The Annual Review of Interdisciplinary Justice Research Volume 11, 2022

Edited by
Steven Kohm, Kevin Walby, Kelly Gorkoff,
Katharina Maier and Alex Tepperman
The University of Winnipeg
Centre for Interdisciplinary Justice Studies (CIJS)
ISSN 1925-2420 (Print)
ISSN 2816-4253 (Online)

Labour Surveillance Practices in Canada's Oil Sands Region: Ethnographic Accounts from Work Camps in Northern Alberta

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Abstract

As monitoring and data collection, surveillance has been a regular feature of workplaces and labour relations since the Industrial Revolution. Drawing on ethnographic data and documentary information, we offer a rare window into employers' surveillance practices that monitor life in oil and gas work camps in northern Alberta, Canada, where tens of thousands of workers stay while working in a fly-in-fly-out commute regime. Our findings demonstrate that firms in the oil sands utilized labour surveillance practices that potentially infringed on people's privacy and ability to consent, mobilizing injustices. Surveillance, we argue, was often coupled with care work, which contributed to workers remaining oblivious to the type and scope of monitoring they were subjected to at work and beyond.

Keywords: surveillance; work camp; oil sands; mobile work; drug; alcohol; privacy; consent

Introduction

In the Albertan oil sands, a vast region in Northern Alberta (140,000 square kilometres) that is also referred to as tar sands because of the bituminous nature of its oil deposits, there are tens of thousands of fly-in-fly-out (FIFO) workers. These workers make their living in the oil and gas sector, working away from their homes elsewhere in Canada. Although the exact number of FIFO workers in the oil sands varies according to the oil sector business cycle (i.e., boom and bust), they have been a constant presence in the region since the 1980s

(Nichols Applied Management Inc., 2018). The oil sands workforce, often located in remote areas, is often flown in and out by oil companies or their representatives (i.e., work camp operators) to work in a rotational shift regime. Practically, oil sands workers work between seven and twenty-one days, usually twelve-hour shifts before returning home for four, seven, or twenty-one days. Employees, when at work, sleep and eat at camps located close to the job site. These camps are managed (and often owned) by firms that supply hospitality services to the oil industry, with CIVEO being one of the largest suppliers in Northern Alberta. Practically, work camp operators fulfil the "hospitality" needs of the FIFO mobility regime in the oil sands; work camp operators are usually responsible for both the accommodation and logistics (i.e., "ride, fly, and stay services"; Suncor, 2021) of the oil and gas workforce. As suppliers of the oil industry, work camp operators are an extension of the oil companies, enjoying authority to regulate FIFO workers' lives. Camp rules are strict, and camp operators punish violations with job termination or "camp suspension," which implies job termination for lack of a place to stay. Camp operators monitor several aspects of FIFO workers' lives, including what, when, and how they eat and drink, how many times they open their bedroom door, and how often they exercise at the gym. Representing the employer's gaze over the oil and gas (mobile) workforce, these operators also monitor what employees watch on TV, their private internet activity, and their geographical mobility on and off duty because of the reusable keycard used when employees leave the camp.

This article provides a rare window into the labour surveillance practices of work camps in Northern Alberta and outlines some of their implications. Our goal is to detail the various surveillance practices in place at work camps instead of theorizing labour surveillance. Since Karl Marx outlined the surveillant role "foremen" and "overlookers" played in the name of capitalists (Engels & Marx, 1887 [1867]), many scholars have dedicated their effort theorizing surveillance (Ball, 2010; Sewell & Wilkinson, 1992; Thompson, 2003). However, few scholars have done ethnographic fieldwork in a workplace characterized by hyper surveillance, which is our case. Also, to our knowledge, no researcher has analyzed the state of

surveillance in work camps accommodating FIFO workers in remote areas.

Surveillance refers to the routine inspection and monitoring of populations to extract and create information (Haggerty & Ericson, 2000; Haggerty & Trottier, 2015). Surveillance takes two main formats: technological (e.g., CCTV); and non-technological (e.g., security guards hired by camp operators) (Marx, 2017). Although Jeremy Bentham's panopticon tends to be the first image coming to mind in discussions about surveillance (Bentham, 1812 [1791]; Foucault, 1979), surveillance has always existed within labour relations (e.g., employers have always "watched" employees; Engels & Marx, 1887 [1867]). The advent of the Industrial Revolution and the following expansion of capitalism led to a gradual diversification of labour surveillance beyond the figure of the "foreman" (Jarrige & Chalmin, 2008). The need to "watch" a massive number of workers required the professionalization of surveillance practices. Pinkerton National Detective Agency, the first globally famous private spy agency, played a significant role in professionalizing surveillance, starting in the late nineteenth century. For instance, acting on behalf of United States-based industrialists like Andrew Carnegie (1835–1919), Pinkerton infiltrated detectives in the labour movement, providing employers with intel that helped them keep unionists out of the most important factories in the United States (Robertson, 2019). Pinkerton was also one of the first agencies to hire women detectives who could work undetected — that is, as women. Considering that prisons did not start to consistently hire female correctional officers until the 1980s (Zimmer, 1987), it is possible to assert that the feminization of surveillance started with labour surveillance. Labour surveillance facilitates the safety (i.e., protection from any harm), security (i.e., protection from deliberate harm), and productivity of workers and labour processes. In the case of the oil sands, labour surveillance seems to be a strategy to ensure employee safety and security in a wild and isolated area with limited communication and transportation. Oil companies also seem to utilize surveillance to mitigate sabotage risks and spy on the labour movement. Regardless of its target (i.e., workers or others), surveillance, particularly if inconspicuous, can limit individual autonomy, evade consent, and

compromise privacy laws, as we show within the surveillance practices adopted at work camps in the oil sands.

