

## Mattern: The City Has Always Been Mediated, November 23, 2009

Point-person for Media & Urban Environment Focus Area

No shortage of attention paid to the mediated city

- As I mentioned in my presentation here earlier this semester, my current research in inspired in part by an exhaustion with the amount of work – especially over the past couple decades – on the “cinematic” or “photographic” city.

Obviously a great deal of attention paid to digital city, too. I’ll start off by reviewing some recent new media projects. But then, I’ll argue for an expanded focus on the mediated city –

**[CLICK]** BEYOND LOOKING FORWARD -- which has two parts:

1. First, we must go **BEYOND LOOKING**; the city is not only visual
2. Second, we must **not only LOOK FORWARD**; recognize precedents – infrastructure that was laid long ago that shapes formal evolutions today; predictions about urban experience made centuries ago that we hear echoed today, in relation to new media technologies, etc.

### 1. **[SLIDE 2]** BEYOND LOOKING

#### Much Recent Work on Sensing / Visualizing Urban Experience Sentient City

##### **[SLIDE3]** Sentient City

**[SLIDE4]** Mark Shepard, Curator, Professor of Architecture, University of Buffalo: “Today, as computing leaves the desktop and spills out onto the sidewalks, streets and public spaces of the city, we increasingly find **information processing capacity embedded within and distributed throughout the material fabric of everyday urban space**. Artifacts and systems we interact with daily collect, store and process information about us, or are activated by our movements and transactions. Ubiquitous computing evangelists herald a coming age of urban infrastructure capable of sensing and responding to the events and activities transpiring around them. Imbued with the capacity to remember, correlate and anticipate, this near-future “sentient” city is envisioned as being capable of reflexively monitoring its environment and our behavior within it, becoming an active agent in the organization of everyday life in urban public space.”

**[SLIDE5]** NEW ROLE FOR ARCHITECTURE: “Within architecture, the recent fascination with building envelopes wrapped with large-scale programmable “**urban screens**” or corporate lobbies outfitted with so-called “interactive architecture” highlights the dilemma. In an age of urban computing and ambient informatics, what opportunities for the design of urban artifacts and spaces lie beyond the architectural surface as confectionary spectacle or the interior vestibule as glorified automatic door opener?”

**[SLIDE6] Urban Screens** (mention biannual conference) + IAC Media Wall  
(about which I've written)

**[SLIDE7]** The projects in *Toward the Sentient City* explore alternate trajectories for the design and inhabitation of this near-future urban environment....

Ultimately, *Toward the Sentient City* argues against a techno-determinism that cedes overwhelming agency to new technologies and either champions or laments their projected impact on urban life. Rather, the exhibition examines the relationship between ubiquitous computing, architecture and the city in terms of the active role its citizens might play – or neglect to play – as both designers and inhabitants, in the unfolding techno-social situations of near-future urban environments.”

(<http://www.sentientcity.net/exhibit/?p=3>)

### Similarly Motivated Project, w/ Diminished Results: HUB2

**[SLIDE8] Hub2**

Hub2 adds to the existing community process by enabling groups of people to engage in non-verbal deliberation about their shared spaces. Through a set of formal workshops and informal drop-in hours, community members are encouraged to express their opinions by showing instead of telling.

We think this is the big **IDEA** (imagine, design, engage, activate). We believe it is possible for people to fully engage in urban design decisions without being an expert in urban design. Through the power of Second Life and the participatory platform we designed within it, participants are able to *imagine* what a space could like look, *design* that space to their liking, *engage* with that space by actually being in it, and *activate* that space by having the language to talk to their friends and neighbors about good design.

we employ **teenagers** in the neighborhoods in which we work to serve as technology "interpreters." This accomplishes two things: it makes the technology less intimidating and fosters inter-generational communication around local and neighborhood issues.

\*\*Creating architecture in Second Life **reduces space to massing and facades**

Now, back to Sentient City...

