

Platform Algorithmic Governance and Precarity in Creative Work: A Case Study of Chinese Game Streamers

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Abstract. Against the backdrop of continuous changes in the rules, algorithms and commercialization requirements of Chinese content platforms, this article focuses on the cross-platform practices of streamer Da Sima on live-streaming platforms such as Douyu, Bilibili and Douyin, and discusses the issue of precarity in platformized creative labor. Existing studies have pointed out that creative labor has long been confronted with structural precarity, and platform governance, algorithmic mechanisms and relational work have further intensified such pressure. However, these studies rarely explain specifically how structural pressure is transformed into the persistent tangible experience of creators in daily platform practices, and further evolves into self-discipline and self-acceleration. This article adopts a qualitative single-case study and netnography, and conducts thematic analysis based on qualitative data including live-streaming content, short videos, platform rule texts, industry reports and comment bullet screens. The study finds that the integration of changing platform rules, the logic of algorithmic visibility and commercialization pressures gradually transforms the freedom and self-expression originally pursued by creators into persistent pressures at the material, relational and identity levels. The seemingly proactive risk-coping strategies, in turn, reinforce the forced accelerated labor process.

Keywords: Platform Governance, Creative Labor, Work Precarity, Self-discipline

1. Introduction

Since 2022, Chinese content platforms have entered a phase of higher intensity. The intensive adjustments to recommendation mechanisms, traffic restriction rules, platform regulations and subsidy policies have turned content creation and live-streaming e-commerce from mere "creative expression" into continuous labor centered on visibility and conversion rates. Under such a structure, the internet celebrity profession appears to be free self-entrepreneurship on the surface, but in reality, it is faced with sustained precarity and multi-dimensional risks. It should be further pointed out that many creators enter this profession not only for economic returns. For many people, live-streaming and content creation also mean opportunities for self-expression, identity achievement and presentation. However, when platform rules begin to iterate rapidly, traffic allocation becomes more unstable, and requirements for commercial transformation become rigid, these originally attractive elements often reverse in long-term practices and gradually turn into sustained sources of pressure. This means that creators must not only pursue exposure and sales volume, but also repeatedly trial

and error in an opaque and changeable regulatory environment and bear the resulting costs. In response to this, the core research question proposed in this article is: Against the background of frequent changes in platform rules and algorithms after 2022, how does the "freedom" pursued by creators gradually transform into pressures at the material, relational and identity levels, and further drive their self-acceleration? Based on this core, this article puts forward three research questions: First, what specific dimensions does the precarity of platformized creative labor manifest in? Second, how do platform algorithmic governance and the consumerist logic of traffic stimulation interact and intensify such precarity? Third, what strategies do practitioners adopt to hedge risks, and why may these strategies turn into forced self-discipline and acceleration?

Focusing on these questions, this article centers on the cross-platform content practices of streamer Da Sima on platforms such as Douyu, Bilibili and Douyin, investigating how he organizes daily creation, maintains visibility and addresses the resulting work precarity in the context of accelerated changes in platform rules and traffic environment after 2022. As a top creator in the field of game content live-streaming, Da Sima is more directly affected by the dual influences of platform traffic mechanisms and commercial cooperation requirements during operation, thus better presenting how platform governance shapes work rhythms and survival strategies. At the level of live-streaming practices, the "visibility parameters" concerned in this article include: livestream duration and frequency, content rhythm and discourse design, interaction mechanisms, product selection and pricing strategies, continuous tracking of platform signals, as well as the maintenance and emotional mobilization of fan communities. Through data analysis, this article defines the concept of "precarity" in the work practices of platform laborers as three interwoven and overlapping dimensions: the first is the material dimension (income/subsidy/cash flow and cost risks); the second is the social dimension (normalized input of relational work and pressure of emotional mobilization); the third is the identity dimension (wavering in professional identity and uncertainty of future paths caused by the conflict between the narrative of free entrepreneurs and realistic situations). The research significance of this article lies in connecting structural precarity with daily experience, further revealing the specific operation mechanism of platform power in creative labor, so as to conduct a critical examination of the mainstream narrative of "free entrepreneurship".

2. Literature review: precarity in platformized creative labor

Existing studies generally acknowledge that creative labor is not as free and glamorous as it appears on the surface, but is highly bound to long-term precarity. Relevant literature can be roughly divided into three threads: The first type of research starts from the labor structure of the creative and cultural industries, emphasizing how project-based systems, short contracts and lack of welfare cause precarity; the second type of research focuses on platform governance and algorithmic mechanisms, explaining how visibility and transformation pressures are institutionalized in the platform environment; the third type of research focuses on the specific strategies of creators and internet celebrities, discussing how relational work, emotional work and diversified income structures become risk-coping methods, and may also trigger new self-discipline at the same time. On the basis of these studies, this paper attempts to further explain "how structural pressure is translated into persistent tangible pressure in daily platform practices" and illustrate why strategies may produce reverse effects.

