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## **(New) Media Facades: Architecture and/as a Medium in Urban Context<sup>1</sup>**

**Abstract:** Besides representing a border dividing interior and exterior spaces, one of the primary functions of the facade is communication. What used to be inscribed in stone, concrete, wood or glass, is now communicated via digital media, which became an integral part of architecture in the information society we live in today. Even though this research includes an investigation of media-supported facades as architectural elements, a much broader discourse oriented toward relational aesthetics in urban spaces will be employed in order to analyze the new media potential of communication layers in architecture.

**Keywords:** urban digital media, media facades, mediatecture, urban new media, relational aesthetics

### **Introduction**

Throughout the history of architecture, the facade of a building represented a clear distinction between inside and outside. In a strictly material sense, walls had to be massive due to structural requirements. The surface of the building, with its distribution of windows and certain materials or ornaments, was intimately connected with the life of its interior. It was the modernist concept of flowing, open space that revolutionized the relationship between open and enclosed spaces, providing a glimpse into the ever-changing life of a building interior. The advent of new technologies such as reinforced concrete and glass curtain walls supported by steel constructions enabled interior spaces to become increasingly open toward the exterior ones, and vice versa.

Besides representing a border dividing interior and exterior spaces, one of the primary functions of a facade is communication. Of course, this communication is always a two-way one, as a facade represents a more or less porous membrane through which architecture opens up toward the city, but also receives the influence of urban context in return. In that sense, we can say that a building facade is a medium, as one

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of its important functions is the transfer of information. Even though the words *medium* and *media* share the same etymology, as both appeared in the English language in the sixteenth century, from the Latin adjective *medius*,<sup>2</sup> their use has determined their respective fields of meaning which sometimes overlap. By the 18<sup>th</sup> century the word *medium* established a meaning referring to the conditions, atmosphere or environment in which something can act or develop, while the advent of the advertising industry in the 20<sup>th</sup> century brought a new set of interpretations that could be attached to this term. The word *medium* could be used to signify communication technologies such as print, radio, film or communication channels in general. On the other hand, the word *media* is simply a plural form of the word *medium*, but it is commonly used to denote physical objects used to store information (for example DVDs) or in phrases such as *mass media*. In spite of the somewhat confusing use of both words and their overlapping meanings, we can say that the words *media/medium* can be used to designate means which provide instantaneous transfer or exchange of information, entities which possess a capacity to write and store data or the means of artistic expression.

For the sake of clarity, we will adopt a model of communication which primarily uses these terms to emphasize the capacity of architecture to convey information, while secondary and tertiary set of meanings still remain important for architectural practice and theory. Even though philosophers and media theoreticians alike cannot agree on the exact definition of the word *media* and therefore provide us with a multitude of communication models that sometimes do not offer a clear distinction between the notions of *media/medium* and *interface*, this paper will employ those terms according to the interface theory proposed by Oleg Jeknić.<sup>3</sup> In this model of communication the *interface* is defined as a source of information compatible with our perceptual system and therefore available to our cognition, while the role of *media/medium* is to transfer that information from *interface* to *subject*.<sup>4</sup>

This study will analyse the implications of new technologies such as virtual and augmented reality on the communication process in an urban context, as well as the relation between event and experience and how it is dictated by the specificities of human perception. If a certain amount of people interact with a certain space, thus receiving, but also creating a certain amount of information, or, in other words – communicates with and within that space – does the urban environment becomes a social network?

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<sup>2</sup> Lat. *medius* – middle, in the middle of.

<sup>3</sup> Oleg Jeknić, *Teorija interfejsa* (Beograd: Fakultet za medije i komunikacije, 2014), 66–73.

<sup>4</sup> The notion of *subject* is used here to denote a final destination of information in a communication process – whether material or immaterial, spatial or transcendent, it represents the center of the system of our cognition. As the relationship between *subject* and *object* in a communication model is a very complex question that has besieged philosophers and theoreticians for centuries, it will not be discussed any further, as the format of this paper does not allow it.

