

Research and Design of City Image Construction Path Based on Aerial Photography

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Abstract. City image construction is currently one of the important strategies for urban development. In the "talent competition" stage of various cities' development, shaping a city's image is a crucial factor that can attract talents and facilitate their identity and sense of belonging, affecting future inter-city competitiveness. Recreating and propagating city image with users in the lead and through their participation is also a refining process of symbiosis between dual discourses, during which the molding and optimization of city image involves multidimensional and multi-perspective interactive exploration modes of propagation. By integrating the real and virtual, history and modernity, interpretation and mining, this work achieves coexistence of heterogeneous integration under the dual contextual mode of symbiosis, further forging a brand new urban branding symbol. Taking Hefei as a research sample, this paper excavates the city's unique qualities and connotations, endowing it with fresh vitality and image in the new media context while disseminating its core values and cultural essence. It provides theoretical reference and guidance for other cities' development.

Keywords: city image, media design, aerial photography

1 Introduction

The double discourse spaces refer to the civil discourse space and the official discourse space. The interaction and gaming between the official and civil discourse spaces have an impact on the evolution of secondary public opinions online, and this impact will exert external effects on the molding and damaging of city images^[1]. Meanwhile, city image is a complex conceptual system. It includes not only the substantial attributes of a city itself but also its image representation in media and in public minds. As proposed by the American scholar Walter Lippmann in his work *Public Opinion*, the so-called "pseudo-environment" is not a mirror-like reproduction of the real environment, but an environment prompted to people by media through selective processing, reprocessing and restructuring of emblematic events or information, so people often take the "pseudo-environment" as the objective environment itself. Under such a pseudo-environment, people's responses are responses to the information environment rather than to changes in the objective environment and its changes.

City image contains three dimensions of connotations: first, the physical image of a city, referring to the facial features of a city in the real world, such as the original texture and humanities of a city, its cultural styles, and public environment conditions. Second, the virtual image of a city constructed through various transmission channels, manifesting the symbolic

meanings of a city in media and virtual spaces. In addition, city image also embraces the subjective cognitions of different audience groups over the city^[2]. Generally speaking, city image is a multidimensional conceptual system embracing both the substantial attributes of a city and its image impressions in transmission and public minds.

The molding and propagation of city image has become a focus of competition among major cities, which is conducive not only to creating personalized city brands but also stimulating the economic, social and cultural development of cities. Many scholars have conducted more analyses and comparisons over the contents and transmission modes of short videos in new media, yet studies on the influence of public opinions online on city image as a more integrated and profound concept remain lacking^[3-10]. At present, most scholars' researches are still staying at macro descriptions of the overall influence of online public opinions on city image levels, without in-depth analyzes on discrepancies of influence degrees and pathways of mechanisms. To make up for the above-mentioned sufficiency, this research is based on typical online public opinion incidents concerning city image, using qualitative comparative analysis methods etc., aimed at probing the conditions under which online public opinions can enlarge the degrees of influences on city image, as well as the key pathways of influences. It is hoped that this study can provide references for better understanding the regulations and mechanisms of online public opinions' influences on city image. The article will carry out in-depth researches and discussions focusing on the relationships between secondary online public opinions and double discourse spaces, as well as how governments should respond to secondary online public opinions, starting from the perspective of double discourse spaces and adopting methods of text analysis, case analyses, integrating theories of crisis management and public relations.

2 Social media boosts the shaping of the city's image

2.1 Identity identification and incentive mechanism

The source of public opinions in civil discourse space is the public's views, attitudes and emotions, which take shape in the civil discourse space, and their fermentation process is influenced by official discourse. Network public opinions refer to the concerns, views and emotional expressions arising among netizen due to certain events or topics. Scholarly researches on the impact areas of network public opinions mainly focus on the images of government and tourist destinations.

Network public opinions feature life cycle development characteristics. According to the three basic stages of generation, dispersion and subsiding, they can be classified into four stages: emergence period, outburst period, subsiding period and stable period. In the emergence period, due to the limitation of video length, the utilization degree of public opinion information is low and the initial transmission speed is relatively slow with limited impact range. It then enters the outburst period, where cross-platform interactive transmission enlarges the breadth of information dissemination. New events can swiftly arouse netizen' focal concerns. The peak period sees the greatest influence. But it will subsequently enter the subsiding period, where the vortex of public opinions is gradually halted from spreading under the influence of external variables^[11]. Finally enters the stable period, with the weakening intensity of public opinions and stabilization of the attitudes.