2.1. Structural precarity of Creative and Cultural Work (CCW)

A large number of studies have pointed out that Creative and Cultural Work (CCW) is seemingly attractive for its freedom, interest and self-realization, but is often highly precarious in terms of labor structure. Comunian and England [1] decompose the precarity of CCW into multiple aspects: short contracts, lack of collective bargaining and union protection, insufficient social security, and low and fluctuating income despite the high cost of living in large cities. On this basis, Dent, Tanghetti and Comunian [2], taking creative and cultural workers in Milan, Italy as an example, show that precarity not only means short-term fluctuations in income, but also manifests in disruptions of work opportunities, discontinuities in career paths, and the need for laborers to continuously invest extra time and resources to maintain "sustainable work possibilities". Studying internet celebrities in Slovenia, Lukan and Čehovin Zajc [3] propose that although internet celebrities are called "self-entrepreneurs", which makes their work content seem to have a great degree of freedom, formal labor contracts and social security are very limited. This article adopts the concept of "relational work", arguing that the work of internet celebrities is not only about producing content or posting posts, but also about continuously managing relationships with fans, brands, agencies, and even researching platform algorithms. Glatt [4] suggests that to cope with such precarity, some internet celebrities deliberately avoid overly catering to platforms, do not invest all their time and income in one account, but retain other jobs, develop side businesses or offline income, and diversify risks through a diversified economic structure. For this article, the key point of this research is that the precarity of creative labor in the platformized environment is not only unstable income, but also long-term uncertainty in social networks, professional identity and future development expectations. On this basis, the platformized environment further changes the way such precarity is perceived and managed. Duffy [5] proposes the concept of "algorithmic precarity", pointing out that the pressure faced by cultural producers is no longer only short contracts, low security or income fluctuations, but is increasingly affected by platform algorithms continuously. Creators must not only produce content, but also constantly guess platform preferences, adapt to rule changes, and predict what expressions and forms are more likely to gain exposure.

Duffy et al [6] propose "nested precariousness", indicating that risks in platformized creative labor do not only come from a single platform, but are jointly affected by market changes, industry competition and platform function updates. In this case, indicators such as likes, comments, shares and online viewers are not only feedback tools, but are regarded as prerequisites for professional success and commercial transformation. Therefore, "pursuing visibility" itself becomes a continuous and uncertain labor. However, these risk hedging strategies do not bring a higher degree of autonomy. For example, creators opening multiple accounts, operating on multiple platforms and conducting repeated trials and errors can indeed diversify risks, but they also make people invest more time and emotional labor. Therefore, these practices are not purely out of proactive planning, but necessary strategies formed under the joint effect of platform pressure, and thus should be better understood as a forced accelerated labor process.

2.2. Algorithms and the daily experience of precarious labor

Creative laborers are continuously under the influence of platform algorithms and rules every day. Taking live-streaming e-commerce entrepreneurs on Douyin as an example, Wang and Cao [7] propose the concept of "algorithmic imaginary" to describe how practitioners understand and imagine platform algorithms. On the one hand, many respondents regard algorithms as an opportunity to "turn over", believing that as long as they constantly adjust live-streaming content,

rhythm and products, they will have the chance to be "promoted with traffic" and usher in a surge in sales volume; on the other hand, they are also fully aware of the opacity and rapid changes of algorithm rules, and any restriction on traffic or adjustment of version rules may cause the originally considerable account data to drop suddenly, forcing the business model to be restarted from scratch. Nevertheless, existing studies also show that creators do not completely passively bear such precarity. Studying influencer labor, Lukan and Čehovin Zajc [3] point out that platformized creators strive for a certain degree of initiative by maintaining diversified income, retaining other jobs, and not overly catering to platforms. Delgaty and Wilson [8], in their research on "cool jobs", point out that the elements that initially attract laborers to enter the industry often turn into sources of pressure in the long run, specifically manifested as three strains: material, social and work identity. Live-streaming e-commerce practitioners on Douyin are highly sensitive to algorithm changes and gradually become so-called "algorithm experts", coping with uncertain traffic through continuous testing, imitation, learning and division of labor. It can be seen that the structural pressure in the platform environment does not exist abstractly, but is transformed into specific pressures that creators have to deal with every day through data indicators, traffic promotion logic and rule changes. These studies can illustrate that the precarity of creative labor is first determined by the labor market and industrial structure, rather than the final result caused by individual "insufficient stress resistance" or "not hard enough". However, this article further asks: How do these structural problems become the daily pressure that such groups can feel every day in the platform environment? For example, when rules, subsidies and traffic change, creators have to immediately adjust their rhythm and discourse, and relational work becomes heavier, ultimately turning "structural pressure" into a daily experience of "being tired every day".

