

A Content Analysis of Social Media Reactions to Employers' Digital Surveillance During the Covid-19 Pandemic

Hai Jing(Jane) Tu
tuhai@iu.edu

February 15, 2022

(Word Count: 1824)

1 Introduction

As early as the year of 2000, Garfinkel (2000) warned that "unrestrained technology ends privacy" (p.5). The author argued that the overwhelming tendency of advanced technologies such as video surveillance and communication networks are doing very little in protecting personal information and autonomy compared with their role in making personal information widely available.

Fast forward into the 2020s, video surveillance is now everywhere. The pandemic has been lingering for two years, and workers have been given more flexibility to partially or permanently work from home (Dey, Frazis, Loewenstein, & Sun, 2020). Along with the trend of working from home, workplace surveillance started to follow employees to their home offices, living rooms, and kitchens. As many employees embrace the work from home trend for saving the pain of long commute spending time at home, others worry about the constant digital surveillance enforced on them through all kinds of platforms(Huws, 2020).

According to Risi and Pronzato (2021), surveillance follows the capitalist logic and it reinforces and reproduces digital and social inequalities. Reactions from the social media platform provide personal accounts on how technology towers over both the public sphere and the private sphere. Employer's surveillance poses a challenge for employees with little digital knowledge to identify and control surveillance, as well as those who are overwhelmed with constant surveillance as part of corporate management.

2 Research Questions

The following research questions are studied in this paper:

1. What are the social media reactions to employers' digital surveillance on employees across different contexts?

2. How do the reactions vary between different perspectives?
3. Is comment lengths related with user engagement?

3 Method

3.1 Data

The data for this research are collected from the Futurology forum on Reddit by searching the keyword "surveillance"(not case sensitive). It generated 25 top posts relevant to the subject from within the past 12 months. Older discussion in the forum on this topic did not turn up. This does not affect the search, because work from home only start to be prevalent since the beginning of the pandemic.

Each post in the search results includes a thread of discussion sorted by the popularity of the comments to the post. The popularity of comments are ranked using "ups." An "up" is a upward arrow next to the head of the post that users can click to show support. The most "upped" comment sticks at the top of all comments and can easily generate hundreds of responses to itself.

This study selected five posts related to digital surveillance on employees are shown in figure 1. The contexts of digital surveillance vary between these posts. Two of them discussed "tattleware," a popular employee monitoring program, one of them discussed video surveillance in the hospital operation room, one of them talked about video surveillance in Amazon truck driver's cabin, and the last one discussed digital surveillance as one of Amazon's former CEO Jeff Benzo's legacy.

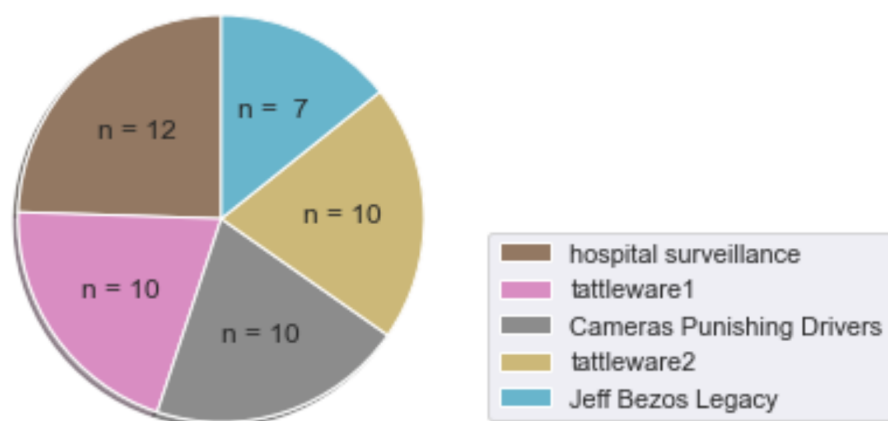


Figure 1: Sources of Comments on Digital Surveillance on Employees

This paper manually collected top 10-12 most "upped" comments from the 5 selected

posts relevant to "surveillance." In the case that there are less than 10 comments under the post, the maximum number of comments are collected. The initial dataset has 64 comments collected. After previewing the data and removing comments not relevant to surveillance, the remaining 49 comments from the time frame of the last two years are used for analysis in this study. It is a valuable dataset for its accessibility, availability, and richness in opinions from a large pool of Reddit users.

