

Visual Truth and Image Manipulation: Visual Ethical Anomie and Reconstruction of Digital Photography

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Abstract: Digital photography has impacted the visual truth in terms of image operation technology. The paper analyzes the performance of image manipulation in digital photography, and asserts that the operation image's resolution of visual truth can be described by three aspects: the fact deviation, the reconstruction of the situation, the trust crisis, the filter survival, the second reprint, and the value change. Consequently, there are three visual ethical problems associated with the manipulation of images by technology, the siege of images on people, and distortions of social order caused by the manipulation of images by technology. Thus, it is suggested that visual ethics be reconstructed from three perspectives: reconstructing the dominant role of human beings in the digital era, returning to the original significance of visual images, and constructing multiple visual structures.

1 INTRODUCTION

The digital camera is not a simple technical replacement for traditional photography, and there are several significant differences between them. The image processor in a digital camera is a microcomputer. In digital photography, photoelectric images are represented by data, which can be displayed through data manipulation. Hence, the formation of digital images is accomplished as a result of the "operation" of the computer. Moreover, the development and popularization of image editing technology have made it easy and simple for people to manipulate images. In spite of some scholars' belief that digital photography is an objective image, it is similar to human visual images [1]. However, the objectivity and authenticity of digital images are greatly reduced by a series of technical means used in the image processing process. Hence, this paper attempts to discuss the technical aspects of digital image manipulation. In this article, the following questions are posed:

- (1) What are the effects of image manipulation on visual truth?
- (2) How does this result in visual ethical anomie?
- (3) How to reconstruct the visual ethics of digital photography?

2 Image manipulation as a means of digital photography

2.1 What is "image manipulation"?

Digital imaging technology has transformed photography

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from film to digital. Unlike film photography, which only allows limited adjustment of the tone of images, digital photography allows the user to easily change the tone and even the content of images. These photography and image modification behaviors brought about by technology can be understood as the operation of images, and are also considered as the operation mode and technical means of digital photography. As a result, William Mitchell believes that computational tools are the basis for digital imaging skills among digital artists, as they facilitate the transformation, composition, modification, and analysis of images. [2] Liu Canguo pointed out in his book *Digital Photography* that digital photography involves knowledge in many fields and is a new aggregation of aesthetics and technology, and digital image recording is a natural process in the development history of photography technology. [3] The term image manipulation is used in a wide range of fields, including computer software, automation technology, biomedicine, and physical geography. This paper refers specifically to the process of using digital equipment to produce and process images. While the concept of "manipulation" has opened up an unprecedented range of image creation possibilities, it is also a game involving both technology and concept.

2.2 Image manipulation in digital photography

In contrast to traditional photography, today's image processing technology is more like a digital "bright room" where operators have more creative options.

2.2.1 The discrete pixel composition of digital images causes the image to lose coherence

Digital images are composed of pixels, which are represented by the numbers 0 and 1. Contrary to the continuous image space of a film image, a digital image is comprised of discrete pixels, resulting in a continuous gradient of color. Pixels contain a limited amount of information. After enlarging an image, it is only possible to see the microstructure of the pixels, and the updated content cannot be obtained. Additionally, image processing software can be used to perform image compression, enhancement and restoration, image change, and segmentation.

2.2.2 Copying, splicing, synthesizing, and altering the semantics of digital images

Photographic equipment and imaging software are constantly being updated and iterated as a result of the advancement of digital technology. As a result, traditional photography completely breaks down the distinction between images and represented objects and creates entirely new concepts and expression languages for creating images. Using Foucault's terminology, "shift, reposition, morph, imitate, disguise, copy, overlap, and apply special effects to a photograph. This method is new to the image of the new, flexible, and without scruples." [4] The replicability of electronic collages reduces the cost of photography, leading to an explosive increase in the number of images.