This paper conducts analyses on typical event public opinion developments and transmission modes, forming effective value researches and explanations on the guidance of regional image transmission and concerns, taking “Harbin” as an example which went viral across the entire network in late 2023 regarding “tourism hotspot marketing” transmission. Within the official discourse system, attempts are being made for equal dialogues with audience in civil discourse space. In the early transmission ecology, official media tended to fall into the trap of grand narratives about famous mountains and rivers and landmark cuisines. Whereas currently popular topics in civil discourse tend to demonstrate audiences’ demands for both grand narratives and delicate concerns on humanity and warmth. This time, Harbin created multiple online hits from multiple dimensions, making audiences feel cared and respected beneath the ice and snow through various incidental apprehensions. Therefore, an ideal dual discourse space must be an organic integration where both complement and support each other.

In late 2023, the explosive popularity of the television drama "Flowers" brought Shanghai closer to netizens across the country. Audiences enjoyed locating and checking in at filming sites depicted in the drama, which became hot destinations for young people's urban exploration activities. Locations such as Huanghe Road and Peace Hotel saw a surge of tourists flocking to take photos and check in. Shanghai specialties like pork rib noodles and fried rice also became bestsellers, allowing audiences to relive Shanghai's modern yet vibrant atmosphere in the 1990s.

In recent years, the phenomenon of "one drama sparking hype around an entire city" has occurred frequently, such as "Go to a Place with Wind" boosting popularity for Dali in Yunnan and "Speed Skeleton" keeping Guangdong's Jiangmen abuzz. Influential television and film productions have become effective means of destination marketing. Hot search topics in the civil discourse space become focal news highlights in the official discourse sphere, with the mutual effects between dual discourses forming a virtuous closed-loop for urban image building that sets a good example for other cities' image molding efforts.

2.2 Short videos design

Short videos have become a new trend in media applications in recent years, and are poised to become a common mode of expression in the mobile era. According to the 52nd "Statistical Report on the Development of China's Internet" released by the China Internet Network Information Center on August 28, 2023, as of June 2023, China's internet users reached 1.079 billion, an increase of 11.09 million from December 2022, with an internet penetration rate of 76.4%. Short videos have become an important platform for netizens to seek information, relax and entertain themselves, and socialize.

Short videos bring new opportunities and vitality for urban image communication and cultural re-positioning. They have spawned many "internet-famous cities" and "check-in spots" that are hugely popular among netizens. Featuring public participation, high frequency of interactions and diversified personally. Short videos have become a novel and efficient path for urban image building and communication^[12].

The relaxed propagation mode of the internet has created an environment for netizens to express themselves freely, while also enabling online carnivals. Ordinary users can authentically record lively and interesting content about a city through short videos, presenting the look and ecology of a city in an all-round and multi-dimensional manner, complementing

official grand narratives in important ways. For example, in Chongqing, dubbed the "TikTok city", featured dishes, graffiti walls at Erling No. 2 Factory, Liangjiang Rail Transit, cliff-side swings and piano staircases have become new symbols vividly and delicately showcasing Chongqing's culture in a way that is stereoscopic and finely-grained.

2.3 Digital media communication design

Network carnival as a new and unique form of social interaction features complex multi-layered and multi-dimensional characteristics in information dissemination. On one hand, aided by internet platforms as the technical foundation, information propagation can achieve wide spatial diffusion with extensive coverage. Using social media tools, messages can circulate swiftly between domestic and international users across different regions. At the same time, the integration of diverse media types enriches and diversifies dissemination channels. Unlike traditional single-channel methods, network carnival gathers transmission and interaction through multiple cross-media formats including text, pictures, videos and live broadcasts. Additionally, information propagation also transcends and overlaps the tangible and intangible dimensions. Finally, the interactive transmission modes between individuals and groups during network carnivals also have distinctive features, amalgamating both one-on-one private messages and one-to-many broadcasts.

The German philosopher and sociologist Jürgen Habermas proposed communicative rationale as a medium for achieving stability and balance in discourse, just as official discourse in itself, though interactive gaming with civil discourse has become the normal can also realize equitable communications to avert crises in event developments. For example, In January 2024, an incident of "sky-high spicy boiled fish maw" occurred in Changsha, capital of Hunan province. According to a municipal announcement on January 2, a female tourist in Changsha's Tianxin District was charged a staggering 106 yuan, about five times the normal price, for a bowl of the dish from a local street stall. After the video rapidly spread online and triggered strong reactions, the two major supervisory departments of Tianxin District responded positively^[13]. On the one hand, this helped quell public anger on the internet, while on the other, it also demonstrated the function of governmental sectors. The four developmental stages of public opinions are: latent, outbreak, persistence and fading periods. Official discourse can leverage the characteristic stages in civil discourse spaces' life cycles to conduct in-depth analyses on potential influences of city brand images during different periods, as well as impact power evolutionary regularities—providing theoretical references for continuous urban image building and tourism propaganda guidance thereafter.

