“Covertly Using” Generative AI in China’s Gaming Industry

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ABSTRACT

This paper investigates the covert adoption of generative AI technologies in China’s video game industry, where practitioners frequently use such tools in content creation while remaining publicly silent about their use. Through qualitative research combining in-depth interviews with industry professionals and review of policy documents, this study explores the tensions between technological efficiency, artistic authenticity, and the material conditions. Findings reveal that AIGC technologies have permeated most stages of game-making, from initial planning and production to distribution. Individual creators across different roles and company sizes exhibit ambivalent attitudes shaped by both institutional pressures and personal aspirations.

KEYWORDS

Generative AI, game industry in China, creative labour, digital production

INTRODUCTION

In recent years, generative AI has emerged as a transformative force in content production, particularly within creative industries such as gaming. Powered by large-scale datasets and advanced machine learning architectures, such as large language models (LLMs) and diffusion models, generative AI systems and tools, including ChatGPT, Midjourney, Stable Diffusion, and Suno AI, can autonomously produce text, images, audio, and code that imitate or augment human creative work (Millington 2019; Li et al. 2023). Unlike earlier rule-based or traditional statistical models, generative AI offers significantly greater flexibility and expressive range in narrative generation, visual asset creation, and content personalization. A key distinction

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should be made between generative AI and artificial general intelligence (AGI), the former being task-specific and model-driven, while the latter refers to speculative human-level, general-purpose cognition technology (Goertzel, 2014). In this article, we focus on generative AI as an industrial tool in practice and the term AIGC (AI-generated content) is also used to refer to the outputs produced by generative AI systems in professional production contexts.

As generative AI and its AIGC outputs becomes a global focal point of technological innovation, people across industries and professions respond in diverse ways. In China, many professionals in the video game industry have been using generative AI with a contradictory and ambiguous attitude: They use it without publicly acknowledging using it. This paper discusses this phenomenon in the context of today's Chinese game industry, highlighting the tensions and dilemmas facing game companies, individual professionals, and state regulators under the pressures of rapid technological change.

For most video game companies in China, the adoption of generative AI is not merely a reluctant choice made in the context of "降本增效" (jiàng běn zēng xiào, reducing costs and increasing efficiency) during economic downturns. It also represents the vanguard of competition between companies to revolutionize the industrial pipeline and product offerings. Although the government encourages the technological development of AI related technologies, relevant legislation is lagging behind, and ambiguous policy documents have further increased people's sense of uncertainty. Therefore, game professionals in various roles are actively or passively embracing generative AI with ambivalent emotions, despite potential risks of intellectual property right infringement and labor right issues. The form and manner of labor that incorporates AI usage and AIGC output thus fluctuate in an unstable position, oscillating between formality and informality (Lobato, Thomas, and Hunter 2011).

In existing research, the intersection of AI technology and video games is often examined from a standpoint of technology. Studies explore how Deep Reinforcement Learning can enhance agent decision-making and gameplay performance across various video game genres (Shao et al. 2019; Skinner and Walmsley 2019), and assess the AI agents' mimicry of human behavior using generative NPCs in games (Ariyurek and Betin-Can 2021). Given the long-standing integration of AI technologies and video game development, the gaming sector represents a particularly promising domain for examining how human labor, creativity, and decision-making are being reshaped through negotiations with algorithmic systems and transformative technologies (Yakan 2022).In the Chinese context, Li, Fang, and Cheng (2023) provides a comprehensive overview of AIGC development in China, examining its technological foundations, market trends, policy landscape, and academic discourse. However, research on how AIGC is being applied in actual game production in China, particularly from the perspective of industry professionals remains relatively limited.

1. Background

In video game industry, both game engine companies and game software developers across the globe have rapidly increased their engagement with generative AI, including Unity, Ubisoft, and multiple AIGC tools release by Blizzard ("Muse", "Sentis", "Ghostwriter", and "Blizzard Diffusion"), all to enhance design productivity and generate content ranging from images, code to background dialogues and concept art. In Asia, Korean game giant NCsoft launched the "VARCO" engine, providing high-quality generate content from text, digital humans, to visual art. From late 2022 to 2023, influenced by the rising popularity of AI

products like ChatGPT, Midjourney, and Stable Diffusion, Chinese gaming companies began to adopt AIGC technologies at scale in game production.

This strategic shift has occurred at an economic juncture when the industry is confronted with challenges: the urgent need to cut costs and boost efficiency, the decreasing user base, and the instability and restriction associated with game licenses. According to the 2022 China Game Industry Report (GPC 2023, 12–13), China's game industry experienced a 10.33% year-on-year decline in market revenue, which was the sharpest drop in eight years alongside the first decrease in user numbers in nearly a decade. The sector has entered a phase of intensified "stock-based competition (存量竞争)"(GPC 2023, 4-5), that is, competition over an already saturated user base rather than continued user growth, marked by shrinking growth potential, tightened capital flow, and increasing operational risks.[1] Besides, amid the lingering effects of the COVID-19 pandemic and the broader structural economic downturn in China (Yao and Zhang 2024; *Financial Times* 2023), many companies were forced to reduce costs through downsizing, hiring freezes, or even terminating ongoing development projects.