3. Methodology

This study adopts a qualitative single-case study and uses netnography to observe the content production and interaction practices of "Da Sima" and his related accounts on Douyu, Bilibili and Douyin. Da Sima is a well-known figure in China's game live-streaming industry, having experienced key events such as suspension of broadcasting, platform migration and phased comeback, making him an information-rich case that can centrally present the precarity of creative labor. Netnography emphasizes long-term observation of specific communities and practices in a naturally occurring online environment. Taking "Da Sima" and his audience as the core field, this study focuses on his daily interactions in live-streaming and short videos, his expressions on platform rules and algorithms, and operations related to commercialization.

Data sources mainly include three parts: The first part is video content data. The author purposively sampled 5 long pieces of content (extracting 1–2 5-minute segments from each) and about 3 short videos from Douyu, Bilibili and Douyin as core corpora for detailed analysis of the streamer's discourse, interaction methods and commercial operations. The second part of data is platform governance rules and policy texts, including 1 community covenant, 1 content management regulation and 1 live-streaming agreement for each platform, as well as 2–3 news reports on Da Sima's broadcast suspension, platform turbulence and the flow of top streamers, used to construct the institutional environment and timeline. The third part includes other relevant materials. The author collected traces of linkage between Da Sima's main accounts/sub-accounts and cooperative accounts, as well as some bullet screens and comments, to understand fan culture and relational work (identifiable information was anonymized when writing the article). The data is processed through thematic analysis. First, the selected live streams and videos are read carefully paragraph by paragraph for open coding, labeling sentences and scenes related to platform governance, relational

work, commercial practices and precarious experience; then similar codes are compared and merged across different samples to form several preliminary themes; finally, the themes are revised and enhanced combined with platform rule texts and industry reports, so that they can respond to the three core questions on platform visibility control, daily pressure of creative labor and coping strategies in the subsequent analysis. This study mainly uses publicly accessible online content and texts, without offline intervention or private contact with the streamer or audience. As a public figure, Da Sima is referred to by his public stage name in the paper; identifiable information such as usernames will be removed or modified when quoting bullet screens and comments of ordinary users to reduce potential impacts on individuals.

4. Analysis and discussion

4.1. How platform governance creates performance pressure

At the platform level, visibility is first institutionalized through a set of "visible" rules, such as ban clauses, live-streaming regulations, and restrictions on traffic diversion and advertising on Douyu, Bilibili and Douyin. At the same time, visibility is affected by recommendation algorithms: for example, whether the live stream is recommended on the homepage, and whether the number of viewers in the live stream drops suddenly, which are often summarized by streamers as "whether the platform gives face today". In the samples, Da Sima repeatedly mentions in a half-joking tone "The platform isn't giving me much push today" and "the popularity has dropped again", and takes the current number of online viewers, gift numbers and bullet screen activity as instant feedback, constantly checking and commenting on these indicators. Because he is always looking at these data, how to make the algorithm promote traffic has become something he has to face every time he broadcasts live.

This state precisely reflects the "algorithmic precarity" in platformized creative labor [5]. That is to say, what streamers face is not only whether the content is good-looking or whether the audience likes it, but a constantly changing and hard-to-fully-explain visibility allocation system. For platformized creative labor, quantitative indicators such as likes, shares, subscribers and comments have been widely regarded as important signals of visibility and professional success [6]. In the live-streaming scenario analyzed in this article, the number of online viewers, gift numbers and bullet screen activity can be regarded as the concrete manifestation of this indicator logic in a real-time interactive environment.

Between platform governance and visibility, streamers need to constantly conduct "self-correction" of front-stage discourse and back-stage operations. For example, on some topics involving game versions, industry news or social events, Da Sima takes the initiative to remind himself that the red lines of such topics cannot be touched, and bypasses such content with implicit expressions such as "I won't talk about this" and "Brothers, don't get me into trouble". In the process of video data analysis, obvious self-censorship behaviors of the streamer also appear, such as quickly interrupting sensitive topics elicited by bullet screens and changing the direction of conversation. At the same time, he frequently uses fixed discourses such as "Brothers, click to follow" and "Brush the bullet screens so I can see who is still here", taking the initiative to meet the platform's requirements for interaction indicators. Visibility here is both an external control of the platform and a work task realized through the streamer's self-discipline and mobilization.