2.2.3 Digital Virtual Image and the production of surrealism

Computers can do everything from computer-generated images to virtual scenes, especially in creating virtual reality. [5] In contemporary image creation, a kind of image artwork has emerged beyond the existence of the real world. With image editing software, you can alter, edit, and reorganize digital image codes, resulting in a virtual image that is as real as the real one. A montage technique is used to superimpose images, and different image elements are synthesized in a picture using Photoshop. Technological intervention transforms the image into a form of digital information that can be programmed, creating a realm of imagination separate from reality.

3 The impact of image manipulation on visual truth

As Wittgenstein pointed out, "the image cannot be used to judge the truth anymore." [6] With the advent of "image manipulation" in the Internet age, the relationship between image and truth has become more complicated and distant. So how does "image manipulation" contribute to the decline of truth from "indispensable" to "declining"?

3.1 Masking reality and recreating the situation

Heidegger states that the world is visualized as an image.

Changes in how images are presented and perceived are redefining our social life and cultural structure. With the aid of beautified software, it is possible to stitch facts from different times and places together. As a result, the image no longer serves as a medium to comprehend reality, but rather serves as a mask, resulting in a scenario in which "life itself is revealed as a huge accumulation of landscapes." [7] "The difference between an image and reality no longer matters. These images substitute for real experience, and for many people, they are hard to distinguish from reality itself." [8] The replicability of images makes it easy for images to proliferate, and social platforms are flooded with beautiful images. On the one hand, it provides a psychological boost to the viewer, but on the other, it obscures the fact that reality is also being eroded by the "manipulation means", and the visual truth is becoming increasingly ambiguous.

3.2 Beautifying the fact and filtering the survival

In the shooting and post-production processes, digital filters are inserted into the camera equipment and image editing software by algorithm engineers in order to achieve instant-beauty function and style change. This makes the filter a form of photography beautification. In this manner, the essence of traditional photography is deconstructed, the authenticity of the image is compromised, and it is increasingly difficult to distinguish between the virtual and real landscapes of society. Generally speaking, the higher the "moisture" of a beautified picture, the lower its "tolerance" is. The image cannot serve as a replacement for the real social face of society until people lose trust in these image landscapes. By beautifying the image, users can feel more present in the social environment. Through the development of beautified image technology, the average person has the ability to display more expression power, expression capital, and social capital on social platforms. In this sense, a beautified image also serves as a form of technical empowerment. A hidden concern lurks behind the rise of filters used by more and more people online to present a "perfect" image of themselves.

3.3 Making trouble and changing the value

Images that are manipulated no longer represent the reality that already exists, but create a "reality" that does not exist or even create much of nothing. In the post-truth era, images encourage the spread of rumors and undervalue the value of truth. Since truth is difficult to distinguish between true and false in the online world, there are neither value-neutral facts nor importance of factual basis. The transmission of manipulated images has also become absurd and unnecessary. It is no longer important to determine whether the image content reflects the real content, but rather the image symbol itself. The identification of image rumors has also become more challenging in recent years. It is difficult to verify the authenticity of images because there are so many image resources, and due to the versatility of digital technology, not every image can be found. Changing the rumor from

“there is truth in the picture” to “there may not be true in the picture” simply proves that the picture no longer represents the truth, but only produces confusion.

4 Visual ethical issues caused by manipulating images

In digital photography, image manipulation technologies have invaded the truth, beautification and forgery have caused problems of visual ethics anomaly, including image surplus, single aesthetics, and Internet rumors. Afterward, the mechanism of visual ethics anomaly resulting from “image manipulation” is examined from three perspectives.

4.1 The manipulation of images by technology

Zhang Jingfang believes that in the new governance era, under the control of the invisible hand of technology, people are literally living in a digital cage.^[9] Technology is tampering with the truth while ignoring ethics. More and more “de-incarnation” and “de-face” manipulation image crises have caused people to reflect on their true selves.