Consequently, AIGC is regarded as the key to solving the "impossible triangle" of (1) delivering high-quality game content (2) in large quantities, (3) yet at a low cost. According to an industry report by the Chinese game research organization "Gamma Data"(2023), among the top 50 revenue-generating gaming companies in China, 64% have incorporated AIGC into their operations. Of these, eight gaming companies use their self-developed large models, and twenty-seven companies have invested in the full spectrum of game industry processes, including research and development, marketing, and operations. In addition, twelve companies are applying AIGC-related technologies to provide solutions for other industries or companies. More specifically, there are nine companies choosing to focus primarily on digital humans and the metaverse domain.

It is also essential to evaluate the government's attitudes and policy-making tendencies towards "AIGC+video games", particularly in China, whose political-economic structure is phrased as "state-permeated capitalism" or "market in state" (ten Brink 2019; Zheng and Huang 2018). This is crucial given the vital role state intervention plays in the Chinese market economy. On July 13, 2023, the Ministry of Industry and Information Technology of China, in conjunction with six other ministries, jointly issued the "Interim Measures for the Management of Generative Artificial Intelligence Services"(生成式人工智能服务管理暂行办法) (hereinafter referred to as the "Interim Measures"). This marks the first time that China has issued regulatory policies for the generative AI industry. The document stipulates that, under the premise of appropriate regulation, technological development of generative artificial intelligence is encouraged, specifically in the areas of platform construction, independent innovation, international exchange, and diversified development across various fields. Compared with the draft opinion published three months ago, the Article 21 of the "Interim Measures" has removed some restrictive measures such as fines and the cessation of services for using generative AI. In situations where current Chinese laws and administrative regulations do not provide explicit guidance, there is a greater tendency to adopt a proactive approach that prioritizes corrective action over penalties. In addition to the utilitarianist kind of tolerance and encouragement, another principle in the document is "分级分领域管理"（fēn jí fēn lǐng yù guǎn lǐ, the management by department and field）. However, the detailed rules related to the use of AIGC in the game industry have not yet been issued by any of the four superior management departments, namely the Central Propaganda Department, the Ministry of Culture and Tourism, the Ministry of Industry and Information Technology, and the Cyberspace Administration of China.

Therefore, the current regulation of “AIGC+video games” in China is insufficient and ambiguous, with key evaluative factors of AIGC in games located very differently between formality and informality. To illustrate, it largely falls outside the formal scope of state policy, regulation, taxation, and measurement, whilst the aspect of its technological advancement is officially endorsed (Lobato and Thomas, 2011).

In such a background, the research questions are as follows: 1. For professionals in China’s game industry, in what situation and how is AI utilised in their work? What is their perception of AI in this industry? 2.What are main concerns of using AI in China’s games industry? How do the professionals react to them? 3.How can the current application of AI give implications on the industry and policy-making, which might involve potential harms and opportunities for different stakeholders (workers, companies, players, and the whole industry)?

2. Methodology

This study adopts a qualitative method that combines analysis of both first-hand data from interviews and secondary sources. For the data collection, semi-structured in-depth interviews with nine professionals in the Chinese game industry were conducted between 2023 and 2025, mainly focusing on their perception and application of AI in relation to work (Potter 2018). Interviewees were selected based on their affiliation (involving both big tech corporations and indie game studio as well as an outsourcing company) and their roles in the division of labor (from gameplay designer, scriptwriter, artist to publishing manager, from producing to marketing). All of them have experience in working in or collaborating with game development and in utilizing generative AI in their past work.

The ethical considerations about the method of interview include: (1) Voluntary participation: interview participants are free to opt-in or out of the study at any point in time. (2) Informed consent: for full transparency, information about the purpose, benefits, risks, and funding behind the study will be made available to individuals and organizations before they agree or decline to join project activities. (3) Confidentiality: pseudonymization or anonymization will be applied to safeguard participants’ privacy (Saunders 2015).

To protect the participants, all interviewees are anonymized in this article. Notably, follow-up interviews conducted in early 2025 revealed a rapid evolution in generative AI usage across the industry. Some participants who initially reported no engagement with generative AI had since adopted multiple tools in both global and domestically developed platforms. This shift highlights the accelerating normalization of generative AI technology in Chinese game development and the growing reliance on domestically developed generative AI tools.

Moreover, this research also gathers data from secondary sources like governmental guideline documents, specific institutional policies and regulations, industry reports, financial reports, media reports, and research reports. Official industry reports like China Game Industry Reports released by the Game Publishing Committee of the China Audio-Video and Digital Publishing Association (中国音数协游戏工委， GPC), business-oriented equity research reports and investment reports especially those on leading companies like Tencent, NetEase, and other consulting reports of interest. Texts of policies, current regulations, and authority’s narratives that can be relevant to the generative AI will also be reviewed, sourced

from either legal documents or institutional publications of GPC. After relevance sampling, the interview data was used for analysis to provide more interpretive insights that respond to the research questions on the surreptitious usage of generative AI among professionals in game companies in China.