Trash Track

**Trash Track**, SENSEable City, MIT

**[SLIDE9] Garbage War, Naples:** no remaining capacity in dumps, no incinerators  
*Nobody wonders where, each day, they carry their load of refuse. Outside the city, surely: but each year the city expands, and the street cleaners have to fall farther back. The bulk of the outflow*

*increases and the piles rise higher, become stratified, extend over a wider perimeter.* Italo Calvino, Invisible Cities

**[SLIDE10]** Trash Track: How It Works, SENSEable City, MIT  
**[VIDEO]** <http://www.youtube.com/watch?v=NTkVbwe7Y9M>

TrashTrack uses hundreds of small, smart, location aware tags: a first step towards the deployment of smart-dust – networks of tiny locatable and addressable microelectromechanical systems. These tags are attached to different types of trash so that these items can be followed through the city's waste management system, revealing the final journey of our everyday objects in a series of real time visualizations.

The project is an initial investigation into understanding the 'removal-chain' in urban areas and represents a type of change that is taking place in cities: a bottom-up approach to managing resources and promoting behavioral change through pervasive technologies.

**[SLIDE11]** Plastic Container of Liquid Soap

**Problem: Garbage is not only a visual phenomenon; it has much wider implications – and any attempt at public education on this issue should tap into those other realms by engaging other ways of knowing, or thinking about the problem.**

## Urban Atmospheres @ Intel, Berkeley

**[SLIDE12]** Urban Atmospheres link to projects websites

At intersection of mobile and social computing, we seek to provoke discussion aimed at understanding this emerging space of computing within and across our public urban landscapes – Urban Computing.

**[CLICK]** Themes of interest: Place, Community, Infrastructure, Traversal

**[CLICKTopBanner]** <http://www.urban-atmospheres.net/> (much work on air quality)

## Recurring Theme: MAKING SEEN THE UNSEEN

### Other Uses of Sensors / RFIDs

**[SLIDE13]** Chris Oakley, "The Catalogue"

**[VIDEO]** [http://www.chrisoakley.com/the\\_catalogue.html](http://www.chrisoakley.com/the_catalogue.html)

### Converse: Making Unsee-able the Seen

**[SLIDE14] Mark Shepard, Sentient City Survival Kit**

(<http://survival.sentientcity.net/>) [umbrella w/ infrared LEDs that thwart surveillance cameras]

The Sentient City Survival Kit is a design research project that **explores the social, cultural and political implications of ubiquitous computing for urban environments...**

Few may quibble about “smart” traffic light control systems that more efficiently manage the ebbs and flows of trucks, cars and busses on our city streets. Some may be irritated when discount coupons for their favorite espresso drink are beamed to their mobile phone as they pass by Starbucks. Many are likely to protest when they are denied passage through a subway turnstile because the system “senses” that their purchasing habits, mobility patterns and current galvanic skin response (GSR) reading happens to match the profile of a terrorist

The project aims to **raise awareness of the implications for privacy, autonomy, trust** and serendipity in this highly observant, ever-more efficient and over-coded city.

*Another Recurring Theme; CONNECTING TO PLACE (Augmented Reality)* [see Lev Manovich on “augmented space”]

Looking at Nothing

**[SLIDE15] Annie Han & Daniel Mihalyo, Lead Pencil Studios, “Looking at Nothing,” Van Alen New York Prize Fellows, Summer 2010**

**Jess Blaustein @ Van Alen: Urban Media Lab class in Spring**

Annie Han and Daniel Mihalyo’s Looking at Nothing is a 3-dimensional research project that **seeks to quantify, distill and bring a renewed understanding to the complex spatial qualities of the urban environment using data gathered by a high density laser scanning device, known as LIDAR** (light detection and ranging). Co-founders and principals of the Seattle-based hybrid art and architecture practice, Lead Pencil Studio, Han and Mihalyo are interested in exploring the ineffable aspects of urban public space and the influence of architecture on human psychology. In Looking at Nothing, **they counter what they understand to be our prevailing tendencies to look through space as nothing and see surfaces, and our limited abilities to describe the parameters of the invisible with vague dualities such as solid/void, figure/ground, or positive/negative.**

During their Van Alen Institute fellowship residency, Han and Mihalyo will use LIDAR to create an analytical catalogue of the aggregate spatial environment of New York City. Building upon their investigations in Rome, Han and Mihalyo plan to scan dozens of locations within New York City, concentrating on the public spaces in the

right of way and the differing spatial typologies found at each site. First developed in California for the Petroleum industry, LIDAR (Laser Infrared Detection and Ranging) uses a laser to make millions of highly accurate point measurements that are tracked and ordered to form a perfect digital 3-dimensional model of the visible world. LIDAR is **capable of capturing the minute detail and texture** of a New York alley at a distance of 600 feet from the scan position, right down to the size of the bottle cap found under a dumpster.