4.1.1 *The absence of reality and the emergence of “hyper-reality”*

The danger of manipulating images lies in the conflict between “authentic expression” and “faithful recording”. Digital images can be seamlessly connected from production to communication with the help of media such as mobile phones. As a “social tool” for establishing interaction between the two parties, viewers still try to reach the real world of the publisher with images. The real is missed from the screen. In the new media era, the symbolic information world constructed by the media using images is covering the actual reality. Through image manipulation, a kind of quasi-image may be created according to the model, which means the mixing of imagination and reproduction. “Hyper reality is a reality without archetypes and authenticity, created using a real mold.” [10]

People publish photos on social media as images-like symbols. From the view of image producers, the manipulated images with beauty and filters may be more like themselves than the real themselves. Technology has also created a hyper-real symbol world in cyberspace. Simulation and reality are entwined under the prevalent use of manipulation methods, and manipulated images are more real than real ones. The abandonment of real simulation and reproduction technology separates the relationship between people and the objective world, and it moves from the actual real world to the image world created by science and technology.

4.1.2 *Image empowerment*

An image’s empowerment power is derived from the competition for visibility. By using visual media, the public can express their protest words and make their

demands visible. Repeated and secondary creations of the same theme image will result in the echo chamber effect and initiate the Internet carnival. The “Operability” of digital images coincides with the self-empowering mechanisms of Internet users, and the free space and flowing resources enable Internet users to exploit their creativity in unprecedented ways. There has been a growth in new cultural phenomena and practices associated with image transmission and interaction, such as selfie culture and emoji, which indicate the rights and freedoms of users’ image discourse.

Visual display often has a distinctive feature of power. Martin Jay once pointed out that we are in a “visual regime”, and vision has a strong disciplinary power. [11] Display is the premise of viewing and gaining attention, and attention is what guarantees the power demands of image producers, consumers, and the platform itself, so that power and capital can be linked. Operational means may enable individuals to intercept portions of images and distort the facts in accordance with their own interests. Social platforms without rational management systems are lacking in media literacy, and users tend to copy the network world; therefore, the camera has become a powerful weapon in the hands of every Internet user.

4.2 The siege of people from the image

Although visualization provides us with a rich visual experience, we are losing control of this trend. In visual culture, images have become a means of social power operation, as well as a form of controlling the siege of people’s power in the sense of social control.

4.2.1 *The turning and alienation of viewing*

Michelle called the problem of the 21st century “the image turn”. Imagery, visual stereotypes, Facebook, hallucinations, copying, copying, imitation and illusion dominate our culture.^[12] There is a significant increase in the dominant consciousness of the subject, as well as a certain degree of liberation in the viewer’s “viewing” behavior. The modern visual mechanism has not only changed the traditional viewing habit of “do not gaze at what is not polite”, but has also created specific visual and ethical concepts, focusing vision into a field that is full of competition and production, and peeping has become a normalized act of watching.

As visual perceptions have changed, the boundaries of graphic representation have expanded, from daring celebrity portraits to cartoons that threaten privacy. Consequently, the images related to personal privacy become the material chosen to satisfy the public’s peeping psychology, which is no longer limited to the “presence” of viewing behavior, and the individual’s discomfort with moral admonitions decreases. Additionally, there are many factors that contribute to the ethical dilemma associated with modern peeping, in addition to the abundance of viewing objects and the development of viewing mechanisms. More and more image producers and broadcasters have ignored the rights of the objects they present in order to pursue a more exciting look and

feel. Without restraint, the private body is listed as an object for public browsing, which blindly satisfies the audience's desire to peep, but establishes an imaginary mirror image of the body image in the invisible.

