it turned out, was an indispensable tool for imperial expansion: if new territories were
to be controlled, they had to be mapped. Within a few decades, royal cartographers filled in blank spots on old maps. In 1500, Juan de la Cosa, who accompanied Columbus on three voyages as captain of the Santa María, produced the Mappa Mundi, the first known map to depict the New World. Geography was such an important instrument of Portuguese and Spanish colonialism that early modern maps were some of the empire's greatest secrets. Anyone caught leaking a map to a foreign power could be punished by death.  

In our own time, another cartographic renaissance is taking place. In popular culture, free software applications like Google Earth and MapQuest have become almost indispensable parts of our everyday lives: we use online mapping applications to get directions to unfamiliar addresses and to virtually "explore" the globe with the aid of publically available satellite imagery. Consumer-available global positioning systems (GPS) have made latitude and longitude coordinates a part of the cultural vernacular. In the arts, legions of cultural producers have been exercising the power to map. Gallery and museum exhibitions are dedicated to every variety of creative cartography; "locative media" has emerged as a form of techno-site-specificity; in the antiquities market, old maps have come to command historically unprecedented prices at auction. Academia, too, has been seized by the new powers of mapmaking: geographical information systems (GIS) have become a new lingua franca for collecting, collating, and representing data in fields as diverse as archaeology, biology, climatology, demography, epidemiology, and all the way to zoology. In many people's minds, a newfound interest in geography has seized popular culture, the arts, and the academy. But does the proliferation of mapping technologies and practices really point to a new geographic cultural a priori? Not necessarily. Although geography and cartography have common intellectual and practical ancestors, and are often located within the same departments at universities, they can suggest very different ways of seeing and understanding the world.

Contemporary geography has little more than a cursory relationship to all varieties of cartography. In fact, most critical geographers have a healthy skepticism for the "God's-Eye" vantage points implicit in much cartographic practice. As useful as maps can be, they can only provide very rough guides to what constitutes a particular space.

Geography is a curiously and powerfully transdisciplinary discipline. In any given geography department, one is likely to find people studying everything from the pre-Holocene atmospheric chemistry of northern Greenland to the effects of sovereign wealth funds on Hong Kong real estate markets, and from methyl chloride emissions in coastal salt marshes to the racial politics of nineteenth-century California labor movements. In the postwar United States, university officials routinely equated the discipline's lack of systematic methodological and discursive norms with a lack of seriousness and rigor, a perception that led to numerous departments being closed for lack of institutional support. The end of geography at Harvard was typical of what happened to the field; university officials shut down its geography department in 1948, as CUNY geographer Neil Smith tells it, after being flummoxed by their "inability to extract a clear definition
of the subject, to grasp the substance of geography, or to determine its boundaries with other disciplines. The academic brass "saw the field as hopelessly amorphous." But this "hopeless amorphism" is, in fact, the discipline's greatest strength.

No matter how diverse and transdisciplinary the field of geography may seem, and indeed is, a couple of axioms nevertheless unify the vast majority of contemporary geographers' work. These axioms hold as true for the "hard science" in university laboratories as for human geographers studying the unpredictable workings of culture and society. Geography's major theoretical underpinnings come from two related ideas: materialism and the production of space.

In the philosophical tradition, materialism is the simple idea that the world is made out of "stuff," and that moreover, the world is only made out of "stuff." All phenomena, then, from atmospheric dynamics to Jackson Pollock paintings, arise out of the interactions of material in the world. In the western tradition, philosophical materialism goes back to ancient Greek philosophers like Democritus, Anaxagoras, and Epicurus, whose conceptions of reality differed sharply from Plato's metaphysics. Later philosophers like Thomas Hobbes, David Hume, Ludwig Feuerbach, and Karl Marx would develop materialist philosophies in contradistinction to Cartesian dualism and German idealism. Methodologically, materialism suggests an empirical (although not necessarily positivistic) approach to understanding the world. In the contemporary intellectual climate, a materialist approach takes relationality for granted, but an analytic approach that insists on "stuff" can be a powerful way of circumventing or tempering the quasi-solipsistic tendencies found in some strains of vulgar poststructuralism.

