

Blind Creativity: A Subliminal Bias towards Architecture and Urbanism in the Mechanical and Automated Periods of Design

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INTRODUCTION

Lewis Mumford referred to a lack of understanding of the effects of industrial modernization on culture, and consequently upon design practice, in what could be paraphrased as 'blind creativity'.¹ One can infer from this phrase that blindness implies a mechanical practice, or a subliminally embedded cultural predisposition, that informs basic attitudes towards space and time and in turn their manifest architectural and urban representations. Consequently, the theme of this paper involves a discussion regarding the qualities of these respective cultural biases, towards time and space, as influenced by dominant technological infrastructures; such as the modern industrial and postmodern automated environments and how this clarifies Mumford's idea regarding blind creativity.

The work of the cultural and technological theorist, Marshall McLuhan, provides vital insight as to how major technological innovations, and their corresponding environments as total operative frameworks, subliminally prejudice or qualify cultural predispositions towards space. By definition, because total environments remain unperceived until changed therefore, an unexamined spatial consensus prevails within cultures; as for example, the visual bias of the mechanical industrial worldview which is currently being displaced by an acoustic bias fostered in the emergent automated industrial environment. That is, a dominant technology always has with it a hidden ground influencing spatial attitudes and configurations. The nineteenth century railway infrastructure, as an urbanizing center-margin organization, is being reconfigured

by means of rapid-rail networks; as the network becomes the archetypal organization of the information age.² The difference is due to the effect of speed-up which is one qualitative dimension of environments characterized as either an environment of visual or acoustic space.

The ground refers to the hidden environment as a totality. For example, the infrastructural ground of the automobile, are the material effects shaping society, consists of highway systems of various degrees, steel production, engineering and design, the petroleum industry and related political dimensions, etc. In this regard, a technological environment is an evolutionary formation whereby one is wholly, but subliminally, immersed in cultural evolution so that such practices as architectural design precludes awareness of environmental influences upon design; hence, the cultural blindness effecting design is induced by the unperceived environmental bias. Like a fish in water, that is not aware of its medium until pulled out, a theory of cultural change that attends to the effects of media or technological infrastructures can provide a gestalt analytic that reveals, for example, the subliminal factors informing spatial intuitions that in turn influence design.

A brief account of McLuhan's communication theory of cultural change will be provided below, and in this context, Mumford's critic of industrial modernism, as a kind of blind creativity, will be discussed. All cultures, as they adapt to the emergence and evolution of technological innovation and concomitant infrastructural environments remain mostly unaware of their effects, and this applies to the current re-orientation of the electronically automated planetary

culture that McLuhan termed the Global Village. In particular, a major side-effect of using electronic media in which space and time have disappeared, or virtually dematerialized, is manifest in architectural design as a quality which I refer to as 'buoyancy' and reflects a current dimension of blind creativity; buoyancy is an unintentional side-effect of the electronic environment. The effect of dematerialization, as a consequence of the increasing ubiquitous application of information technology, networking and the use of digital software and imagery, is an inherent feature of instant communications. This sense of buoyancy, or simulated weightlessness, is manifest in some current design as both a response and environmental adjustment to devalorizing natural embodiment for self-images in virtual reality. This is a result of the extreme condition of speed-up under electronic conditions whereby communicating at the speed of light transforms the embodied self-image into a virtual data-profile.

The heightened awareness of the subliminal factors by means of cultural and environmental studies incorporates a deeper understanding of how space and time are culturally qualified and how this in turn informs design. An understanding of the co-productive relationship between the things we make and our self and world images in the context of their operational infrastructural environments, educates perception regarding qualitative changes of pattern, scale and pace of cultural forms. Human productions, and in particular dominant technological environments, are not neutral. That is, an understanding of these ground-works, or perception of what 'stands-under' society as the conditioning environment of services and dis-services removes the blinders of how design was informed in the past, and also acts as a means of anticipating creative development in the present. By analogy, the study of the movement of an iceberg requires a gestalt analysis of its movement which means 'standing-under' the surface (since more than 90% of the iceberg is below the surface) to observe changes in water pressure, sea currents, temperature and salinity differentials that provide insight towards anticipating its movement. Just by surveying the tip of the iceberg and anticipating its change in space and time is a blind study, a study of content and not the effects of the medium regarding changes of position. Similarly, but more profoundly, in order to understand design in the context of culture requires more than the study of the history, geometries or production of

architecture in space and time, but rather, a study of the movement of culturally acquired predispositions and conceptions of space and time; such as, the movement from the ideas of absolute space and time in the mechanical age towards the current concepts of relative space-time; e.g. the notions of literal and phenomenological space-time in the work of Siegfried Giedion and Slutsky & Rowe.³

