BETWEEN SIMULATION AND INHABITATION:
Money, Technology and People

Architecture in Communication:
Re-learning from Las Vegas
Shadi Nazarian
Cornell University

The fragmentation of the city core has lead to the discovery of latent possibilities set into motion through new technological, political and cultural catalysts. The role of public space and public art is in turn transforming and occupying new and unprecedented dimensions. Architecture as an integral and inherent component of metropolis, both in terms of sustaining and constructing an urban texture, makes spatial conditions at multiple scales and through various media. This paper explores the impact of the digital media on the construction and perception of space, and presents a new mode of reading the complex structure of a metropolis. The paper examines the consequences of the use of the digital media as a means of construction of space and perception of time. The paper also addresses the consequences of using ephemeral elements of digital media in architecture and gestures towards a redefinition of the concept of permanence.

Las Vegas is examined as a new metropolis, which presents a new embodiment of technological innovations and of the digital media. The paper examines how Las Vegas functions like a machine that alters our experience of time and space while it integrates the use of the media in its physical, cultural and political contexts.

Las Vegas, a temporal mirage shimmering on the surface of the desert from dusk to dawn, oscillating, wavering between the purity of the desert and the extreme life of abundance and dissipation, appears to have a continuous presence inside, independent of real time. The city is merely an operational matrix.

Inside the matrix, the continuous flow of sensory input goes on uninterruptedly, challenging the stability of the real. Nothing interrupts the simulated focus except an occasional shower of coins. Time stands still. Eyes, wide open, this world never sleeps. It never blinks.

Each of the nodes in the matrix, governed by different themes, process time at different speeds. It is neither reality nor time that links these nodes. In the streets of "Paris" it is always early evening, further down the strip, people experience four day/night cycles in the duration of a calendar day. Each node becomes an oasis nourishing different temporal, cultural, and spatial possibilities.

Outside the matrix, daylight reappears every day, stabilizing us in a physical and temporal reality, until the virtual and optical illusions take over the dark hours, joining the outside to the inside. Joining these otherwise disparate worlds until again this temporal link breaks at dawn...

The only constant is the machinery at work, its rhythms, and its rules. It devours money to survive. It numbs the conscious mind and holds it hostage in units of altered time.

Las Vegas simulates icons and symptoms of permanence: sky, earth, cities, buildings, waterways, and bridges. Its buildings simulate materials of permanence: sand stone, marble, and granite. Structures, spaces, even people from "Paris", "Venice", and "New York" are reconstituted. "Accept no other imitation", a sign says, of the impersonators who appear there each evening at a casino. They too are reconstructed personalities who believe they are who they imitate, not unlike the parking valet, the cashiers and the maids who speak French in "Paris", or the gondoliers who speak with an Italian accent in "Venice". Las Vegas even simulates simulations of power (palaces), simulations of death and entombment (the Pyramids), icons of technological advancement (The Eiffel Tower), and of the entertainment industry (Disneyland).

Las Vegas uses tools of simulation to create its excessive reality - a Hyperreality. On the one hand it uses tools of simulation like projection, reflection, and mirroring to create realities that are constructed here without reference to an exterior condition, realities that do not represent nor exist outside of this simulated world. On the other hand it uses processes and techniques of construction to simulate stone buildings in which the structural and material properties of stone are not used, but simulated to create an illusion of permanence. One is an extension of the other; they are both about illusions. Everything is a fabricated reality and a production of sensory input devices.

This Metropolis presents a new embodiment of technological innovations at the threshold of real and virtual, revealing new spaces to occupy - found at the boundary of material realities and immaterial virtualities.

The meaning of the word 'permanence' hinges upon a linear, uninterrupted notion of time. It is, for example, only in relation to

Fig. 1. Electrobricollage - a section study by Shadi Nazarian for "Thresholds: The Arcades Project", a multimedia, interactive and site specific installation for the Center for Exploratory and Perceptual Art (CEPA).1999

this notion of extended time that it becomes possible to conceptualize and measure the 'durability' of substantive matter. Similarly, one could argue that our notion of continuous, linear time is itself only made possible in and through its relation to substantive matter, that matter is itself what lends the abstract concept of linear time its apparently objective measure. Temporal permanence and substantive permanence here are seen in a mutually dependent relationship. Embedded in the word permanence, and lending it its conceptual coherence, is an understanding of both 'time' and 'matter' whose own comprehensibility are, likewise, mutually dependent and affected by cultural and scientific insights. And it is, therefore, inevitable that changes in our definitions of 'time' and 'matter' will also compel us to rethink the concept of 'permanence'[1].

