

Promotion Function of Media Façade of Landmark: The Perspective of Media Archaeology

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Abstract: The use of the LED screen and LED lighting systems on façades has expanded in significant cities worldwide in the past decade. Some architects actively cater to the trend of media facades to design the facade of the new landmark as media or interface for communication and interaction. In recent years, dozens of media facades of buildings have even composed the urban media matrix in more than 20 cities, which have become new landmark landscapes. The landmark media façade with particular history in ads is not emerging suddenly. Therefore, from the perspective of Media Archaeology, this paper analyzes the history of media and adverts on landmark facades and compares media on façades in different periods.

1. Introduction

In the past 20 years, media facades have been constructed in many large cities all over the world, due to the widespread application of LED lighting systems and huge screens, so researchers mainly focus on the cases of the media facade of the 21st century. However, as a phenomenon, it is just a new stage of the long history of façade which is used for public communication. Media archaeology is an emerging approach to media research. Huhtamo and Parikka considered it as “a cruise in time” and explained that “the past is brought to the present, and the present to the past; both inform and explain each other, raising questions and pointing to futures that may or may not be” [1]. According to media archaeology, a new medium has no absolute distinction compared with the old one, but revive via new technology. As Zielinski made clear, “The idea is to begin just a few inquiries into the different strata of the histories that we conceive as ‘histories of the media’ in order to pick out the signs of a ‘butterfly effect’, in a few places at a minimum, in reference to both the hardware and the software of the audiovisual” [2]. Therefore, the study taps into the history of architecture and art to dig out the previous existence of media façades, and to reflect on the media façade design.

The surface of the landmark has been used for communication as media since ancient times, such as murals on the facade of ancient Egypt temples and religious embossing on the facade of Milan Cathedral. In the era of capitalism, huge luminous billboards on buildings have replaced friezes and murals, and have begun to occupy the facade of new commercial landmarks. Advertising practitioners

and architects are different stakeholders in urban public space, and they have different views on the media of facade. In ancient Rome, architects did not reject using landmark facades to communicate with the public as a kind of media, so embosses were religious or political propaganda as “ads”. The modernist architects, for whom form follows function [3], wiped decorate and media off façades. Ironically, as a result of modernism, the obstacles were cleared out for the deep integration of billboards, screens, and building surfaces. With the development of LED technology, the structure of LED lighting systems is almost invisible during the daytime, so more and more architects began to actively think about how to integrate the media and building to design the media façade. One of the most important functions of the media facade is advertising, which needs to be combined with local culture and spatial characteristics closely. Advertising and architectural expression no longer conflict in essence under the concept of media facade, so the problem is how to integrate better.

Therefore, a challenging problem that arises in this domain is how the medium and advertising function of the facade has evolved. From the perspective of media archaeology, this paper will attempt to find out the medium and advertising functions of different stages of the facade, and briefly sort out the relationship between media and advertisement of landmark facade, to reflect on advertising of present media facade and promote the development of advertising via media facade.

2. Literature Review

2.1 Media Façade

The term media facade is emerging in the 1990s, because of the use of LED light on the facade. Behrens et al. summed up that “Some see digital media facades as simple ornaments that create an ambient atmosphere. Others consider the potential of digital media facades for communicating content. for instance, advertising (e.g. Times Square, New York or Piccadilly Circus. London). news content (e.g. the network of Big Screens in the UK, which was initially run by the BBC), media art (e.g. Lozano Hemmer's artwork), social visualization (e.g. BlinkenLights), or for community purposes on a neighborhood level (e.g. Screens in the Wild)” [4]. From this description, we can see that the urban screen is the source of the concept of media facade. Wiethoff and Hussmann added projection to this concept, “Media facades are digital public screens with arbitrary form factors and of varying resolution, which are created by either equipping the outer surface of an architectural building with controllable, uniformly shaped, light-emitting elements or by projecting digital content onto it. Media facades are embedded into the architectural structure of the underlying building and transform the building into a communicative element” [5]. Hank had defined that “media facade is any external building surface with an integrated capacity to display dynamic graphics, images, texts, and spatial movement” [6]. This definition emphasizes that the screen function of the media facade should be integrated with the building surface is different from the urban screen, and whose source can be traced back to the incomplete project of Pompidou Art Center. The definition of media facade is based on media technology. Therefore, with the further development of spatial media and information technology, the connotation and extension of the media facade will be adjusted accordingly. But it is undeniable that the media facade is born out of the urban screen and building illuminating, and has become an interactive interface and communication platform of the city. In the future, the media facade will have new functions and forms with the application of AR, 5G, AI, and other technologies. Thus, the media facade can be considered as an information surface and used for communication but presents different forms due to technical iteration.