Looking at Nothing codifies in spatial terms what physical qualities and components, in their multiplicity, constitute the surfaces that our senses interpret as the 'city'. Capturing and assembling this data in the digital realm, Han and Mihalyo will create **comparative distillations of constituent parts of the urban landscape – only signs, for example, or windows, or utility infrastructure, or buildings, or spaces between buildings**. Looking at Nothing aims to expand our field of perception by precisely removing things from view. At the conclusion of their term, Han and Mihalyo will exhibit their research and observations through prints, drawings, and digital animation video, in anticipation of a large-scale site-specific installation.

**[CLICK]** LIDAR of Ground Zero

## Museum of the Phantom City

**[SLIDE16]** Van Alen Institute's Fellows Program

[http://www.vanalen.org/fellowship/fellows/03\\_2009\\_ChengSnyder](http://www.vanalen.org/fellowship/fellows/03_2009_ChengSnyder)

**[SLIDE17]** Museum of the Phantom City

Irene Cheng and Brett Snyder's Museum of the Phantom City **uses personal telecommunications technologies to transform New York City into an interactive museum of architecture and urbanism**. Conceived as an **"open source" museum**, the project engages the public by encouraging users to act as both tourists and curators of the city.

Cheng and Snyder propose to rethink our current system of guidebooks and maps and their one-way flow of information, by **redeploying multimedia cell phones and PDAs as instruments for revealing the hidden stories behind the city's buildings and streets**. Museum of the Phantom City will house a multi-media **archive of descriptions and experiences, audio and video recordings, and images** that offer **access to otherwise invisible narratives of the city**. While traveling throughout the city, for example, pedestrians may be able to download or upload images of unrealized or utopian schemes for the sites they encounter, allowing them to see the juxtaposition of present and future. **Other itineraries may map the city according to user-generated descriptions of less determinate qualities, like mood or sounds**, enabling a user to navigate the city by spaces in which particular moods are predominant.

**[SLIDE18] OTHERFUTURES**

- WNYC: <http://www.wnyc.org/news/articles/143185>
- Significance of having to be **ON SITE**

**[SLIDE19] Bucky Fuller's Dome**

- Phantom City website: <http://phantomcity.org/> -- click on “designers,” choose Buckminster Fuller

## New Potential for Ubiquitous Computing

**[SLIDE20] Adam Greenfield**, head of design direction @ Nokia; teaches at NYU ITP; author of *Everyware*; blogger on Speedbird

**[SLIDE21]** “The Long Here, The Big Now” *PICNIC08* [7:00 → 12:00] “That which primarily conditions choice ... is no longer physical...”

**[VIDEO]** <http://vimeo.com/2436640>

(Picnic is like a Dutch TED conference)

**[SLIDE22] Archigram's Living City exhibition** @ Institute of Contemporary Arts, London, 1963 – looked at city as an organism

“Through image, text, sound and light, this ‘**assault on the senses**’ that physically enveloped visitors attempted to convey ‘a vision of the city as an environment conditioning our emotions.’” (Sadler 2003: 556; quoting Maxwell 1964). Archigram member Dennis Crompton reported to Hadas Steiner that the group considered integrating “**city smells**,” as well; “You must have noticed the different characteristic smells of Paris, Milan, London and New York...” (Steiner 2006: n27). But as Sadler points out, “The potential of an exhibition to operate as a **total, sensorially conditioning environment** had already been demonstrated at the Institute of Contemporary Arts by the 1959 *Place* show, coordinated by a team that included the erstwhile Situationist Ralph Rumney” (2003: 567).