4.2. How constantly adjusting content and strategies becomes a daily work mode

Faced with such control, Da Sima does not passively bear it completely, but seeks ways to survive within the limited live-streaming living space by continuously adjusting content and operation strategies. Such adjustments include changes to live-streaming rhythm, topic selection and column structure, as well as repeated trials of time arrangement and multi-platform layout. Data analysis shows that he flexibly switches content modules according to changes in the number of online viewers: when popularity is low, he turns to chatting with the audience and telling jokes to maintain bullet screen activity through emotional drive; in this process, he often uses self-deprecating discourses such as "I'm a bit unpopular recently" and "Just chatting with everyone" to resolve the embarrassment caused by poor data, and also uses teasing expressions such as "Troll all you want—I'll just take you for a fool" and "gone nuts" to maintain a relaxed atmosphere in the live stream. When popularity rebounds or there are important activities, he focuses on "key games" and "highlight operations", cooperating with continuous shouts such as "Move, move" and "backhand grab" to emphasize technical performance and program effects. Such adjustments occur not only within a single live stream, but also in cross-platform and cross-time arrangements. For example, by uploading recreated short videos of "classic scenes" on Bilibili, he reprocesses wonderful clips from live streams into short videos, leaving memory points for old fans and striving for new viewers; on Douyin, he adopts a faster-paced and information-dense editing form to adapt to the recommendation logic of vertical short videos. The repeated self-deprecating expressions in the samples, including calling himself a "faded streamer" and the live stream room a "shabby little stream room", on the one hand buffer the discomfort caused by traffic fluctuations, and on the other hand explain to fans why he constantly tries new content and new platforms. Such continuous labor of adjusting content and strategies has gradually become a normalized work mode: streamers need to repeatedly find a balance between "trying to maintain program characteristics" and "catering to platform and commercial indicators".

Combined with the previous research on cross-platform labor and risk diversification, such constant adjustment of content and strategies is not only flexible response, but also a continuous labor forced by the platform environment. It seemingly enhances the initiative of creators, but at the same time disperses the pressure of "maintaining visibility", "sustaining fan participation" and "adapting to different platform rules" to individuals.

4.3. Unstable experience at the emotional and identity levels

Beyond structure and daily operations, precarity eventually settles into creators' complex emotions towards their professional identities. In the samples, Da Sima frequently switches between identities such as "teacher", "streamer" and "worker": on the one hand, he continues the image of a "teaching streamer" from his early fame, calls himself a "gold-medal lecturer", emphasizes professionalism with discourses such as "giving lessons", "reviewing" and "analyzing the situation", and packages live-streaming content into a mature "tactical system" through self-created terms such as "peripheral OB (observer)" and "square jungle pathing", so fans generally call him "Teacher Ma" and "Boss Ma"; on the other hand, he also uses expressions such as "Being a streamer is not easy nowadays" and "We are also workers" to narrow the psychological distance with the audience.

Self-deprecation is an important way to deal with this contradiction. Whether summarizing his fame experience with "Ten years as a top player, no one knows; one day as a fool, the world knows" or describing his and his teammates' mistakes as "foolish", he uses humor to soften the frustration caused by precarity. However, the more self-deprecation is needed to maintain the atmosphere, the

stronger his dependence on traffic fluctuations and platform decisions. In a few clips, when talking about the uncertainty caused by broadcast suspension experience or platform adjustments, Da Sima mentions in a more serious tone "I need to think about how to go in the future" and "I can't rely on only one path for food", showing wavering and anxiety about future career paths. From the framework of "hidden strains" proposed by Delgaty and Wilson [8], this unstable experience can be understood from at least three levels. The first is material pressure, namely traffic fluctuations, unstable commercial opportunities and uncertain future income expectations. The second is social pressure, namely the streamer's need to continuously maintain close relationships with fans and keep the live stream atmosphere through humor, self-deprecation and interaction. The third is work identity pressure, namely he has to maintain the professional image of a "gold-medal lecturer" on the one hand, and constantly describe himself as a "worker" on the other hand, showing that he always wavers in his professional position. Such swinging between "loving game live-streaming" and "regarding live-streaming as a job that may be lost at any time" is a prominent microcosm of creative laborers' experience of work precarity in the platform environment.

5. Conclusion

Since 2022, when platform rules and algorithmic mechanisms keep changing, why has the freedom originally expected by creators gradually turned into pressure in reality, and further driven them to continuously accelerate self-discipline? To answer this question, taking Da Sima as a case, this article comprehensively investigates and analyzes his live-streaming content, short videos and platform rule texts on multiple platforms, combined with other relevant reports, through netnography, qualitative single-case study and thematic analysis. The research shows that platforms do not only impose restrictions from the outside. More importantly, they integrate precarity directly into creators' daily work through traffic allocation, interaction data and commercial cooperation requirements. On the surface, creators can cope with risks in various ways, such as adjusting live-streaming content, distributing content on multiple platforms and maintaining fan relationships with discourses. In fact, these practices do not really reduce pressure, but further normalize self-discipline, increased emotional input and extended live-streaming duration. It can be seen that platformized creative labor has not expanded the free space for content creators. On the contrary, under the narrative of "free entrepreneurship", it transfers more risks to individuals and generates new oppression and inequality.

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