2.2 Media Archaeology

According to Zielinski, media archaeology is not looking for the old things that have existed in the

new things but finding the surprising new things in the old things [7]. Parikkan considered that media archaeology is introduced as a way to investigate the new media cultures through insights from past new media [8]. Huhtamo argued that media archaeology emphasizes cyclical and recurrence that some disappearing media will reappear in another form [9]. Huhtamo analyzed the history of public media displays from the perspective of media archaeology. The trade signs, banners, advertisements, billboards, and earliest dynamic displays are discussed respectively [10]. Huhtamo proposed the concept of “screenology” to be a specific branch within media studies focusing on screens as “information surfaces”. The focus should not be only on screens as designed artifacts, but also on their uses, their intermedial relations with other cultural forms, and the discourses that have enveloped them in different times and places [11]. The media façade is a kind of information surface of a building that can be traced to frieze. This paper attempts to get new knowledge from the prehistory of the media facade to rethink the current media facade.

2.3 Semiology

The Landmark is a building with icon and medium function in a region that can help people easily identify their location, and also an important place for public communication. Schumacher argued that classic modern architecture neglected the iconic and symbolic relation, but a semiotic system was necessary within the design process so that new architectural forms could be read and understood by society [12]. Therefore, the double semiotic systems of architectural form and content of media façade contribute to composing landmarks. Meanwhile, it is an icon as a city brand and represents the particular culture in the process of communication. Thus, a landmark has dual symbol characteristics in the communication process, as a sign to be recognized or read in the context of a city, and as a sign to be used in other media communications.

Additionally, Venturi et al. understood Las Vegas as “a communication system” in which signs and symbols interface with buildings, and considered that “the graphic sign in space has become the architecture of this landscape” [13]. Barthes proposed to interpret urban space with semiology. The city is considered poetry of signifier, and the landmark is the essential medium and sign to inherit and spread social ideology [14]. Furthermore, Lefebvre moved beyond Barthes, and argued that city space should not be analyzed solely as a conglomerate of signs, images, or texts, which reduces the space in question to a collection of messages and the experience of living in that space to a “reading”. It should be approached as a lived, practice space [15].

2.4 Relationship between Advertisement and Landmark

The word “advertise” comes from the Latin word “advertere”, which means attention, inducement, and communication. Nevett found that there was widespread use of advertisements written or inscribed on walls, mural advertisements, and shop signs in the Roman Empire [16]. In the Middle English age (1300-1475), advertising has been used to mean making someone notice something. When large-scale commercial activities began to flourish in the UK at the end of the 17th century, modern advertising was born. However, in ancient Greece, the facade of a landmark already had the media function of inducing and spreading ideas that modern advertisement has because the public space nearby the landmark was so essential for social activities that the facade was decorated with lots of narrative relief and frieze. In the period of capitalism, commercial advertisements have begun to encroach on façades, and even some buildings were shaped as a landmark due to the dense billboards, as Cronin described, the billboard is interface with the urban which results in some advertising sites becoming integral to the character of certain cities or sites, such as Piccadilly Circus in London and Times Square in New York. For Cronin, “the rhythms of advertising, and the way in which advertising companies attempt to tap into urban rhythms, bring into being the animated urban

space in more profound ways” [17]. The rhythms of light shown on the media façade of the landmark also attempt to tap into urban rhythms. Furthermore, as Crilley noted, buildings themselves are designed to “read” as gigantic outdoor advertisements to aid the city to attract inward investment [18]. Additionally, political communication is examined by Cairns as a form of promotion; as a form of advertising and appropriates architecture to its persuasive ends [19].