What is revealed, by means of a gestalt analytic of culture and sustaining technological environments, are movements or the production of qualitatively distinct and culturally relative conceptions of spatiality and temporality that in turn, in-form manifestations of various styles of art, architecture and urbanism. Each culture, such as the modern industrial and the post-industrial automated societies of today, are prejudiced by their ground-works, or 'moved' (i.e. transformed) by their technological infrastructures, which are the qualifying contexts shaping perception and consequently design conceptions. For McLuhan, an understanding of sustaining, or self-qualifying technological environments as extensions of one's embodied self, is a manner of overcoming blind creativity by means of perceiving the major factors of cultural evolution.

CULTURAL EXPERIENCE GROUNDED UPON SELF-QUALIFYING ENVIRONMENTS

Blind creativity is an automatic response, or can be defined as a lack of understanding of cultural change. McLuhan's work discusses cultural change empirically, whereby the loci of human transformations is situated in human embodiment and with regard to correlative changes of sense, sensibility and consciousness; i.e. for McLuhan, human evolution has predominantly been technological and not biological since the invention of the first tools and language. He referred to all things that humans make as either hardware, such as computers, automobiles, airplanes, printing press and pencils, or software, such as poems, architectural styles, schools of thought, or fields of science and all are extensions of human faculties, functions and organs.⁴ They are extensions in the manner that the wheel extends the foot, the book extends the eye, and computers and wired and wireless networks extend the brain and nervous system. Consequently, tools are innately not neutral, because as embodied extensions they effect the interplay among the human senses (i.e. synesthesia), or ratio-of-

the-senses. The environment, in a sense, becomes defined by the proportional effects, by means of technological sensory extension, that shapes the sensory bias of the operational context; hence, the environment is self-qualifying because embodied participation through mediated extension defines how we perceive ourselves and the world, or how we shape individual and contextual identities.

For example, the invention of the phonetic alphabet was unique; because the separation of the visual from interplay with the other senses, which fragments synesthesia, is a primary effect. Since Antiquity, this is an effect which manifests psychologically as the progressively heightened abstract abilities and is represented in the appearance of logicians, analysts and the Western individualist tradition. It made possible Euclid and lineality which revealed the eye-bias as prejudicing a 'visual space'; a space qualified in terms connectedness, continuity, homogeneity and stasis. Other spaces, created by the other senses such as touch, kinesthesia or the ear, preserve synesthesia and have the effect of creating what McLuhan terms 'acoustic space'; a space that is decentered, discontinuous or structured by interval. However, as the visual dominance evolved in the West, as for example, by means of the invention of the printing press (in 1454 by Gutenberg), this medium intensified the eye-bias while by amplifying phonetic literacy. In turn, the evolution of the phonetic alphabet environment fostered the development of the scientific revolution of the 17th century and the industrial revolution by the middle of the next century. In this environment, qualified by the prejudice for visual space, various aesthetic conceptions also emerged which included linear perspective and Realist art, Cartesian homogenous and rationalized space, and the Newtonian ideas of absolute space and time as conceived within a world image as a mechanical clockwork universe.

New innovations and their corresponding developing infrastructures fostered a subliminal sensory bias such as a generic sense of the visual, acoustic or audile-tactile spatiality. By definition, environments are therefore self-qualifying, because as extensions of the human embodiment they bias particular prejudices for self and world images as they reflect particular ratios-of-the -senses. That is, the creation of one's self image and world image are mutually and inclusively, or dialectically, con-

figured within the evolutionary framework of these extensions and the corresponding conditioning of sensory bias and related perceptions. For this reason, McLuhan claims that technologies are not neutral, but rather humanistic or self-qualifying environments; i.e. this involves a co-creative dialectical evolutionary cycle whereby we shape our tools and our tools shape us. This co-formative dynamic involves automatic or blind participation, because technological extensions as total environments are difficult apperceptions.