With the widespread use of new digital media such as the Internet and smartphones among post-90s and post-00s groups, the propagation pattern of user-generated content (UGC) has emerged. Typical new social media representing this new pattern include TikTok, a typical short video social APP through which post-90s and post-00s users publish their own short video works. Compared with traditional media such as newspapers, television and radio, a major feature of new propagation platforms represented by TikTok short videos is strong interactivity. Relying on advantages such as low creative threshold, strong social attributes and fast transmission speed under the "video turning" new media, it not only attracted widespread participation in creation and transmission from the audience, but also received positive feedback from platform users. Users participate in the "secondary propagation" of short videos through functions such as forwarding, liking, commenting and real-time bullet screens. This

realizes a role conversion from passive recipients to participators in meaning construction^[14]. Therefore, to enhance the propagation effect of short videos, video creation teams and publishers should pay close attention to user feedback, establish audience awareness, follow propaganda rules, and make timely adjustments to propagation strategies according to user feedback to create high-quality works that meet audience expectations and actual social development needs. Relevant government departments should guide individual users to enhance awareness of urban image construction.

This pattern contains three implications: First, it is the reproduction and generation of short videos based on individual users with a micro perspective to partially reproduce the city (UGC mode). Such short videos have the following characteristics: vivid and immersive, with strong involvement and better interaction with the audience. The disadvantage is that it cannot deeply mine representative symbolic images of the city and lacks reorganization and construction through refining symbols to highlight the intrinsic connotation and unique visual image of the city. Second, short videos externalize the shaping of urban images into effective propagation of symbolic images, i.e. through disassembly, reorganization and montage techniques to realize the visualization, white spacing and artistic expression and processing of short video shaping of urban images. Third is the audience's cognition of urban images, that is, how to achieve a relatively unified match in the process of short videos shaping and propagating urban images between the official discourse of urban image shaping and grass-roots media propagation of images. The process of shaping urban images through short videos is a construction formed after the multi-media shaping, regeneration and propagation processes such as user forwarding, liking through urban official and grass-roots discourse space and user recognition.

TikTok provides not only a publicity platform for urban image transmission, but also generates online celebrity city topics to carry urban imaging presentation and cultural expression, playing a positive role in urban image transmission. The TikTok short video platform is easy to operate, empowering ordinary individuals with media discourse rights and attracting many individual users to register. The public releases their own perspectives of urban images through TikTok short videos. Likes, comments and shares from fans further stimulate individual users' creative enthusiasm. Users gain a sense of existence on the TikTok short video platform, attracting them to explore delicacies with regional characteristics in various corners of the city, or check-in at famous scenic spots and historic sites in the city.

3 The design of aerial photography in short videos

In the digital media era, exploring new ways of visual creation and new pursuits of aesthetics constantly becomes every image creator's pursuit. With the continuous development of the film and television industry, people's pursuit of visual sensations in modern times is increasingly concentrated in rich means of image creation, hoping for more novel and interesting visual displays.

Aerial photography, with a God's eye view, directly touches on humans' inner cravings for the sky, feeling like the perspective of a bird when surveying the earth from above. This greatly expands traditional visions, an innovative photographic method that suddenly changes the inherent visual angles of humans. As a new medium, aerial photography is gradually

becoming a hotspot in image creation driven by continuous scientific and technological development and innovations in imaging technology. At the same time, aerial photography is developing into a trending new form of creation on short video platforms, taking up an important position and promoting the rapid development of the short video industry.

Located in central Anhui Province, Hefei is one of the birthplaces of Chinese civilization, commanding east and west, and connecting north and south. With a long history and superior natural geographical location, this is Hefei's unique advantage for development. As an innovative highland and a city of science and technology full of innovative spirit, this paper believes that combining aerial photography and land photography on the basis of short videos can perfectly showcase this great innovative city of Hefei. In the process of urban promotion video production, aerial photography is used to enrich visual effects, enhance immersion and improve experience effects for better creating certain atmospheres and improving video quality and effects^[15]. Based on Douyin's image aerial photography short video design, integrating videos and sounds brings audiences a brand new reading and viewing experience. Meanwhile, as the hottest form of transmission currently, short videos can undoubtedly better propagate the charm of Hefei.

