Knowledge Workers of the Digital World, Unite!
Knowledge Workers' Workplace Surveillance and Hidden Transcripts in China

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In the aftermath of the COVID-19 pandemic, there is a growing use of Information and Communication Technology (ICT) for the purposes of labor control and surveillance. This trend significantly affects the knowledge workers who are deeply connected with ICT. However, there is a lack of studies tackling the perceptions of knowledge workers regarding surveillance, its impact on their work practices, and how they push back against it. Based on Scott's concept of hidden transcripts, this article studies the workplace surveillance faced by Chinese knowledge workers and their responses and reveals the complex interplay between workplace control, the meaning of work, and hidden transcripts. Based on the findings of 13 in-depth interviews and the analysis of the content of 3,205 Weibo posts, 4 themes are identified in the discussions about the work of Chinese knowledge workers, the influence of their perceived meaning of work on their interpretation of surveillance, and the specific strategies of their hidden transcripts. The paradoxical role of ICT is demonstrated in labor rights as sites of surveillance and counter-surveillance, especially digital platforms. Furthermore, a more comprehensive internal view of the survival dynamics among knowledge workers is provided.

Keywords: knowledge workers, workplace surveillance, meaning of work, hidden transcripts, China

Situated within the world's largest developing economy, Chinese workers, who are considered the architects of China's economic miracle, also bear the brunt of labor tragedies to a certain extent. They face employment statuses filled with uncertainty, with concerns about wages, working hours, and health and welfare benefits. Many studies express concerns that various factors, such as the Confucian virtue of silence toward authority (McLaren, Kendall, & Rook, 2019) and the high level of insecurity and unenforced labor

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rights (Wang, 2020), foster a compliant labor force on whom harsh working conditions are imposed.[2] This results in a vicious cycle of shorter rest periods and diminishing returns. This phenomenon involves traditional manufacturing laborers, ICT professionals, academics, designers, editors, and marketing personnel (Houdmont, Zhou, & Hassard, 2011). Knowledge workers are "brain-based" employees, distinguished from ordinary labors by their closer connection with ICT (Carleton, 2011; Drucker, 1959; Pyöriä, 2005). The global population of knowledge workers has surpassed 1 billion (Gartner, 2019), making these issues more pronounced.

The absence of labor welfare is a common issue in developing countries, which is even more significant in China. In the post-COVID-19 era, the voices of Chinese knowledge workers protesting over-surveillance, work overload, and layoffs at large enterprises have become trending social topics (Huang, Wang, Yuan, & Liu, 2022). This new generation has a new attitude and orientation toward work. Over the past five years, slang terms have emerged, such as "996.ICU," which refers to working from 9 a.m. to 9 p.m., six days a week, until workers end up in the intensive care unit, and "Fubao," derived from a statement by Alibaba's founder suggesting that young people should view the overtime culture of tech companies as a "huge blessing" to be cherished. Such terms reflect young people's discontent with large corporations and "capitalists." In addition, disputes and conflicts have been further amplified due to the widespread platformization and infrastructuralization of social media (Zhao & Ye, 2022, 2023) and the aggressive deployment of productivity surveillance tools.

Against this backdrop, influential critics of work meaning and rights have emerged on Chinese social media platforms, amassing millions of followers. Within an environment of high regulation and corporate censorship (Ye & Zhao, 2023), they provided vital spaces for knowledge workers to present and exchange hidden transcripts. Therefore, the following relevant questions arise: *How do Chinese knowledge workers perceive work? How is ICT-driven workplace surveillance interwoven with the meaning of work perceived by knowledge workers? How do these knowledge workers use ICT to exchange hidden transcripts and form opposing forces?* To answer these questions, this article first reviews related studies on and concepts of knowledge workers, workplace surveillance, meaning of work, and hidden transcripts. It then details the findings of the conducted studies and concludes the discussion.

Knowledge Worker, Meaning of Work, and Workplace Surveillance

In the latter half of the 20th century, the production and consumption of information products and services underwent significant growth (Castells, 1996). While industrial production relied heavily on cheap labor, energy, and investment in tangible assets, in the postindustrial society, knowledge has become the new driving force and the most valuable asset for individuals and collective actors (Braverman, 1974; Castells, 1996; Castells & Himanen, 2002). Drucker (1959) accurately predicted the rise of knowledge workers, anticipating that knowledge work would become a more crucial economic resource than land, labor, and financial assets. Despite the lack of a clear definition of knowledge work, researchers agreed that a high

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[2] Despite the enactment of the Labor Law in 1995, China has failed to effectively implement many of its provisions, such as the enforcement of the 8-hour workday, which is intended to safeguard the workers (Zhou, 2013).

level of education and skills and the use of information technology are key characteristics. The latter are crucial parts of the informatized labor process (Pyöriä, 2005). Due to the development of ICT (Carleton, 2011; Pyöriä, 2005), knowledge workers face challenges different from those of physical laborers, including information overload, online permanence, time management challenges, task formalization, task complexity, procrastination, and technological deficiencies. These challenges affect the performance of the entire knowledge worker group (Ben-Arieh & Pollatscheck, 2002; Evaristo, Adams, & Curley, 1995).