Interviewee	Company Size	Role	Attitude
A	Large	Designer (Narrative)	Favorable
B	Large	Designer (Gameplay)	Positive
C	Medium	Publishing Manager	Negative
D	Small	Artist	Negative
E	Medium	Scriptwriter	Positive
F	Medium	Artist	Favorable
G	Small	Producer	Positive
H	Small	Producer, Designer	Ambivalent
I	Large	Programmer	Ambivalent

Table 1: Basic information of Interviewees and their attitude towards AIGC

3. Using AI in China's Game Companies

3-1. Various Ways of Usage in Work Scenarios

It was against the backdrop of industry-wide efforts to "reduce costs and increase efficiency" (降本增效, jiàng běn zēng xiào) that generative AI tools began to attract attention in the Chinese gaming sector. Their potential to streamline asset production and lower communication and labor costs made them particularly appealing to game companies struggling to survive in a saturated market. During our interviews, four participants reported that they had been "optimized" (bèi yōuhuà, 被优化) , a euphemistic term widely used in China's tech and gaming sectors to describe layoffs, due to project restructuring in recent four years. Another interviewee mentioned that her partner's game publishing company had recently gone bankrupt. It was precisely under these increasingly precarious labor conditions that generative AI entered the scene, offering potential solutions to cost pressures, while simultaneously exacerbating precarity from another direction.

While the *Interim Measures* advocates against monopoly in the AIGC sector, structural imbalances persist in China's gaming industry. Leading companies such as Tencent and NetEase have begun developing proprietary large models to support internal production, while smaller studios constrained by limited investment, technical capacity, and hardware tend to rely on third-party AIGC tools via API access or other channels (from Interviewee B, D, H, G and I). These studios also lack sufficient resources to upgrade computing equipment. Interviewee D, from a 10-person art outsourcing team, noted that as of August 2024, only

two computers were equipped with RTX 4090 GPUs, forcing the team to take turns using them for AI-related tasks. In Interviewee G's company, one employee was allowed to work from home one or two days a week because his personal GPU outperformed the office hardware. In contrast, Interviewee I, who works at a large studio, said their team successfully secured dedicated funding for AI hardware upgrades. These examples illustrate how unequal access to computing resources shapes the everyday adoption of generative AI in game production. Access to foreign models like ChatGPT is further complicated by service restrictions and regulatory ambiguity: OpenAI does not serve mainland China, so users must rely on VPNs, overseas IP addresses, and foreign credit cards, practices that operate in a legal and infrastructural grey zone. At the same time, many downstream service providers have also been severely affected. Interviewee D reported that as clients increasingly turned to AIGC for content creation, his company laid off over half of its employees and now faces potential bankruptcy. This trend was echoed by Interviewees H and I, who noted that both small and mid-sized studios (H) and large companies (I) are using AI to produce low-creativity digital assets that were once outsourced.

At the same time, professionals in different roles are finding ways to incorporate generative AI into their workflows, often with noticeable gains in efficiency, even as broader constraints and uncertainties persist. Similar to any other industry, generative AI helps the most with "bullshit jobs" that produce repetitive, high-volume, but insignificant content, including administrative work like updating workflow sheet, simple programing, as well as communication like email writing and online CRM (customer relationship management) (Interviewee A&C). Some interviewees described themselves half-jokingly as "PPT weavers" (PPT 纺织工) to emphasize the symbolic burden of presentation culture and internal messaging. More specific to game companies, it is reported by multiple interviewees that AI contributes to the following aspects as the figure 1 shows: brainstorming, programming, art creation (usually in the process of communication instead of direct output), and some tedious labor in marketing.

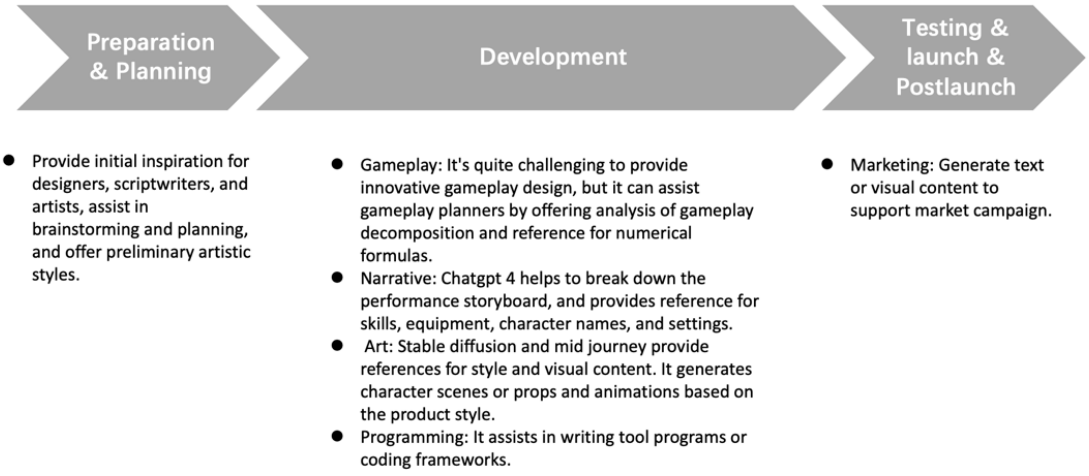

Figure 1: AIGC applications across different stages of the game development process