Utilizing multi-angle perspectives of distant, panoramic and close-up shots to conduct all-round and multi-angled displays of various shooting sites, the Hefei Kaifu Temple is taken as an example and exhibited from four angles below, as Figure 1-5 shows:

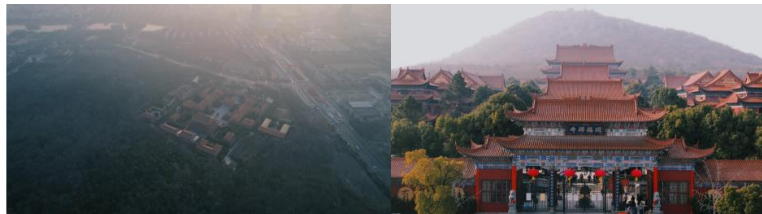


Figure 1. Design of aerial photography(1).

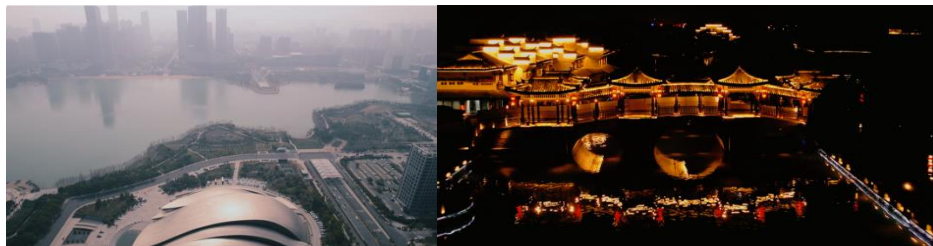


Figure 2. Design of aerial photography(2-3).

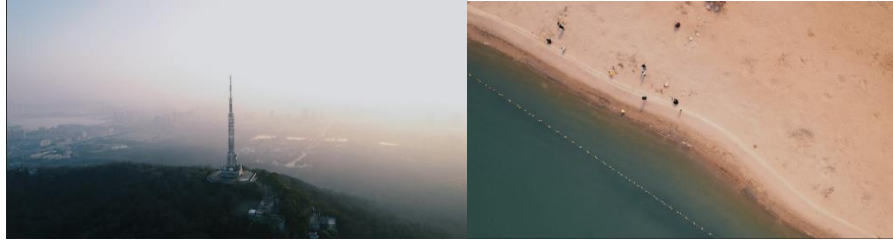


Figure 3. Design of aerial photography(4-5).

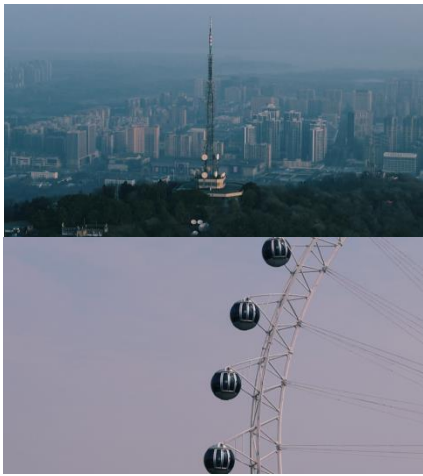


Figure 4. Design of aerial photography(7-8).

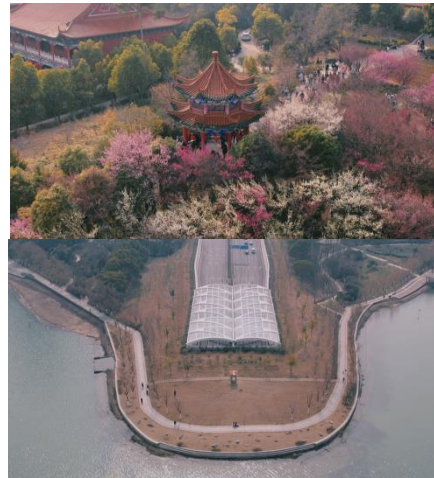


Figure 5. Design of aerial photography(9-10).

4 Conclusions and Future work

The image of a city is a representation of its cultural characteristics and overall spiritual temperament, communicating and building a unique impression of the city is an important part of the city's development strategy^[16-19]. In the traditional process of building a city image, the government usually plays a dominant role. Specifically, government and other official functional departments use traditional media such as newspapers, television, radio, and promotional brochures to promote the local highlights of the city around its distinctive cultural resources, economic development status, and local people's lives to the outside, telling good local stories and building a harmonious and prosperous city image.

In recent years, with the continuous development of media technology, the media industry has seen a "turn to video", and the ways, subjects and content of urban image construction have been continuously updated and iterated^[20]. Especially with the increasing need for city promotion abroad, new media has become a necessary choice for shaping and promoting the city's image. In particular, short videos have gained the enthusiasm of user groups of all ages due to their low creative threshold, fast transmission speed and strong social attributes.

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