3. Evolution of Media on the Façade

3.1 Frieze on Façade

As a place for public communication, landmarks have been used as important media in public space since ancient times. The embossing of Parthenon Temple in Athens which describes the celebration of Panathenaia, and the frieze of Zeus Altar, can't be simply understood as decoration, but as media of communication.

The Zeus Altar was constructed by Eumenes II as a memorial to Pergamum's victory over the Galatians. The Great Frieze of Zeus Altar represents the famous battle of the Olympian Gods and Giants inspired by Hellenic mythology, which symbolizes the triumph of order over chaos. Measuring over 2.3 meters high and more than 120 meters long, the sculptured relief conveys a visual element of politics, history, literature, drama, and tragedy that were predominant at the time in an art historical context. The Athenians attempted to commemorate for eternity their victories and their glory and to contextualize their memory within the landscape of the city via architecture and frieze on it. The characters with exaggerated facial expressions on the relief are very dynamic and seem to be separated from the wall. The contrast between light and shade makes the whole frieze more artistic. Moreover, there's evidence that these reliefs used to be colored. All the above not only increases the appeal of the relief itself but also increases the power metaphorized by Greek gods, who can sweep almost everything. The characters' identities are confirmed by the delicate carving details and the names of Greek gods marked on the edges.

Parthenon is a representative building that skillfully integrated architectural structure and media narrative in the heyday of ancient Greece. The Zeus altar that was built in the Hellenistic period, puts more emphasis on the narrative of the frieze, which occupied a larger proportion of the building surface than the Parthenon. Compared with the Gigantomachy frieze of Parthenon, the marble statues of the Gigantomachy frieze of Zeus altar nearby the stairs of the entrance look like they are coming out of the wall. The mythical world and the real world seem to merge into one. We can find a similar scene named WOW! NINJA in SHIBUYA in Tokyo in 2018, by which DOCOMO can promote its new WOW! JAPAN website. As part of the WOW! JAPAN promotional campaign, DOCOMO presented daily showings of animated ninjas on the Shibuya MODI building's outdoor screen. The background of the animation represents the same as the surface of the MODI building so that animated ninjas look like fighting on the Shibuya MODI building. Additionally, the colored tremendous friezes of Zeus Altar in Pergamum which is similar to huge screens on the facade of Times Squares in New York, can impact the public easily through splendid visual experience, and make the landmark a symbol, especially in the era of lack of other more effective media.



Figure 1: Zeus Altar



Figure 2: WOW! NINJA in SHIBUYA

3.2 Illumination of the Façade

Another narrative method of media facade can be traced back to the use of lighting on building facades. Marshall McLuhan says “When the light is being used for brain surgery or night baseball is a matter of indifference. It could be argued that these activities are in some way the ‘content’ of the electric light since they could not exist without the electric light. This fact merely underlines the point that ‘the medium is the message’ because it is the medium that shapes and controls the scale and form of human association and action” [20]. The first large-scale application of electric light on the surface of a building was used for landmarks. At the 1889 Paris World Expo, the Eiffel Tower which was illuminated and shaped as a night landmark became the information of electric lights. Electric lights narrate urban space by selectively illuminating the building at night. every illuminated facade becomes the content conveyed by the medium of light. Besides landmarks, large billboards were installed on top of buildings and illuminated in Paris to ensure visibility on dark evenings. In the 1920s, advertising companies carried out ‘lightfests’ at night consisting of grand displays of illuminated advertising in Germany. Furthermore, as Schielke made clear, in addition to the functional aspect of visibility of a building, light is used as a medium to generate an atmosphere and conveys a meaning. “Light” has also been turned into a tool for urban self-representation and thereby into marketing communication as well [21]. For instance, the color of the Empire State Building lights is changed to recognize important occasions, holidays, and organizations throughout the year, as defining feature of the New York City skyline since 1976.