## Urban Datascape and Mediatecture

What used to be inscribed in stone, concrete, wood or glass is now communicated via digital media, which became a ubiquitous part of architecture in the information society we live in today. The use of digital media in architecture and its increasing interactivity – both as the means of its creation and through everyday consumption in the urban context – qualifies architecture as a new media practice. Even though communication through the use of conventional, unchangeable materials, such as concrete, glass or brick, brought us some of the most poetic and subtle facades in the history of architecture, the development of digital technology, moving images and the screens they are projected onto, have enabled unprecedented possibilities of communication in the urban environment. Creating and thinking in the context of a Warhol-infested world and postmodernism, architecture visionaries such as the *Archigram* group imagine the technocratic society of the future as information infrastructure wrapped in pop culture aesthetics, with infinite displays and commercials. In this dystopian vision of the future, the materiality of the building becomes secondary to the information it is conveying. In the meantime, media facades have seamlessly crossed over from drawing boards of avant-garde architects to market-oriented (hyper)reality shaped by late capitalist society. Times Square and The Strip in Las Vegas, conditioned solely by a desire to bring maximum profit, are capitalist wonderlands at their worst (or best, depending on the point of view), and therefore probably the best example how this hybrid of architecture and media can turn into its own caricature. If messages are too loud and there are too many of them, the only thing you can do is stop listening to them.

It was Robert Venturi who introduced the paradigm of *information surface*<sup>5</sup> into architecture. Advising us to learn from vernacular and commercial culture, Venturi saw electronic display not as an optional addition secondary to physical form, but as a building brick of architecture for the information age we live in. He wanted us to think of „architecture as an iconographic representation emitting electronic imagery from its surfaces day and night.“<sup>6</sup> Venturi sees architecture for the *information age* as a form of communication, but also reminds us that, historically, architecture has always included visual narratives, ornament and iconography, and therefore advocates for architecture to be defined as iconographic representation. The only difference is that information conveyed through architecture is no longer a monologue set in stone or brick, but an ever-changing digital image that offers the possibility of dialogue through the possibility of real-time interaction. Tracing a lineage from the billboards

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<sup>5</sup> A term introduced by Lev Manovich to describe Robert Venturi's proposed view on architecture for the information age, Lev Manovich, "The poetics of urban media surfaces," *First Monday, Special Issue #4: Urban Screens: Discovering the potential of outdoor screens for urban society*, 2015, accessed September 10, 2016, <http://www.firstmonday.dk/ojs/index.php/fm/article/view/1545/1460>

<sup>6</sup> Robert Venturi, *Iconography and Electronics upon a Generic Architecture: A View from the Drafting Room*: Cambridge: MIT Press, 1996), as cited in Lev Manovich, "The poetics of urban media surfaces."

and neon signs of Las Vegas to urban screens in contemporary cities, Venturi nevertheless sees information surface as a two-dimensional, separate entity co-existing with the traditional physical frame of architecture. In that sense, rather than speaking of information surface, it is arguably more appropriate to use the term *information layer*, as it allows for communication to be translated into spatial context. Instead of conventional space with the addition of media surface, we operate with architecture that holds a potential to become media infrastructure, integrating physical and information space.

Similar to Venturi, French philosopher Paul Virilio has also written on the key role that urban digital media and commercial screen culture, including cinema and TV, had on the urban experience in general. Virilio also finds evidence of *architecture of communication* throughout the history of conventional construction, such as medieval cathedrals, but in contrast to Venturi he investigates how the experience of urban landscapes changes under the influence of individual perception shaped by the culture of the screen that has become a pervasive factor of modern society. For him, architecture is no longer about habitation but information. Virilio theorizes that the experience of the city, just as one of the cinema, is happening on the verge of our consciousness – in other words, our basic perception of physical space and time is being warped by the information layer provided by digital media devices in our homes, streets and cities. Such technologies, feeding us with information coming from some other space (if the communication is happening in real time, but in different places) or time (if the source is time-based media, used to store information recorded in some other time),<sup>7</sup> fragment our perception of physical space and contributing to the apparent dematerialization of architecture. In his book *Lost Dimension*, first published in 1984, Paul Virilio wrote of the upcoming change in everyday existence brought by the advance of digital technology: “Will we soon replace the ensemble of apartment furniture with the active and dynamic vectors that will themselves progressively but radically modify the configuration of the building, and then the architectural morphology? [...] Having made the window autonomous through the television screen, and the door through the automobile, will we now participate in the complete disintegration of the building?”<sup>8</sup>

Such urban environments dissolve the boundaries between nature and technology and, in terms of human perception, create a specific kind of urban landscape – *datascares*. We will use this term deriving from the words data and landscape to denote the contemporary urban context consisting of physical architecture blended with media infrastructure in variable ratios. When it comes to particular technologies

<sup>7</sup> Manovich divides media into *time-based media*, which denote devices used to store and preserve information through time, and *real-time media* referring to communication systems that provide the exchange of information between subjects in real time, i.e. telecommunication.

