

Research on the Liability for Tort of Portraiture Right by Artificial Intelligence Face-swap

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Abstract: The arrival of the era of artificial intelligence has given rise to a new technology of artificial intelligence face-swap. While this technology brings convenience to life, it also violates the portraiture rights of rights holders. Therefore, regulating the application of artificial intelligence technology and preventing improper application of artificial intelligence technology to commit tort behaviors is an inevitable requirement of the development of the times. At the same time, protecting the “portraiture right” in artificial intelligence face-swap technology is a necessary issue that must be addressed.

Keywords: Artificial intelligence; Portraiture right; Liability for tort

1. The development of artificial intelligence face-swap technology

At first, artificial intelligence face-swap was mainly used in the production of film and television works. Before the emergence of artificial intelligence face-swap technology, it was very difficult to replace the faces of individual actors in film and television works, requiring high investment costs. With the artificial intelligence face-swap technology, only a photo of the replacement’s face and a small investment cost are needed to replace the character. If left to its own devices and subjected to “alienation and abuse”, it may become a tool that infringes upon the legitimate rights and interests of others and endangers public safety.^[1] At present, there are two theories in the academic community in China regarding the determination of tort standards: those for profit and those for non-profit purposes, which are reflected in China’s legislation.^[2] Nowadays, artificial intelligence face-swap technology has been widely applied in various industries, and it is also very convenient and fast to apply. It allows ordinary people to proficiently apply this technology, but at the same time, it also leads to the abuse of technology.

The initial artificial intelligence face-swap technology originated from Generative Adversarial Network (GAN). GAN is composed of two artificial intelligence (AI) agents, one responsible for forging images and the other responsible for detecting whether images are real. Through mutual confrontation, GAN has been continuously improved its ability and provided basic theoretical support for face-swap technology. For example, in 2014, the emergence of GAN marked the birth of artificial intelligence face-swap technology, and there were indications at the time that GAN had the potential to generate highly realistic faces. In addition, there are differences between artificial intelligence face-swap technology and deepfake. Artificial intelligence face-swap is a technical means of replacing faces by artificial intelligence technology. Deep forgery is a malicious application of artificial intelligence face-swap technology. When it is applied normally, such as in special effects scenes and actor stunt double lens processing in film and television production, it can improve the efficiency and visual effects. Deepfake, on the other hand, utilizes artificial intelligence algorithms, especially generative adversarial networks (GAN), to create false video or audio content to mislead audiences. The regulation of deep forgery should start with its participants, mainly including network users, network service providers, etc. By regulating the purpose of applying deepfake technology, the reasonable application of deepfake can be achieved, and the various risks caused by the technology to individuals, society, and the country can be avoided.^[3] Criminals may use deepfake technology to create fake news videos, such as forging speech videos of political figures to disrupt social order. Or for financial fraud, for example, it can forge the faces of corporate executives to issue illegal fund transfer instructions.

2. Characteristics and hazards of artificial intelligence face-swap

2.1 Highly concealed

Artificial intelligence face-swap technology can generate very realistic effects, making it difficult for ordinary people to distinguish whether an image or video has undergone face-swap processing with the naked eye. It makes infringement easily overlooked, and the infringed party may not be aware of the infringement of their portrait rights for a long time, making it difficult to determine the infringing party. The anonymity of the online environment allows infringers to hide their true identities, and they may use fake accounts or operate through

proxy servers. This increases the difficulty of determining the infringing party, and it is difficult for the infringed to find the specific responsible party when defending their rights. With the continuous development and popularization of artificial intelligence face-swap technology, related software and tools are becoming increasingly accessible and easy to operate. Even non professional technicians, as long as they have a certain level of computer operation foundation and network usage ability, can easily use these tools for face-swap operations, which greatly increases the possibility of tort. There are a large number of face images and video resources on the Internet, and infringers can obtain these data through various ways as the material for AI face changing. For example, collecting photos or videos of others from social media platforms, video websites, public databases, etc., and then using these materials for face-swap operations, once the infringing content of artificial intelligence face-swap is released on the internet, it can quickly spread to a wide audience in a short period of time. The characteristic of rapid dissemination has led to a rapid expansion of the scope of infringement, causing greater damage to the reputation and image of the infringed party. It is worth noting that the material carrier of a portrait is closely related to the work, usually presented in the form of photographic works, art works, etc. However, the subjects of portraiture rights and copyright are often different, and unauthorized disclosure or use of works related to portraiture without the permission of the rights holder may also constitute copyright infringement.^[4]