Geography's second overarching axiom has to do with what we generally call "the production of space." Although the idea of the "production of space" is usually attributed to the geographer-philosopher Henri Lefebvre, whose 1974 book *La Production de l'Espace* introduced the term to large numbers of people, the ideas animating Lefebvre's work have a much longer history. Like materialism, the production of space is a relatively easy, even obvious, idea, but it has profound implications. In a nutshell, the production of space says that humans create the world around them and that humans are, in turn, created by the world around them. In other words, the human condition is characterized by a feedback loop between human activity and our material surroundings. In this view, space is not a container for human activities to take place within, but is actively "produced" through human activity. The spaces humans produce, in turn, set powerful constraints upon subsequent activity.

To illustrate this idea, we can take the university where I'm presently writing this text. At first blush, the university might seem like little more than a collection of buildings: libraries, laboratories, and classrooms with distinct locations in space. That's what the university looks like on a map or on Google Earth. But this is an exceptionally partial view of the institution. The university is not an inert thing: it doesn't "happen" until students arrive to attend classes, professors lock themselves away to do research, administrative staff pays the bills and registers the students, state legislators appropriate money for campus operations,
and maintenance crews keep the institution's physical infrastructure from falling apart. The university, then, cannot be separated from the people who go about "producing" the institution day by day. But the university also sculpts human activity: the university's physical and bureaucratic structure creates conditions under which students attend lectures, read books, write papers, participate in discussions, and get grades. Human activity produces the university, but human activities are, in turn, shaped by the university. In these feedback loops, we see production of space at work.

Fine. But what does all of this have to do with art? What does this have to do with "cultural production?"

Contemporary geography's theoretical and methodological axioms don't have to stay within any disciplinary boundaries whatsoever (a source of much confusion at Harvard back in the mid-1940s). One can apply them to just about anything. Just as physical geographers implicitly use the idea of the production of space when they inquire into the relationship between human carbon emissions and receding Antarctic ice shelves, or when human geographers investigate the relationships between tourism on Tanzanian nature preserves, geography's axioms can guide all sorts of practice and inquiry, including art and culture. A geographic approach to art, however, would look quite different than most conventional art history and criticism. The difference in approach would arise from the ways in which various disciplines rely on different underlying conceptions of the world. A geographer looking into art would begin with very different premises than those of an art critic.

To speak very generally, the conceptual framework organizing much art history and criticism is one of "reading culture," where questions and problems of representation (and their consequences) are of primary concern. In the traditional model, the critic's task is to describe, elaborate upon, explain, interpret, evaluate, and critique pre-given cultural works. In a certain sense, the art critic's role is to act as a discerning consumer of culture. There's nothing at all wrong with this, but this model of art criticism must (again, in a broad sense) tacitly assume an ontology of "art" in order to have an intelligible starting point for a reading, critique, or discussion. A good geographer, however, might use her discipline's analytic axioms to approach the problem of "art" in a decidedly different way.

Instead of asking "What is art?" or "Is this art successful?" a good geographer might ask questions along the lines of "How is this space called 'art' produced?" In other words, what are the specific historical, economic, cultural, and discursive conjunctures that come together to form something called "art" and, moreover, to produce a space that we colloquially know as an "art world?" The geographic question is not "What is art?" but "How is art?" From a critical geographic perspective, the notion of a free-standing work of art would be seen as the fetishistic effect of a production process. Instead of approaching art from the vantage point of a consumer, a critical geographer might reframe the question of art in terms of spatial practice.6

We can take this line of thinking even further. Instead of using geo-
graphic axioms to come up with an alternative “interpretive” approach to art (as I suggested in the previous paragraph), we can use them in a normative sense. Whether we’re geographers, artists, writers, curators, critics, or anyone else, we can use geographic axioms self-reflexively to inform our own production.

If we accept Marx’s argument that a fundamental characteristic of human existence is “the production of material life itself” (that humans produce their own existence in dialectical relation to the rest of the world),2 and, following Lefebvre (and Marx) that production is a fundamentally spatial practice,3 then cultural production (like all production) is a spatial practice. When I write an essay such as this, get it published in a book, and put it on a shelf in a bookstore or museum, I’m participating in the production of space. The same is true for producing art: when I produce images and put them in a gallery or museum or sell them to collectors, I’m helping to produce a space some call the “art world.” The same holds true for “geography”: when I study geography, write about geography, teach geography, go to geography conferences, and take part in a geography department, I’m helping to produce a space called “geography.” None of these examples is a metaphor: the “space” of culture isn’t just Raymond Williams’ “structure of feeling” but, as my friends Ruth Wilson Gilmore and Clayton Rosati underline, an “infrastructure of feeling.”