4.2.2 The proliferation and disappearance of aesthetics

Digital photography has led to a new visual aesthetics, where passive acceptance has been replaced by active participation in aesthetics; aesthetic objects from the past to today's elegant and vulgar appreciation; aesthetic experience is progressively becoming virtual and interactive. Originally, aesthetics was a concept derived from material activities, but now technology and aesthetics are interacting with each other. Currently, operational images benefit from the overall visual aesthetic atmosphere, and their prevalence is nothing more than the performance of aesthetics and technology to expand their own ideologies. In recent years, photography beautification technology has evolved from a tool to represent beauty into a medium for aesthetic expression. Social software thus grasps the traffic password "brushing is reasonable and good-looking is justice", and social platforms reflect the discipline problem in image production and processing. Nowadays, most people accept copies that have been reprinted many times after beautification rather than originals due to the improvement in image transmission speeds and easy access to reprinting. Oftentimes, this leads to stereotypical popular aesthetic practices and aesthetic concepts, and individuals begin seeing the world through others' eyes rather than their own. The aesthetic personality is also eliminated in the subtle influence.

4.3 The reconstruction of social order

When the production and dissemination of images are within reach due to the popularity of mobile phones, images with strong impact effects replace the profound ornamental works, and the worship value of images begins to give way to the display value. The complex visual landscape constantly impinges on people's visual perception, and various image representations constantly challenge the visual limits of viewers, thus tampering with conventional visual concepts.

4.3.1 Visual carnival and visual consumption

Technology-driven visual carnivals have already outlived their aesthetic value due to the deep participation of consumer consciousness in the social transformation of the 1990s. Visual consumption has become dominant in image production due to the close connection between visual culture and consumer society. Through the digital medium, visual consumption and image production are mutually beneficial. "The greatest effect of electronic devices is to emphasize and accentuate a need that is already well established." Bowman once stated. [13] As more visual objects are provided to users, the means of image display become more extreme. Some images that

indulge low desires and stimulate visual pleasure constantly challenge the established social order and ethical paradigm. The aesthetics of daily life makes experience and entertainment become the guidelines of visual culture.

Modern image production and display technologies not only affect the production and consumption of contemporary social culture, but also influence the standard to judge the attractiveness of an image. Therefore, image producers continue to create visual wonders, capital is deeply invaded, the image becomes a commodity, and personal display usurps ethical constraints of social norms. In order to suppress the initiative of the subject, image manipulation suppresses the influence of visual symbols on other media forms, which is seen as a declaration of war between text and image, as well as constructing a social order dominated by symbols and models.

4.3.2 The Visualized "Data Prison"

Online images can easily be copied into countless copies, and they are almost impossible to forget. In light of the fact that data owners are able to access the past data of users at any time and anywhere, we face the threat of a data dictatorship. In addition to personalized accurate push and advertising based on data resources, we can also obtain users' shopping habits by analyzing data and predicting their purchasing power as well as conducting awareness penetration through social media marketing.

With the rapid development of capitalism's digitization, big data applications have already penetrated all walks of life, including the photography and beautification industry. Data has become a capital that can be controlled and consumed. The "2020 shooting beautify Industry Research Report" released by Aurora Big Data found that four out of ten Internet users who use mobile phones possess shooting to beautify apps. With the use of big data algorithms, image manipulation is possible, and users appear to use a variety of image beautification software to display themselves on the platform. However, it is the Internet companies that control the preferences of users to cater to their self-exhibition, and to create a "visual feast".

5 The Visual Ethics Construction of "Manipulation Image"

5.1 Reconstruction of the subject position of the human in the digital photography age

Harari believes that in the 18th century, humanism moved from a god-centered worldview to a human-centered one, pushing God aside. While in the 21st century, dataism may move from a human-centered worldview to a data-centered one, pushing people aside. [14] Image operation is intimately linked to the algorithms that support it. When images are beautified using "portrait presets" and "automatic beauty makeup", these steps are completely hidden from their image attributes by the image retouching software. In this way, the final image presented

to the public actually implies a lot of digital “algorithm aesthetic”.