2.2 Complex

Firstly, the legal relationship is complex, and artificial intelligence face-swap involves multiple parties, including developers, users, and platform providers of face swapping technology. The responsibilities and obligations of different parties in infringement need to be defined according to specific circumstances, which increases the complexity of legal relationships. For example, technology developers may be responsible for technical security and compliance, platform providers may be responsible for reviewing and managing content, and users may be responsible for their own usage behavior. Secondly, the determination of damages is complex. The act of artificial intelligence changing faces to infringe on portraiture rights may cause various forms of damage to the infringed party, such as reputation damage, mental damage, economic losses, etc. The identification and quantification of these damages require comprehensive consideration of multiple factors, such as the nature of the infringement, the scope of dissemination, and the reputation of the infringed party, which increases the difficulty and complexity of infringement identification.

2.3 Destructive

The core feature of artificial intelligence face-swap lies in its “falsity”. A study by the Massachusetts Institute of Technology found that it takes approximately six times longer for a true story to reach 1500 people than a false story.^[5] Some people may use artificial intelligence face-swap technology only for entertainment and parody purposes, replacing others’ faces in some funny or inappropriate scenes, but this behavior may still infringe on others’ portraiture rights. Although its subjective malice is relatively low, it still causes certain damage to the image and dignity of the victim. Some companies or individuals may use someone else’s portraiture for artificial intelligence face-swap without authorization for commercial purposes, such as advertising, product promotion, and other activities. The subjective malice of this behavior is more obvious, which is to infringe on the portrait rights of others in order to obtain economic benefits. Some people may use artificial intelligence face-swap technology to create false images or videos for the purpose of maliciously defaming and attacking others, smearing and slandering their reputation and image. This behavior not only violates the portrait rights of others, but may also constitute defamation and other forms of infringement.

3. Recognition of artificial intelligence face-swap tort of portraiture rights

The artificial intelligence face-swap violates the portrait of a natural individual. According to the Civil Code, the definition of “portraiture” is “recognizable external image”. As long as it can present the external image of a specific natural individual and make people clearly recognize that this external feature belongs to a specific natural individual, this external image belongs to a portrait. In the context of artificial intelligence face-swap, if the transformed image still allows the general public to establish a corresponding relationship between the image and a specific subject through some unmodified features, such as body shape, body movements, special decorative clothing, scene details, etc., then the image can be considered recognizable and belongs to the protection category of portrait rights.^[6] For example, if someone’s face is changed, but their body posture, clothing, and specific scene have uniqueness, and the public can still recognize the original subject of the image based on this, it may constitute a tort for portraiture rights. Secondly, without the explicit consent of the portraiture owner, using their portraiture for facial replacement and specific purposes without authorization is an important basis for determining infringement of portraiture rights.^[7] Even if the effect after changing faces is not completely consistent with the original portraiture, as long as someone else’s portraiture elements are used without authorization, it may constitute infringement. For example, if a company uses the image in its video as a template for an artificial intelligence face-swap software without the consent of a popular blogger, and offers it to users for paid use, this constitutes the act of using someone else’s portraiture without consent. According to the law,

tort of portraiture rights also includes the production, use, and disclosure of the portraiture of the right holders without their consent. In the case of artificial intelligence face-swap, if someone else's portraiture is altered, whether it is used for commercial advertising, film and television works, online videos and other public occasions, or disseminated and used in the private domain, as long as it meets the above behavioral characteristics and is not licensed, it may cause infringement.^[8] For example, changing someone's face into an inappropriate scene and publicly disseminating it on the internet, even without commercial purposes, may infringe on portrait rights. If the doer uses artificial intelligence technology to vilify or defile someone else's portraiture, or forges someone else's portrait through information technology means, it is also a violation of portraiture rights. For example, using artificial intelligence face-swap technology to maliciously modify someone else's image into an ugly or funny appearance, or making false face-swap videos to mislead others and damage their reputation, all of which are violations of portraiture rights. Improper application of artificial intelligence face-swap technology to infringe upon the portraiture rights of others, causing mental pain, distress, or property damage to the portraiture rights holder, is also an important factor in determining infringement of portraiture rights. The dissemination of artificial intelligence face-swap videos has had a negative impact on the reputation of rights holders, leading to a decrease in their social evaluation, or causing them to lose commercial endorsement opportunities and suffer economic losses due to infringement, all of which can serve as the basis for determining infringement. The court will determine the corresponding compensation amount based on the degree of damage and specific circumstances when making a judgment.