3.2 Analysis

The 49 most "upped" comments generated from the 5 posts are manually copied and posted into an Excel file for coding. The coding scheme includes measurement of the following attributes of the each comment: 1. number of ups, 2. attitude toward digital surveillance in workplace, 3. perspectives, 4. length of each post measured by number of words, 5. context.

Two of the above four columns ("number of ups" and "count of words") are numerical and based on counting. The other three ("attitude," "perspectives," and "context") are manually coded following the principles of mutually exclusive and exhaustive Krippendorff (2004).

Start with opening coding (Corbin & Strauss, 1998), attitudes toward digital surveillance is coded into three categories: "support," "against," and "wishy-washy". For those who supported digital surveillance, there are three categories coded for reasons: "prevent wrongdoing," "protect doctors," and "educational." Attitude against digital surveillance are coded into 10 categories through opening coding and then furthered coded into six groups using axial coding (Corbin & Strauss). The six groups are "bad management," "excessive monitoring," "increase risk of liability and security," "violates privacy," "profit driven," and "causing stress."

The perspective variable is coded into four categories through open coding and axial coding. With the majority of the comments are posted from the perspective of employees(n=30), there are some voices from hospital patients(n=7), analysts(n=6), and administrators((n=6). The context variable is coded into "General Workplace," "Hospital Operation Room," and "Truck Driver" based on their distinctiveness.

The coding results allow further analysis to explore reactions on Reddit about workplace digital surveillance across contexts and perspectives. In addition, the relation between "count of words" and "number of ups" is explored using correlation analysis. All data analysis are conducted using Python. Through the analysis, the reactions to digital surveillance and its impact on workers' life and career gradually emerge.

4 Results

4.1 R1

Analysis show that the majority of the comments (77.6%) are against digital surveillance on employees. Only 12.2% support digital surveillance, and 10.2% don't have a clear stand (Figure 2).

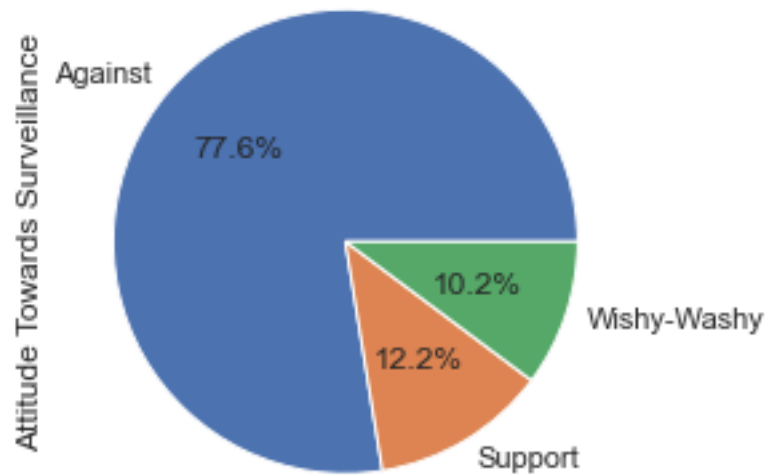


Figure 2: Attitude Toward Digital Surveillance on Employees

Negative attitudes towards digital surveillance on employees spread across all three context categories, but support for digital surveillance only appear in the context of hospital operation room (Table 1).

Attitude/Context	General workplace	Hospital Operation Room	Truck Driver
Support	0	6	0
Against	26	5	7
Wishy-washy	1	1	3

Table 1: Contingency Table Between Attitude and Context

Objections to digital surveillance are based on six categories shown in Figure 3. The top reasons for objection digital surveillance include "bad management"(n=11) and "excessive

monitoring”(n=8), followed by “increase risk of liability and security”(n=4), “violates privacy”(n=4), “profit driven” (n=4), and “causing stress” (n=3).