Although knowledge work is cognitive rather than physical, its labor is still acquired to generate surplus value. "Labor time" constitutes the central productive component in value creation (Marx, 1967), and the history of capitalism is marked by the evolution and refinement of workplace supervision technologies (Braverman, 1974; Burawoy, 1979). Monitoring denotes the ability of management to record and track the performance, behaviors, and personal characteristics of the employees in real time or as part of a broader organizational process (Ball, 2010). Technologies for collecting data on work frequency and duration, output quality, and nonproductive time (Bain & Taylor, 2000; Ball, 2010) have been developed. They provide work managers with an effective means to collect information on worker behavior without direct monitoring (Garson, 1988). However, studies have also provided substantial evidence of the negative effects of workplace surveillance on employees, including high stress levels, poor work attitudes, reduced trust in management, and reduced social interactions at work (Allen, Coopman, Hart, & Walker, 2017).

Surveillance methods have evolved from the simple oversight of workers punching in, counting, weighing outputs, and piece-rate pay to Taylorism, a scientific management of workers. New surveillance methods, including mobile surveillance technologies, widespread networks of devices and sensors, algorithmic control of task assignments, and reinforced performance metrics, have been developed to improve the management of workers (Jarrahi et al., 2021). COVID-19 only intensified this drive to manage. While the pandemic provided workers time with family, more flexibility, and increased personal autonomy (Manokha, 2020), some workers found that working every day led to negative outcomes (Gao et al., 2022). So, on the one hand, being knowledge workers involves more uncertainty and complex interactions, and the "informational development model" (Castells, 1996, p. 229) requires them to be creative, flexible, collaborative, autonomous, and often mobile (Greene & Myerson, 2011). On the other hand, capitalism requires "control and predictability" (Clegg & Dunkerley, 1980, p. 169) to extract more profit from the labor time purchased from employers. Consequently, in the post-pandemic era, the irreconcilable contradictions between these two drives are intensifying.

In the face of uncertainty, change, and significant setbacks, workers are reexamining their career choices, the meaning of work in their lives, and their role in the wider world (Wrzesniewski, 2002). Existing studies suggest that there is a complex relationship between workplace surveillance and the meaning of work (Sewell, Barker, & Nyberg, 2012). Individuals with different meanings of work may have different perceptions of workplace surveillance. Regarding the meaning of work, there are three types of relationships between people and their work: (1) Job: People consider "job" as a means to get financial rewards and material benefits that allow them to enjoy life after work; (2) Career: People associate "career" with their personal accomplishments, such as their professional advancement, self-esteem, and social status; (3) Calling: People believe that the "calling" (Weber, 1958) in their work has social value and it is an inseparable part of their lives, providing irreplaceable fulfillment (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). The job-career-calling distinction does not necessarily

depend on the occupation. Workers with all the three orientations exist in any form of work. The self-initiated behaviors that employees consider to shape, mold, and change their jobs have been referred to as job crafting (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001). Zhang and Parker (2019) proposed a three-level hierarchical structure of job crafting: (1) job crafting orientation (i.e., approach vs. avoidance crafting), (2) cognitive and identification crafting (i.e., behavioral vs. cognitive crafting), and (3) crafting content (i.e., job resources vs. job demands).

As China's economy continues to open up, a significant influx of foreign businesses and investments into the service sector has reshaped the employment landscape (Kessler, 2007). The state's pursuit of technological dominance has led to intense competition between tech companies and high-end service industries, resulting in extreme working hours, professional burnout, and informal and insecure employment (Zhou, 2013). The new generation of employees, especially millennials, have a more confident, open, and self-centered identity, which may give rise to different views on the loss of labor rights and control compared with the previous generations (Zhu, Xie, Warner, & Guo, 2015). Yet, the censorship of online labor activities and the ambiguity of court rulings have reduced the desire of workers to organize and assert their labor rights through clear acts of resistance (Liu, 2023). However, there is a lack of studies on whether Chinese knowledge workers perceive surveillance within ICT collaboration, how they escape/resist it, and how their work meaning affects their perception of ICT surveillance. Based on these observations, the following question is proposed:

RQ1:   *What forms of ICT surveillance do Chinese knowledge workers face, and how do they relate to the meaning that knowledge workers ascribe to their work?*

Hidden Transcripts in Social Media

The "hidden transcripts" denote the interactions, stories, myths, and rituals in which employees engage outside the direct surveillance of those in power (Scott, 1990). Developed from a study of Malaysian farmers (Scott, 1985), the concept of hidden transcripts proved relevant to wider social contexts such as the contemporary working class (Scott, 1990). Within Scott's (1985) framework of "everyday forms of resistance to power" (p. 35), the "public transcript" denotes open interaction between subordinates and those in authority. The term "hidden transcripts" captures speeches, gestures, and practices that occur offstage and may either confirm, contradict, or inflect what appears in the public transcript (Scott, 1990). The hidden transcripts have several characteristics: It is a collective cultural product that emerges from power relations between subordinates and authority, and is manifested in social spaces where the subordinate group establishes itself through resistance. In the corresponding process, this group is isolated from control and surveillance from above. Therefore, it is difficult for the authorities to directly observe (Scott, 1987, 1990). Finally, a hidden transcript exists only to the extent that it is practiced, articulated, enacted, and disseminated within these offstage social sites (Scott, 1990).