<sup>8</sup> Paul Virilio, *Lost Dimension* (New York: Semiotext(e), 1991), 80, as cited in Tore Slaatta, “Urban screens: Towards the convergence of architecture and audio-visual media,” *First Monday, Special Issue #4: Urban Screens: Discovering the potential of outdoor screens for urban society*, 2015, accessed September 10, 2016, <http://www.firstmonday.dk/ojs/index.php/fm/article/view/1549/1464>

dynamically delivering and extracting data from physical space, effectively turning it into a datascape, we need to mention video surveillance, screens located in public spaces and personal mobile devices providing us with location-based media. In a post-9/11 world, video cameras became a ubiquitous part of the urban landscape of the Western metropolis. Screens in public spaces now employ technologies that provide real-time interaction and personalized experience for the consumer that is potentially every urban dweller in Western civilization. It was mobile devices with software applications operating within Global Positioning Systems (GPS) that has enabled users to be exposed to a personalized flow of data generated in the urban space and determined by information provided by GPS apps. On the other hand, you can use your mobile device to interact with other users in some other, virtual space, which could overlap with the actual physical space of the city.

Lev Manovich used the term *augmented reality* to explain the laying of dynamic and context-specific information over the visual field of the user.<sup>9</sup> It might seem counterintuitive that human perception would adapt so quickly to immaterial reality while still existing in the physical world, but the global craze surrounding *Pokémon Go*, a location-based augmented reality/pervasive video game that took the world by storm in 2016, proves how plastic human perception is, and how easily we integrate technology in our *body schema*.<sup>10</sup> Even though the augmented reality interface for *Pokémon Go* was crude and presupposed the limits of the mobile phone screen in order to access the additional information layer, users had no trouble merging their digital avatars and virtual Pokémons with actual geographic locations, which is proven by more than 500 million downloads of this mobile app worldwide. While this certainly proves how prophetic Marshall McLuhan's vision of the urban landscape as electronic extension of man was, the curious cases of people who accidentally stumbled upon dead bodies, overcame their agoraphobia or debilitating depression through *Pokémon Go* also serve as a reminder of how powerfully integrated physical and virtual spaces can become in our minds. Even though our current mobile technologies are far from being elegant, we are more than willing to conform our cultural and behavioural patterns to them, as this photo from Hillary Clinton's presidential campaign proves – she is left without eye contact as all the visitors turned their backs on her in search of the perfect selfie. (Fig. 1)

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<sup>9</sup> Lev Manovich, "The poetics of urban media surfaces."

<sup>10</sup> *Body schema* (fr. *schéma corporel*) is a term coined by French philosopher Maurice Merleau-Ponty and is used to denote the perceived position of our bodies in the physical world. This is a subjective category that can differ from objective body position and size, that way explaining how people still feel pain in phantom limbs or how easily we integrate different tools and technological devices into the perception of our body in physical space, thus contributing to embodied cognition.