I propose that we stand at a threshold, where the convergence of new information media and built form, make possible new sensibilities with respect to 'permanence'. I also propose a more constructive role for the digital and information technologies that does not assign them a purely representational function. Through experiments that occupy the intersection of material and virtual[2] construction, and of architecture and media studies, I research the implications of multiple readings of time and matter. Las Vegas, seen through this lens, is viewed as a spatial and temporal montage, constructed by a collection of fragmented events, severed from their respective spatial and temporal contexts and inserted into a unique environment.

This process transplants the simulated events into their new environment in such a way that sets into motion transformations and mutations of both the fragment and the context. I suggest that Las Vegas is a paradigm for this process wherein the basic vocabulary of architecture itself undergoes a reconstruction. By this means the conceptual foundations of the notion of permanence are themselves transformed.

Matter, noted Virilio in an interview with Andreas Ruby, was centuries ago "defined by two dimensions: mass and energy. Today there comes a third one to it: information. But while the mass is still linked to gravity and materiality, information tends to be fugitive. The mass of a mountain for example is something invariable, it is immobile, its information, however, changes constantly" [3]. What once was merely mass takes other meanings in the context of our current technologies. "Today information counts more than mass and energy. The third dimension of matter takes the place of the thing itself"[4]. We use information about the matter to undermine it as an obstacle. Virilio argues that architecture "will continue to exist, but in the state of disappearance". "To me - he says- to disappear does not mean to become eliminated. Just like the Atlantic, which continues to be there even though you can no longer feel it as you fly over it. Or like the body that continues to exist without actually being needed-since we just switch the channel. The same happens with architecture: it will continue to exist, but in the state of disappearance"[5].

In a recent project[6] for *the Center for Exploratory and Perceptual Art (CEPA)*, I examined the literal and perceptual thresholds of the physical construct (Matter), the movement of the audience as well as their engagement with, and operation of, the tectonic elements (energy). My focus was the impact of media technologies (information) upon these hybrid constructs. The architectural intervention became a device that brought into question the transformation and mutation of basic architectural elements (walls, openings, doors...) in a situation where hybrid conditions and technologies coexist.

Walls and in fact all static surfaces transformed to assist in the registration of the audience against the virtual transient spaces and/ of the bodies in movement. The rotating panels/doors that negotiated the passage of the audience from one space to another became optical devices. These devices functioned much like apertures in cameras empowering the audience to control, adjust and refract images and projections of the digitally prepared constructions and/or of their own image, activating the spaces on either side of the threshold. Using these mutated and informative architectural elements one was able to project oneself or others into impossible but perceived spaces

Fig. 2. Walls and in fact all static surfaces transformed to assist in the registration of the audience against the virtual transient spaces and/of the bodies in movement.
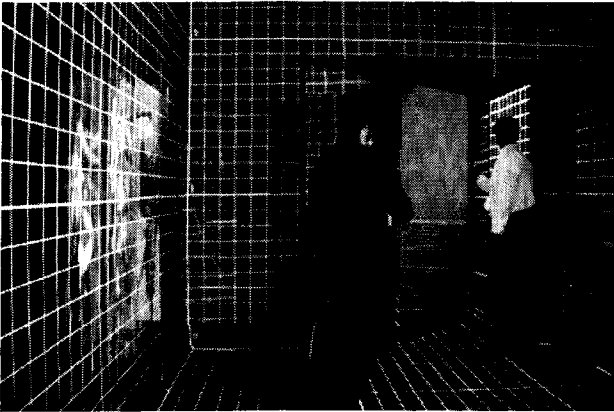

Fig. 3. The rotating panels/doors that negotiated the passage of the audience from one space to another became optical devices.

only to gain a clear understanding of the reality of the architectural intervention.