Moreover, light can project an image on a façade. Engels and Staubermann speculated that magic lanterns were used as part of the extensive city illumination on the occasion of the Hesse government anniversary in 1727 [22]. According to Nevett, adverts were projected onto public buildings by magic

lanterns in the 19th century [23]. The use of a digital projector with high-lumen and high resolution makes the urban projection show become an important public art project of the festival. Urban projection show is not only media art or public art but also excellent advertising because expensive projection show needs investment. Investors often choose the façade of a landmark as a screen that can attract more attention to promote the brand. During the 2015 Milan World Expo, to promote Italian Catholicism, the projection show which is named Pietra e Preghiera sponsored by the Catholic foundation, was projected on the facade of Duomo Church and reflects the holiness of Catholicism through the abstract animation.



Figure 3: Pietra e Preghiera

3.3 Urban Screen

Mcquire deems that the development of urban screen to media facade has gone through several stages, and the two most important milestones are in Times Square, from which we can see that the main driving force is advertisers [24]. In addition, the public's view of the urban screen is gradually changing from negative to positive. When the urban screen full covered Times Square, people suddenly found that the city screen constructed the Times Square as the representative of commercial society and the landmark of New York culture. as Simmel emphasized, “the modern metropolis is characterized by an influx of strangers and the experience of ‘shock’” [25]. This streetscape covered with screens and luminous moving images can provide a shocking and bustling experience that makes an ordinary building a commercial landmark. Thus, similar streetscapes and commercial landmarks can be found in London, Hongkong, Shanghai, and Tokyo. But these urban screens are distributed and lack effective planning, so architects have to think about how to design media facades to create a landmark.



Figure 4: Times Square, New York

Table 1: The milestone of the large screen in public space

Year	Project	Location
1976	Spectacolor	Time Square, New York
The mid-1980s	JumboTron	Expo '85, Tsukuba
1990s-now	LED screen, Disney's Times Square Studios used by its ABC television network, Nasdaq's MarketSite building	Time Square, New York

3.4 Media Facade: Integration of Landmark and Dynamic Media

Tomitsch et al. trace the origin of the media facade, which fully integrates facade and dynamic image lighting systems, to the incomplete large screen of Le Centre National d'art et de Culture Georges Pompidou designed by Renzo Piano and Richard Rogers [26]. The mature technology of LED lighting systems makes the media facade more adaptable and popularized rapidly. The lighting design of a new landmark also adopts this method on a large scale, because it will not affect the basic form and function of a building. In recent years, landmark landscapes and buildings in major cities of China have undergone such media facade renovation. In the daytime, light belts hidden in the building structure are invisible, but at night, the computer-controlled LED lighting system turns the facade into a screen, and even unifies facades as one huge urban 3D screen.