**Spatial experience is not solely visual**

Increased Interest in **Embodied Experience**

Mirko Zardini, in his introduction to the *Sense of the City* exhibition catalogue, proposes that these mediations have the potential to

**[SLIDE23]** Need to explore projects that would “*pose a different way of talking about, describing, and planning our cities; they suggest thinking of them as places for our bodies...; they remind us how mutable is our way of perceiving the urban environment; they offer us a history of the changes in the Western city from new points of view that have been hitherto neglected; in addition, they reveal to us the possibilities provided by the urban environment in its various aspects – those of sound, smell, touch, vision, and climate – and invite us to look at them in new ways* (Zardini 2005: 24).

Or hear, smell, taste, or touch them in new ways, he might rather have said. These urban mediations would enhance and expand the field of resources available to researchers, who still attend primarily to graphic sources. They also have the potential to enhance exhibitions exploring urban history or city life, to play a role in the development of multisensory and urban pedagogies, and to open up new directions for media art.

**[SLIDE24]** **Sense of the City Exhibition**, CCA, 10/26/05 – 9/10/06

**[SLIDE25]** **Nocturnal City**: we examined the night-time city and its illumination, and, through Braille and audio-tactile maps, we imagined a sightless means of navigating the city.

**[SLIDE26]** **Seasonal City**: videos showed snowplows digging Montreal out from under feet of snow, and photographs imaged architectures of ice.

**[SLIDE27]** **Sound of the City**: we donned headphones to hear the unique soundscapes of various cities throughout the world

**[SLIDE28]** **Surface of the City** drew attention to the color, texture, and smell of asphalt by encouraging us to touch and smell samples of the materials that coat the city’s surface.

**[SLIDE29]** **Air of the City** explored air quality and the regulation of the urban atmosphere with heating, ventilation, and air conditioning systems. Here we also sniffed vials of bottled “urban” scents – ranging from subway detergent to grass to garbage.

**[SLIDE30]** **Sensing Chicago @ Chicago History Museum**

Honorable Mention in Excellence in Exhibition Competition, American Association of Museums

**[SLIDE31]** **Sensing Chicago**

## Media Projects: Audio

SoundSeeker

**[SLIDE32]**

Betsey Biggs @ Conflux

[SLIDE33] Eleven Dreams in Redhook

<http://silvertone.princeton.edu/~bb//11dreamsinredhook/>

[SLIDE34] Map

[SLIDE35] Pictures w/ **Sound File**

## Smell

[SLIDE36] Gawker's New York Subway Smell Map

[SLIDE37] NYTimes Jason Logan Scents and the City, 8/29/09

## Multisensorial Art Projects

[SLIDE38] Red Dive's "Peripheral City": sought to create "artistic experience in which audiences could engage with many different kinds of art and performance on a multi-sensory level and interact with each other and the surroundings in a heightened way"

[SLIDE39] The collective's **guided "performance-tours"** throughout New York involved **impromptu performances and dances and live musicians**, who sometimes appeared alongside the tour, "animating an overlooked piece of architecture through rhythm and sound."

2000 work, "**One Less Sense**," a tour of an old school building in which participants were **blindfolded** and guided via touch and whispers and encouraged to **hear, feel, taste, and smell their way through the space**

## Mediated Parallel: Remediated Places Project

Ruth Tringham's, Michael Ashley's (both Berkeley), and Steve Mills' (U of Cardiff)

[SLIDE40] Remediated Places Project "aims to share the multisensorial experience, construction and memory of places, specifically cultural heritage sites" – in this case, the 9000-year old mound of Çatalhöyük, Turkey. This project doesn't deal specifically with cities, but its techniques can certainly be applied to the representation of other spaces *like* cities.

- <http://okapi.dreamhosters.com/remixing/mainpage.html>

[SLIDE41] **Wide variety of media formats:** photographs, drawings, video, virtual reality renderings, GIS maps, texts, and numerical data created during archeological digs, along with specific "remediation" media: videowalk logs recorded with binaural microphones, video interviews with archeologists about their "remembered sense perception" at Çatalhöyük, and ambient sound clips.