Therefore, it follows, that the concept of the self-qualifying environment is implicitly about the formation of identity because responsive participation, rather than detachment, inherently invites participation resulting in modified behaviors that are physical as well as social and psychological. In this regard, McLuhan understands identity in terms of a dynamic co-formative environment whereby the user becomes what he beholds in the context of subliminally imposed qualifying predispositions. Consequently, he applies the antiquated or pre-literate (i.e. acoustic) meaning of the term mimesis. Mimesis, in that age, meant that the user becomes what he beheld through participation, as in ritual. But with the emergence of phonetic literacy, as it deconstructed ritual and the mythopoetic, the individual was progressively abstracted from the social context fostering as sense of objective and rationalistic detachment. Eventually, in our Western heritage, the Cartesian body-mind duality emerged as a consequence of an intensified 'eye-I' bias with a concomitant cognitive split, or explanatory gap, regarding an understanding of the effects of the material world upon the human psyche or mind and vice-versa. It is in the context of privileging a materialist worldview, as it evolved into the 19th and 20th centuries (Freudian man), whereby Mumford could critique this bias as manifest in architecture during the era of mechanical design. That is, under the influence of a heritage prejudicing the qualities of visual space and consequently privileging mechanical production and its related econocentric bias, a predisposition for uniform, repetitive and homogenous design evolved. In his book *Sticks and Stones: a Study of American Architecture and Civilization* Mumford wrote (in the chapter titled 'The Age of the Machine'), that, "In sum, the best modern work does not merely respect the machine: it respects people who use it. It is the lesser artists and architects who, unable to control and

mold the products of the machine, have glorified it in its nakedness..." (p. 85). In this paper, I have applied the phrase blind creativity as a complement to Mumford's use of the phrase the "blind market" as applied in the following context:

The machine has stamped us; and we have not reacted..... The designer, whether he is the architect, the owner, or the working contractor, works within a tradition whose bearing lies beyond him.....the great mass of modern houses are no longer framed for some definite site and some definite occupants: they are manufactured for a blind market. The boards are cut to length in the sawmill, the roofing is fabricated in a roofing plant, the window frames are cut in standard sizes and put together in the framing factory,....The nemesis of mechanism is that it inexorably eliminates the architect – even the architect who worships its achievements [i.e. blind creativity].⁵

The printing press provided the first uniform mass-produced commodity. The industrial revolution and metropolis were analogues of the printing press writ-large. Factories mass produced uniform standardized parts in the context of industrial metropolis and increasingly mechanized the nation-state (e.g. Haussmann's reforms for Paris). McLuhan provides the formal cause for Mumford's account of the blind market and designer, abstracted or eliminated from the apparently self-sufficient industrial context; in a sense the architect became the servo-mechanism of the machine culture. That is, he provides insight into Mumford's reference about an architect who "works within a tradition whose bearing lies beyond him". Understanding the human production of culture in terms of their human extensions, or self-qualifying environmental effects, is not possible by means of a mechanical analytics of traditional science and philosophy. In the electric age our horizons have broadened. This occurs as information technology provides a new automated ground for architecture and education which facilitates the possibility of a more comprehensive understanding of change.