At the end of the 18th century, the history of the working class formation in England shows that the new concept of democracy of the working class was based on the spontaneous action of the common people and the self-organization process (Thompson, 1966). Since class formation is related to social mobilization, which cannot take place without communication, it is necessary to study the interaction of

workers, while taking into consideration the public and hidden transcripts, to determine the extent to which they have developed "class consciousness." In the schematic terms of Scott (1990), the hidden transcripts include a domain of material appropriation (e.g., labor, grain, and taxes), a domain of public mastery and subordination (e.g., rituals of hierarchy, deference, speech, punishment, and humiliation), and a domain of ideological justification of inequalities (e.g., the public religious and the political world view of the dominant elite). Moreover, the conceptual framework of Scott (1985, 1990) provides a very efficient approach for analyzing ethnographic data gathered in business settings (Murphy, 1998). It is important to mention that existing studies have shown how the low-profile forms of resistance (i.e., hidden transcripts) can lead to the systematic undermining of the dominant hegemony (Mumby, 1997) and the way those who are seemingly powerless carve out discursive spaces for influence and control (Murphy, 1998).

Hidden transcripts highlight that narratives focusing only on resistance cannot fully reflect the relationship between workers, employers, and work. In terms of the relevance and resistance applicability, the complexity, dynamism, and interconnectedness of resistance practices cannot be overlooked. Hence, the construction of simple dichotomies between covert and overt forms of resistance or between individual and collective resistance (Putnam, Grant, Michelson, & Cutcher, 2005) should be avoided. For instance, Payne (2008) deduced that workers neither wholeheartedly agree with surveillance nor uniformly resist surveillance control. To move beyond the resistance framework and better understand the relationships between employees, employers, and work, it is necessary to study the life contexts of workers and their complexities.

Social media, functioning as a de facto public space, are an ideal environment to study hidden transcripts and these life contexts. Social media have become the most important backstage for the production of collective cultural products (Papacharissi, 2002). It allows for shared experiences and opinions that cannot be articulated within organizations (Wojcieszak & Mutz, 2009) to be anonymously voiced outside the purview of authorities. Existing studies focusing on the hidden transcripts on Chinese social media (Wu & Fitzgerald, 2021; Ye & Zhao, 2023) have suggested two main reasons for their prevalence: Cultural habits and Internet censorship. (1) Chinese culture has a punishment mechanism involving a "sense of shame" and public humiliation, which cultivate a behavior of self-submission among the working class, making it difficult for Chinese workers to express their true views on work in front of their employers or the public (Hu, 2013). This encourages them to turn to online platforms to express their needs. (2) In highly regulated systems, the consequences for controversial online speech are not limited to virtual penalties like shadow banning but also include administrative punishments (Qiu, 2010; Ye & Zhao, 2023). Therefore, the sharing, storage, and mutual support provided by social media platforms allow users to generate a significant amount of commentary in a "psychologically safe" state (Zhang, Fang, Wei, & Chen, 2010).

To access the hidden transcripts of workers, it is crucial to consider their sensitivity to such topics and to gather research data in spaces where they feel comfortable (Corbin & Morse, 2003). In an environment characterized by macro-level regulation and micro-level surveillance, workers having different meanings of work require perceived safe and hidden transcripts to express complex emotions and attitudes. Therefore, in-depth interviews with workers and content analysis of discussions on Weibo were conducted for this study, covering a wide variety of industries and jobs.

RQ2:   *How do Chinese knowledge workers use social media to produce hidden transcripts when advocating for or opposing the status quo?*

Study 1

Data and Methods

Semi-structured in-depth interviews with 13 knowledge workers were conducted from December 2022 to January 2023, using snowball sampling. Their occupations included working with the Internet, finance, telecommunications, and civil service, with educational backgrounds of bachelor's, master's, or PhD degrees, representing a typical cross-section of knowledge workers (see Table 1). The questions covered three main sections: Surveillance faced at work, the changes in work after the pandemic, and the hardships and joys of work. The participants were encouraged to freely describe their work-related behaviors, attitudes, and emotions. Each in-depth interview lasted 1 to 2 hours, resulting in approximately 140,000 Chinese characters of interview transcripts that were open-coded before being translated into English.

Table 1. Information About Interviewees.

ID	Gender	Age	Working Year	Industry	Position	Education
A	Male	33	2.5	Big data information	Deputy secretary general of a research institute	PhD
B	Male	27	1.5	Public offering fund	Investment researcher	Master's
C	Male	25	1	The Internet	Algorithm designer	Master's
D	Female	28	3	Cloud computing	Data analyst	Master's
E	Female	27	3	The Internet	Manager	Master's
F	Female	42	18	The Internet	Translator/data monitor	Bachelor's
G	Male	22	0.5	Construction	Office worker	Bachelor's
H	Female	29	1	The Internet	Public opinion analyst	Bachelor's
I	Female	25	1	Communication	Finance officer	Bachelor's
J	Female	25	1	State institution	Social media editor	Bachelor's
K	Male	29	0.5	Finance	Sales executive	Master's
L	Female	26	0.5	Telecommunications	Sales office operator	College
M	Female	31	8	Bank	Wealth management account manager	Bachelor's

The interview transcriptions were preprocessed by classifying the responses to the questions. They were then filtered into parts of speech using PaddlePaddle (Ma, Yu, Wu, & Wang, 2019) and Jieba (Junyi, 2023) in Python. Moreover, stopwords were removed using HIT's (Harbin Institute of Technology) list (goto456, 2023). Afterward, the processed corpus was vectorized using the skip-gram algorithm (Mikolov, Chen, Corrado, & Dean, 2013). Principal component analysis (PCA; Abdi & Williams, 2010; Pearson, 1901) was used to reduce the dimensionality of the data to answer RQ1. The t-distributed stochastic neighbor embedding (Van der Maaten & Hinton, 2008), which is nonlinear, was used as a supplement to the linear PCA to further reduce the dimensionality of the interview data. The K-means (MacQueen, 1967) were then

employed to cluster the data, with two optimized numbers ($k = 2$ and 4) identified by the algorithm. Afterward, the transcripts were manually read one by one for thematic analysis and naming of the themes. Therefore, $k = 4$ was manually selected to explore the various levels of answers.