4. The solution path for artificial intelligence face-swap tort of portraiture rights

4.1 Personal level

We need to enhance awareness of privacy protection and refrain from uploading clear facial photos, videos, and other personal information on untrustworthy websites or platforms, especially those containing facial close ups with identifiable backgrounds, clothing, etc., to reduce the chances of personal portrait materials being obtained by criminals. Be cautious when providing biometric information such as faces and fingerprints to strangers or unfamiliar applications or platforms, in order to avoid infringement of portraiture rights due to the leakage of biometric information. For example, some informal mini applications may collect users' biometric information for illegal purposes. We should improve discernment ability, maintain vigilance and rational judgment towards videos, images, and other content seen on the internet, and carefully identify whether there are any signs of face-swap. If any abnormality or suspicion is found in certain content, avoid becoming an accomplice to infringing on the portraiture rights of others without knowledge. If one discovers that their portraiture rights have been infringed, such as being used for artificial intelligence face-swap without permission or discovering similar infringement behaviors, they should promptly retain relevant evidence, such as screenshots, video recordings, chat records, etc., and report to relevant platforms or file a lawsuit with the court to protect their legitimate rights and interests in accordance with the law.

4.2 Technical developers and platform level

Related departments are supposed to establish strict technical usage standards, and follow the principles of legality, compliance, and ethics when developing and applying artificial intelligence face swapping technology, ensuring that the application of technology does not infringe on the portraiture rights of others. For example, clearly defining the application scenarios, scope of use, and usage methods of the technology. The security of artificial intelligence face-swap technology should be continuously improved, advanced encryption technology, identity verification technology, etc., can be adopted to prevent the technology from being maliciously exploited or abused. For example, strict verification of user identity is required to ensure that only authorized users can use relevant technologies, and corresponding technical restrictions are set: at the technical level, certain limitations are imposed on the effectiveness of artificial intelligence face-swap, such as reducing the clarity and recognizability of the images or videos after face-swap, making it difficult for the content after face-swap to be used for illegal or infringing activities. In addition, the platform should strengthen content review: establish a sound content review mechanism, strictly review the images, videos, and other content uploaded by users, and promptly discover and delete content that violates artificial intelligence face-swap. For example, using artificial intelligence technology to assist in auditing, improving the efficiency and accuracy of auditing, it is necessary to clarify platform rules, establish clear platform usage rules and user agreements, prohibit users from engaging in unauthorized AI face-swap behavior on the platform, and impose strict penalties for violations, such as account bans, legal responsibilities, etc. Relevant platform can provide convenient reporting channels for users, encourage users to report AI face-swap infringement behavior in a timely manner, so that the platform can handle it quickly. When using artificial intelligence face-swap technology, it is necessary to label the AI synthesized content on the platform. Users or developers are required to clearly label and explain the AI synthesized content on the platform so that other users can identify it clearly and avoid public misunderstanding.

4.3 Government and legal level

Relevant government departments should continuously improve laws and regulations on artificial intelligence face-swap technology and

portraiture rights protection, clarify the boundaries of the application of artificial intelligence face-swap technology, the criteria for identifying infringement behaviors, and punishment measures, etc., to provide strong legal basis for preventing and combating artificial intelligence face-swap tort of portraiture rights. They need to strengthen regulatory enforcement, increase supervision over the application of artificial intelligence face-swap technology, establish a sound regulatory system, strengthen supervision and management of technology developers, platform providers, etc., and promptly investigate and crack down on illegal and irregular behaviors discovered. The work of publicity and education need to be carried out through various channels and methods to popularize the risks of artificial intelligence face-swap technology and the importance of protecting public portraiture rights, thereby improving public legal awareness and prevention awareness, and guiding the public to use artificial intelligence face-swap technology appropriately.

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