[VIDEO] <http://chimeraspider.wordpress.com/about/remediated-places-on-youtube/> [4:03]

**[SLIDE42]** The project is **scalable, modular, and portable for reception in various formats and by difference audiences. On-site in Turkey**, the project could serve as an installation at an interpretive center; visitors could take an ipod and headphones with them while touring the site, and they could choose an audiovisual tour that represents any of several themes (the senses, life history, etc.). The project could also be **experienced remotely as a website**: you might take a virtual tour that provides some of the same content presented in the on-site audiovisual tour, including video and photographs, but online, the still and moving images stand in for direct experience. Finally, the project could be a **live performance**, which the developers describe as “something between a play, an opera, and a circus” – a form of improvisational theater that appeals to embodied sensory knowledge of the place.

**[SLIDE43: Quote]** Remediated Places seeks to “enable the user – at whatever level of experience and skill – to **draw out these innumerable fragments of multisensorial places, memories, life-histories, and interpretations of the archaeological data at multiple scales...and recombine or remix them**”; a “key point of the project,” the developers say, “is to demonstrate transparently the intentionality of authoring and the shared experience of author and audience that is created through interactivity.”

**[SLIDE44]** Rather than striving for photorealism, the authors advocate “**incorporating and engaging with elements of uncertainty and process**” – like the grainy, pixellated, decaying images that foster **haptic perception**. “Only in this way,” the authors say, “can digital visualisations move **beyond a sole concern with imitation and embrace issues of creativity and ambiguity** that more fully engage and challenge audiences.”

**[SLIDE45]** The anthropologists’ first strategy is what Marks calls “**narrative identification**”: in Remediated Places, “**sweat dripping off an excavators forehead** triggers a feeling or memory of heat in the user; a close-up of hands excavating will trigger through their rhythm the memory of a song or a dance.”

Remediated Places requires the user to “swing from virtual touch and movement to physical movement and touch”; “even the on-line format,” they note, “requires the **hand-movement of the keyboard and mouse**.” Yet they seek additional ways to “increase the bodily haptic experience,” by, say, instructing the user to **move the hands and feet, or to move away from the screen and perform a particular action**.”

Video itself, as opposed to other more static representations, imparts a sense of movement to the mediated site: “The **videos take advantage of movement through space** and proximity to various textures and objects, tactile sensation of the feet, even the...**breathing of the videographers**.” **[SLIDE46]** The use of first-person **game engines** have the potential to offer differently embodied means of moving through the mediated space.

Their final strategy is essentially the same as **Marks’ haptic perception**: they seek to create **footage that expresses a more “intimate scale.”** **[SLIDE47]** “Intimate” refers first to the **proximity to the mediated subject**; the anthropologists aim to capture this intimacy on film through “close-up video walks within the ‘forbidden’ excavation area” – by granting access to secret spaces – and through “**ultra close-ups** of the hands and trowels at work.”

Yet the project developers also use the term “intimate” to refer to “the **lack of orchestration, direction, and explicitness**, to reflexivity” of their recorded images. These are the blurry, distributed, disorganized images that pull the viewer in close and encourage heightened engagement with the on-screen image.

How to translate a similarly multisensorial, multimodal, multi-vocal approach to representing and studying the urban environment?

Before we move on to the 2<sup>nd</sup> section, I'll share some useful resources

[SLIDE48] City of Sound  
[CLICK] Tag Cloud

[SLIDE49] BLDGBLOG

[SLIDE50] Van Alen Institute, Studio-X, Storefront for Art & Architecture,  
Architectural League of New York  
Center for Urban Pedagogy

**[SLIDE51] Beyond Looking FORWARD – look back!**  
THE CITY HAS ALWAYS BEEN MEDIATED

I will here read an excerpt from a paper I delivered at the College Art Association Conference a few years ago

**[SLIDE52] Mumford Books: Technics and Civilization (1934), The Culture of Cities (1938), City in History (1961),**

Mumford regards the city as a *physical cognitive* map, and a training ground for the mind. In *The Culture of Cities* he wrote, “Mind takes form in the city; and in turn, urban forms condition mind.... The city records the attitude of a culture and an epoch to the fundamental facts of its existence.”<sup>i</sup> Mumford’s definition of *city* is not far off from McLuhan’s definition of *media*, which he regards as extensions of the mind and senses. And Mumford’s claim that “urban forms condition mind,” we hear echoed in McLuhan’s famous phrase “the medium is the message”; the form of the medium shapes its content and how that content is received.