Finding 1. Perceptions of Work Meaning and Surveillance of Knowledge Workers

Themes were recorded from four clusters of the interview transcriptions of the 13 knowledge workers (Figure 1).

Process and Goal

Workers discussed the establishment of specific, measurable performance goals using key terms such as workload, achievement, bonus, and profession, among others.

> I only work remotely when the whole society stays indoors. In fact, my workload during that period was relatively small. Therefore, there would be less connections between the superiors and subordinates or other involved work. Consequently, there was no strict evaluation of the work content. (Interviewee G)

Workplace and Communication

Workers reflected on the physical and digital environments where tasks were performed and interactions occurred. This cluster is directly related to workplace surveillance, and keywords include methods and techniques of communication, such as market, office, the Internet, and telephone, among others.

> For other colleagues under my management, I would ask them to hold a meeting every evening before leaving work to discuss and report on the day's work, or to post its progress in the working group. (Interviewee E)

Meaning and Cognition

This theme focuses on how knowledge workers perceived and evaluated their work and responsibilities. This encompasses the intrinsic meaning of their tasks, the added value of work, their ability to perform tasks efficiently, and their attitudes toward work efficiency, including any tendencies toward loafing on the job.

> On the one hand, the remuneration should be sufficient for the social living expenses of individuals. On the other hand, you also need self-esteem, and some of your abilities can be highlighted in the work. In other words, you need a sense of social acceptance. (Interviewee M)

Organization and Relationship

This concerns how knowledge workers dealt with the structural and relational dynamics within their companies and includes keywords related to the interplay between organizational hierarchy, team interactions, and individual roles, such as company, leader, and colleague, among others.

Because we are a state-owned enterprise, compared with the employees of the Internet company, there is not much subjective initiative to do some new entrepreneurial work for us. Most of the time, we play a supporting role. If leaders want to do a job, we cooperate and support them to complete it. There is little room for individuality. (Interviewee D)
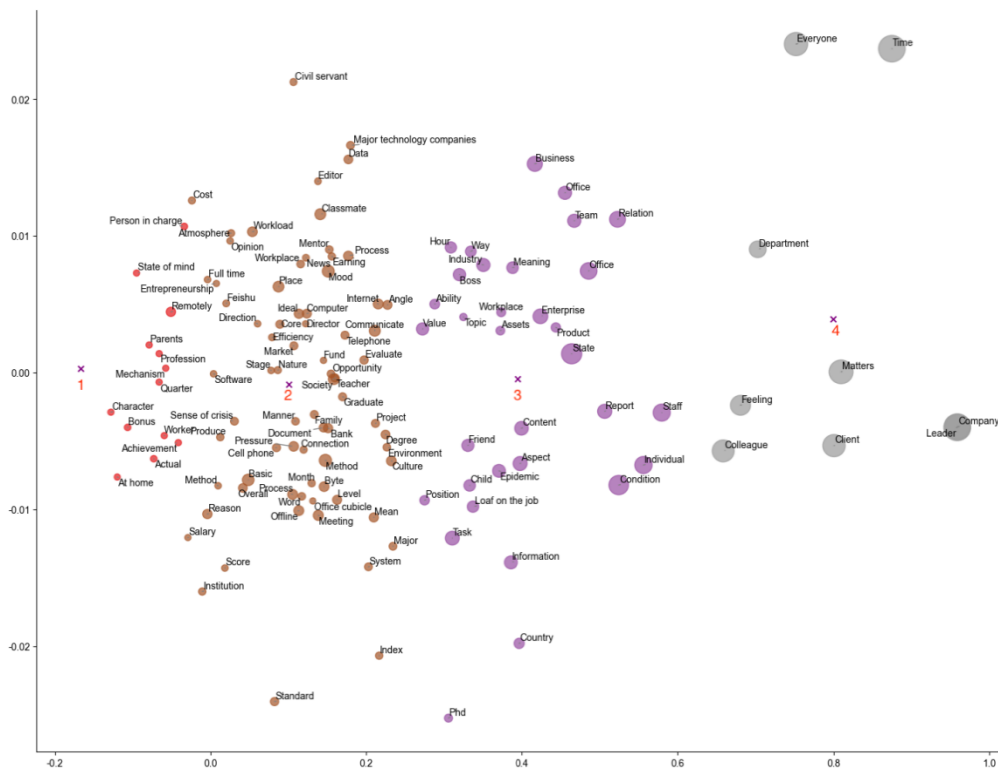

Figure 1. Results of the cluster analysis of the interview transcriptions of knowledge workers.