**Fig. 1:** Hillary Clinton campaign, Orlando, USA, 2016.  
Photo: Barbara Kinney, Hillary for America

Lev Manovich announced the death of architecture induced by the accelerated production of digital images set up as visualizations of artificially generated reality – we can interpret this ominous vision as an announcement of architecture subordinated to digital images, rather than a literal disappearance of physical structures. In that sense, it is important to note that, when speaking of virtual, we will use this term in the Bergsonian sense, as a philosophical concept which opposes the *actual* (as a feature of the present tense) with *virtual*, which he discusses in terms of memory and potential (that is more or less realized in the real world and real time). Gilles Deleuze has attempted to define Bergson's notion of virtual using Marcel Proust's comprehension of virtuality through memory as „real but not actual, ideal but not abstract.”<sup>11</sup> For Deleuze, virtual refers to the aspect of reality that is ideal, but nonetheless real. In other words – virtual is an umbrella term which covers the potential of things that is yet to be actualized. According to Elizabeth Grosz, the essence of virtual remains the same, regardless of the medium used to create it – it is always about being outside, „the ideal of transcending the body, suppressing corporeality, abandoning the sticky mess of material that constitutes our entwinement with the real, seems to have been pervasive throughout both philosophical theory (and through it, architectural discourses) and the mathematical and computational sciences that came together with engineering to design and produce computers and the virtual spaces upon which they now both rely. [...] This pervasive fantasy of disembodiment is linked to the fantasy of mastery at a distance, of ‘tele-presence’, the illusion of being able to leave the body at will and reappear elsewhere, to be present while not really present (a fantasy that

<sup>11</sup> Oleg Jeknić, *Teorija interfejsa*, 140.



is powerful in religious obsessions and in New Age belief systems).<sup>12</sup> This concept of virtual should be discerned from the *virtual world* – a computer-based simulated environment or VR equipment, i.e. technology used to achieve such sensory simulation.

The arrival of communication systems using technology of electromagnetic (EM) waves to transfer information at the end of the 19<sup>th</sup> century created conditions which could support a particular form of communication – *telecommunication*. Telecommunication marks a communication process happening in real-time, but not necessarily in the same physical space frame. Participants in this exchange, be it a human subject or a machine, are simultaneously present in time, but do not have to inhabit the same space, as with telecommunication information can be transferred to a remote subject. In that sense we could say that technologies such as personal mobile devices, but also any urban digital media providing dynamic exchange of multimodal (audio, visual... etc.) information between users, provide us with the possibility of telecommunication.<sup>13</sup>

Another term that we need to define is *cyberspace*. In his book *Neuromancer* published in 1984, William Gibson introduced the term cyberspace to define “the notional environment in which communication over computer networks occurs.”<sup>14</sup> The concept of cyberspace will be important for us as it provides the model of communication which includes the “copresence and interaction<sup>15</sup> of multiple users, allowing input and output from and to the full human sensorium, permitting simulations of real and virtual realities, remote data collection and control through telepresence,<sup>16</sup> and total integration and intercommunication with a full range of intelligent products and environments in real space.”<sup>17</sup> It might seem obvious that cyberspace and physical space stand in a relation similar to the one describing the duality of body and mind, but it is more functional to analyse cyberspace as a mode of extension and stimulation of the human body existing in physical space, aligned with McLuhan’s view of the media. We can conclude that the layer of cyberspace is intertwined and coexists with physical space as a hybrid entity – similar to what Lev Manovich marks as augmented reality.

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<sup>12</sup> Elizabeth Grosz, *Architecture from the Outside: Essays on Virtual and Real Space* (Cambridge, London: The MIT Press, 2001), 83.

<sup>13</sup> Even though participants in this exchange could inhabit the same space, for instance stand on the same square, their communication is realized through technical devices which use EM waves to transmit data and is therefore mediated rather than direct, so can be considered a telecommunication.

<sup>14</sup> *Oxford Dictionaries*, accessed September 21, 2016, <https://en.oxforddictionaries.com/definition/us/cyberspace>

<sup>15</sup> Communication in the most general sense implies the exchange of information; in that sense, we could say that adjective interactive (communication) used to describe a multi-way exchange of information is redundant, as every process of communication inherently involves the possibility of multiple users exchanging information in real time. Therefore, terms *interaction* and *interactive* will be used to denote technical communication systems providing a two-way, immediate exchange of information between two or more participants which are simultaneously present at the moment of exchange, regardless of their distance in physical space.

<sup>16</sup> Term *telepresence* refers to *the use of remote control and the feedback of sensory information to produce the impression of being in another place, an idea which is now part of virtual reality concept.*

<sup>17</sup> Marcos Novak, “Liquid architectures in cyberspace,” in Michael L. Benedikt, ed., *Cyberspace: First Steps* (Cambridge: MIT Press, 1991), 225.