Based on ethnographic data collected in the oil sands region in spring and summer 2015, we demonstrate that surveillance in work camps functions like operations of labour regulation disguised as hospitality and care. Many workers are unaware of the sheer extent of surveillance they are subjected to while working in the region, perhaps, in part, because oil companies are seldom forthcoming about how they monitor their employees. In some cases, surveillance and its effects regulate employees' lives even when off duty or back at home on rotation. Despite growing academic interest in work life in the oil sands (Dorow, 2015; Dorow & Jean, 2021; Dorow & Mandizadza, 2018; Dorow & O'Shaughnessy, 2013; Keough, 2015; Lionais, Murray, & Donatelli, 2020), the surveillance facet remains largely unexplored. The following sections provide contextual information about the oil sands, present our research methods, and detail our findings. Our last section discusses the relevance of our findings for FIFO workers, especially regarding their privacy rights, and outlines some of our study's limitations.

Oil and Gas Extraction in Alberta: FIFO and Work Camps

Canada is the fourth-largest producer and third-largest exporter of oil globally (Government of Canada, 2020). About 80 percent of the country's crude oil derives from the oil sands region in Alberta (Government of Canada, 2020). Twice the size of Ireland, this region is famous for being remote and cold. The town of Fort McMurray in the Regional Municipality of Wood Buffalo, with about 78,000 inhabitants, is the only urban centre in the region (Statistics Canada, 2017b). Based on our research findings, Fort McMurray, which FIFO workers jokingly call "Fort McMoney" because of the money that overtime work in the area yields to workers, is located 450km north of Edmonton, Alberta's capital city. The oil sands' isolation and lack of infrastructure pose major logistical obstacles for the oil and gas extraction supply chain, marketing, and human resources. Oil companies outsource most of their workforce, regularly flying workers from across Canada in and out of the region. Oil companies and most contractors organize and pay for employee airborne

commute. There are about ten oil companies flying workers into the oil sands region. Large oil sands operators such as CNRL, Suncor, Shell, Imperial Oil, and Athabasca maintain private aerodromes located at or near project sites while also generating traffic at the Fort McMurray International Airport. FIFO ensures labourer availability and readiness — FIFO workers set their minds to work before flying to the oil sands, usually the day before when they pack their bags (Dorow & Jean, 2021; Dorow & Mandizadza, 2018). Once they are in the region, work routine and rhythm ensure that workers are focused on work.

Oil companies hire FIFO on a rotational basis, working for several days consecutively and then taking several days off. While most workers return home during their time off, others may visit nearby urban centres (Fort McMurray or Edmonton) on a shorter rotation. In the region, FIFO workers work at least twelve hours a day and more than eighty-four hours a week on average, adding more than 360 Canadian dollars to the national GDP per hour worked (Statistics Canada, 2017a) — the most significant contribution across all sectors in the country.

While working in the region, workers stay in work camps, which are "cost-effective" modular buildings (Nichols Applied Management Inc., 2018). Private contractors, not the employers, usually build and operate work camps. With 22,000 rooms spread across twenty lodges, CIVEO is the largest developer, owner, and operator of work camps in Alberta (as of 2021), providing accommodation services to several oil companies: CNRL, Suncor, Syncrude, ConocoPhillips, Imperial Oil, as well as their contractors (CIVEO, 2018).

As we learned through fieldwork in the region, indebtment is a major factor regulating the work-life decisions of most FIFO workers; the need to repay credit motivates numerous workers seeking employment in the area, and the economic gains ensure their continued employment. Workers accept life's challenges in the FIFO work regime because they need to pay off school loans, mortgages, and consumer debts and support their family, from whom they live apart while working. Yet, based on formal and informal interviews, the same jobs that attract them to the region to pay off their debt often

land them into greater debt, essentially creating a vicious cycle that digs them deeper into debt with dependence on their FIFO employment. In addition, based on interviews, FIFO workers buy expensive "toys" (e.g., vehicles, houses, and boats) as a coping mechanism for their loss of freedom, arguably a means to cope with the physical strain and demanding schedules thrust upon them.

While the FIFO work regime in the oil sands, with rotational work and work camps, are well-known for their contributions to Alberta's and Canada's oil and gas industry, research on the topic is limited. Most researchers on FIFO work in Canada discuss the impact of mobile work in the community of Fort McMurray (Dorow & O'Shaughnessy, 2013; Foster & Taylor, 2013; Vodden & Hall, 2016). Other topics refer to mobility patterns (Storey, 2016) and gender hierarchies around paid and unpaid work in the oil sector (Dorow, 2015). The only two works currently available on work camps discuss care work, that is, the reproductive side of paid work (Dorow & Mandizadza, 2018). Led by Sociologist Sara Dorow, both studies, from 2018 and 2021, analyze work camps as a space that enables and controls both productive and reproductive life for tens of thousands of people, leaving surveillance unanalyzed beyond noting its traditional role in producing "routines" and "disruptions" (Dorow & Jean, 2021). Dorow and Mandizadza's (2018) study views camps as an intersection that links "work-life" and "personal life" through care.