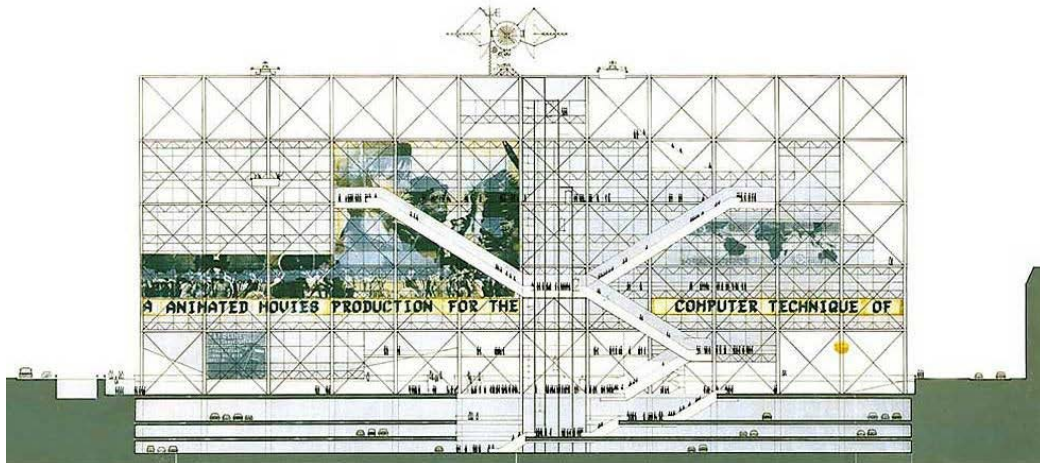


Figure 5: Le Centre National d'art et de Culture Georges Pompidou





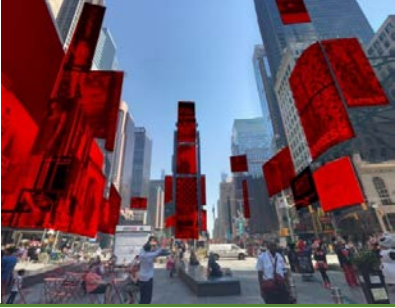

Figure 6: Qianjiang CBD lighting show in Hangzhou, China

4. Comparing Media on Landmark Façades in Different Periods

4.1 From One Layer to Double Layers of Façade

Parthenon, Zeus Altar, Empire State Building, Times Square, and Qianjiang CBD are cultural landmarks and spatial media of cities in the different historical stages. From the comparison of these cases, we find that the part of the building surface which disseminates information occupies a larger and larger proportion of the landmark façade, and media revives on modernism landmark façade again. The reason is that the methods of shaping landmarks are changing with the transformation of media. Because LED lighting system that can be hidden in the building structure and has no influence on indoor lighting and other functions of the building is used on building lighting, even architects who insist on modernism have accepted this kind of media façade, which is so invisible at daytime that the landmark can have two completely different appearances during the day and at night. Therefore, the area occupied by the media is larger and larger, and even covers the whole building surface. The media facade based on an LED lighting system has become an effective means to shape the urban landscape and cultural landmark at night. The media layer added to the façade has brought about a new change, that is, the media facade plays an increasingly important role in the creation of landmarks. Especially, the huge media facades have exceeded the spotlight effect of traditional nightscape lighting, and have become an eye-catching landscape at night, which will lose the symbolic meaning, if the media facades are turned off.

Table 2: Proportion of media which is marked in red on landmark facade in different times

Parthenon Temple in Athens	Duomo Church in Milan
	
Times Square in New York	Qianjiang CBD lighting show in Hangzhou
	

Meanwhile, the physical form and architectural details of landmarks are engulfed by large areas and high-resolution screens, leading to that landmarks are recognized only by the outline of the screen at night. It can be seen from Table 2 that, unlike the Eiffel Tower, Times Square in New York is made up of dense giant screens in an immersive place, which is difficult to be represented by certain graphic

signs. Single buildings are further united into the skyline of the city by the Qianjiang CBD lighting show in Hangzhou.

4.2 Landmark as a Sign and Context

In Barthes' opinion, signification has three orders or three messages: the first-order statement is denotative; the second is connotative; the third is mythical [27]. Take the case of New York Times Square; the word or image of Times Square is denotative; the connotative is the commercial street; the third message is capitalist commercial civilization. Therefore, a large number of giant screens strengthen its mythology and become a symbol of the era of consumerism, which is the real content or purpose of communication and experience on-site.

As the brand and symbol of the city, the landmark participates in the communication via other media, which further reshapes and reconstitutes the landmark. Barthes took steak as an example to discuss how a simple food becomes a symbol of French culture and history [28]. The media facade and its content are embedded in the process of shaping and spreading the cultural and spatial landmark. The Eiffel Tower in Paris and the Times Square in New York have become the spokesmen for the local tourism economy. The landmark which impacts mass communication as a symbol and mythical is the propaganda advertisement of the city where it is located, and constantly copied and disseminated by the mass media.