In the initial procedures of preparation and planning, generative AI is strategically utilised for brainstorming, because it can quickly come up with diverse stories and give inspiration to people by providing various project directions. However, in the development stage, it is rare for professionals to immediately apply AIGC outputs in game-making as the generated

content often lacks the required granularity, coherence, or alignment with project-specific constraints, and thus still requires significant human revision and adjustment. Up to now, when a job requires advanced level skills to cope with complex programming, human programmers are still irreplaceable for either fixing bugs or optimizing operations (from interviewee I and G). As for promotional releases, generative AI largely helps to provide fixed templates, repetitive promotional slogans, tweets, and even promotional character cards, with human content creator feeding it a whole bunch of existent materials (interviewee C, G and H). In such work, generative AI can assist with creating visual images (decorations, components, icons) and large amounts of interactive dialogue.

Among all departments, art teams appear to be the most controversial site of AIGC adoption. While many companies tacitly allow the use of generative AI internally, professionals in these teams face not only external criticism from players and collaborating artists but also internal conflicts, including ethical concerns and anxieties about the future of artistic labor. According to the interviewees, AI drawing is not directly used for output not only because of the broad-based boycott of customers (players) and outer artists in long-term collaboration with game companies, but also in the simple fact that AI's creation is not qualified enough. "Sometimes it is obvious to recognize. For example, AI's drawing tends to add unnecessary details in some unimportant margins, whilst human artists know the balance." Therefore, generative Ai is more often utilized internally on the planning side (or sometimes externally used by 甲方("jiǎ fāng", the Party A) who put forwards their requirements with some concept images. In short, those who have demand for the artists, for more efficient guidance, would use AI to provide the direction for their creation. However, it is currently less likely to find AI directly used for art creation in critical areas like character drawings in China's game production, whether it is used for background drawings is debatable, because the characters-related creation such as skins, skill designs, art images are the directly-selling goods to players in the business's commercial cashflow.

Meanwhile, practitioners constantly mentioned that AI is just a tool, "even when using it, you must have people modifying its work". Some have experiment on AI painting to show that, if completely having generative AI doing the task of art, it will conversely result in exponentially increased working time than human drawing by hand, because workers need to repeatedly adjust the prompts, and 'somehow the more you adjust, the stranger picture it returns. The drawing is so weird that it is apparently not in line with our basic perception of things. Human artists are still the core of art creation. In contrast, interviewees D and G believed such inefficiency often reflects a lack of prompting skill: the clearer the instruction and the more refined the reference materials, the more accurately the output aligns with creative goals. As interviewee H concluded, "The upper limit of AI is set by the human using it." Another prominent limitation of AI in China lies in its inescapable systemic bias, stemming from the Anglo-centric foundations of mainstream language models—from training data to cultural assumptions. However, China's game industry, including companies serving international markets, does not operate primarily in English, and often requires culturally specific content. Several professionals reported that generative AI frequently produces misleading information when tasked with content involving Chinese myths, martial arts, or classical literature, elements that often underpin narrative and character design in domestic games. For example, interviewees pointed out that visual models tend to generate Chinese gardens(中式园林) with Japanese torii gates, or depict xia (侠) , righteous swordsmen rooted in Chinese chivalric ideals (侠, xiá) in the style of Japanese samurai.[2] In narrative generation, ChatGPT and Claude were said to rely heavily on Greco-Judaic archetypes, which one interviewee with a background in comparative literature found incompatible with the cosmology of Chinese mythology.

On the other hand, workers in small and medium-sized companies that create simplified, homogeneous web games are using AI drawing in a more unmediated way, because they relatively have much less concerns about platform regulation and players' loyalty. That transforms web game creation from the traditional mode of mass outsourcing to more AI-driven projects undertaken by those small-scale web game companies themselves. Hence, the surplus of digital laborers from these outsourcing companies and web game companies, similar to those in other industries, have come at a confluence of two trends of unemployment and under-employment, which is a major social and economic concern for policymakers.