Mumford also speaks of the city as a palimpsestic medium; he writes: **[SLIDE53]** “In the city, time becomes visible: buildings and monuments and public ways, more open than the written record, more subject to the gaze of many men than the scattered artifacts of the countryside, leave an imprint upon the minds even of the ignorant or the indifferent”<sup>ii</sup>.

**Addresses the Biases of the City Medium**

Overview of references to city in canonical works in media studies:

Let's start at the beginning – the beginning of mass communication history, that is – in the time before writing, when the human voice was the only medium. There is much agreement that the rise of civilization – and all of its cultural productions, including architecture – corresponds to the birth of writing. **[SLIDE54]** McLuhan notes that “in his monumental study of *The Beginnings of Architecture*, Siegfried Giedion has many occasions to comment on the fact that before script there is no architecture”.<sup>iii</sup> Groups of people settled in particular regions, developed agricultural societies, and eventually grew a surplus of goods, which then enabled them to trade with others. As trade increased, people needed a means of recording their transactions, and thus writing developed as a tool for accountancy. **[SLIDE55]** Clay tokens stored in clay envelopes were used to record the trade of sheep and grain<sup>iv</sup>. It is significant that the first writing materials – stone and clay – were also among the first building materials.

Record keeping also promoted the growth of complex political and social institutions.

**[SLIDE56]** And as goods were distributed farther and wider, cultural contact and human interchange increased, and the communication system grew ever wider and more complex. Both Mumford and Harold Innis credit the alphabet – a development attributed to the Phoenicians – with promoting the rise of the Phoenicians' trading cities and the “emergence of smaller nations dependent on distinct languages.”<sup>v</sup> **[SLIDE57]** Writing made possible the city-states and imperial cities of the ancient world. Even the substrate on which the literate elites wrote these characters, helped to shape their civilizations. Innis writes, “Papyrus was produced in a restricted area and met the demands of a centralized administration whereas

parchment as the product of an agricultural economy was suited to a decentralized system.”<sup>vi</sup>  
Thus the development of writing systems and writing substrates was essential to the rise of ancient civilizations, and these new means of record keeping shaped not only the communication environment, but also the physical environment – particularly, the birth of city-states and the spread of empires.

But even these cultures, in which communication was controlled and writing stayed in the hands of the elite, were primarily oral cultures. **[SLIDE58: Gozo Citadel]** And here, architecture and speech were the principal media for communication. Plato’s ideal city was limited in size by the number of citizens who could be addressed by a single voice.<sup>vii</sup> “Even so,” Mumford writes, “there was a more common limitation on the number who might come together within the sacred precincts to take part in the great seasonal ceremonies...”<sup>viii</sup> The city could stretch as far as the voice could travel; it could grow as much as the church could hold. “At the beginning,” Mumford says, “all [the city’s] creative offices were tied to religion, and the most significant messages were sacred ones.” He continues:

These sacred messages, written in the stars or the entrails of beasts, in dreams, hallucinations, prophecies, came within the special province of priesthood. For long they monopolized the creative powers, and the forms of the city expressed that monopoly.... [T]he great business of the citadel was to ‘keep the official secrets.’<sup>ix</sup>

In these pre-literate cultures, architecture was thus a medium whose message was the control of communication. As Mumford says, “the forms of the city expressed [the] monopoly” of political and religious leaders over the creation of knowledge and its distribution

**[SLIDE59]** Now, jump ahead a few thousand years to mid-fifteenth century France: The archdeacon proclaims: "This will kill that. The book will kill the edifice." This "citadel" was about to lose its monopoly of knowledge to an altered wine press. "To our mind," Hugo writes, in *The Hunchback of Notre Dame*.