Lippmann deems that people live both in a real environment and Pseudo-environment which is mainly constructed by mass media [29]. The impression of a city is often shaped by the mass media. For example, the impression of New York is represented by Times Square, the World Trade Center or Statue of Liberty, etc. Therefore, landmarks often act as an important sign in the Pseudo-environment and media environment of city impression, leading to that landmark having great advertising value. The reason why lots of companies are willing to advertise on the screens of Times Square is that the adverts are not only for the local people but also to highlight the internationalization of the brand with the symbol of Times Square in the communication of other social media. The media facade makes the integration of advertising and landmark more logical. Therefore, the advertisement on landmark media facade uses landmark as some symbol for secondary communication or as context to interpret. From the big screens of Times Square driven by advertisers to Qianjiang lighting show driven by local government, we can see the new cognition of the relationship among media, landmarks, and advertisements.

4.3 The Change of Narrative Mode of Landmark Media Façade

Before the screen era, the viewing order of the facade is dominated by the experiencer, who can choose the moving line outside the building and the viewing order of the relief or mural on the facade.

Many media facades form a three-dimensional screen, which leads to the integration of spatial montage and film montage. Montage was originally a French term in the field of architecture and meant composition and assembly. After the birth of the film, montage is applied to the field of film and reidentified by Eisenstein means that montage produces new meanings through the editing and reorganization of the lens. The spatial and decentralized media facades make people see different contents from different perspectives and distances, and generate different narrative orders with the movement of the viewer. Therefore, the montage of moving images and the montage of urban space blend together to construct the narrative and experience of urban space. Benjamin considers montage as film dynamite, "the fundamental ambivalence of film's dynamite pivots not on its capacity to fragment the world, but on the uncertainty as to how the fragments might be reassembled into the 'right order'" [30]. The spatial montage merges with fragmented media facade montage to construct a new "startling" reality.

Benjamin argued that “Let us compare the screen [Leinwand] on which a film unfolds with the canvas [Leinwand] of a painting. The painting invites the viewer to contemplation; before it, he can give himself up to his train of associations. Before a film image, he cannot do so. No sooner has he seen it than it has already changed” [31]. This change of canvases can be a metaphor for the change of facades from a narrative of sculpture or painting to a narrative of moving image or interface. The way of experiencing has changed from self-selected gaze to compulsion and is coerced into the narrative montage constructed by the creator. The medium of high-density information is regarded as a hot medium by McLuhan, which more easily affects the public mind.

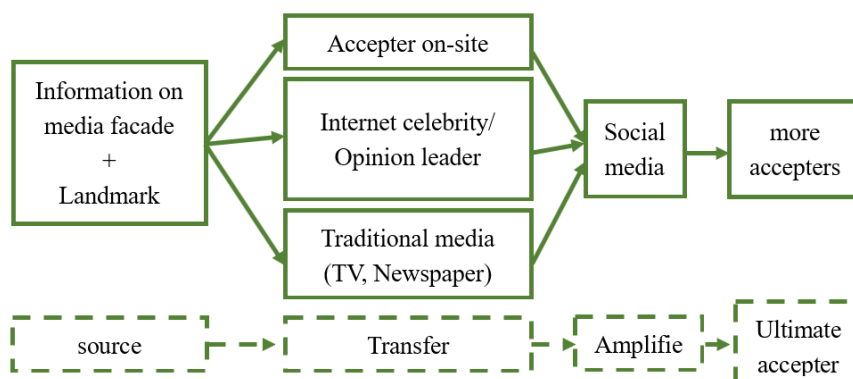
4.4 Temporary Content and Secondary Transmission via Other Media

In terms of time, Innis defined the ancient landmarks as “time-based media” [32]. The media content of these landmarks pursues eternity to establish long-term authority and maintain permanent rule. On the contrary, the screen of the media facade caters to the consumption demand of image and experience in the consumer society, so the content is temporary.