In the workplace and communication topic, workplace surveillance was commonly reported in various forms. Most of the respondents (*n* = 10) openly discussed experiencing restrictive impacts, as shown in Table 2. Three sales personnel described a surveillance system that combined human and machine (i.e., algorithm) efforts, where the performance calculation included the actual sales and assessments of the work behavior during the sales period (e.g., the number of potential clients added as friends, and the duration and frequency of calls with potential clients). "The results of the surveillance are used to evaluate my job performance and salary" (Interviewees K, L, and M). These jobs had high time pressures (restricted time

for task execution), high task formalization levels (highly specified and structured tasks), and low task complexities (simple coordination and dynamics among components; Evaristo et al., 1995). In addition, the outcomes of the surveillance were subject to evaluation by superiors. That is, the superiors ultimately determined whether the outcomes were satisfactory and whether workers' behavior affected the job performance.

Perceptions of surveillance focused on its ability to extend the workplace: Work shifted to any time and any place. This surveillance was through the affordances of digital applications. Features originally intended to increase the efficiency of communication had become surveillance mechanisms through their use by colleagues and leaders. "Read receipts," "shared documents," and "IP address display" were frequently mentioned by the respondents. In the work communication software, "read receipts" are tags meant to confirm that the message has been read and cannot be forcibly turned off, and these have evolved into a means of mutual surveillance. "Read but not replied" is seen as a rude workplace taboo. "Shared documents," where all team members work on an online Word document, and the content added by each person and the editing history is recorded to track the work progress. This feature makes the contributions of everyone transparent to each other. Since 2022, the China Internet Information Center has required Internet platforms to display the geographical information of each user's IP address. This provides the employers with another means of control: Displaying a location different from the workplace without permission seems inappropriate.

Within the context of the long-term coexistence of surveillance technologies and devices, respondents expressed anxiety over being replaced by peers and machines due to the inability to accumulate professional skills, viewing the ability of surveillance as expanding until labor replacement occurs.

I feel a sense of crisis about my future. Because there is not much professionalism in my job. Although some professional tasks should be accomplished through learning, it is just a matter of time and speed of understanding. Maybe one day, artificial intelligence will develop and replace me. (Interviewee G)

Table 2. Surveillance Status Reported by Interviewees.

ID	Surveillance Tool	Monitoring Focus	Count for Performance
D	WeChat Work	Clock in and out	No
G	DingTalk	Clock in and out	No
I	Bossware "Welink"	Effective operation on personal computer	No
J	Applications for government office	Clock in, request for leave	No
K	Sales system	Sales volume	Yes
L	Surveillance camera on workstation	Length and number of calls made	Yes
M	Surveillance camera on workstation, sales system	Length and number of calls made	Yes

If work is classified according to the "job-career-calling" model (Bellah et al*.,* 1985; Wrzesniewski et al., 1997), the distribution of identified respondents is as follows: Job (n = 9), career (n = 2), and calling (n =

2). Distinct perceptions of surveillance and the meaning of work among these three types of workers were observed. For instance, the frequently mentioned issue of overtime (a domain surveillance technology is also commonly used) was acknowledged by all the respondents to varying extents, while differences existed in their perceptions. During the interviews, respondents who viewed their work as a "job" or "career" complained about overtime being recorded through a timekeeping machine, turning overtime into a visible quantifiable act. In this "last-man-standing tournament," they felt obliged to work overtime under panoramic data surveillance, even in the absence of their leaders. On the contrary, knowledge workers who perceived their work as a "calling" downplayed the subjective impact of surveillance. They tended to consider their work as "information-intensive and time-sensitive" (Interviewees A and B). Thus, they surpassed the repetitiveness and oversight, experiencing value, meaning, contribution, aspiration, sense of achievement, recognition, and respect. Their qualifications (master's or PhD) and specialties (finance or information management) had led them into industries (finance or Internet industry) with high task complexity (Wood, 1986), which resulted in perceptual differences affecting their performance and income. It can be objectively deduced that the higher the complexity of the work tasks, the less the traditional attendance management and supervision apply, and managers are more likely to evaluate those who perceive their work as "calling" through monthly, quarterly, or annual reports on work content, completion, and quality. This indicates that differences in professional tenure, task complexity, and individual cognition could reduce the negative perceptions of surveillance at the objective and subjective levels, which are more likely to be found among employees who see their work as a "job" or a "career" only.

Study 2

How does the perception of work and surveillance transform into hidden and shareable transcripts? A content analysis based on social media posts was conducted to answer RQ2. Posts from "Tui Na Bear" and the corresponding comments were considered an analysis sample. "Tui Na Bear" is a highly influential Weibo account in China's key online public sphere, boasting millions of followers as of January 2024. This account content is frequently reposted to other super social media platforms, such as Douyin and Douban, receiving a large amount of shares and likes. This demonstrates the high cross-platform social influence of this account on topics related to knowledge workers. For example, in 2022, "Tui Na Bear" posted 306 work-related discussions, which generated 35,566 comments from approximately 21,000 netizens. Within this internal community, netizens are keen to discuss issues they would never tell their bosses about and topics they rarely share with colleagues, including how to counteract office systems, negotiate with companies, transfer workloads, and interact with colleagues and leaders. The core of these discussions is an exchange of strategies for achieving a better work-life balance. The wealth of personal narratives extracted from these comments revealed that urban knowledge workers, including lawyers, programmers, doctors, teachers, and other white-collar workers, are the primary audience engaging with "Tui Na Bear." It can be deduced that the discussions about these posts effectively reflect the current consensus among knowledge workers (Wang et al., 2016). They can also be considered a crucial analytical resource to obtain the hidden transcripts of how knowledge workers confront workplace surveillance.