...It was the affright of the priest in the presence of a new agent, the printing press. It was the terror and dazzled amazement of the men of the sanctuary, in the presence of the luminous press of Gutenberg. It was the pulpit and the manuscript taking the alarm at the printed word.... It was the cry of the prophet who already hears emancipated humanity roaring and swarming; who beholds in the future, intelligence sapping faith, opinion dethroning belief, the world shaking off Rome...."<sup>x</sup>

**[SLIDE60]** In overtaking the "controlled forms" of Mumford's pre-literate city, the printing press signifies a new awakening, a new epistemology. Hugo continues:

It was a presentiment that human thought, in changing its form, was about to change its mode of expression; that the dominant idea of each generation would no longer be written with the same matter, and in the same manner; that the book of stone, so solid and so durable, was about to make way for the book of paper, more solid and still more durable. In this connection the archdeacon's vague formula had a second sense. It meant, "Printing will kill architecture."<sup>xi</sup>

The printing press precipitated the evolution of the entire social ecology, as Eisenstein argues. Thought was evolving. The modes of expressing that thought were evolving. And these new modes of expression brought new biases: the book of paper offered solidity and durability, and, although Hugo doesn't mention it, portability and easy distribution. It

enabled literacy and self-empowerment and promised a religious and political revolution. Hugo assumes that this new medium, with its new attributes, will “disappear” the old.

But in the mind of another, Gutenberg’s press would *save* architecture, provide new possibilities for its teaching and practice. In his book *Architecture in the Age of Printing*, Mario Carpo says that [SLIDE61] “starting in the early sixteenth century, architectural treatises began to diffuse a new, media-savvy architectural theory that was consciously developed in response to the new means of communication” (e.g., the Five Orders)<sup>xii</sup>. The reproduction of architectural images allowed Renaissance builders to learn from the image – not from visits to classical sites. These images of classical architectural elements fostered a method of “recomposition” – creating spaces based on various combinations of a set number of elements. Thus, Carpo says, design was standardized, and imitation was common and legitimate. Printing would revolutionize the way architecture was taught and practiced; but the book would not obsolesce the building.

Carpo mentions several characteristics of print – its capability of reliably reproducing images, its standardization, etc. – that, according to [SLIDE62] Marshall McLuhan, also impact our conceptions of spatiality. In his *Understanding Media*, McLuhan focuses specifically on the spaces of housing. He links writing to the ascendance of the visual over the tactile, kinetic, and auditory – what he calls the “specialization of the senses” – and the fragmentation of skills. This newly visually-oriented, literate “sedentary specialist,” he says, can *enclose* space. “The square room or house speaks the language of the sedentary specialist, while the round hut or igloo, like the conical wigwam, tells of the integral nomadic ways of food-gathering communities.”<sup>xiii</sup>

This increasing compartmentalization of domestic space brought on, in part, by print culture, is also of interest to [SLIDE63] Jurgen Habermas. In *The Structural Transformation of the Public Sphere*, Habermas addresses the increasing compartmentalization of domestic activities into different rooms, the new conceptions of privacy and subjectivity that those architectural changes indicate, and the arrival of new media forms – like the personal letter and the novel – that also attest to these changing subjectivities and shifting notions of public and private.<sup>xiv</sup> Urban historian Gwendolyn Wright also addresses the impact of new popular print formats – particularly plans books and domestic magazines -- on home design and decoration.<sup>xv</sup> Although they characterize it differently, both Habermas and Wright have identified a relationship between the evolution of media and the evolution of domestic space. Habermas in particular links the growth of print culture to the spread of new physical spaces – namely, salons and coffee houses – that serve as a testing ground for new media, and provide a forum for rational critical debate. These new spaces were essential to the formation of a public sphere.

Far from “disappearing” architecture, as Hugo’s novel proposed, the book and print culture spurred evolution in the media and urban ecologies. The introduction of a new medium – the book – sparked changes in the design of physical space, so that those spaces could accommodate the new perceptions, understanding, behaviors, and values of a literate society.