Dorow describes this intersection as a "circuit of care" (2018). Practically, workers staying at camps use that space to care for themselves while working in the region to provide (i.e., care) for their families and receive hospitality services (i.e., care) from those who work at camps. In their 2021 study, Dorow and Jean explored the daily strategies that FIFO workers use to endure rotational work in the region, including being confined in a work-camp-work-site routine. While the 2018 study emphasizes the geographical dimension of camp, the 2021 study emphasizes the temporal dimension of camp. Dorow's scholarship draws on ethnographic research to identify and analyze the social formations that characterize long-distance rotational work to theorize regimes of workforce geographical mobility. In addition to revealing the surveillance practices that regulate life in work camps, our analysis

contributes to the research led by Dorow and her effort to theorize workforce geographical mobility in the region. Thus, we introduce surveillance as an additional factor regulating "life on the move" and a core part of what Dorow and Mandizadza (2018) referred to as "circuit of care" within the greater context of FIFO work. Our findings confirm that surveillance is caring (Graham & Barker, 2006). However, complementing Dorow's scholarship, our findings demonstrate that caring can also be intrusive and coercive.

Methods

The data supporting our analysis derive from a broader sociological investigation into the social organization of long-distance commuting in the oil sands. Principal Investigator Professor Sara Dorow (University of Alberta) led such an investigation with several researchers, including the lead author, between 2014 and 2015. The investigation focused on how FIFO workers experienced mobility, including how commuting and rotational work affected their productive and reproductive lives (Dorow & Jean, 2021; Dorow & Mandizadza, 2018). Surveillance was not anticipated as a significant topic in the organization and regulation of long-distance commuting, which limited data collection. In other words, interview guides had no explicit questions about surveillance. Instead, the lead author explored surveillance in interviews and conversations only when research participants voluntarily voiced their opinions about monitoring and data-collection practices in the work camps. When surveillance was a topic of conversation, the lead author inquired into the nature and scope of surveillance practices and how those practices influenced life at work camps.

Collected by the lead author through ethnographic fieldwork, the data set supporting this article includes the following materials: participant observations; documentary information provided to work camp residents (e.g., forms and pamphlets); reports by organizations involved with the oil and gas sector; informal conversations with numerous FIFO workers; and forty semi-structured interviews with oil sands workers staying and working (i.e., camp staff) at camps. While the category "FIFO workers" included individuals from various occupations, camp staff referred to front desk personnel,

housekeepers, kitchen staff, bartenders, paramedics, and security guards. The demographics of these workers reflected those reported in the larger population of FIFO workers (Nichols Applied Management Inc., 2018). About 90 percent of participants were white, male, Canadian citizens from Alberta and five other provinces across the country. The remaining 10 percent were recent immigrants or temporary foreign workers. Temporary foreign workers worked as housekeepers and kitchen staff. A minority of our participants, about 10 percent, were female. Participants ranged in age from their mid-20s to mid-60s, but most were in their 40s and 50s. Although we did not consistently track participants' family situations, most indicated having a spouse, ex-spouse, and/or children.

To collect research data, the lead author stayed in two "open" work camps, which also accommodated oil industry contractors and direct employees of the oil companies. The lead author followed FIFO workers' rhythms and routines for about ten days — five days at each camp. Camp managers welcomed and facilitated the research on both occasions, allowing the lead author to put up posters in most common areas. These posters advertised the study and offered a contact telephone number and email address to those willing to interview about their "life on the move." The advertisement was broad, expressing interest in interviewing anyone who worked FIFO in the region, including direct and indirect workers of the oil industry, and those who worked at the camp (i.e., providing care services to "oil workers").

Most formal interviews resulted from the participants responding to the research advertisement. Beyond formal interviews, all the other interactions happened organically, resulting from the lead author's stay at camp. Upon contacting a potential participant via text message or email, the lead author arranged for a formal interview at a time and place of the participant's choosing. Formal interviews took about an hour and were audio-recorded, transcribed (verbatim), and anonymized. They usually happened in the afternoons and evenings in the work camp dining room or pub, or at picnic tables outside the building entrance. Informal interviews ranged from a few minutes to over an hour, depending on the participant's interest and availability and the type of rapport the lead author established with the

participant (Eriksson & Kovalainen, 2008). Most interactions (including interviews) with front desk personnel, security staff, paramedics, bartenders, and kitchen staff were fortuitous.

Meanwhile, conversations with housekeepers resulted from a formal arrangement with the camp manager for the lead author to participate in a "daily stand-up meeting" with the housekeeping team providing care work to FIFO workers. Participation in that meeting led to the opportunity for the lead author to shadow three housekeepers while they did "walk-downs" and cleaned about one hundred rooms. Participant observation data from the meeting and the shadowing event and conversations with housekeepers revealed that cleaning duties were also surveillance practices.