Data and Methods

Nonprobability samples, which are small and purposively selected (Patton, 1990), are not statistically representative of a population (Ritchie, Lewis, Nicholls, & Ormston, 2013), while purposive

sampling is necessary when informed observers are experienced in the study area and elicit an explanation (Patton, 1990). Knowledge workers who comment on anonymous social media as self-reports are more private and more candid in their disclosures compared with those who answer questionnaires (Correa, Silva, Mondal, Benevenuto, & Gummadi, 2015). Therefore, Study 2 extracts the content about work from the account of "Tui Na Bear" to study issues related to knowledge workers.

The content analysis coding frame was established based on the hierarchical structure of job crafting (Zhang & Parker, 2019) and the mental resources (Munoz-de-Escalona & Canas, 2017) adapted for post-COVID knowledge workers, as shown in Table 3. Due to the fact that 35,566 comments represent a large volume of material to be analyzed, 2,899 comments that were liked more than 20 times by netizens (i.e., they resonated with more netizens) were selected and coded according to the frame presented in Table 3. Three coders were recruited and trained. They obtained an intersubject reliability value of 85.76% ($p < .001$) using the Fleiss kappa test (Fleiss, 1971).

Table 3. Content Analysis Coding Sheet.

Theme/Emotion	Category	Conceptualization	Operationalization
Job crafting (Zhang & Parker, 2019)	Behavioral crafting	Self-initiated behaviors to shape, mold, and change jobs	Wealth (e.g., salary and bonus); health; work time; professionalism; work autonomy; workplace interpersonal relations; job prospects (industry or corporate); work-life balance
	Cognitive crafting	How one frames or views his tasks or job, which is self-initiated and self-targeted	Work creativity; self-realization; corporate culture; work pressure; labor law and social security; dignity
Emotions (Munoz-de-Escalona & Canas, 2017)	Negative–positive valence	Degree of emotional pleasantness–disgust	Negative valence = 1, moderate = 2, positive valence = 3
	Low–high arousal	Physiological activation or arousal	Low arousal = 1, moderate = 2, high arousal = 3

Finding 2. Hidden Transcripts of Knowledge Workers

Weibo gives knowledge workers a possible backstage to reproduce subversive meanings in organizational communications (Murphy, 1998) due to the fact that the meaning is not only reproduced but produced, negotiated, and resisted (Mumby, 1993). After coding the 306 Weibo posts and 2,899 comments that received several likes, a large volume of hidden transcripts could be seen, such as rituals of aggression, tales of revenge, gossip, rumor, grumbling, and complaints. The data for hidden transcripts were analyzed to answer RQ2. To further understand the hidden transcripts of knowledge workers on Chinese social media, it was necessary to explore the issues that were focused on, the emotions that were expressed, and the effects that were triggered by these postings.

Topics related to social media, containing work-related content by tens of thousands of netizens (and more lurkers) through posts and likes, were first detected. The emerging themes (Table 4) were summarized as follows: Very high work pressure, inability to perform self-realization and work-life balance, complicated workplace interpersonal relations and corporate culture, low salary, and bonuses. These themes may correspond to (1) process and goal, (2) workplace and communication, (3) meaning and cognition, and (4) organization and relationship of the four clusters in Study 1. Table 4 presents the relationships between the themes found in the Weibo content and the clusters found in the interviews of Study 1.

Table 4. Themes in the Hidden Transcripts of Knowledge Workers.

Theme	Cluster in Study 1	Percentage (%)	Example
Work pressure	2	19.3	*Every day, I feel like pretending to be an emotionally stable adult.*
Self-realization	3	18.6	*I often feel my work is worthless, which makes me miserable.*
Work-life balance	1	17.9	*My current life is exhausting, and I can't afford to have children.*
Workplace interpersonal relations	4	13.8	*When the boss is Covid-positive, you also have to make 800 calls to ask for instructions on work.*
Wealth	1	11.7	*Next year, I plan to learn vegetable cultivation to cut living costs.*
Corporate culture	4	10.9	*It is a chief characteristic of "wolf culture" at work.*
Job prospects	1	10.1	*I don't have the courage to resign and hope to get fired instead.*
Work time	4	8.4	*I envy those who have weekends to look forward to, unlike me.*
Health	1	5.4	*I believe sleeping less and being more energetic are essential for success.*
Work professionalism	3	5.0	*Attending an elite school does not guarantee a better job for a nerd like me.*
Dignity	3	4.8	*It's "cool" to prove I'm a good slave, but it's not fulfilling.*
Labor law and social security	2	2.7	*When will labor laws protect workers on-site?*
Work autonomy	3	2.0	*I loaf on the job because I can't get money or power. Who will loaf on the job if either of them is the reward for work?*
Work creativity	3	1.9	*We are just a tool, nothing exciting.*
Others	—	1.3	*Children from ordinary families must learn how to survive instead of enjoying happiness.*

N.B. The total exceeds 100% as each Weibo post (main post or comment) may discuss more than one topic.