**The city is a *palimpsest* of mediation – a place simultaneously aural, graphic, textual, sonic, visual, and digital. Old media are still present.**

[SLIDE64] [VIDEO] “This Is Where We Live,” Apt Studio & Asylum Films:  
<http://www.vimeo.com/2295261>

David Henkin’s *City Reading*

If old media are still present, we need to dig into the substrata of the palimpsestic city to uncover these buried media infrastructures. Media Archaeology

**[SLIDE65]** Francois Truffaut's *Stolen Kisses*, 1968

**[VIDEO]** <http://www.youtube.com/watch?v=YLEJbFKTyQI>

**[SLIDES66-68]** Tubes

**[SLIDES69-70]** Contemporary Fascination with Tubes

“Today we have the Internet – a vastly superior network of tubes which nonetheless somehow don’t seem quite as awesome,” writes Adam Bonislowski in a 2008 issue of *The L Magazine*. “Chalk up another win for the physical immediacy of the analog system!”

It’s not only about nostalgia, or the awesomeness of old technologies. It’s the realization that the immaterial interacts with the material in ways that require further investigation. That the material isn’t going away.

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- <sup>i</sup> Lewis Mumford, The Culture of Cities (New York: Harcourt Brace Jovanovich, Inc., 1966: 5.
- <sup>ii</sup> *Ibid.*, 4.
- <sup>iii</sup> Marshall McLuhan, “The Role of New Media in Social Change” in George Sanderson and Frank Macdonald, Marshall McLuhan: The Man and His Message (Golden, CO: Fulcrum, 1989): 36; Siegfried Giedion, The Eternal Present. The Beginnings of Architecture. A Contribution on Constancy and Change (New York: Pantheon Books, 1964)
- <sup>iv</sup> Denise Schmandt-Besserat, How Writing Came About (Austin: University of Texas Press, 1996).
- <sup>v</sup> Innis, 39.
- <sup>vi</sup> Innis, 48.
- <sup>vii</sup> “For the city, as it develops, becomes a center of a network of communications: the gossip of the well or the town pump, the talk at the pub of the washboard, the proclamations of messenger and heralds, the confidences of friends, the rumors of the exchange and the market, the guarded intercourse of scholars, the interchange of letters and reports, bills and accounts, the multiplication of books – all these are central activities of the city. In this respect the permissive size of the city partly varies with the velocity and the effective range of communication.” (Lewis Mumford, The City In History: Its Origins, Its Transformations, and Its Prospects (New York: Harcourt, Brace & World, Inc., 1961) 63-5.
- <sup>viii</sup> Mumford, City, 63.
- <sup>ix</sup> Mumford, City, 99.
- <sup>x</sup> Victor Hugo, “This Will Kill That” The Hunchback of Notre Dame: <http://www.freebooks.biz/Classics/Hugo/Hunchback/HunchbackC24P1.htm>
- <sup>xi</sup> “In fact, from the origin of things down to the fifteenth century of the Christian era, inclusive, architecture is the great book of humanity, the principal expression of man in his different stages of development, either as a force or as an intelligence.” (Victor Hugo, “This Will Kill That” The Hunchback of Notre Dame: <http://www.freebooks.biz/Classics/Hugo/Hunchback/HunchbackC24P1.htm>)
- <sup>xii</sup> Mario Carpo, Architecture in the Age of Printing: Orality, Writing, Typography, and printed Images in the History of Architectural Theory Cambridge, MA: The MIT Press, 2001: 6
- <sup>xiii</sup> Marshall McLuhan, Understanding Media (Cambridge, MA: MIT Press, 1994):125; see also Marshall McLuhan, “The Role”, 36.
- <sup>xiv</sup> Jurgen Habermas, The Structural Transformation of the Public Sphere: An Inquiry Into a Category of Bourgeois Society (Cambridge, MA: MIT Press, 1995).
- <sup>xv</sup> Gwendolyn Wright, Moralism and the Model Home: Domestic Architecture and Cultural Conflict in Chicago, 1873-1913 (Chicago: University of Chicago Press, 1980); Building the Dream: A Social History of American Housing (Cambridge, MA: MIT Press, 1981).