My point is that if one takes the production of space seriously, the concept applies not only to “objects” of study or criticism, but to the ways one’s own actions participate in the production of space. Geography, then, is not just a method of inquiry, but necessarily entails the production of a space of inquiry. Geographers might study the production of space, but through that study, they’re also producing space. Put simply, geographers don’t just study geography, they create geographies. The same is true for any other field and any other form of practice. Taking this head-on, incorporating it into one’s practice, is what I mean by “experimental geography.”

Experimental geography means practices that take on the production of space in a self-reflexive way, practices that recognize that cultural production and the production of space cannot be separated from each other, and that cultural and intellectual production is a spatial practice. Moreover, experimental geography means not only seeing the production of space as an ontological condition, but actively experimenting with the production of space as an integral part of one’s own practice. If human activities are inextricably spatial, then new forms of freedom and democracy can only emerge in dialectical relation to the production of new spaces. I deliberately use one of modernism’s keywords, “experimental,” for two reasons. First is to acknowledge and affirm the modernist notion that things can be better, that humans are capable of improving their own conditions, to keep cynicism and defeatism at arm’s length. Moreover, experimentation means production without guarantees, and producing new forms of space certainly comes without guarantees. Space is not deterministic, and the production of new spaces isn’t easy.

In thinking about what experimental geography entails, especially
in relation to cultural production, it’s helpful to hearken back to Walter Benjamin, who prefigured these ideas in a 1934 essay entitled “The Author as Producer.”

While he worked in exile from the Nazis in Paris during much of the 1930s, Benjamin’s thoughts repeatedly turned to the question of cultural production. For Benjamin, cultural production’s status as an intrinsically political endeavor was self-evident. The intellectual task he set for himself was to theorize how cultural production might be part of an overall anti-Fascist project. In his musings on the transformative possibilities of culture, Benjamin identified a key political moment in cultural works happening in the production process.

In Benjamin’s “Author as Producer” essay, he prefigured contemporary geographic thought when he refused to assume that a cultural work exists as a thing-unto-itself. “The dialectical approach,” he wrote, “has absolutely no use for such rigid, isolated things as work, novel, book. It has to insert them into the living social context.” Right there, Benjamin rejected the assumption that cultural works have any kind of ontological stability and instead suggested a relational way of thinking about them. Benjamin went on to make a distinction between works that have an “attitude” toward politics and works that inhabit a “position” within them. “Rather than ask ‘What is the attitude of a work to the relations of production of its time?’” he wrote, “I should like to ask, ‘What is its position in them?’” Benjamin, in other words, was identifying the relations of production that give rise to cultural work as a crucial political moment. For Benjamin, producing truly radical or liberatory cultural works meant producing liberatory spaces from which cultural works could emerge. Echoing Marx, he suggested that the task of transformative cultural production was to reconfigure the relations and apparatus of cultural production, to reinvent the “infrastructure” of feeling in ways designed to maximize human freedom. The actual “content” of the work was secondary.

Experimental geography expands Benjamin’s call for cultural workers to move beyond “critique” as an end in itself and to take up a “position” within the politics of lived experience. Following Benjamin, experimental geography takes for granted the fact that there can be no “outside” of politics, because there can be no “outside” to the production of space (and the production of space is ipso facto political). Moreover, experimental geography is a call to take seriously, but ultimately move beyond cultural theories that equate new enunciations and new subjectivities as sufficient political ends in themselves. When decoupled from the production of new spaces, they are far too easily assimilated into the endless cycles of destruction and reconstitution characterizing cultural neoliberalism, a repetition Benjamin dubbed “Hell.”

The task of experimental geography, then, is to seize the opportunities that present themselves in the spatial practices of culture. To move beyond critical reflection, critique alone, and political “attitudes,” into the realm of practice. To experiment with creating new spaces, new ways of being.

What’s at stake? Quite literally, everything.
Notes

1. Many of the ideas in this essay have been developed over almost two decades of conversations with my longtime friend and interlocutor Nato Thompson.


5. Lefebvre's analysis, like much critical geography, relies on a spatial reading of Marx.

6. Rosalyn Deutsche's book Evictions is the best example of what a critical art-historical project along these lines might look like. I would like to see more art historians take this project up. See Rosalyn Deutsche, Evictions: Art and Spatial Politics, Cambridge: MIT Press, 1996.


