



Representation, Extension and Integration: Aerial Photography and Body

Yi Li*, Fenglin Xing

School of Journalism and Communication, Nanjing Normal University, Nanjing, Jiangsu province 210000, China.

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***Corresponding author:** Yi Li, School of Journalism and Communication, Nanjing Normal University, Nanjing, Jiangsu province 210000, China.

Abstract

Aerial photography with UAV (Unmanned Aerial Vehicles) as the main equipment has developed into an important way of creation. It has seen a wider range of application, including the production of movies, TV dramas and documentaries. Also, aerial photography is often used by individuals in daily creation. Against such background, aerial photography endows movie and television with new aesthetic features and visual presentation. The ultra-view of aerial photography not only offers its viewers a brand-new visual experience, but also gives photography, featured by embodied practice since its birth, with a strong sense of detachment from the body. Robert Capa, a well-known photojournalist, had such words of wisdom, "If your pictures aren't good enough, you aren't close enough." Now it seems justified to adapt it as "if your pictures aren't good enough, your camera flies not high enough". What aerial photography sees in front of the aperture is extraordinary visual images and behind the aperture, the desire of human to represent, extend, and integrate into their body.

Keywords

Aerial Photography, Embodiment Communication, Media Technology

Introduction

In the media practice of photography, it is always the body of those who are photographed that has been focused, be it from the perspective of visual language or power relations. For the former, John Szarkowski took five principles—*the thing itself, the detail, the frame, the time, and vantage point* as the core of photograph in *The Photographer's Eye* (1964) and eponymous photo collection (1966). For the latter, Michel Foucault's Theory of Power argues that to see and to be seen are not only a basic perception of body, but also indicates a relation of power. It is invariably the case that the body of photographer is obscured and neglected while the interpretation of the body of the photographed takes up a lot of space. Plato once used caves as a metaphor for our world: those who stand back against the entrance to the cave took what is projected onto the walls as something real. Here the image, be it the shadow casted or the paintings caved on the wall, had its entity and kept its materiality till the invention of characters, which brought the first annihilation of the materiality of characters. Thousands of years later, the ushering of the digital era marks the second annihilation of its materiality as media as the image is transformed from albumen paper to the coded characters. Vilém Flusser held that the media between painting and nature was human while that between image and nature was the compound of human/apparatus. Then he took one step further by referring the apparatus to the "black box" that played a key role in photographing. During the early days of photography, the body of the photographer was allowed to "dance" as he wished even behind the "black box"—many preparations and adjustments needed to be done before the shutter was pressed. But today's photographing is another story to

tell: generally, the body of the photographer is restricted to such extent that only the arms or fingers can move. The body is being replaced by nonhuman agents like programs and algorithms. In this sense, body as a kind of media is experiencing the similar transformation of images. The aerial photography has largely expanded the horizon of human as a new approach to observing the world. Based on the theories of body and communication, this paper aims at discussing the relation of photography and body from the perspective of aerial photography.

1. Manned Aircraft: the representation of body

When a photographer represents things with cameras, he also represents his own body. For photography is an embodied practice where image serves as an anchor point that implies the man and the camera exist in the same space and time during the photographing. All photos are proofs of certain existence (Roland Barthes, 1977). The photographers keep searching for new angles or reaching beyond the limits of the visual angle, which is invariably related to the predatory nature of photography (Susan Sontag, 1977). It is obviously a huge temptation to hunt from the overlooking angle of eagles. Yet the sky is always beyond the reach of human.

The classic aerial photography is of course realized by photographers' taking the aircrafts. Aerial photography begins in 1850s. Félix Nadar, who took the first sky photo by riding in a hydrogen balloon, was deemed as the first photographer who realized aerial photographing. And Wright established himself as the first one to take photos in airplanes when he did so in 1909. That the photographers take the aircrafts like helicopters and hot air balloons remains an important way of aerial photography. Technically speaking, the classic aerial photograph keeps a conventional relation of the photographer and their camera with no essential differences from the photography on the earth. Because here the technology is pronounced on the aircraft, not between the equipment of photography. As face-to-face communication is the most primitive yet low-efficiency way of information dissemination, the continual development communication technology, from paper to electronic signals, is aimed at breaking the space-and-time restrictions of the body, compensating for every "absent" moment during the human communication. When one steps into the cabin and sets up his lens above the air, he is "representing" his own body where, were it not for the material media of plane, he would otherwise not be able to reach. From the perspective of practice, the physical "representation" is still within the range of embodied practice: With the body of the photographer being dominant and the body movements acting on the photographing equipment, it is the combination of the movements of body and shutter that produced the photo. That means, during the representation stage of aerial photography, it is the body of the photographer rather than the photographing equipment that conquers the sky.