Urban digital media represent the intersection of architecture, information and culture which co-exist in the arena of technology and construction. Through networking and content-sharing they are creating a possibility for global multimedia infrastructures for commercial and cultural exchange. I will use the term *mediatecture* to describe the field of new media in which architecture operates in an urban context. Each communication carried through *mediatecture* can be divided into a certain number of *polymedia pixels*, which represent the smallest possible units of communication transmitted via *mediatecture*. The model of communication based on polymedia pixels will be thoroughly discussed in the following sections in this paper.

## Architecture and/as New Media

In this section we will investigate the position of architecture within the new media paradigm. The use of the term *new media* is often confusing – it seems that everyone takes it for granted, but explanations of this term vary widely. The terms media/medium and interface are frequently used interchangeably, proving that philosophers and scholars in the field of media and communication science do not pay sufficient attention to the technological aspect of these concepts. The common denominator in most definitions of new media is the use of the digital computer and its impact on the communication process. For instance, Serbian art theorist and conceptual artist Miško Šuvaković specifies that it is “the use of digital computer as an essential technology for information processing, representation or simulation”<sup>18</sup> that determines art as new media practice. When speaking of the impact digital computer technology has on architecture and urban space we are actually analysing the implications of some of the key concepts explained in the previous chapter – virtuality, cyberspace, interaction and telecommunication. Lev Manovich sees digitization as a true breakthrough; it was the possibility of transforming all data into a digital code that made data programmable. In his words, “computer therefore was no longer just an Analytical Engine, suitable only for crunching numbers, it has become Jacquard’s loom – a media synthesizer and manipulator.”<sup>19</sup> Further, Manovich states five key trends that define new media:

1. *numerical representation* – it is the fact that the new media object could be described mathematically that makes it programmable;
2. *modularity* – it consists of many discrete samples such as pixels, characters and script
3. *automation* – Manovich sees automation as an opportunity to, at least partially, free the creative process from human intentionality;
4. *variability* – a new media object can exist in an infinite number of versions without changing the essential nature of the object;

<sup>18</sup> Miško Šuvaković, *Epistemologija umetnosti ili o tome kako učiti učenje o umetnosti* (Beograd: Orion Art, 2008), 110.

<sup>19</sup> Lev Manovich, *The Language of New Media* (Cambridge, London: The MIT Press, 2001), 30–32.



5. *cultural transcoding* – computerized media operates on digital code; the structure of computerized media today follows the logic defined by data organization of a computer system, which remains invisible to humans without the appropriate interface, in contrast to conventional media defined by their comprehensible production techniques.<sup>20</sup>

Manovich is one of the most influential thinkers in the field of new media today, but we could criticize his definition of new media for not making a clear distinction between the concepts of media and interface. A lot of contemporary media scholars including Manovich use the term media to denote what is actually a user interface of a digital computer. Formally, it is EM radiation and digital code inscribed in it that are the media, as they are responsible for the transfer of information. On the other hand, digital code remains an incomprehensible string of ones and zeros unless made available to our senses through user interface. Even though Manovich's definition of new media could explain the content presented by urban digital media such as various screens and mobile devices, it remains powerless when it is supposed to grasp the comprehensive thought of an all-encompassing entity that includes both physical space and information layers intertwined with it. In other words, he fails to see mediatecture beyond media content and physical infrastructure that supports it as discrete entities.

Relying on Merleau-Ponty and Bergson, a line of philosophers which put emphasis on the role of the body in the process of cognition, American media theorist Mark Hansen is on the quest to define what really makes new media *new*. In his book *New Philosophy for New Media*, he hypothesizes that the human body, with its ability to reach cognition through embodiment, is the new (or better to say – old) media. By rehabilitating the process of *affection*, introduced by Bergson, and understanding the human perceptual apparatus as the interface of new media, he moves the locus of new media discussion from the issues of technology to human perception and cognition. Similar to Manovich, he acknowledges the impact digitization had on human culture but is less concerned with its technical aspects. Rather, he sees this loss of media specificity as a chance for the body to take on a more prominent function as a selective processor of information: “We could say, to put it in single terms, that it is the body – the body's scope of perceptual and affective possibilities – that informs medial interfaces. This means that by flexibility brought by digitization, there occurs a displacement of the framing function of medial interfaces back onto the body from which themselves originally sprang. It is this displacement that makes new media art *new*.”<sup>21</sup> Dematerialization of physical space (and architecture) foreseen by Paul Virilio becomes a central concern for Hansen.