Nevertheless, not all games are as simple and homogeneous as web games. Most interviewees have stated that they believe generative AI is not enough now for more sophisticated work, as "games" are designed for human experience, which is not what AI can handle alone. Nevertheless, they also acknowledged that the impactful emergence and prevalence of AI gradually deployed in the industry has given certain anxiety to human employees along with some industrial prediction, mainly in the following aspects: First, they think AI will crowd out some technical staff of middle and lower ability. Moreover, according to one interviewee who is studying a game-related postgraduate course in the US, those lower-level artists and programmers whose employment in the game industry are influenced by AI will be switching to other places. 'It is because that the game industry has a low entry barrier and employers who can be replaced by AI are usually those who do not really like games and work hard for it. They can just shift their racing track.' But for other interviewees with less advantaged education, they express more empathy for those workers, especially in the present situation where game companies will not associate their layoffs to AI usage. 'Because everyone is secretly using AI and this is so confidential that even if it is AI replacing workers, companies will never say so as an explicit reason.'(Interviewee C) This situation coupled with the high frequency of the game company's layoffs and staff changes, thus, layoffs are very difficult to be linked with effects of the generative AI, unless people within a specific game project can intuitively feel the tensions within the team between the AI entering workplace and the accordingly personnel redundancy. Notably, another interviewee responding to the question whether there are already employees really crowded out because of AI says that AI can only do low-end work, but the majority of professional in game development are not only responsible for low-end work; their responsibilities include high-skilled tasks and middle-level jobs as well. Thereby, AI just releases the low-end part of their work, and so far, cannot replace the human workers with more comprehensive skillsets. This finding based on current application in work scenario can respond to Navas's (2021) idealistic statement that AI, robots, and/or algorithms can be as creative as human brains because all acts of creativity are within three recursive operations of "copy, transform, and combine". Even if the potentiality of AI is yet to be fully discovered, its working capacity and style up to now is still very limited and cannot be independent from human workers in the creative game industry.

Having said so, game production is not a monolithic process of work and generative AI impacts positions differently. For instance, public relations, marketing and other jobs that require timeliness and deep contact with people may not be as much of a crisis. Yet some skilled workers of programming, artwork, and the less creative aspects of copywriting feel much more worried, though insisting on their belief that AI as a tool can never work well without humans.

3.2 The "Secret" Usage of AIGC

However, it is worth noting that in this complex heterogeneous industry environment, the use of AIGC technology is not only swaying between formality and informality over time. There are also differences between different subjects of division of labor and different AI tools used. For example, one of our interviewees talked about using the built-in AIGC tool in Unity to assist in generating audio content, which has the legality of content generation regulated by national agencies; however, there were also interviewees who mentioned that the company has prepared VPNs and broadly working environment more accessible to AIGC tools. Some businesses of bigger scale even approve of purchasing GPT or MD accounts to use AI to produce content. While some interviewees believe such procurement often involves informal workarounds, the exact mechanisms remain opaque and unconfirmed. These contents will be used in digital products sold as goods or services, but their production process and tools are in a gray area that bypasses regulations.

On one hand, the use of AI is very attractive, mainly in reducing costs and increasing efficiency. However, because of the legal and players' concerns, using AI is publicly unacknowledged while implicitly allowed and perhaps encouraged. Gaming companies do not provide hardware and software support or training, but the internet environment and AIGC service membership coverage can be seen as their roundabout way of technological support for employees' using AI tools. The only explicitly stated rule is that art professionals must not directly use or alter the directional reference images provided by clients ("Party A"), as doing so would reveal confidential project content and could lead to legal consequences.

For now, professionals in Chinese game companies are integrating generative AI into development workflows, but this process is not public. The closer their work is to core art production, the more carefully they manage its visibility. While AI usage is not publicly acknowledged, most companies tacitly allow it, so long as it does not attract outside attention.

According to our informants, the main reason of such secret manner of using generative AI in this industry is that a big share of the general public have strong resistance to generative AI in creative work (and game production is epistemologically included here). Particularly players among them, who are the primary customers of game companies, have great impact on the decision-making of profit-seeking game companies. Players' most rigorous scrutiny of AI usage focuses on visuals such as skins, card images, and character skill graphics, which usually require their investment of money and/or playing time to obtain, and these are the most direct commodities that game companies provide to players. One interviewee has pointed out an interesting phenomenon: professionals in art departments of game companies dare not use generative AI to produce such commodity visuals straightforwardly, instead, they use AI in genuine workplace mostly for communication (i.e., pre-supply some pictures for reference to direct the human artists). In contrast, they are quite bold when using AI for background images, with minor human modification and adjustment, because background is not the commodities for sale and attracts way less attention from the players.

Moreover, game platforms may also have a regulative effect for them to admit their usage of generative AI. For instance, Steam has declared that it forbids games made by generative AI in any sense. Additionally, some companies of medium-large-scale often maintain long-term contractual relationships with external artists, who usually have quite a radical stance in resisting against AI painting because they believe it threatens their careers and livelihoods and diminishes their creativity and expressiveness. The game company will then be cautious about using AI when working with them. Though external artists are often in a position of contractor, their community still holds some restrictive power. Their cooperative and even

interdependent relationship with companies, albeit unbalanced, can make the latter pay more attention to AI's controversial ethical consideration for the fear of losing the supportive collaboration of independent artists. These challenges and limitations from the players, the platforms, and the collaborative contractors, have created a complex and dynamic landscape for China's game companies that use AI in game development.