11. Ibid.

12. Ibid.
THE BUS TOUR AS INVERTED VITRINE:
ENGAGING WITH THE MATERIAL CULTURE OF THE MUSEUM OF THE AMERICAN LAND

MATTHEW COOLIDGE

The tour bus is a mobile theater—a captive audience, in a room of chairs, facing forward, with anticipation. The world lies ahead. Anything could be ahead. At the front is the narrator, off to the side of the big picture window of where we are going. The narrator's job is to be the matrix that holds the parts together, providing continuity, thematic structure, and consistency to the experience. The narrator must set people at ease so that their defenses are down and they are ready to absorb, and to prepare fertile ground that allows for the growth of new ideas. But the narrator is not the subject, only a medium, a shaman. The point is the thing pointed out, not the pointer. And people shouldn't be too comfortable, as the purpose of the journey is not recreation, but inspiration. To keep things exciting, we have to all be in the same experimental boat of possibility, and people should be on the edge, ready to jump. It is research.

A valuable resource on the bus is the video monitors, where supporting material for the tour, such as film clips, documentaries, slideshows, and live tracking maps, can be presented. Using the monitors, a video camera can zoom in to make distant objects in the land visible. Time and space can be folded, shrinking long distances between things with engaging and relevant video material, or making figurative allusions to places and spaces you are passing through. The possibilities for phenomenological fris-son between multimedia and physical place are untapped, exciting, and nearly endless. But it is important to default to the primacy of place, since there you are. It's outside the frame of the windows. Get off the bus.

The most important part of the bus tour is the destinations. Anyone in the museum profession can tell you about the importance of the visitor's proximity to the physical artifacts of the museum. This connection with "material culture" is the whole point of the museum. But in the museum of the American Land, the material artifacts are places and spaces, and they cannot be housed in a vitrine. The answer is the bus tour; creating a museum atmosphere inside the bus bubble, and taking it out to the land. The bus is the vitrine (and the tourists are part of the subject, too).

Unlike most museums though, where the artifacts are insulated from direct contact by glass cases, or the established safe-distance for people from pictures on the wall is monitored by watchful guards, the museum of land allows for full contact and immersion with the subject. In the American Land Museum, not only can you touch the artifacts, you can be in them and on them. You can be surrounded by them, enter their spaces, ingest their dander and odor. This receptive exchange is the final and deepest link in connecting people to experience. Once you have been there, you have done that. It stays.
LOOP FEEDBACK LOOP
THE BIG PICTURE OF TRAFFIC CONTROL IN LOS ANGELES
MATTHEW COOLIDGE FOR CLUI

The Center for Land Use Interpretation is a research organization that examines the nature and extent of human interaction with the earth’s surface. The Center embraces a multidisciplinary approach to fulfilling the stated mission, which is to “increase and diffuse knowledge about how the nation’s lands are apportioned, utilized, and perceived.” To these ends, the Center employs conventional research and information processing methodology as well as nontraditional interpretive tools. The Center collects, catalogues, interprets, and disseminates information about the contemporary landscape through its archives and public programs, which include exhibitions, publications, and tours.

The Center also exists to stimulate discussion, thought, and general interest in the contemporary landscape. Neither an environmental group nor an industry affiliated organization, the Center can work to integrate the many approaches to land use—the many perspectives of the landscape—into a single view that emphasizes the shared, common ground.

The Center operates with the belief that the physical landscape embodies an inscription of the society that operates within it, and that in reading and understanding this inscription comes a deeper awareness of the relationship between humans and their environment. Learning and teaching the vocabulary of this “language of land use” is one of the functions of the Center. Another is to discover ways of seeing the utilization of terrestrial and geographic resources that have yet to be considered.
UPRIVER
POINTS OF INTEREST ON THE HUDSON FROM THE BATTERY TO TROY

OPENING OCTOBER 6, 2006
THE CENTER FOR LAND USE INTERPRETATION
1 THIRD STREET TROY, NY 12180

Above and Left: The Center for Land Use Interpretation image and text panels depicting the programs and projects of CLUI, 2007. Inkjet prints 16 x 24 in. (40.6 x 61 cm) each.
The following text is excerpted from *When Faith Moves Mountains* by Francis Alys and Cuauhtémoc Medina, which documents the creation of *When Faith Moves Mountains*, a project about geological displacement, but which also may be applied to *The Making of Lima*. On April 11, 2002, five hundred volunteers were equipped with shovels and asked to form a single line at the foot of a five-hundred-meter-wide dune in Ventanilla, on the outskirts of Lima, Peru. This human comb pushed a certain quantity of sand a certain distance, thereby moving the dune a few inches from its original position. The physical displacement was infinitesimal, but its metaphorical implications were not.