The Virtual 'realities' conceived in Las Vegas serve a similar function. Here the mutation of the familiar as a result of hybrid conditions of time and space is a paradigm for a new construct that brings together the virtual and the substantive events. It uses media and tools of simulation as the means to construct new hybrid structures that consist of matter, energy and information. As with my CEPA project, Las Vegas is a place where the reality of the material architecture and the virtuality of the "continuous flow of optical appearances" make it "difficult to still believe in the stability of the real"[7]. This is a place where "that which happens is much more important than that which lasts (ce qui dure)- and also than that which is solid (ce qui est dur)"[8]. This is a place where a juxtaposition of electronic media and traditional building technologies begin to inform architectural form and space. This is a place where architecture "takes place in the literal sense of the word, in both domains: in real space (the materiality of architecture) and virtual space (the transmission of electromagnetic signs)", where "the real space of the architecture takes into account the real time of the transmission"[9].

The interior world of Las Vegas, where the continuous flow of sensory input produces a hyperreality (made possible by the space and time altering effects of digital technology), creates its own mesmerizing realities and rhythms. Its exterior world however, reestablishes the link to the familiar physical and temporal reality. Virtual and optical illusions join these otherwise disparate worlds in the dark hours until the light at dawn breaks this temporal link. What happens where they meet? What kind of architecture occupies such a site that is perpetually in flux spatially and temporally? What unique programs could it house? What kinds of materials could it employ?

The image of the Las Vegas structures may signify something other, but the continued efforts to become what they signify and establish the means to authenticate themselves, qualifies them as simulations rather than mere imitations or representation of their subjects[10]. At times Las Vegas has tried to simulate a more authentic reality than the original. "Venice", Las Vegas carefully and painstakingly simulates hundreds of years of weathering and aging in the construction of its surface materials. The ancient texture, colors, and ambience are recreated as closely as possible. A virtual Venice is built to scale and continues to grow in this new environment of simulation six thousand miles away. Even a cultural advisor is hired to validate this Venice against the real one. The simulated gondolas had to be powered making the job manageable for the serenading gondoliers, actors whose employer prioritized their performing abilities during their auditions over their ability to operate the boats. The new Rialto Bridge too is informed by its new home. It no longer crosses the canal, but a stream of shimmering taxicabs and automobiles. What is important however is that the Las Vegas "Venice" is not simply an imitation but a simulation. An imitation is conceived through a fixed relation between the real and its signifier, but a simulation sets into motion a dynamic relation between the two, which effectively disrupts the hierarchy of the former.

As noted earlier, a traditional notion of permanence is conceived in relation to a conventional notion of matter and relies on measuring its duration against a constant and linear understanding of time. The added dimension of information may unfold simultaneous and
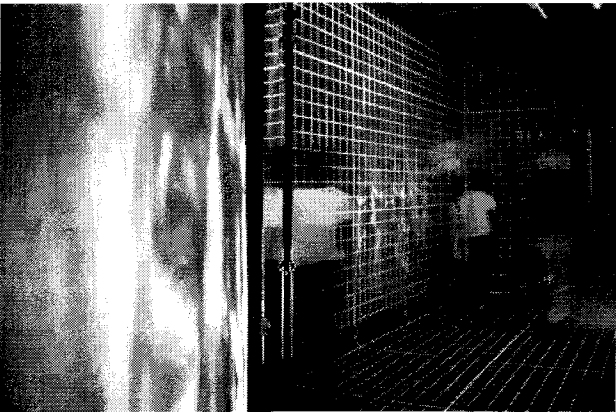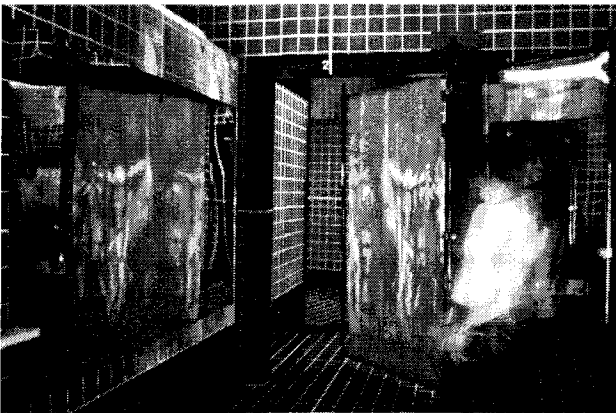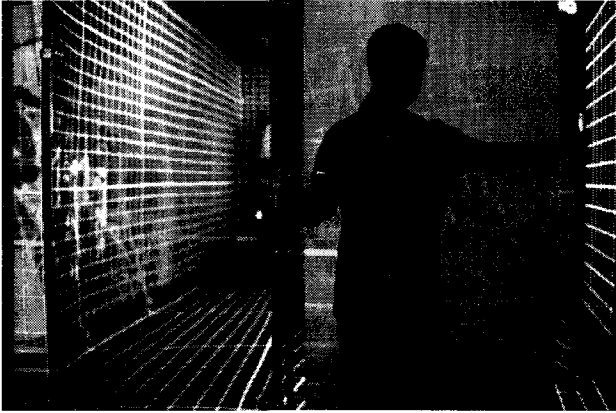
Fig. 4,5, 6. These devices functioned much like apertures in cameras empowering the audience to control, adjust and refract images.