Beyond external actors, some internal employees have also expressed their concerns through various forms of protest. Several interviewees noted that some of their colleagues especially in art and narrative departments even had chosen to resign in response to their company's push for AI integration, unwilling to see their creative work repurposed for "model training" in platforms like Stable Diffusion or Midjourney. However, such resignations, while ethically charged, often lacked practical leverage. In many cases they shared, the companies continued to use those artists' prior works for training purposes. Interviewees expressed sympathy and respect for these individual choices but also acknowledged that such actions are difficult to scale, given the industry's saturation, fierce competition, and the economic pressures individuals face."Between the moon and sixpence, I choose sixpence," said one of the Interviewee, referencing the impossible dilemma between artistic integrity and economic survival. This tension between creativity, technological disruption, and sustainability not only affects individual practitioners but also highlights the need for more structural support and collective mechanisms to address the unresolved ethical, legal, and labor implications of generative AI in creative industries.

4.Policy Implication

However, from the most recent and relevant legal case (on November 29th, 2023) judged by Beijing Internet Court (China Intellectual Property 2023) on the copyright infringement dispute of artificial intelligence generated pictures, is reported to be the first case of copyright in the field of AI-generated pictures. In this case, AI generated artwork was taken as original by the court in that "it reflects the original intellectual input of human beings and that it should also be protected by the copyright law". The judgement reads, "the plaintiff designed the characters and the way they were presented, and other elements of the picture input the prompts, and set the parameters for the layout and composition of the picture, reflecting the plaintiff's choices and arrangements. On the other hand, the plaintiff through the input prompt words, set the relevant parameters, obtained the first picture, he continued to increase the prompt words, modify the parameters, and continue to adjust the correction, and ultimately obtained the picture in question, this adjustment and correction process also reflects the plaintiff's aesthetic choices and personality judgement ..... The picture in this case is not a mechanical work. In the absence of evidence to the contrary, it can be concluded that the pictures were independently completed by the plaintiff, reflecting the plaintiff's personalized expression. To sum up, the picture in question possesses the element of originality." The court thinks that it is still a human being, not the AI model, who makes the intellectual input in the whole creative process. Given that encouraging creativity is recognized as a core purpose of the copyright system, AI-generated images should be recognized as works and protected by copyright law as long as they reflect the original intellectual input of a human being.

While this judgement subtly shows the authority's positive attitude to AI application, on the other hand, the purview of policymaking in China is still ambiguous. But if the positive attitude revealed in this judgement extend to future policies and regulations, what is at stake would be intellectual property rights protection and human labor interests, which are also the core issues in the public discussion about generative AI applications in entertainment industries.

For now (to date, Feb 2025), apart from guidelines for the development AI technology and the “Interim Measures" issued recently, China has not implemented comprehensive and consistent national policies or laws that can address public concerns, and nascent problems over AI application and very few actions on agenda setting for constructive public debate over AI usage in the creative and entertainment industries. From the view of legislation, Dai and Jin point out that past judicial results revealed the current lack of a distinction between computer-assisted and AI-generated results. In addition, since China does not operate under case law and courts may still change their opinions, the absence of an overarching framework to address AI application in business for legal reference will keep leaving emergent problems in the gray zone.

Time	Issuing Authority	Document Title
2017.7	国务院(State Council)	新一代人工智能发展规划 (*New Generation Artificial Intelligence Development Plan*)
2019.8	科技部(Ministry of Science and Technology)	国家新一代人工智能创新发展试验区建设工作指引 (*Guideline for Building Pilot Zones for AI Innovation Development*)
2020.7	国家标准委、网信办、发改委、科技部、工信部 (Standardization Admin., CAC, NDRC, MOST, MIIT)	国家新一代人工智能标准体系建设指南 (*Guideline for the Construction of AI Standardized System*)
2021.3	全国人大(NPC)	中华人民共和国国民经济和社会发展第十四个五年规划和 2035 年远景目标纲要 (*Outline of the 14th Five-Year Plan and Vision 2035*)
2021.7	工信部(MIIT)	新型数据中心发展三年行动计划（2021—2023 年） (*Three-Year Action Plan for New Data Center Development 2021–2023*)
2022.7	科技部、教育部、工信部、交通运输部、农业农村部、卫健委(MOST, MOE, MIIT, MOT, MARA, NHC)	关于加快场景创新以人工智能高水平应用促进经济高质量发展的指导意见 (*Guiding Opinions on Promoting High-Level Application of AI for Economic Development*)
2022.8	科技部(MOST)	关于支持建设新一代人工智能示范应用场景的通知 (*Notice on Supporting the Construction of AI Demonstration Application Scenarios*)
2023	国家互联网信息办公室、国家发展和改革委员会、教育部、科技部、工业和信息化部、公安部、国家广播电视总局（NRTA, CAC, NDRC, MOE, MOST, MIIT, MPS）	生成式人工智能服务管理暂行办法 (*Interim Measures for the Management of Generative Artificial Intelligence Services*)

Table 2: Key Policy Documents on China’s Artificial Intelligence Development
Source：“Gamma Data”, *Prospects for the Development of China's Game Industry AIGC in 2023* （2023-08-16）