As is common in and expected of ethnographic fieldwork (Eriksson & Kovalainen, 2008), the lead author engaged in participant observation, gathering numerous notes and insights from following the camp routine and holding informal interactions with the camp staff and guests (or residents). No deception was used, as the lead author made her researcher status and research intentions clear to everyone with whom she interacted. The lead author also recorded her experience at camp in field diaries. Her records included interview notes, routines, activities, informal conversations, observations, personal opinions and feelings, as well as any "sociological thought" (i.e., concepts, theories, and references) that she considered helpful for data collection and data analysis. Complementing experiences at the camp were secondary data, including, among other sources, industry reports, statistical data, and corporate information. Once a day, usually at night just before bedtime, the lead author searched the internet and library websites for documents and other sources that could complement, supplement, or clarify research data collected during the day. The lead author also toured a "closed" camp, which received visitors despite numerous restrictions, holding informal conversations with FIFO workers and observing the premises.

To analyze the data, the lead author utilized the software NVivo to develop a codebook using the themes in the semi-structured interview guide as a starting point to organize the data, including field notes

(Auerbach & Silverstein, 2003). Once the data was organized into discrete themes, the lead author applied a second "pass" of coding to identify and code surveillance-related excerpts under a broader category (i.e., node) referred to as "surveillance." When identifying surveillance themes within the data, the lead author paid particular attention to technological and non-technological practices regulating participants' lives inside and outside the camp. The "surveillance" category included several subcategories (i.e., parent and children's nodes) that reflected three sites of surveillance regulation: space; time; and behaviour. To ensure coding validity, the lead author often revised the codebook to include or drop nodes. She also kept a precise annotation on the meaning of each node. The research providing the data for our analysis received approval from the Research Ethics Board of the University of Alberta (Pro00033235). The following section draws on ethnographic data, outlining how FIFO workers were monitored at camp.

Findings: Labour Surveillance in the Oil Camps

Life in the oil sands featured rigid work routines, long shifts, meals in canteens, socialization in "prole" pubs, and its own language. For example, "Jack and Jills" described two rooms adjoined by a single bathroom, while "hump day" indicated the day marking the middle of a rotational shift. "Five-year plan" was another popular term among FIFO workers, as many expected to stay working in the region for only five years. Still, most lasted decades in the area, jumping from one five-year plan to the next because they never managed to fully pay their debts and save enough money to build a sustainable life, with gainful employment, outside of the "sands." Life in work camps was also marked by "controllers," to use Aldous Huxley's (2004 [1932]) term, which referred to agents and practices monitoring and regulating (i.e., guiding) people's lives (i.e., surveillance apparatus). Like in Huxley's *Brave New World* (2004 [1932]), FIFO workers seemed to have internalized and normalized FIFO routines, including surveillance practices, as time passed. Practically, workers interjected habits that facilitated or resisted surveillance. Habits making surveillance "smoother" included having their door access cards ready to use (i.e., not holding the line), especially in common areas. Voluntarily avoiding behaviours that could be caught on camera and

reprehended immediately, such as entering the dining room shirtless or sweaty, was another example of self-surveillance. Meanwhile, habits resisting surveillance included holding the access door to people going in or out of a premise, especially the camp pub, which helped people avoid having their mobility patterns within camp recorded.

Arriving at Camp

Most camp operators provide workers with a booklet containing some of the rules and disciplinary actions governing life on their premises, which was also the case for the camps where the lead author stayed. Drug and alcohol policies were discussed most frequently at those camps, thus asserting control over such consumption patterns. However, alcohol policies made no mention of employees having their visits to camp pubs monitored, despite this being the case (Suncor, 2012, 2017, 2018). The visible part of drug and alcohol policies referred to searches. Employers, including work camps acting on behalf of oil companies, reserved the right to search employees' bodies for illicit substances and possessions randomly and without warning or reasonable cause (Suncor, 2018). "Search teams" reinforced employers' rights. Composed of handlers and sniffer dogs, search teams regularly inspect the premises and everything in it. Random searches occurred at any time of the day or the night without warning, but they were ubiquitous upon arrival when new cohorts of employees checked in at camp. Oil companies also conducted surprise and routine urine tests, including upon the employee's arrival. Drug and alcohol policies required workers to be and look "fit for duty" (Suncor, 2012, 2017, 2018) whenever on company business or company premises.

Based on informal interviews with front desk personnel, paramedics, and security staff, suspicious appearance (e.g., flushed face or dishevelled clothing), attitude (e.g., boisterous or belligerent), behaviour (e.g., restlessness or clumsiness), or activity (e.g., hanging out in a place meant for circulation such an aisle) could be further investigated. Suncor also required employees to undergo alcohol and drug tests after workplace incidents or accidents in general, with or without a reasonable cause. Workers deemed to violate Suncor's drug

and alcohol policy usually have their employment terminated, but they may be referred for assessment or temporarily removed from the position. In some cases, Suncor, which had a notoriously rigid drug and alcohol policy, perhaps the most rigid policy in the oil sands, referred employees to treatment programs, depending on the employee's skill type or specialization and job performance. Employees with unique or highly demanded skill sets were more likely to be treated with leniency and receive support to treat addictions. Employees who refused to have their urine or the "content of his/her clothing pockets or any baggage that he or she is carrying" (Suncor, 2011) tested or inspected were deemed non-compliant with corporate policies and subjected to "disciplinary action." Disciplinary action often resulted in the indefinite suspension of camp privileges, and thus job termination given the lack of alternative places to stay in the proximity while on duty.