2. Unmanned Aerial Vehicle for photography: the extension of the body

During the World War II, the American Air Corps still used Kodak K24 camera, whose size was half of a man, for aircraft detection. Such optical technology meant more space, more take-off weight, more cumbersome operation steps, and a higher the risk of being shot down. Also, the body of the photographing soldier faced great challenges. In recent years, with the advent of Unmanned Aerial Vehicles, the photographer's body has been liberated. UAV for aerial photography consists of the flying platform and the image system. It has reshaped the man-machines relation in photography. Photographic equipment has changed from tools to machines amid its hundred-year development. The difference between tools and machines lies in the fact that the tools are variable while people are invariable, while in the case of machines, quite the opposite. Tools act as a function of human while human become a function of machines (VilemFlusser, 1983). When Flusser came to this view, the built-in program in the photography equipment was but the program of the process from photosensitivity to imaging. However, in the era of intelligent photography, the algorithm has also been integrated into the photography equipment, which further reversed the man-machine relation.

As the telephoto and wide-angle lens help human expand their vision, the flying platform of the drone, as it frees from the hold of hands, realizes the extension of the entire body. With the support of flight system, the camera and photographing equipment can be temporarily separated from the human body. And all the photographer needs is a smart phone or a controller for the remote control of the angle, height, exposure, and related data of the drones. The biggest change is that the photographer no longer has to be there himself or herself. The connection between the human and the machine has changed from a physical touch to a virtual synchronicity of electronic signals. Although not acting directly on the camera, the body have it realize simple movements, extending the photographer's

body movements up into the sky. It is more suitable to call the UAV in this scene a moving photography equipment rather than a camera. Here the extension can be also seen as a kind of projection of the body, the movements of the UAV is a simple reproduction and imitation of those of the photographer's body. Because in terms of hardware mobility, both the lens and the drone can only realize horizontal and vertical movement, rendering itself mechanical and rigid. That means the photographer's body is far from free but rather limited, his fingers required to operate accurately within what little space to ensure the smooth movement of the drone.

3. FDV Drones: the integration with the body

Media is extension of man (Marshall McLuhan, 1964), but different media not only extends our sensory organs but also undermines them (Kittler, 1986), such one-way extension having the body absent. But visual reality might compensate for the balanced sensory organs as human may find the presence effect back through immersive face-to-face communication in cyberspace (Chen, 2005). We could have sensory experience in all aspects when using FDV Drones as media practice.

Ascension is an imagery of great importance in traditional Chinese culture. Su Shi, a man of letters living in the Song Dynasty, wrote down these lines, “冯虚御风 (tread thin air and ride the wind)” and “羽化登仙 (To ascend the celestial body)”. These are all demonstrations of people's yearning for the body capable of swift flying. The maneuverability of FPV Drones scores beyond that of average drones for aerial photography as they can be flexibly steered in the air at a very high speed, almost replicating the flying pattern of birds. That promises to offer people a brand-new flight experience. For example, a DJI FPV is equipped with a pair of flying glasses that can provide the user with a strong sense of immersion. When the user puts on the glasses, the FPV Drone can be regarded as a Cyborg body of human and the user seems to be able to function beyond his body. If a photographer manipulates the FDV Drone to take a video, the extremely dynamic first-person picture is naturally tainted with strong artificial traces. It is not simply the representation the body, but the integration of the body and the machine into the photographing. The dichotomy of human-machine is abandoned and the state of human-machine reconciliation is achieved. Such state implies that the more delicate and skilled operation of the drones is required and that the optical lens is directly connected to the organ of vision.

The body shift driven by media technology both includes and excludes the body (Hu & Liu, 2022). This view may seem strange. However, when looked from the interaction practice between photography and the body, inclusion and exclusion are in fact two different approaches to the same goal. As we walk into the era of metaverse, our body is trying to cross the boundary between real space and cyberspace. It is predictable that the photography equipment will no longer be just a digital product, but will, as deeply integrated with the human body, serve as one of the drivers of being media.

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