THE PARADIGM SHIFT FROM THE MECHANICAL TO THE INFORMATION AGE

As mentioned above, in the information age, acoustic space increasingly qualifies the bias informing cultural practices such as architecture. This space is characterized as a resonant field that is decentered, spherical and boundless, and structured in terms of the gap or interval as an organizing

principle of human experience. That is, in the information environment, communication occurs at the speed of light in a global resonant field, or cyberspace, so that this simultaneous context inherently fosters simultaneous awareness. That is, the possibility of instantly retrieving knowledge, from multiple information and data resources via multimedia modalities, fosters inter-disciplinary studies. However, in order to assimilate knowledge under these conditions of information overload it is necessary to bypass traditional visual methods of organizing knowledge in the manner of exclusive definitions, categories and specialties. Today, we are compelled, by changed environmental conditions, to assimilate knowledge in terms of structures and processes, that is, by means of pattern recognition. Pattern recognition of complex structures, as facilitated by the digital extensions of our brain and nervous system, provides the possibility for insight into the structural dimensions of cultural change and their effects on societies. Literate cultures, qualified by the extreme use of the 'eye-I' bias, prejudiced assimilating knowledge in terms of quantifying, measuring, defining and producing abstract theories. In terms of McLuhan's cultural analytic, the eye views in one but not all directions at once. By contrast, the ear hears from all directions at once, so that instant simultaneous electronic communications is analogous with the acoustic bias; i.e. a bias qualifying representations such as collage and montage, rather than visual Realism and linear perspective. Today, the world is perceived in the image of the global village displacing that of the Newtonian clockwork universe. That is, in the electronic information age our self and world images are not embodied or hardware images but rather virtual, or software images, because we have enveloped the planet by electronically extending our senses, nervous system and brain which has the effect, by means of instantaneous global communications of making the users discarnate beings.

The modern mechanical age was characterized by identities related to private and public spaces in a physical rational world. Increasingly today, due to mass media, operating at instant electronic speed, the corporate image is that of the collective mass, whereby participation and involvement rather than detachment and privacy, qualifies or nurtures identity. Historically, and for the first time since the invention of the telegraph and then the evolution of the internet and broadcast media these environ-

ments have progressively situated beings in the resonant digital space of the global village, or cyberspace. On the telephone or internet, our physical sense of being is translated into acoustic or audio-visual images, constituted of bits and bytes, in order to maintain a perception of co-presence globally. This means that the significant message of electronic communications is not the message sent, but the fact that users are being sent in a dematerialized form; e.g. where are you when on the phone?

In terms of architectural design, and in the context of digital communications, participation qualifies or subliminally fosters the effect of dematerialization on the human psyche and sensibilities. This is evident in certain designs as a blind influence, in the manner of what I term 'buoyancy'; buoyancy is a response to the aesthetic influence, in both the practice and education, upon architects when applying such BIM functions as digital collaboration and virtual reality modeling. Buoyancy expresses the quality of weightlessness, inherent to the hyper-real scale of cyberspace. That is, by translating our physical selves and events into digital images constituted of light or weightless photons, digital communications transforms embodied discourse, composed of atoms, into a virtually real discourse composed of light. Another important effect of the digital environmental surround, qualified by feedback as a resonant interactive field, is the development of heightened sensibility for design and its consequences; whereby the design community has become more responsible regarding contextual issues in the manner of sustainable architecture (but this topic is another paper).



Figure 1.

Examples of architectural form exhibiting buoyancy are increasingly evident today. In the work of the Deconstructionist architect Daniel Libeskind, his buildings are composed of tumbling cubes in a kind of short-fall avalanche, which exhibits a style of 'free-fall' buoyancy. This appears in his work for the extensions of the Denver Art Museum and the Royal Ontario Science Museum in Toronto (figure 1).

His approach deconstructs the visual prejudice for rationalist dichotomies such as the vertical axis on a horizontal plane in the manner of the skeletal frame and contained box-like spaces. In other words, this rationalist approach to design is unhinged from its Cartesian axial mooring and the context of Newtonian absolute space, and the rooms, as volumes, are released into juxtaposed free fall. In this way the Cartesian and Newtonian frameworks are no longer fixed abstract referents and are displaced by an ongoing and interpretive spatial interpretation by the user's movement as a dynamic embodied referent in space-time. By deconstructing the prejudices associated with abstract visual space qualified by containment and stasis, or that of a neutral absolute space as referent, the user becomes designer; i.e. in the manner of phenomenological space-time.



Figure 2.