The emotional characteristics of each of the different topics discussed by knowledge workers were then recognized. Fourteen themes (Table 4) were reorganized based on the four clustering topics found in Study 1: (1) *Process and goal*: Health, wealth, work-life balance, and job prospects; (2) *Workplace and communication*: Work pressure, labor law, and social security; (3) *Meaning and cognition*: Self-realization, work professionalism, dignity, work autonomy, and work creativity; (4) *Organization and relationship*: Workplace interpersonal relations, corporate culture, and work time. Afterward, according to Munoz-de-Escalona and Canas (2017), the trained coders coded each Weibo post showing emotions by negative to positive valences (1 = negative, 2 = neutral, 3 = positive, on the x axis) and low to high arousal (1 = low, 2 = neutral, 3 = high, on the y axis), as shown in Figure 2. In general, the emotion in the discussions regarding work on Weibo is rather negative (mean = 1.03, SD = 0.89), and it has a high level of activation or arousal (mean = 1.43, SD = 1.19). The emotion of the knowledge workers toward work pressure, work professionalism, and dignity has the most negative valence and the highest arousal. Topics related to *process and goal*, such as health, wealth, and work-life balance, have more positive valence and lower arousal. Note that the themes in the middle of Figure 2 deal mainly with *meaning and cognition*, including self-realization, work autonomy, and work creativity, as well as the *organization and relationship* clusters. An outlier related to the "labor law and social security" was also found. This was mainly due to Weibo posts that were talking about cases where defaulting companies were taken to court, while the emotion in the discussions of these successful cases was the most positive one.
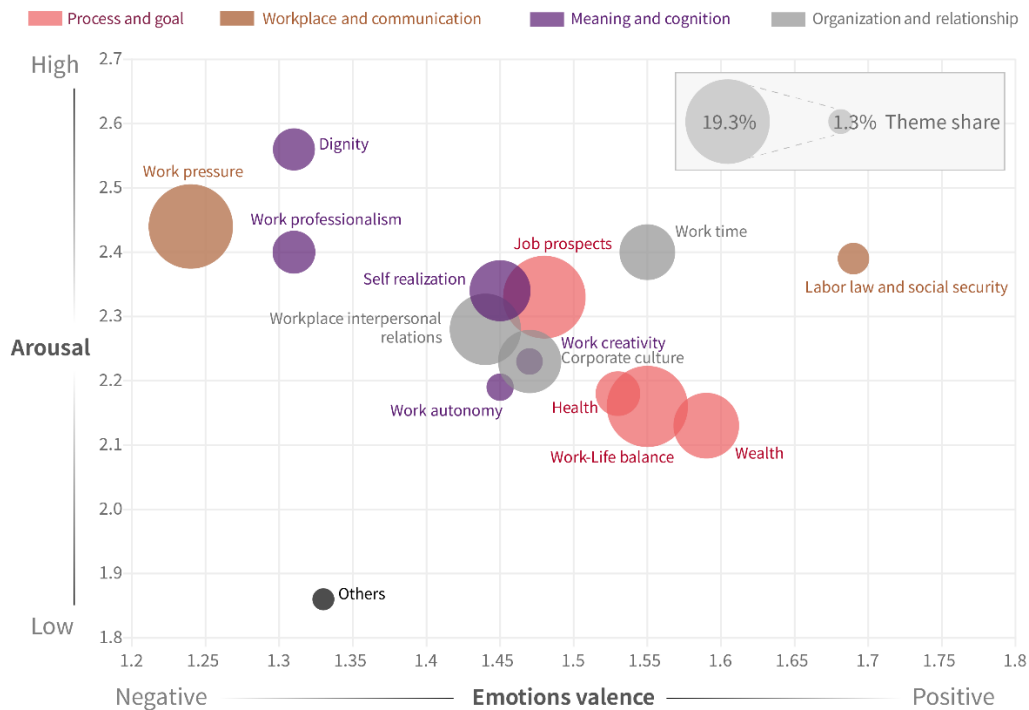

Figure 2. Emotional characteristics of themes in the hidden transcripts.

Afterward, this study tested whether various themes yielded different levels of user engagement. Lurkers expressed their favorable and agreeable attitudes toward the comments under the main posts by liking them. Therefore, this study considered the logarithm of the number of likes received by Weibo posts or comments as the dependent variable of user engagement and conducted an analysis of variance (ANOVA) statistical test on different types of topics, as shown in Table 5. A significant difference can be seen at the level of the discussion clusters ($F = 3.574$, $p < .010$). Thus, it can be concluded that the work *meaning and cognition* and *organization and relationship* were the most resonated clusters for these knowledge workers.

Table 5. ANOVA Results of User Engagement and the Clusters of Themes

	Item	N	M	SD	F	p
Ln_engagement	Meaning and cognition	740	4.34	1.01	2.995	.030*
	Organization and relationship	1162	4.30	0.98		
	Process and goal	846	4.32	1.03		
	Workplace and communication	523	4.18	0.94		

* $p < .05$ ** $p < .01$. Ln_: Indicates the natural logarithm of the engagement indicator.

In these two groups (*work meaning and cognition*, *organization and relationship)*, there is undoubtedly a wealth of discussion regarding complaints and strategies against surveillance. An emotional and thought-provoking comment from a knowledge worker on the meaning and perception of work deeply resonates:

> When I come home late at night after finishing a PowerPoint presentation, I feel like a factory worker operating a sewing machine. I realized that I am bound to be a weaver, watched by countless eyes, unable to see the sky. (personal communication, January 21, 2022)

In work scenarios extended across time and space, under very high work pressure and the collaborative surveillance of humans and algorithms, knowledge workers who view their job as a "career" or "job" and resist the surveillance mechanisms predominate on social media. Their strategies are categorized into three types: Loafing, feigning ignorance, and technical resistance.