The subjects of work creation and aesthetic appreciation generally lack depth, chase flow, and blindly follow the trend. The algorithm creates a seriously homogeneous image environment, which undoubtedly weakens our deep thinking on beauty and deprives us of the possibility of multiple aesthetics. With the widespread involvement of visual texts in social life, operational images gradually affect the formation and dissemination of social values, especially in the field of ideology. Therefore, on the one hand, we should emphasize the humanistic care behind the image, take into account the rational reflection derived from vision, consider the rational expectations associated with the technical picture, and take responsibility for regulating visual ethics on our own. However, while satisfying the fragmented visual carnival in social software, we should pay attention to the spiritual dimension of people and grasp the concept of boundaries and social responsibilities.

5.2 Returning to the original meaning of visual images

Through digital “operation”, users create widely disseminated visual texts almost all the time. These images are no longer simple reproductions, but self-presentation with individual aesthetics. The viewer and the viewed compete on the same stage, resulting in the public’s attention to pleasure stimulation beyond the original significance of the image. For Plato and later thinkers, there is always a higher value and meaning concern behind sensory entertainment, and people must be wary of the destructive power caused by purely emotional stimuli.

The use of visual images has become a mainstream form of expression in modern society, however, digital technology has provided images with a plethora of possibilities, and aesthetic carnivals which exceed moral norms will adversely affect social development. In response to the “attention economy”, technology has opened up new capital markets on new continents. New media profit cannot be separated from the visual prospect that attracts eyeballs and clicks. In order to stimulate people’s senses, an increasing number of obscene, ugly and pathological images have been created by individuals. In order to prevent the formation of the image over the content, image producers must develop a conscious ethical character, eliminating vulgarity, superficiality and blindness, and establishing an ethical character. It is imperative, first and foremost, that we reflect on the rationality of using image manipulation techniques; second, we should build and improve media literacy among citizens in moderate “viewing”. Additionally, the platform should ensure that the images of the media platform are accurate and position the audience appropriately.

5.3 Constructing multiple visual structures

Unlike print culture, visual culture constructs social

subjects through the use of visible symbols and images. It is in this process that society, culture, and self are cognitively shaped. People living in the real world produce their own visual experiences in a variety of ways. Visual construction includes visual construction in the social field and social construction in the visual field. ^[15] Both emphasize the practice of social visual expression. Since images are more intuitive and expressive than words, the consciousness, emotion and action of the subject are more likely to be affected by images, and visual discourse is more profound and powerful in constructing the cognition and ideology of the subject.

All visual behaviors and expressive practices in the visual field are social, and in the social field, vision is the most important perception channel of the subject. Visual structures are produced by the visual regime using rhetoric and representation to influence how people see and how they see. Technically, the first level of viewing includes elements such as composition, color, and light, and the appropriate use of these parameters facilitates the formation of a comprehensive and objective understanding of society. A viewer should be able to comprehend visual language, understand events through images, infer the motives and intentions of the image publishers, as well as build social cognition from the content level. As a matter of ethics, mass media image information should be conducive to social progress. It is also important for the audience to cultivate good visual literacy, think critically about images, and rationally handle the communication and collision of different visual cultures, so that a diverse and inclusive social world can be constructed that conforms to acceptable ethical norms.

6 Conclusion

The new communication environment is a complex environment in which opportunity and challenge coexist. The public is easy to fall into the dilemma of post-truth because of the visual picture. Due to the development of operating technology, the image is unable to convey its true value and significance to the viewer. The combination of image and virtual reality extends “viewing” into an interactive, experiential, and traversal experience. Through the proliferation of manipulated images, not only is the viewer’s rational cognition challenged, but also his or her living autonomy is compromised, and the possibility of a multi-cultural perspective is destroyed. There are many aspects of cognitive power and public order challenges brought about by the digital photography era, including visual ethics. Considering the ethics of digital photography and pursuing a good digital life is an issue that requires further reflection and investigation.

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