The extension to the College of Art, by the British architect Will Alsop (2001-2004) provides another fascinating design that has been affectionately re-

ferred to in Toronto as 'the floating table'. The cubic volume is supported, above the existing buildings on the street, by means of slender sloping columns in various colors (figure 2). The playful arrangement and coloring imply that they are non-structural elements in the manner of the game 'pick-up sticks', which heightens the sense of a lack of support. The intriguing aspect, with respect to the form of these columns, is that they actually taper like a sewing needle where they meet the underside of the building.

The total effect is that these columns don't appear to be holding the building 'up' but rather, they are keeping it 'down' as if the building was pegged or tied down like an oversized balloon (figure 3). This is an example of what could be termed 'aerial' buoyancy, in which the form simulates an object, light in weight, and in which work and study happen in the air.



Figure 3.

Another expression of floating or weightlessness might be termed 'submarine' buoyancy and is pro-

vided by the British architect Norman Foster who designed the new Complex for Pharmacological Research in The University of Toronto. What is extremely interesting about this work is that from the exterior it is almost the twin to Foster's Modernist offices located on the Thames, in central London, built in the 1980's. This is only a skin-deep resemblance because the lobby of the former building is inhabited by two seemingly inflated volumes, suspended from thin solid rods above (Figure 4).

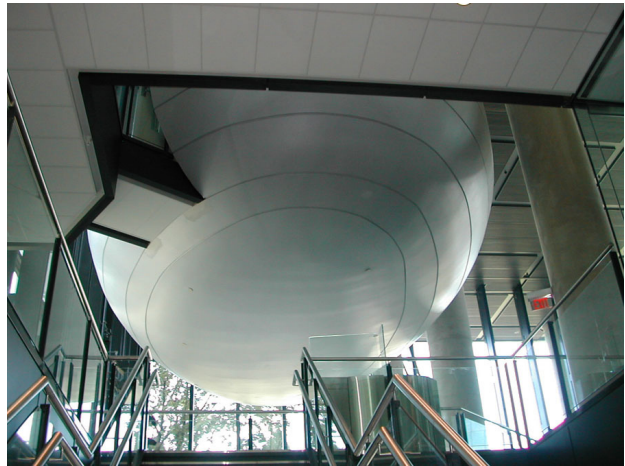


Figure 4.

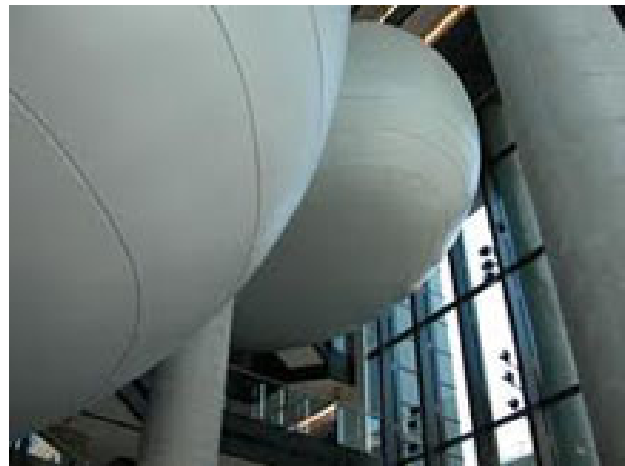


Figure 5.

These simulated inflatable forms are lecture halls which are also connected by short bridges to adjacent mezzanines. The effect of feeling submersed, within or below submarines is reinforced by the

exterior views which mimic the appearance of an aquarium. This appears to be deconstructing visual space by means of transparency and the montage of objects, not in a contained space, but rather by means of juxtaposition of objects that define their own space through space-time (Figure 5).

In these examples buoyancy is expressed as it blindly mimics the sense of a material world as qualified by the electronic information and dis-corporeal being. Actualizing the effects of our extended nervous systems and brains in the manner of design reveals the conditioned sensibility or qualified participation in the emergent electronic culture. Today, we are increasingly involved with the hyper-human scale of cyberspace with the concomitant loss of embodied values that were engendered by face-to-face relationships; relationships which safeguard a more humanistic scale, pace and patterns for societies. Buoyancy therefore satirizes weightlessness in a material world that is increasingly privileging dematerialization and therefore, ironically safeguarding a natural scale and context. Parodying the immaterial dimensions of the field of electronic resonances by design is one way of retrieving a sense of balance between our natural sense of embodiment and the hyper-natural scale of dis-corporeality innate to the emergent world of cyberspace. The attempt, by means of design, to restore a favorable balance between the natural and hyper-natural is a vital function for sustaining not just material but psychological and social well-being.