multiple readings of the matter, which conceptually undermine the linearity of experience in/and time. One can now see the object from various perspectives that contribute to the development of new understandings in relation and in addition to its most obvious reading.

In turn the introduction of hybrid technologies in the making of spatial constructs could materialize such multiple readings, rupture our prevailing concept of temporality as a homogeneous and linear structure, and replace it with a more subjective and fragmented notion of time. This is bound not only to effect our creative constructs, but also to change our understanding of time, perception, and permanence. If time is conceptually perceived as multiples of intervals, rather than a constant linear dimension, and therefore measurable against a multi dimensional coordinate system, permanence too becomes measurable in multiple ways.

Time has not always been understood as linear. Various cultures and people have explored the possibility of a dimension of depth that allows parallel and simultaneous realities to be recognized. Our relationship to the world around us is conceived through multiple and simultaneous rhythmic and cyclic experiences of renewal and retiring, birth and death, sleep and awakeness, menses, blinking, breathing, etc. We intuitively understand our world and synchronize our life with its cycles, seasons, days and nights. These rhythmic cycles allow us a perception of time by signaling, recording and displaying their effects on us and the physical world in which we live. The concept of cyclical time even extends the possibility of re-turn to the same coordinates in time and place where hierarchies of real and referent no longer emerge. The comforting reconstitution of at least certain aspects of life is made possible by combining the two models of the linear and the cyclical where we do not return to the same coordinates but move along a spatial path. This seems perhaps closer to our contemporary experience of time. As soon as we are removed from these cycles of renewal we are in a different relationship to the world. Las Vegas attempts to remove us from the rhythms that link us to the world by altering the experience of time, by problematizing perception and our contemporary experience of time and space.

"Time, said St. Augustine, is a threefold present: the present as we experience it; the past as present memory; the future as present expectation. Hopi Indians used only the present tense in their language: past was indicated as "present manifested," and the future was signified by "present manifesting". Until approximately 800 BC, few cultures thought in terms of past or future: all experience was synthesized in the present. It seems that practically everyone but contemporary man has intuitively understood the space-time continuum"[11].

"The future of the past is in the future. The future of the Present is in the past. The future of the future is in the present"[12]

John McHale's words may suggest a multidimensional and nonlinear interrelationship between the tenses making possible a reading of time constantly flowing and slipping from one tense to the other. Past, present, and future simultaneously exist, informing one
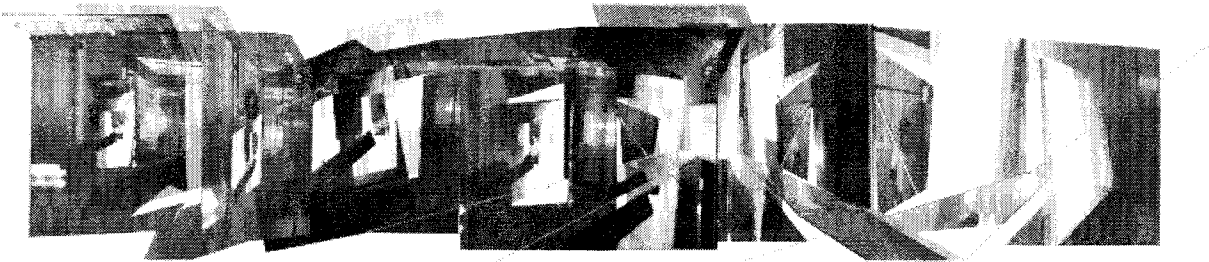
Fig. 7. Electrobricollage - a study by Fabian Bedolla, for the "Building/Machines" studio.

another, and constructing yet another spatial relationship between future, past and present - in no sequential order.