Suncor's policies led the company into a significant legal battle with Unifor Local 707A, which represents about 3,800 Suncor workers (as of 2021). The battle started in 2012 when Suncor introduced random testing. Suncor argued that random testing improved deterrence and reduced workplace incidents and injuries, despite not showing robust evidence to support those arguments. In contrast, Unifor claimed that random testing failed to accomplish measurable safety improvements while violating workers' rights to clear information on how, when, and why employees were being drug tested. In addition, oil companies used the "reasonable cause" provision of their alcohol and drug policies to test and profile "suspicious" employees. Vague, this provision did not define a "reasonable" or "just" cause for testing, allegedly allowing for arbitrary and unfair profiling. In 2018, when the Supreme Court of Canada refused to hear Unifor's appeal, the union gave up (Dobson, 2019).

Based on numerous reports and similar accounts, tests and inspections placed workers under self-surveillance even before they arrived in the region. Fearful of being caught and unclear about testing specifics, workers often refrained from drinking alcohol and using recreational drugs on the days preceding their arrival in the region. Alternatively, workers opted for drugs that left the system in a shorter period (e.g., cocaine instead of cannabis). Workers also

tended to be careful and self-conscious about inadvertently carrying forbidden or suspicious items in their pockets or luggage. Based on interview accounts, fear and unclarity lead workers to "miss out on" necessary leisure time and "stress out" over work before returning to the site/camp. All FIFO workers formally or informally interviewed reported being unable to have a good night of sleep in the final days of their time off work. According to interview information, the surveillance regime that waited for their return (i.e., searches) was not the only culprit, but it certainly contributed to their anxious mental state.

Camp Architecture

FIFO workers often referred to camps as "prisons." Others called it "part prison, part hotel," an expression that the media has already picked up (Southwick, 2017). Based on participant observations and formal and informal interviews with camp residents, the architecture of those camps was similar and deliberately designed to operationalize surveillance practices quickly and smoothly. Thus, the descriptions provided, although resulting from data gathered at two camps, can be generalized to most camps. All camps, but especially the larger ones, resembled higher secure prisons, as they maintained tight control of the comings and goings of people on their premises. Surrounded by barbed wire fencing, such camps tended to have a checkpoint at the entrance, where security staff diligently identify, record, and check the permit (i.e., any document stating the purpose of the visit) of anyone attempting to enter the premises. Based on participant observation and documentary information, camps had no watchtower, as was the case in Jeremy Bentham's description of the Panopticon (Bentham, 1812 [1791]). Still, surveillance was visible in CCTV circuits and security staff who patrolled the premises to maintain order and enforce camp rules. Finding any corner that was not monitored by cameras was nearly impossible. Based on an informal interview with two TELUS employees providing CCTV maintenance service at one of the camps, the private sub-contractors installing cameras for TELUS were experts in finding and eliminating "blind spots."

After passing the gate, workers and visitors could view the actual camp, designed as a series of modular buildings usually integrated into a fishbone-like format. When entering the facility through the single entrance, the first "thing" that workers (or visitors) were exposed to was the "boots-off" facility, a large storage area surrounded by benches for workers to keep their safety shoes. In a coercive tone, signs in the boots-off area reminded workers and visitors that wearing outdoor footwear in camp was prohibited. At the boots off facility, workers swiped their badges whenever entering and exiting the building, which allowed camp operators to maintain an accurate count of residents in case of an emergency.

Following the boots-off facility were the front desk and dining room. The dining room was the busiest part of a camp. Camp kitchens served two hot meals a day: breakfast and dinner. In most camps, workers who missed one of the two main hot meals had no option but to rely on snacks available at the "refreshment room," a little nook with fridges and drawers containing beverages and food, respectively. Resembling the oil economy, social dynamics in dining rooms oscillated between periods of "boom" and "bust." When meals were served, there was a "boom" in the dining area; it became crowded with hundreds of people, and the clinking of dishware became unbearable for unaccustomed folks. In the downturn, when everyone had gone and the chairs were empty, all left was the kitchen odour and staff members cleaning up after residents. Most camps did not allow cell phones, outside food, backpacks, winter jackets, headwear, or sleeveless outfits in the dining room. Sweaty people coming straight from work or the gym were also not allowed in the dining room. Rules regulating the workers' bodies (i.e., the embodiment of surveillance within one's corporeality) were everywhere.

Bedrooms made up most of the camp space, followed by the dining room, kitchen, and boots-off facility. If camps were fishbones, the bedroom area was the lightweight vertebrae linked to the vertebral column; the aisles connecting each wing of the camp was the vertebral column; and the dining room, front, desk, and boots-off facility comprised the head. In the bedroom areas, signs reminded camp residents to be "quiet" at "all times," as people working the night shift rested during the day and vice-versa. Some camps had

aisles or wings just for women, as well as rules banning men and women in each other's wings or rooms. Based on informal interviews with security guards, such rules were intended to deter sexual harassment and assault. The rooms were small, about one-third the size of a standard hotel room. Rooms often came with a Bible and a calendar, not necessarily set to the correct month. When asked about the need for calendars, several camp residents explained that they lost the sense of time at camp, "just like when you are in prison," because the spaces, the people, and the routines are always the same. Each room had a small window allowing residents to see the neighbouring module or the surrounding woods, depending on the room's position.