CONCLUSION

The language of architecture represents the bias of a mindset that is not a product of ideology, but rather that of a mode of perception prejudiced by means of a self-qualifying environment. For McLuhan, the notion of logos is not that of rationalistic reason or logic, but he refers to the pre-Socratic insight of the co-creative, co-formative dialectic between the speaker and the world; oral cultures perceive that when 'a word is uttered a world is outered'; i.e. world-making and language are synonymous as the means/medium for the construction of societies. McLuhan recognized that languages are technologies in the manner that they store and transmit knowledge and experience. In just this way, technologies such as planes, trains or computers are languages, because, by means of their operative infrastructural grammars they uniquely store and transmit objects

and information (LM...). It is these grammars, when analyzed in terms of self-qualifying environments, which facilitate an understanding of how all communication systems mediate and shape meaning and being. In this regard, buoyancy satirizes weightlessness in order to maintain a human dimension as a local condition of our lives. Mumford felt that the human scale is a most vital design criterion when he wrote:

Home, meeting-place, and factory; polity, culture and art have still to be united and wrought together, and this task is one of the fundamental tasks of civilization. Once that union is effected, and the long breach between art and life, which began with the Renaissance [with the intensification of visual space after printing and resultant Cartesian mind-body substance dualism], will be brought to an end.....there is nothing to prevent our own civilization from recovering once more *its human base* [my italics] – nothing, that is, except our desires, aims, habits, and ends.⁶

"Desires, aims, habits and ends" are subjective domains of societies rather than the inter-subjective; they constitute the tip of the iceberg, or content, rather than the qualifying dimensions of man-made environmental influences. Environmental context, as a self-qualifying framework, rather than content, shapes percept and percept in turn in-forms concepts such as space and formal conceptions of art and architecture. Being predisposed to visual space or acoustic space as qualified by the mechanical and automated environments respectively, has engendered their respective social realities and concomitant blindness. Blind creativity, therefore, is a behavior inherent to all architectural periods and related design styles throughout history. But today, as technological change has accelerated, this behavior is becoming more transparent. In the information age we are experiencing extended self-qualifying abilities in the manner of pattern recognition as well as structural and systems analysis, while obsolescing cognitive abilities which privileged specialization and non-interdisciplinary study.

The extension of the nervous system and brain is fostering the ability to think about thinking (i.e. critical thinking about the cognitive correlates of environmental development) because knowledge can no longer be separated into particular subjects or fixed definitions. Critical thinking for McLuhan involves thinking about the self-qualifying groundwork, or human extensions, in terms of their effects as a way of anticipating blindness or the prejudices

of environmental bias. In other words, environments, whether local, regional or global, are artifacts designed by means of an ecology of media or technologies. However, for a sustainable ecology regarding not only material, but also psychological and sociological well-being as an effective response to blind creativity, then architectural and urban design must be understood in terms of the co-formative dynamics of self-qualifying environments. This approach could foster anticipatory rather than blind design in order to safeguard human scale and natural experience whatever innovative technological changes we produce.

ENDNOTES

- 1 Lewis Mumford, *Sticks & Stones: a study of American architecture and civilization* (New York: Dover Publications, Inc. 1955), 86.
- 2 Manuel Castells, *The Internet Galaxy* (London: Oxford University Press, 2002), 1-3.
- 3 Colin Rowe and Robert Slutsky, *Transparency* (Basel: Birkhauser, 1997)
- 4 Marshall McLuhan and Eric McLuhan, *Laws of Media: A New Science* (Toronto: University of Toronto Press, 1988), 3-4.
- 5 Lewis Mumford, *Sticks & Stones: a study of American architecture and civilization* (New York: Dover Publications, Inc. 1955), 85-86.
- 6 Mumford, *Sticks & Stones*, 112.