This discourse, which implies that every space is experienced and *produced* subjectively, holds strong connections to environmental psychology as well as to Lefebvre's concept of the production of space. Hansen's point of view is important to us as it allows for architecture and urban spaces to be considered as an organic whole with

<sup>20</sup> Ibid., 26.

<sup>21</sup> Mark B. N. Hansen, *New Philosophy for New Media* (Cambridge, London: The MIT Press, 2004), 22.

the information layer co-existing within them. If it is ultimately a human body that makes the selection and sense of data it gathers, it makes no difference whether that information is inscribed in stone or glowing from a digital screen. Therefore, we could conclude that instead of being in a certain relation to new media which exist as separate entities, architecture and urban context actually possess a new media potential.

In a city freed from stable dimensions and appearances, we could talk about what Scott McQuire defines as “a mediated production of urban space that has become a constitutive frame for a new mode of social experience.”<sup>22</sup> He uses the term *relational space* to describe the ephemeral qualities of these new media-architecture complexes. Relational space can only be defined with the temporary position each subject occupies in space and time, and its relation to the position of other subjects. For McQuire, “The heterogeneity of relational space is a key experience of contemporary globalization, and demands new ways of thinking how we might share space to constitute collective experience.”<sup>23</sup> Personalized marketing and other pervasive urban digital media that provides us with a tailor-made urban experience serve as proof that the private and public domain are increasingly converging. On the other hand, it is our private experiences, like millions of *Instagram* photos of famous tourist sites such as the Eiffel Tower, that inevitably shape our perception of those places, even before we visit them. (Fig. 2)



**Fig. 2:** Various, yet very similar photos of couples in front of the Eiffel Tower showcase how strong culturally-ingrained expectations and the predefined identity of the place are. Photos: first two photos from left by *The Paris Photographer* via OneThreeOneFour, third photo by Melvin Gilbert via Veyburry and fourth photo by Kent Wong.

<sup>22</sup> Scott McQuire, “The politics of public space in media city,” *First Monday*, *Special Issue #4: Urban Screens: Discovering the potential of outdoor screens for urban society*, 2015, accessed September 10, 2016, <http://www.firstmonday.dk/ojs/index.php/fm/article/view/1544/1459>

<sup>23</sup> *Ibid.*

## Relational Aesthetics for Mediatecture

In previous chapters we have established that contemporary urban space, defined by mediatecture, possesses a new media potential and can be marked as relational space. Therefore, we will need *relational aesthetics*<sup>24</sup> in order to understand and create within such environments. The goal of relational aesthetics art is to create a social circumstance; it operates in the realm of constructed social environment in which the viewer's experience becomes the art. Fuelled by the advent of technology, the contemporary city requires rethinking of the urban space that is now supposed to integrate empathetic and responsive urban digital media enabling multimodal communication. In the attempt to generate a protocol for social connectivity and networked collaboration within such a context, Barker et. al introduce the concept of *polymedia pixel*, as the smallest possible unit of communication realized via mediatecture.<sup>25</sup> Polymedia pixels are not necessarily defined by the physical aspects of their technology, but rather by their role in the communication process. The multiplication of polymedia pixels in 2D or 3D layout creates an image which could include different sensory modalities such as visual, auditory, etc. Barker et. al name seven key attributes of the polymedia pixel:

1. *contextual responsiveness* – to physical, environmental factors;
2. *interactive responsiveness* – to human intervention and activity in proximity;
3. *intelligence* – adaptation of behaviour to suit given condition;
4. *multimodality* – ability to address multiple human sensory systems;
5. *sensing and communication* – access point from which users can feed data to the system and vice versa;
6. *energy efficiency* – optimising energy expenditure and self-powering energy resources;
7. *open protocol for networked device controllers* – such a communication system must be configured to provide access to as many diverse users from their own, possibly different platforms.<sup>26</sup>

This paper was published in 2010, and while technological progress made many of the defining features of polymedia pixel our reality this model of communication remains valid because it is not dominantly formed by technical aspects of urban digital media but rather their relational aesthetics. Of course, the advance of technology has offered numerous new possibilities for communication in urban space. Neural

<sup>24</sup> French curator Nicholas Bourriaud defines the term *relational aesthetics* as “a set of artistic practices which take as their theoretical and practical point of departure the whole of human relations and their social context, rather than an independent and private space.” Nicholas Bourriaud, *Relational Aesthetics* (Dijon: Les Presses du reel, 1998), 113.