These workers first reduce their enthusiasm for ICT, lowering the expectations and investments in their work. For example, "Dozens of projects, all marked URGENT by the manager! . . . In any case, I'll take my time. Let them worry if they're in a hurry, I don't care" (personal communication, April 19, 2022). They then mask their work capacity, appearing slow-witted. For instance, in ICT-collaborative work, they slow down the output speed and lower the expectations of the team by acting dull. The key to the strategy is maintaining a balance to avoid being fired or promoted, which implies a greater workload. "Never finish an Excel sheet too quickly; if you have to, take a whole day" (personal communication, June 21, 2022). These are forms of mental and in-action passive resistance.

The third strategy is inspired by open-source software. It forms a hidden force against surveillance mechanisms. "I obtained a virtual location app, allowing me to bypass the company's location-based clocking mechanism and arrive at the workstation late or leave early" (personal communication, March 1, 2022). Especially during the COVID-19 pandemic, those working from home "stole" to keep some balance between work and life, such as "lying in bed and attending online meetings with a prerecorded avatar" (personal

communication, March 15, 2022). However, the line separating work and personal life also blurs: Remote work leads to communication challenges and fosters greater isolation among coworkers—with convenient excuses readily available for delayed responses, prolonging the task completion times, and prompting managers to heighten the surveillance measures. Nevertheless, the technical resistance of workers persists unabated, forming a cohesive front: "A senior colleague, who is the best at slacking off at work, developed a software that makes her mouse click randomly on the screen when no one is around, giving the surveillance app the illusion that she is working" (personal communication, January 19, 2022).

Discussion and Conclusion

This article tackles the experiences of Chinese knowledge workers in the information society and the post-COVID-19 era. It initiates a necessary dialogue about the meaning of work and perceptions of surveillance among knowledge workers. The conducted study demonstrates that under the simultaneous pressures of market competition and surveillance technologies, the concerns of knowledge workers related to work include meaning and cognition, organization and relationship, process and goal, and workplace and communication. For those who consider their work as a "calling," the "cultural control" named for competitiveness, cost consciousness, and profitability (Kunda & Van Maanen, 1999) has been internalized. For those considering it as a "career" or "job," the fear of being replaced by peers or artificial intelligence (AI) is constant. In addition, they face a complex and matrixed socio-technical "surveillant assemblage" (Haggerty & Ericson, 2017). Chinese social media become a platform for knowledge workers to share the hidden transcripts of their work processes. Through hearsay or ironic self-mockery, Chinese knowledge workers have joined forces to establish an anonymously backed platform characterized by predominantly negative sentiments and heightened emotional intensity. Hence, they engage in discussions on subjects that directly affect their lives. Common strategies to face surveillance, in narrow and broad senses, include loafing, feigning ignorance, and technical resistance. The exchange of such transcripts is not about morality. It is based on the backdrop that the alienation of work as sacrifice is unfair, especially considering the inadequate labor protection system in China (Liu, 2023).

In embracing this approach, evolution from a one-sided view of ICT as a productivity tool is achieved, showcasing its inconsistent affordances, especially digital platforms, in labor disputes. More precisely, on the one hand, surveillance as affordance entangles with the meaning of work held by the new generation of knowledge workers. On the other hand, it brings about the development of anti-surveillance tools, among the covert communications of knowledge workers, to cope with the changing work environment and high work pressure. The scattered discussions about knowledge workers' perceptions of surveillance and hidden transcripts (Sewell et al., 2012; Zhen, 2021; Zureik, 2005) have been developed into a comprehensive framework that links meaning of work, job crafting, and emotion as analytical concepts. This provides a more comprehensive internal picture of the survival dynamics of knowledge workers. Compared with existing studies (Ghobadi & Clegg, 2015; Neumayer & Svensson, 2016), the consciousness and notions of knowledge workers revealed in this study, though preliminary, pave the way for a new class consciousness and activism under digital surveillance, especially AI surveillance. This hidden resistance could easily shift to complaints about policies and the legitimacy of the governance, which allows its transformation into a practical force. The analysis of hidden transcripts helps deeply understand how individuals (a) identify covert constraints, (b) generate resistance feelings, and (c) promote change (Murphy, 1998).

However, the challenging nature of this transformative force among Chinese knowledge workers should also be acknowledged. Influencers on Chinese social media, including lawyers, journalists, doctors, teachers, and Internet practitioners (operators or programmers), benefit from higher education levels, socioeconomic statuses, and media literacy. They have high professional visibility and can skillfully dodge algorithmic and human censorship (Ye & Zhao, 2023) to advocate for rights-related topics. They adeptly articulate negatively charged and emotionally intense events and feelings using compelling and impactful language, thereby possessing high social mobilization capabilities. However, they endure their class limitations and are unlikely to take subversive actions as the Chinese migrant labor class has done (Chen & Lu, 2011; Qiu, 2010, 2018). Rather than crafting new ideology at work, their cognitive processing is mostly passive resistance to ideological domination, such as expecting employers to comply with labor laws to keep working hours within legal limits without developing other work values. Therefore, it can be deduced that these online discussions discourage entrepreneurs and employers. The knowledge workers are unlikely to generate collective political action, lacking the potential for public change and only serving as outlets for further emotional release. This explains the popularity of hidden transcripts on Chinese social media.

In future work, offline surveys could be supplemented to mitigate the impact of the nonprobability sampling method used in this study and to gain a more comprehensive understanding of how knowledge workers are affected by different industries and perceptions of work meaning. The impact of the online hidden transcripts on the offline actions of knowledge workers could also be explored.

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