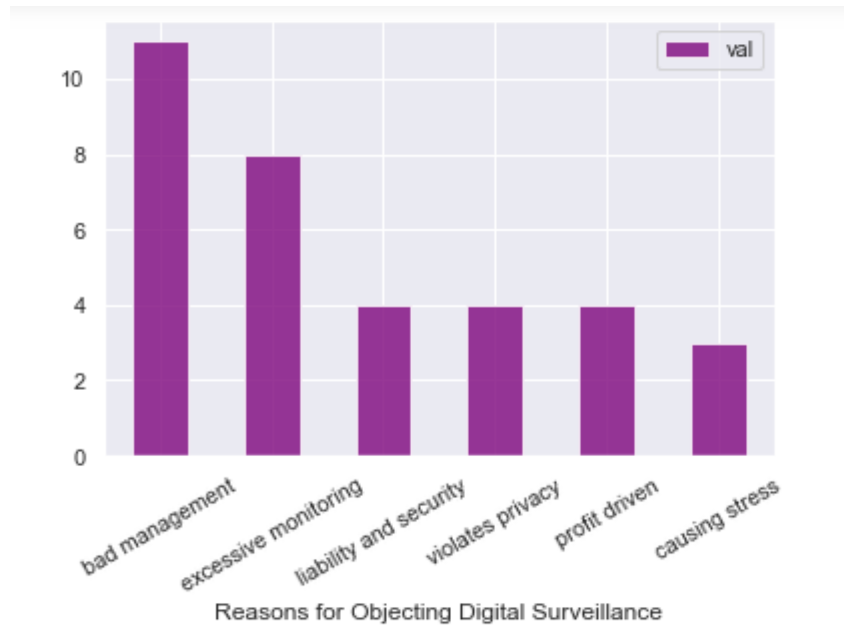


Figure 3: Reasons for Objecting Digital Surveillance

4.2 R2

The contingency table(Table 2) demonstrates the difference between different perspectives on their attitudes toward digital surveillance. Table 2 shows that comments from the perspective of employees are generally against surveillance. The other three perspectives are more or less divided.

Attitude/Perspective	administer	analyst	employee	patient
Support	2	2	0	2
Against	5	4	26	3
Wishy-washy	0	0	4	1

Table 2: Contingency Table Between Attitude and Perspective

This study further simplified the perspective variable into two categories: “employees” and “others.” In order to do this, the author re-coded perspective into a new variable so the “others” category include perspectives from hospital patients, analysts, and administrators (Table 3). It’s clear that the most resistance to digital surveillance exists in employees.

Attitude/Perspective	employees	others
Support	0	6
Against	26	12
Wishy-washy	4	1

Table 3: Contingency Table Between Attitude and Perspective(Recoded)

4.3 R3

To find out the relation between lengths of comments and their popularity, this study conducts a Pearson r correlation test using "count of words" (M=52, N=49) and "number of ups" (M=158, N=49). The test result ($r=0.59$, $p=6.79$) indicates that there is no significant correlation between the two variables (Figure 4).

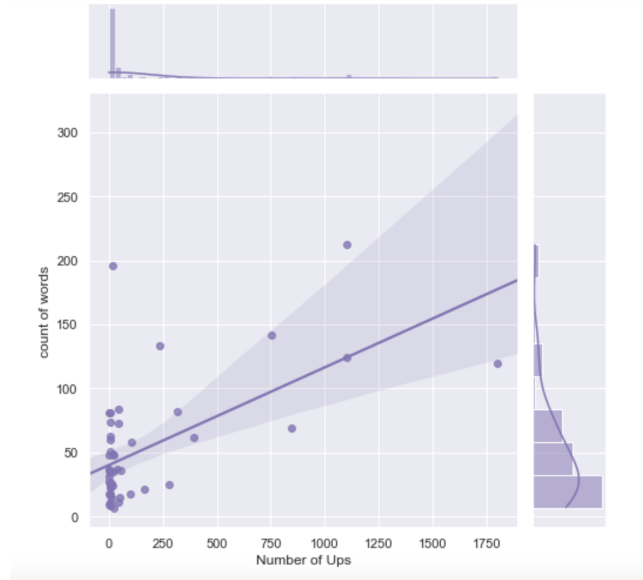


Figure 4: Correlation Between Comment Lengths and Popularity

To further the analysis, this study tests if number of ups is any different between different attitudes. It does show significant difference between the three attitudes ($F=1$, $p=.000$) (Figure 5). Comments that are against digital surveillance are the most upped.

5 Discussion and Conclusion

The study answered all three research questions. First, the sentiment toward digital surveillance over employees is highly unwelcome among employees and across contexts. There are split views from the perspectives of administers, analysts, and hospital patients. For example, video surveillance in hospital's operation rooms are well supported. By looking into the dataset, the reasons for supporting digital surveillance have some grounds. Some