This study would imply that future policy-making on AI usage in China’s game industry can refer to several existent and impactful regulations and guidelines outside China that intend to promote the responsibility of using generative AI technology (Burt 2021). For example, the EU’s Artificial Intelligence Act (AIA) that is applying to all businesses in the EU market. It aims to classify AI systems based on their level of risk: unacceptable and to build basic principles of transparency, accountability, human oversight, and data protection. Another regulation is the US federal government’s guidance on AI governance. In addition to these frameworks at the regional or national level, there are also some international industry-specific regulations

that may apply to generative AI in certain domains. A general report released by the International Labour Organization (ILO) released accentuates the need for a human-centered approach when using AI to respect workers' rights, dignity, and well-being. (Cappelli and Rogovsky 2023). More specific and relevant regulations in the game industry that govern the intellectual property rights of concern, as well as the privacy rights of game users. But for business as the regulated subjects, some trade-offs are involved when they calculate the costs, and the opportunities adjust their process of developing products and services for specific markets. For instance, Due to the EU's General Data Protection Regulation (GDPR), which requires game developers not to infringe on the rights of others, the game developer Gravity Interactive (the maker of Ragnarok and Dragon Saga games) had chosen to stop selling in the EU for some time before its relaunch. Although most businesses will try to comply with the regulation while striving for more profit margins that can be increased by generative AI (Candelon et al. 2021).

5. Conclusion

The fact that professionals and companies in the game industry are using generative AI secretly suggests the uneven progress in public reception and the time lag of coordinate transformation in industrial working conditions. Present utilization of generative AI cannot accomplish high-level or creative work without human guidance and interference, and it mostly benefits the efficiency in communication that gives directions of relevant visuals to professionals. On the other hand, it is noticeable that the powerful state control on China's business seems to be toned-down in AI-related industries. But it is also hard to draw a conclusion that the government in this way is leading freer AI application out of utilitarianism, because its overall response to AI usage appears out of sync with AI's technological advancement. In this sense, game companies and the internal professionals still need to strategically balance the ambition for broader profit squeeze with more efficient AI creation with the quality feedback and long-term benefits of their games, considering present and potential restrictive or directional factors from both market variants and governmental regulations.

This study, however, is an exploratory investigation based on a small number of in-depth interviews and document analysis. Rather than seeking statistical generalization, it aims to surface nuanced tensions and lived experiences within the current stage of generative AI adoption in China's game industry. The sampling prioritizes diversity of professional roles over numerical representativeness, with interviewees drawn from different positions across art, narrative, planning, and outsourcing teams. That said, the limited overlap between roles remains a constraint. Future studies could expand the sample size and seek cross-role validation to better capture structural patterns across studios of varying sizes and ownership types.

Endnotes

1 On the micro level, several interviewees also mentioned that the industry has transitioned from expanding an incremental user base to competing for existing players. They noted that in their projects, especially some large-scale mobile game titles, the main performance focus has shifted from attracting new users to re-engaging and activating old or existing ones (known in industry terms as "acquisition" [拉新, lāxīn] and "activation" [促活, cùhuó], respectively).

2 Xia (侠, xiá) refers to a figure in Chinese cultural tradition, often a wandering swordsman or martial hero—who upholds justice through personal virtue rather than institutional authority. It is a central archetype in wuxia fiction and Chinese popular imagination.

REFERENCE:

Ariyurek, Sinan, Aysu Betin-Can, and Elif Surer. 2021. "Automated Video Game Testing Using Synthetic and Humanlike Agents." *IEEE Transactions on Games* 13 (1): 50–67. https://doi.org/10.1109/TG.2019.2947597.

Burt, Andrew. 2021. "New AI Regulations Are Coming. Is Your Organization Ready." *Harvard Business Review*.

Candelon, François, Rodolphe Charme di Carlo, Midas De Bondt, and Theodoros Evgeniou. 2021. "AI Regulation Is Coming: How to Prepare for the Inevitable." *Harvard Business Review* 99 (5).

Cappelli, Peter, and Nikolai G Rogovsky. 2023. "Artificial Intelligence in Human Resource Management: A Challenge for the Human-Centred Agenda?" ILO Working Paper.

China Intellectual Property. 2023. "China's Beijing Internet Court rules on the first copyright infringement dispute over AI-generated image' Nov 29, 2023. http://www.chinaipmagazine.com/en/news-show.asp?id=12834

China Audio-Video and Digital Publishing Association Game Publishing Committee (中国音数协游戏工委, GPC). 2021. 2021 Nian Zhongguo Youxi Chanye Baogao [2021年中国游戏产业报告; 2021 China Game Industry Report]. Beijing: GPC.

———. 2022. 2022 Nian Zhongguo Youxi Chanye Baogao [2022年中国游戏产业报告; 2022 China Game Industry Report]. Beijing: GPC.

———. 2023. 2023 Nian Zhongguo Youxi Chanye Baogao [2023年中国游戏产业报告; 2023 China Game Industry Report]. Beijing: GPC.

———. 2024. 2024 Nian Zhongguo Youxi Chanye Baogao [2024年中国游戏产业报告; 2024 China Game Industry Report]. Beijing: GPC.