Science just made the announcement that we now have been able to reduce the speed of light to almost zero when trapped inside cold atom. Although we knew that we could slow the speed of light inside water, glass and similar matter - and the new discovery does not exactly mean that it can be brought to a halt - this has tangible consequences such as the transfer of 'information' from light to atom[13]. Although here 'information' is literally carried by light and transferred to atom, this is indeed one more example of information that challenges our traditional notions of matter and suggests a more fluid relationship between material facts and conceptual ideas. New modes of understanding time and matter can alter the ways in which we conceptualize and use these elements in technology, visual arts and architecture.

I am interested in reading and decoding Las Vegas through the mechanism and procedures that assemble it. Rather than reading the 'sign' in Las Vegas, as do Venturi, Scott Brown and Izenour[14], as an ornament that occasionally rises to serve an architectural function like a façade, I am proposing a more dynamic realism that undermines the hierarchy between the real and the sign. The city has thriving gambling and entertainment industries that are no doubt designed to hold one captive. Vegas, however, is much more important as a paradigm for the convergence of conventional architecture with new media and information technologies. It provokes us to think about the future of architecture. It is liberating.

Las Vegas allows us to leave behind our traditional Kantian notions of time and space, and to explore it instead as a succession of events and vistas that produce a web of discontinuous spaces, a multidimensional montage, an assortment of spatial and temporal simultaneity. This new and ambitious place can certainly benefit from such readings that would elevate it to the Cubist tradition as it continues to capture simultaneous perception of opposite impulses and optical counterpoints.

Montage, Eisenstein says may assemble elements that are not necessarily in harmony and are perhaps in conflict with one another. Such is the case, I propose, in Las Vegas whose construction most closely approximates that theorized by Eisenstein. Las Vegas is conceived as a montage, a compositionally dynamic construct that extends no single urban statement. It is not unlike the counterpoint compositions of Bach, or paintings of Picasso where the viewer is confronted with multiple perspectives. As with those innovations conceived by Bach and Picasso, the architectural innovations of Las Vegas force us to reconsider the disciplinary boundaries within which our concepts of time and space are materialized.

We stand at a transitional point in the practice of architecture where a constructive dialogue between the reality of built form and the simulations fostered by the various and new tools of the digital media makes possible new ways to conceive of architectural form and space. When a new tool or medium of communication is invented, most often follows a period of examination of the tool in order to understand how it can represent or reconstruct 'the familiar' in a more productive or perhaps more seductive way. During this time the tool's capabilities are explored and enhanced. 'The familiar', too, now seen from a different perspective begins to be understood in new ways and undergoes a transformation. Gradually the fascination with the tool begins to wear off. It simply becomes a matter of technique. Experiments that follow this period allow us to question the ways in which we can modify and use the tool to address unprecedented questions and produce new kinds of realities.

Through the examples explored in this article, and through teaching interdisciplinary design studios and seminars, I propose that within the context where the products of digital media and built form converge we are already entering the next phase - of experimentation. What interests me, is the transitional space wherein the relation between media, representation, and architecture is put into question. Where rather than simply representing or (re)constructing a given 'reality', the media reflects back upon that reality jolting them both out of the inertia that slows them.