Mobility within Camp

Camp operators regulated spatial mobility within camp premises in a detailed and comprehensive fashion. Surveillance allowed operators to manage residents as well as the space productively and cost-effectively. The effectiveness of surveillance relied on an architectural design that optimized visibility and prevented any kind of activity that could facilitate secrecy or intimacy. The camp interior design allowed ease of navigation, eliminating areas where workers could sit down and socialize. The presence of cameras and the absence of furniture and cosy nooks also discouraged interactions and exchanges. Loitering in a space designed for a controlled circulation of working bodies felt awkward and even wrong.

When circulating in camp, workers always carried a magnetic keycard, like those provided at hotels, to access most spaces and services. In addition, keycards regulated access to doors and specific "checkpoints," like the buffet area in the kitchen. Such cards allowed camp operators to track worker movements inside the buildings quickly, easily, and continuously. Furthermore, and perhaps at a more implicit level, the mobility of workers was continually monitored and controlled. Essentially, keycards represented a "password," a sort of language that merges individuals and masses, allowing work camp operators to identify and classify FIFO workers according to their needs.

Camp operators also relied on keycard technology to monitor the workforce health and wellness and optimize housekeeping services

and other resources. For instance, keycards allowed camp managers to determine the frequency with which workers access the gym. Practically, the keycard technology let camp managers know how many times a camp resident accessed the gym area through reports generated by front desk personnel. Based on interviews with front desk personnel, those reports were a source of knowledge that camp managers could tap into to create practices (e.g., posters on the walls) to denounce "unhealthy" (e.g., not going to the gym) and encourage "healthy" (e.g., going to the gym) lifestyles. This knowledge also served the broader regime of labour surveillance in the oil sands, as oil companies had the right to request camp operators to hand in information from camp residents. Oil companies used knowledge of FIFO workers to support policies (e.g., occupational health) or punish undesirable behaviours (e.g., disruptive behaviour).

With the keycard system, front desk personnel determined room occupancy, including if a room was temporarily empty or if the occupant had checked out. In addition, housekeepers and maintenance personnel utilized room occupancy information to organize room cleaning and repair work. Multifunctional, the keycard technology also benefited security. By tracking how often users opened and closed their doors, keycards allowed front desk and security personnel to identify suspicious behaviour patterns. For instance, front desk and security personnel viewed frequent door movements as indicators of substance use and the presence of irregular visitors. Based on conversations with camp residents, once workers have been "caught" exhibiting unusual behaviours, they start to be observed more carefully by the front desk and security. Conversely, camp operators also used keycard technology to flag rooms for under-surveillance whenever they belonged to highly positioned people in the company hierarchy (e.g., directors).

Modern and high-tech camps employed smart keycard surveillance to support and promote individual comfort. The Swedish lock manufacturer Assa Abloy was the leading provider of keycard technology, which was delivered to guests as a cell phone application (i.e., VingCard Elsafe) (Assa Abloy, 2021). Relying on smart keycards, camp operators monitor residents from afar. For instance, smart keycards released workers from the trouble of standing in long

lines to check in and out in person, as operators assigned rooms remotely. By assigning rooms remotely, camp operators allowed workers to save precious time upon arrival or departure. This scheme also benefited front desk employees, who use the extra time to attend to other tasks and generate labour productivity. With innovative keycard technologies, camp operators made the mobility regime more efficient (i.e., reducing the costs of housing a large contingent of workers in a remote location). For instance, camp operators regulated the temperature of each room remotely by setting the room's thermostat to a specific temperature, saving electricity. Room thermostats were activated by a motion sensor as soon as the worker opened the door, ensuring that the room was always at a pleasant temperature when guests were inside while conserving energy when they were not.

Despite offering conveniences to camp operators and FIFO workers, keycards, like any app, had geo-social tracking capacities that camp operators could use to observe and record the worker's life patterns outside of work. The adoption of such technology indicated that oil companies, through their contractors (e.g., camp operators), were elevating their surveillance capacity to unexpected limits. Despite the keycard's comprehensive surveillance capacity, FIFO workers did not seem aware of the keycard's total surveillance capacity. Also, although camp staff (e.g., front desk personnel) had a clear understanding of the nature and scope of surveillance in camp, they tended to view surveillance as convenient and necessary for camp operations, especially the scheduling of housekeeping services.