At different times, in the process of information dissemination via facade, the composition and relationship of behavior, carrier, and organization are different. Before the screen era, once completed by architects, sculptors, or painters, the media of facade was difficult to change for a long time. In the media facade era, the screen becomes the medium, whose content can be replaced at any time. Therefore, the architect's discourse power at the content level is declining, with emerging of media artists and advertisers.

In the communication path, the media facade of landmarks caters to the widespread application of mobile networks and social media. Different from the fixed content of traditional landmark facades, the information on the media facade often becomes a trigger of secondary transmission via other media, in which the landmark becomes the context of information interpretation. Recently, social media becomes the main media of secondary transmission instead of television. The number of people who can see adverts in Times Square or Hangzhou CBD lighting show on-site is limited. However, it is easy to trigger secondary transmission via social media, because of the symbol of the landmark. For instance, as a result of the pandemic in 2020, a large number of people in the United States have died of COVID-19. Filmmaker Eugene Jarecki used a billboard in Times Square to display the number of deaths named “Trump Death Clock”, to require the Trump administration to take steps to stop the spread of COVID-19 immediately. Due to the epidemic, there are few people in Times Square. However, the “Trump Death Clock” is widely spread via social media. One related tweet on Twitter has been watched more than 440,000 times, and another related message in Chinese social media SINA Microblogs has been viewed more than 840,000 times.

Table 3: Communication path



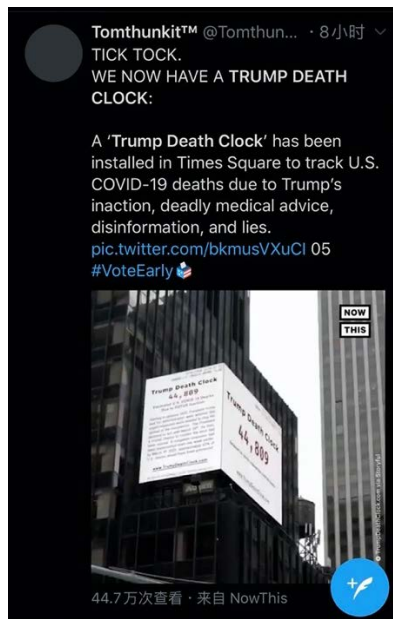


Figure 7: “Trump death clock” on Twitter

5. Conclusion

From the point of view of media archaeology, the so-called media facade is not a new media, but the revival of different media of facades in the long history with the developing technology. However, the extensive application of media facade in new landmarks makes simulation replace reality and causes an image to replace the original material world. Baudrillard insists that “There are no more media in the literal sense of the word (I’m speaking particularly of electronic mass media)—that is, of a mediating power between one reality and, between one state of the real and another. Neither in content nor form. Strictly, this is what implosion signifies” [33]. The implosion of the media facade in the urban space scale breaks the boundary between the simulation and reality. The intervention of new technology, such as AR or MR, will further aggravate the mixture of simulation and reality in the future.

In the process of communication, advertising, media façade, and landmarks vest the city with recognizable, identifying features. “García-Carrizo suggests that there needs to be a win-win situation in which advertising is at the service of the brand, the environment, and the citizens and society, and, of course, the city where that advertising takes place” [34]. In our opinion, there are two relationships between advertisement and media façade of a landmark: advertisement on media facade and media façade of a landmark as an advertisement of the city. Therefore, media façades and advertisements can contribute a building to being a landmark. Landmark as advertisement implied in urban space and exerts a subtle influence on the public. The advertisement on the media facade of a landmark can trigger secondary transmission with the help of social media to spread the advertisement, landmark, and the metaphor of the landmark.

The media facade has evolved to cross-media integration and will be embedded in the whole smart city system by AR, AI, and other spatial digital technologies in the future. AI or algorithmic advertising is not only a kind of surveillance but also a way to pry into your heart, to strip the disguise of a consumer in the consumer society. If consumption driving economic development does not change, this trend will be encouraged by capitalism. This paper has not yet discussed this phenomenon. In the following research, the advertising characteristics of landmark media facades with the new technology will be further explored.

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