Fig. 9. The project "The Space of Public Art/Architecture" for the seminar "Building /Metropolis", funded by the Council for the Arts, Faculty Fellows in Service grant for Community Outreach Projects, Cornell University. Image of the students' project: "Matrix". May 2000
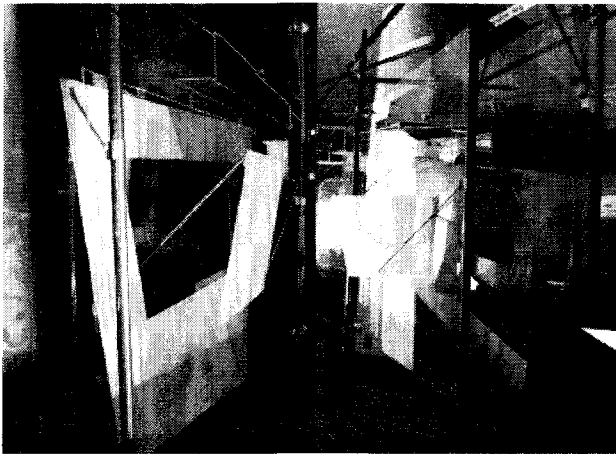
Fig. 8. "Building/Machines" studio multimedia investigations within an apparatus designed and negotiated by Shadi Nazarian and James Rayburg. These experiments were on view at Hartell Gallery in an exhibit titled "interVIEWS", organized by Nazarian and funded by a grant from Cornell Council for the Arts in support of her interdisciplinary studio.

NOTES

[1] Permanence, n.: continuing indefinitely without change [from *Oxford dictionary on line: http://www.oed.com*]. In terms of architecture is particularly linked to its synonyms, durability and endurance. Both of these synonyms contain the word Dur, *adj.* which in French means tough; also the word Durée, *n.* that means duration, time; and the word Durer, *v.* which means to endure, to last, and to continue [from Larouss's *Dictionary* (New York: Pocket Books, 21st printing, 1976)].

[2] Virtual, a. (and n.): In Computers- Not physically existing as such but made by software to appear to do so from the point of view of the program or the user; spec. applied to memory that appears to be internal although most of it is external, transfer between the two being made automatically as required. [from *Oxford English Dictionary -On Line:* http://www.oed.com].

[3] Andreas Ruby, "Architecture In The Age Of Its Virtual Disappearance: An Interview With Paul Virilio", in John Beckmann, ed., *The Virtual Dimension* (Princeton Architectural Press, 1998): p. 180.

[4] Ibid., p. 180.

[5] Ibid., p. 187.

[6] "Thresholds: The Arcades Project", a multimedia, interactive and site specific installation for the Center for Exploratory and Perceptual Art, was funded in part by the Arts Council in Buffalo and Erie County, The county Initiative Program - Sponsored Individual Artist, in 1999.

[7] Andreas Ruby, "Architecture In The Age of Its Virtual Disappearance", *The Virtual Dimension*, edited by John Beckmann (New York: Princeton Architectural Press, 1998): p. 179.

[8] Ibid., p. 180.

[9] Ibid., p. 182.

[10] "The transition from signs which dissimulate something to signs which dissimulate that there is nothing, mark the decisive turning point. The first implies a theology of truth and secrecy (to which the notion of ideology still belongs). The second inaugurates an age of simulacra and simulation, in which there is no longer any God to recognize his own, nor any last judgement to separate true from false, the real from its artificial resurrection, since everything is already dead and risen in advance". ..."To dissimulate is to feign not to have what one has. To simulate is to feign to have what one hasn't. One implies a presence, the other an absence. But the matter is more complicated, since to simulate is not simply to feign: "Someone who feigns an illness can simply go to bed and make believe he is ill. Some(one) who simulates an illness produces in himself some of the symptoms," (Littre) Thus, feigning or dissimulating leaves the reality principle intact: the difference is always clear, it is only masked; whereas simulation threatens the difference between "true" and "false", between "real" and "imaginary". For more information please see: (Jean Baudrillard, *Simulations,* Translated by Paul Foss, Paul Patton and Philip Beitchman (New York: Semiotext[e], 1983), p, 12, and p. 5)

[11] Gene Youngblood, *Expanded Cinema* (New York: E. P. Dulton & Co., 1970): p. 81.

[12] John McHale, *The Future of the Future* (New York: George Braziller, 1969): opening of the book.

[13] National Public Radio, 6:00 PM News, January 18, 2001.

[14] Robert Venturi, Denise Scott brown, and Steven Izenour, *Learning From Las Vegas* (Cambridge, Massachusetts: the MIT Press, 1972).