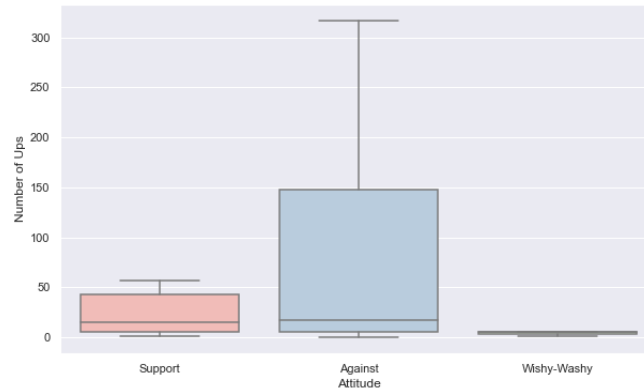


Figure 5: Difference of Popularity Based on Attitude

said "it protests doctors from false accusation," some hoped it could stop wrongdoing, and some said the recorded video in the operation room can be educational. At the same time, someone who was against video surveillance argued that what happens in the operation room, which involves risks and contingency, could be misconstrued and therefore bring legal liability for doctors.

In the context of general workplace, such as Amazon and many other corporate environments, digital surveillance over employees is highly resisted from all perspectives. People question why corporates still measure employees' work using the quantity of hours spent at work, not the quality of the work they deliver. Digital surveillance is considered part of bad management strategy, because this is simply how managers justify their existence. Also, excessive surveillance such as monitoring how much cursors are moved on a computer naturally frustrates employees and cause stress. Others worry about security and liability. For example, what if tattleware's admin credential is compromised, or what if AI makes mistakes when monitoring drivers' activities during driving, etc. Privacy is certainly a consistent concern that underlies other concerns, but the word "privacy" don't show as often as expected in the comments. Actions proposed to resist surveillance include block cameras or set webcam to face a second screen. Overall, context plays a role in how the public reacts to digital surveillance over employees, and the context of hospital operation room is the only one context where surveillance has a nearly half support.

Second, perspectives make a difference on attitudes. Of all the comments made from an employee's perspective, none of them supports surveillance. However, administrators, analysts, and patients seem to have divided views. Just like Risi and Pronzato (2021) argued, digital surveillance follows the capitalist logic, therefore is profit-driven. The nature of capitalism is to encourage monopoly and avoid regulations. Amazon is the iconic capitalist machine that feeds on maximum productivity of its warehouse works as well as programmers. Quite a few comments complained about the toxic work environment with

unreasonable workload in Amazon. Rampant surveillance are stressful for their employees. According to Harding (1992), our view of the world depends on our our standpoint, which is a perspective earned through critical thinking of the power structure in our society. It is interesting to see how perspectives change views, and how hard it is for people from different perspectives to agree with each other.

Third, there is not a correlation between popularity and lengths of posts. Social media is known for it's impatience. Long posts with critical thinking and contemplation are not well received on the Internet.

5.1 Limitation

The limitation to this study lies primarily in the fact that the analysis is based on just 49 comments collected from Reddit. Grounded theory typically requires deep study of rich texts available. The sample is good enough to include different contexts, perspectives, and attitudes, but it is far from capturing the complexity of the overall sentiment on this matter. In addition, the open coding of the texts does not have existing categories to refer to. The criteria for coding is still underdeveloped based on the lack of literature on this topic and limited sources available.

References

- Dey, M., Frazis, H., Loewenstein, M. A., & Sun, H. (2020). Ability to work from home: Evidence from two surveys and implications for the labor market in the covid-19 pandemic. *Monthly Labor Review*, 1-19. Retrieved from <https://www.jstor.org/stable/26931202>
- Garfinkel, S. (2000). *Database nation : the death of privacy in the 21st century* (1st ed.). Cambridge: O'Reilly.
- Harding, S. (1992). Rethinking standpoint epistemology: What is "strong objectivity?". *The Centennial Review*, 36(3), 437–470. Retrieved from <http://www.jstor.org/stable/23739232>
- Huws, U. (2020). The algorithm and the city: platform labour and the urban environment. *Work Organisation, Labour Globalisation*, 14(1), 7-14. Retrieved from <https://www.jstor.org/stable/10.13169/workorglaboglob.14.1.0007>
- Krippendorff, K. (2004). *Content Analysis: An Introduction to Its Methodology* (2nd ed.). Thousand Oaks, CA: Sage.
- Risi, E., & Pronzato, R. (2021). Smart working is not so smart: Always-on lives and the dark side of platformisation. *Work Organisation, Labour Globalisation*, 15(1), 107–125. Retrieved from <https://www.jstor.org/stable/10.13169/workorglaboglob.15.1.0107>

A Appendix:

List of Five Reddit Posts on Digital Surveillance

1. Operating Room Surveillance
2. Jeff Bezos Legacy
3. Tattleware Discussion 1
4. Tattleware Discussion 2
5. Camera in Drivers' Vans