<sup>25</sup> Tom Barker et al., “Interactive Polymedia Pixel and Protocol for Collaborative creative content generation on urban digital media displays” (paper presented at International Conference on New Media and Interactivity, Istanbul, Turkey, 2010), accessed September 15, 2016, <https://opus.lib.uts.edu.au/bitstream/10453/16609/1/2010000690.pdf>

<sup>26</sup> Ibid.

networks and deep learning have moved the AI paradigm from pre-programmed responses to the possibility of true intelligence. Biofeedback is increasingly used for various purposes, ranging from computer passwords and surveillance to urban media content generation in real time. Such technologies are increasingly becoming smaller, smarter and more elegant, as recent collaboration between Hussein Chalayan and *Intel* proves. The visionary fashion designer has integrated wearable tech into his Spring/Summer 2017 collection, which includes portable projectors that generate visualizations based on the biofeedback data received from the wearer while animating the surrounding space.<sup>27</sup>

Nevertheless, it is not the technology itself but the intentions that define relational aesthetics of mediatecture. While Rafael Lozano-Hemmer's project *Body Movies* is almost fifteen years old, it still remains one of the most poetic manifestos of what communicating in the contemporary urban context might mean. This Mexican-Canadian electronic artist continuously investigates new modes of interaction in urban spaces through his series *Relational Architecture*. *Body Movies* transforms the public space of the city by projecting thousands of photographic portraits previously taken on its streets. However, these portraits remain invisible until the city square is filled with passers-by who obscure powerful light sources located on the ground and project shadows in which images generated by video projectors can finally be seen. When all the portraits have been revealed by the shadows a video surveillance tracking system issues the command to change the scene to the next set of portraits, once again inviting the public to occupy new narratives of representation. In the artist's own words, "*Body Movies* attempts to misuse technologies of the spectacular so they can evoke a sense of intimacy and complicity instead of provoking distance, euphoria, catharsis, obedience or awe."<sup>28</sup>

## Conclusion

Architecture is certainly conditioned to follow technological progress when it comes to its economic and ecological implications, but its aesthetics seems to be disconnected from the paradigm shift triggered by the light speed by which technology develops. The other source of confusion is the imprecise use of the terms media/medium in theoretical discourse. This study has investigated key concepts necessary to define new (urban) media – virtuality, augmented reality, interactivity and mediatecture. By comparing various definitions of new media we have attempted to position architecture in relation to them, only to settle for Mark Hansen's point of view which

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<sup>27</sup> "Intel Brings Wearable Technology To Hussein Chalayan's Paris Fashion Week Show," *Forbes*, accessed September 30, 2016, <http://www.forbes.com/sites/rachelarthur/2016/09/30/intel-brings-wearable-technology-to-hussein-chalayans-paris-fashion-week-show/#f857930789f9>

<sup>28</sup> Rafael Lozano-Hemer, *Body Movies*, accessed September 10, 2016, [http://www.lozano-hemmer.com/body\\_movies.php](http://www.lozano-hemmer.com/body_movies.php)

locates new media in the human body and its ability for embodied cognition. This particular discourse was useful, as it was less concerned with the particularities of technology and offered a new media potential to architecture, as all perceptual information, no matter whether coming from analogue or digital sources, were unified through our corporeal interface. We have established that regardless of their source all data that our sensory system receives is processed in analogue fashion, meaning that mediatecture defines relational space.

Evolution conditioned our perceptual system to be particularly sensitive to change and contrast, as that helped us survive when faced with sudden threats. Today most of us are no longer endangered by wild animals, but our perceptual systems are still calibrated primarily to notice change, which is exactly why mediatecture, with its ever-changing nature, is so appealing. Contemporary architecture might be keeping in step with the advance of media technology in a purely technical sense, but the relational aesthetics it simultaneously creates is yet to be charted.

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