Dai, Zhe, and Banggui Jin. 2023. "The Copyright Protection of AI-Generated Works under Chinese Law." *Juridical Tribune Journal= Tribuna Juridica* 13 (2): 241–60.

International Labour Organization. 2015. "*World Employment Social Outlook. Geneva: International Labour Organization.*"

'How Will Generative AI Change the Video Game Industry?' 2023. Bain. 14 September 2023. https://www.bain.com/insights/how-will-generative-ai-change-the-video-game-industry/.

Li, Xiangyu, Yuqing Fan, and Shenghui Cheng. 2023. 'AIGC In China: Current Developments And Future Outlook'. arXiv. https://doi.org/10.48550/arXiv.2308.08451.

Lobato, Ramon, Julian Thomas, and Dan Hunter. 2011. 'Histories of User-Generated Content: Between Formal and Informal Media Economies'. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.1749803.

Millington, Ian. 2019. AI for Games, Third Edition. 3rd ed. Boca Raton: CRC Press.

Navas, Eduardo, Owen Gallagher, and Xtine Burrough, eds. 2021. The Routledge Handbook of Remix Studies and Digital Humanities. 1st ed. New York : Routledge, 2021.: Routledge. https://www.taylorfrancis.com/books/9781000346688.

Park, Joon Sung, Joseph C. O'Brien, Carrie J. Cai, Meredith Ringel Morris, Percy Liang, and Michael S. Bernstein. 2023. 'Generative Agents: Interactive Simulacra of Human Behavior'. arXiv. https://doi.org/10.48550/arXiv.2304.03442.

Perez-Liebana, Diego, Jialin Liu, Ahmed Khalifa, Raluca D. Gaina, Julian Togelius, and Simon M. Lucas. 2019. 'General Video Game AI: A Multitrack Framework for Evaluating Agents, Games, and Content Generation Algorithms'. IEEE Transactions on Games 11 (3): 195–214. https://doi.org/10.1109/TG.2019.2901021.

Perez-Liebana, Diego, Spyridon Samothrakis, Julian Togelius, Tom Schaul, and Simon Lucas. 2016. 'General Video Game AI: Competition, Challenges and Opportunities'. In Proceedings of the AAAI Conference on Artificial Intelligence. Vol. 30. https://doi.org/10.1609/aaai.v30i1.9869.

Potter, Anna. 2018. "Managing Productive Academia/Industry Relations: The Interview as Research Method." *Media Practice and Education* 19 (2): 159–72.

Saunders, Benjamin, Jenny Kitzinger, and Celia Kitzinger. 2015. "Anonymising Interview Data: Challenges and Compromise in Practice." *Qualitative Research* 15 (5): 616–32.

Shao, Kun, Zhentao Tang, Yuanheng Zhu, Nannan Li, and Dongbin Zhao. 2019. 'A Survey of Deep Reinforcement Learning in Video Games'. arXiv. https://doi.org/10.48550/arXiv.1912.10944.

Skinner, Geoff, and Toby Walmsley. 2019. 'Artificial Intelligence and Deep Learning in Video Games A Brief Review'. In 2019 IEEE 4th International Conference on Computer and Communication Systems (ICCCS), 404–8. IEEE. https://doi.org/10.1109/CCOMS.2019.8821783.

Yakan, Sayid Adli. 2022. "Analysis of Development of Artificial Intelligence in the Game Industry." *International Journal of Cyber and IT Service Management* 2 (2): 111–16.

Goertzel, Ben. 2014. "Artificial General Intelligence: Concept, State of the Art, and Future Prospects." *Journal of Artificial General Intelligence* 5 (1): 1–48. https://doi.org/10.2478/jagi-2014-0001

ten Brink, Tobias. China's Capitalism: A Paradoxical Route to Prosperity. Translated by Carla Welch. Philadelphia: University of Pennsylvania Press, 2019.

Zheng, Yongnian, and Yanjie Huang. Market in State: The Political Economy of Domination in China. Cambridge: Cambridge University Press, 2018.

199IT | 中文互联网数据研究资讯中心-199IT'. 2023. 16 August 2023. //www.199it.com/archives/1637421.html.

'生成式人工智能服务管理暂行办法_中央网络安全和信息化委员会办公室'. n.d. Accessed 19 November 2023. http://www.cac.gov.cn/2023-07/13/c_1690898327029107.htm.

China Intellectual Property. 2023. "China's Beijing Internet Court rules on the first copyright infringement dispute over AI-generated image' Nov 29, 2023. http://www.chinaipmagazine.com/en/news-show.asp?id=12834

Yao, Kevin, and Ellen Zhang. 2024. "China's 2023 GDP Shows Patchy Economic Recovery, Raises Case for Stimulus." *Reuters*, January 17, 2024. https://www.reuters.com/world/china/chinas-2023-gdp-shows-patchy-economic-recovery-raises-case-stimulus-2024-01-17/

Financial Times. 2023. "EU Companies More Concerned about China Slowdown than Tariffs." *Financial Times*, September 19, 2023. https://www.ft.com/content/39440b9b-2362-4307-9b69-8671e61d36d2