Time Off Work in the Oil Sands

Most camps offered recreational facilities with televisions, pool tables, and, occasionally, bowling alleys for workers to relax when they were not in their regular twelve-hour shifts or doing overtime, but these facilities were usually empty. FIFO workers typically spend their limited free time in their rooms or by going out to Fort McMurray. Many camps had regulations that prevented workers from leaving the premises when on a work rotation, except to go to the mining site via transportation provided by the oil companies. In those camps where workers were allowed to leave camp temporarily and

the surveillance it entailed, riding in and out of camp was difficult or inconvenient, as most FIFO workers had no private vehicles. To get out of camp, workers often relied on shuttle services that ran a few times a day at a fee or on expensive taxi services, as many centres were about 100km away from Fort McMurray. Transportation hurdles and camp operators encouraged workers to stay at camp during their free time for safety (e.g., avoid impaired driving) and security reasons (e.g., mitigate the risk of bringing banned items back to the centre). In the 2000s, to encourage workers to stay at camp, camp operators began upgrading their recreational facilities at oil companies' request. This initiative led trips from camp to Fort McMurray to drop by 75 percent between 2007 and 2017 (Nichols Applied Management Inc., 2018). Opening pubs in camp was another primary strategy to encourage workers to stay on site. Camps that included a pub were referred to as "wet" camps, while those with a complete ban on alcohol were "dry." The opening of pubs deserves attention, as the introduction of wet camps became another opportunity for surveillance practices.

Wet camps offered camp operators acting on behalf of oil companies the opportunity to regulate and control, rather than ban entirely, alcohol consumption. The regulation was more effective and produced reliable information on worker behaviour, including drinking habits. In most camps, operators controlled and monitored access to alcohol by requiring workers to swipe their employee badges on the way in and out. Pubs operated under tight rules that included restricted hours. The last order had to be placed one hour before closing time, ensuring people were sober before returning to the privacy of their bedrooms. Based on informal interviews with bartenders, they scrutinized the customers and rationed alcohol intake when necessary. Also, according to bartenders, camp guests avoided confrontations with bartenders, as they know that they maintain a tight connection with camp managers and security. Bartenders had one of the highest wages of all camp workers; this discourages them from over-serving or over-indulging pub customers in exchange for tips.

In 2015, TELUS was the primary internet and video surveillance service provider in the Albertan oil sands, having contracts with

virtually every work camp. The internet, where workers spent most of their free time, was monitored. For instance, Suncor's Firebag Village Lodge informed new arrivals in its welcome brochure that TELUS monitored internet access on site. The booklet also advised workers to avoid websites that contain "tasteless, obscene, insensitive, racist, political, sexist or hateful material" (Suncor, 2016), leaving space for personal interpretation. Many of the workers interviewed claimed to feel self-conscious about their internet history sites regardless of external surveillance. They avoided criticizing their employers or life in work camps for fear of being accused of inappropriate behaviour and being kicked out of camp.

TELUS surveillance capacity offered a window into the internet use patterns and private lives of everyone working in the region. TELUS contractors carried a corporate smartphone with an app that allowed them to view media content from every CCTV camera in every work camp they provided services for (virtually all camps) and adjust camera directions remotely, including zooming in and out at will. This app also allowed contractors to pull up comprehensive information about TV watching and the internet browsing history of any random worker on the premises, including the duration of time spent on any channel or website. One may think that watching pornography got workers in trouble. However, the interview with the TELUS contractors mentioned above revealed that employers did not mind "the guys" watching porn. In fact, work camp operators and oil companies "sort of welcomed" this possibility as a "pressure release" mechanism. Asked about what could then be a "concern," the contractors answered in unison: "sabotage and unions." Oil companies viewed workplace sabotage such as explosions and union activism as a real threat to their operations, but we found no further information about the topic. TELUS services were responsible for the most intrusive surveillance practice at camp. However, TELUS surveillance was invisible; FIFO workers tended to be careful about their online activities. They had no idea that TELUS personnel could "zoom in" on their computer and TV screens, having a close look into everything they were doing during their downtime. FIFO worker camps also included non-technological surveillance practices that were often invisible. Such practices included care work executed by

women, as a mostly female housekeeper crew held a lead role in monitoring workers on site.

Interview data with housekeepers revealed their training included identifying and reporting prohibited visitors from inside and outside of the camp in the rooms. Most work camps allowed no unauthorized outside visitors for security reasons, which included preventing the presence of sex workers at camp. The few oil companies that authorized outside visitors in their camps, like Canadian Natural, stipulate visiting hours (CNRL, 2013). Drawing on rigid and often inaccurate gender standards, housekeepers viewed the presence of long hair anywhere in men's room, but especially in the shower of en-suite rooms, as an indicator of female visitors, which was prohibited in most camps. In most camps, female and male residents were not permitted to visit each other's rooms. As part of their duties, cleaning staff inspected the entire room, from mattresses and pillows to the shower and toilet, for signs of banned substances. They examined trash bins for traces of drug paraphernalia and empty bottles or cases of alcohol. Garbage bins were "equipped" with transparent plastic bags so that housekeeping staff could see their contents easily. They were trained to look around quickly, without touching people's personal belongings, but they informed security if they found any evidence requiring a more thorough search. Housekeepers also performed safety-related duties, such as ensuring that the baseboard heaters were free of obstructions to prevent fire.