If I remember right, the first way the project was stated, during my first visit to Lima, was above all verbal—"Faith moves mountains"—and came before any image of the project. And this statement was so simple that its physical, visual translation had to be just as direct. From that point on, there wasn’t much more to it: the obvious demonstration of the saying "to move a mountain" is to "draw a line" (which was later illustrated as a comb, used to "comb" the landscape). Remove a thin layer of sand from one side of the hill and put it back on the other and you’ll cause a minimal but real geological displacement. In a more pragmatic manner, it was also the most explicit way of communicating the metaphor’s physical application to the other people involved.... Yes, it’s true, nothing changed, but for a few hours the possibility of change was introduced, besides the absurdity or futility of the act.
Above and Left: Francis Alís (in collaboration with Cuauhtémoc Medina and Rafael Ortega), Where Faith Moves Mountains, 2002 (video stills). Three-channel video installation with color and sound, 34 mins.
Above: Ilana Halperin, Near ITTOQQORTOOREMIIT from the project Towards Helgolv Land, 2007. Etching on handmade Fabriano paper, 39 x 23 in. (99.1 x 58.4 cm).
GEOLOGIC INTIMACY/PHYSICAL GEOLOGY

Please explain this impulse to me—attempts of physical contact with geological time.

Recently, I have been spending time in the "oddities" drawer of the geology department at the Manchester Museum. In it, I came upon a very fine collection from Mount Vesuvius of lava medallions—magma pressed between forged steel plates to form an imprint. Imagine a waffle iron that makes use of lava instead of pancake batter. In the same drawer, a small stone relief sculpture which appeared to be carved out of pure white alabaster was in fact revealed to be a limestone cast made through the same process that forms stalactites in a cave—the residue of a high-velocity calcifying process.

I have been thinking about physical geological time—the fast-moving lava flow vs. slow time inside a cave. The impulse to understand geothermal water through boiling milk in a 100-degrees-Celsius sulfur spring in the crater of an active volcano.

I spoke with a paleontologist who told me that a fossil is the presentation of the moment of death, that trace fossils record an action—eating or walking, but not the organism itself.

Jim said to me, a volcano buries itself. It perpetually erases its own history.

In Towards Heilprin Land, a volcanologist explained the nature of love to me. He said, you love what you get to know, what you pay attention to and therefore become more aware of. This is not a passive form of love.

This is how I feel about the volcano.
The substance of cities is bricks, stone, mortar, cement, glass, steel, and asphalt. The strength of these materials, their consistency and their chemistry, is what makes citizens feel that their lives have a durable material basis. The road you walk on to the corner store will not suddenly open up like a chasm, the building you live in will not collapse in a pile of rubble for no reason. The bridge you cross will not break if it is not bombed. The sky does not fall on the heads of law-abiding citizens. Not ordinarily.

From time to time, whispers and rumours run through these blocks of certainty like bursts of runaway voltage from a faulty transformer. Lights flicker, flare, and die, the blades of ceiling fans and the ordinary courses of daily life circle to a suspended stillness. The city is an epileptic and rumours are its seizures. Things can come undone because of a whispered rumour. Cities may be built in steel and concrete, but they are eroded by whispers. Erosion by Whispers reflects on the way in which rumours render cities ephemeral. Their intangible presence can be read across the density of urban infrastructure—housing, electricity, water and other utilities—to suggest that fragility is as much part of the experience of cities as the claim to endurance.

Raqs Media Collective: Jeebesh Bagchi, Monica Narula, and Shuddhabrata Sengupta.
schools of secret lessons are open for students
and markets for all things living, or dying, are thriving, they say
you know erosion by whispers in the bones of your city.
In 1966, a young architect proposed a design for a five-star hotel and a new mosque in Martyrs’ Square, the center of Damascus. In 1971, his plans were scrapped. In 1982, a building began to be built. Hospital? Parking Garage? Military Housing? The project—now called the Basel al-Assad Center—has been the subject of much rumor and speculation. As of 2007, the building remains unfinished. In this documentary video, \textit{take into the air my quiet breath}, an architect recounts the chronicle of the building and considers its possible future.