Discussion and Conclusion

Grounded in an intense work regime, oil and gas extraction in Northern Alberta holds a large and diverse workforce captive for several weeks in isolated and stressful environments. Surveillance is key to the regime's success from organizational, safety, security, and economic perspectives. For instance, alcohol and drugs are persistent causes of concern in the oil sands, making the use of drug tests arguably imperative from the employers' perspective (The Economist, 2007). In 2018, an alarming 45 percent of FIFO workers screened positive for legal and illegal drugs during their rotation, including cannabis, cocaine, amphetamine, opiates, and ecstasy (Calgary Herald, 2018). Safety is of paramount importance for all

employees, their families, and society. Although surveillance cannot stop the presence of unregulated drugs and alcohol in the region, we believe it certainly makes it harder for people to conceal banned substances. Also, surveillance facilitates the identification of risky behaviour in an occupational context marked by dangerousness (e.g., operating heavy equipment). However, safety protocols shall be guided by evidence and fairness. Otherwise, they may compromise trust and job satisfaction and create a toxic and stressful work environment that negatively impacts employee well-being (Lambert, Hogan & Allen, 2006).

In addition, surveillance contributes to the economic feasibility of productive regimes, including the oil sands work regime (Ball, 2010; Graham & Barker, 2006). Surveillance optimizes housekeeping, maintenance work, and resources, as well as FIFO workers by helping oil companies control labour productivity when workers are not working "out at the site." With surveillance, camp operators streamline behaviours and ensure necessary routines that replenish workers (e.g., sleeping, eating, entertaining). Surveillance also allows operators to monitor and enforce quiet time, preparing workers for another intense and dangerous shift. The fact that oil companies rely on surveillance is not a problem; the problem results from the strategies that oil companies and their work camp operators use to practice surveillance.

The surveillance strategies we identified in work camps compromise reasonable expectations of consent and openness in the sense of having access to detailed information about an organization's policies and procedures regarding the management of personal information. Those practices also disregard Alberta's "Personal Information Protection Act," which establish "consent" and "openness" as a fundamental basis for data collection (PIPA, 2003). PIPA allows private employers to breach consent and openness to collect employee information under a few exceptional circumstances, including situations in which surveillance serves the employee's interest. Employers have received legal authority to do so, and surveillance data is necessary to comply with a collective agreement. However, with a few exceptions, none of the circumstances listed by PIPA applies to the practices we found in the oil sands.

Not discussing surveillance practices is the rule rather than the exception among oil companies and work camp operators — if this is a result of a lack of awareness or a function (manifest or latent) of employer practices requires future study. Surveillance practices, especially those more implicit, go under the employee's radar, eroding the understanding and expectation of privacy (Cohen, 2012; Nissenbaum, 2010). Inconspicuous surveillance, in addition to encouraging social sorting, just like any type of surveillance, also potentially facilitates injustice and discrimination, as surveillance subjects do not know under which criteria they are being targeted and monitored (Lyon, 2003). In the case of work camps, inconspicuous surveillance practices include the housekeepers' investigative role, bartenders keeping tabs on employees' consumptions, and the controls yielded by keycards. Moreover, when employers disclose their surveillance practices, details are unclear about how employees can prevent infractions. As is often the case with internet monitoring, employers leave the definition of "tasteless, obscene, insensitive" undefined and thus open for interpretation. The lack of precise definitions for what constitutes a "forbidden" website equips employers with flexibility in reasoning for an employee dismissal, making FIFO workers vulnerable to arbitrariness.

The surveillance practices encountered in work camps are concerning because oil companies and their hospitality supplier camp operators do not officially inform FIFO workers of their presence, extent, or effect, including job termination in the case of non-compliance. Drug tests epitomize the employee's vulnerability; oil companies do obtain employee consent before applying the test, but whether that consent is voluntary is arguable because of the social and economic implications that not signing the paperwork may have on the employee's life.

The nature of surveillance in the oil sands is reactive and coercive rather than proactive and engaging. Although surveillance can create knowledge and information that can be used to educate and produce desirable behaviours, camp operators, intentionally or not, engage surveillance that punishes nonconformity. These methods, however, fail to address the emotional, familial, physical, and social costs of remote work. Instead, they maintain high demands and hard labour in

extreme conditions while enhancing other social ills, such as burnout, substance abuse, and occupational injuries.

Our study is limited in that we did not set out to learn about surveillance practices. Despite detailing surveillance practices, we had limited data to explore how FIFO workers experience and interpret surveillance, a topic that deserves exploration. Although surveillance can advance the safety and productivity of working processes, it also can undermine labour autonomy and creativity and the employee's trust in the employer, compromising the attraction and retention of workers (Sloan & Warner, 2015). Moreover, what is just, in terms of the rights and needs of the mobile employees, is unknown, complicated, and requires disambiguation. What demand on employees can employers justly make without compromising rights or not providing the necessities for psychological (as well as physical and social) health? Future research projects looking at the impacts of surveillance on remote work are necessary to determine how employees experience surveillance and if and how surveillance impacts their well-being. The unintended effects of surveillance on job performance, occupational stress, and job satisfaction also deserve attention, especially in a sector marked by labour turnover and shortages, as is the case of oil and gas in Canada.

Funding

This work was partially supported by the Social Sciences and Humanities Research Council through its Partnership Grants funding opportunity [grant number ID 895-2011-1019], the Research & Development Corporation of Newfoundland and Labrador, the Canada Foundation for Innovation, and numerous university and community partners in Canada and elsewhere.

Acknowledgement

The authors acknowledge and thank Professor Sara Dorow (University of Alberta) for comments on an earlier version of this article.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest concerning the research, authorship, and publication of this article.

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