Monitoring, Surveillance and Technostress- An Enterprise Application Case

Completed Research

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Abstract

There has been an increasing reliance of organizations on workflow systems to maintain quality and to manage people. The use of enterprise workflow applications like ERP, CRM or customized workflow applications provides ample opportunities for computer-mediated control and monitoring. The employees are subjected to constant surveillance that often starts negatively affecting their health and mental wellbeing. The knowledge of constantly being watched puts tremendous pressure on people. This Technostress experienced by employees is caused due to lack of social interactions with peers and supervisors, change in their job description and information overload. They often face role conflict and are constrained by the system. The system drives the business instead of the other way around. The managers have increased workload as now they spend time and energy in micromanaging their teams. This paper examines the impact of monitoring and surveillance due to Enterprise Workflow applications on employee stress.

Keywords

Enterprise Workflow Application, Technostress, Surveillance, Monitoring, Computer Mediated Control

Introduction

Organizations use various methods to ensure conformity and compliance by employees. One of the most potent ways is through electronic monitoring and surveillance. Although the knowledge that they are being observed acts as a cue for employees to adhere to the organizational norms and rules, electronic monitoring and surveillance also create a stressful work environment for individuals. Both academics (Sewell and Wilkinson 1992; Vieira da Cunha et al. 2015) and popular press (Burbeck 2017) have raised concerns about the increased monitoring and surveillance in the workplace and its side effects. The long-term impact of working under constant stress from technology could be behavioral like absenteeism (Ragu-Nathan et al. 2008) or psychological like reduced commitment to the organization (Ragu-Nathan et al. 2008). The stress creating effects of working with Information Systems (IS) have generated high levels of interest among researchers. They have drawn upon the psychology literature to delve deeper into how such stress is created.

With more and more technologies being inexpensively available to monitor employees electronically, organizations have moved from manual surveillance to electronic surveillance. Monitoring and surveillance through Enterprise workflow systems can be defined as management control exercised through the constant watch and supervision capability provided by the information systems that log in the targets and ongoing activities of its users. Through these systems, managers can be constantly aware of their subordinates whereabouts and progress. There has been a shift towards Computer-Mediated Control (CMC). The most common IS applications that are deployed by organizations for improving efficiency are workflow systems like ERP, CRM, SCM etc. An unintended application of such system is for electronic
surveillance and monitoring, which becomes a cause of stress among employees, and yet it remains largely unstudied. Researchers (Amick and Smith 1992; Aiello and Kolb 1995) have postulated the potential stress causing capability of these systems, but there has been a lack of studies on the exact nature of what it is about these systems that create stress among users. The system logs in each user with a unique ID and the nature of user’s task is reported to their supervisor. The monitoring is real time, and so are the consequences of noncompliance and mistakes. The constant pressure to perform under the watchful eye of the system puts tremendous pressure on people which leads to undesirable organizational outcomes like reduced job commitment, poor performance and an overall negative impact on employees’ health and well-being. The literature on Technostress elucidates the generic features of IS that lead to increased stress but remains silent on the specific attributes of technologies like workflow systems that creates stressors. The process of how these systems generate stressors and how these stressors affect individuals remains understudied. For an organization, to manage workplace stress and reduce the losses accrued due to stress-related productivity loss and absenteeism, it must be able to answer the three questions: what are the features of workflow systems that causes stress, how these features create stressors and what is the impact of the resultant strain on users and organizational objectives.

Workflow systems affect the majority of employees in an organization. Organizations have struggled with their implementation and adoption. One of the major reasons, apart from technical shortcomings, is the lukewarm response of users to such systems. The workflow systems, at times, reduce people to mere operators of technology and are unable to tap into their experience and talent. If the technology leads to undesirable strain, users would neither be able to use their individual talents nor would be able to use the system properly, causing organizations to lose on both fronts.

The use of the workflow systems causes stress has been known but what is it about these systems that lead to stress, the process of creation of stressors and their manifestation for individual end users is yet understudied. The reasons to study stress originating in organizations due to Enterprise Workflow Systems and the unintended outcomes of them are firstly, organizations invest highly in both people and IS and like to maximize their returns on the investments made on both. There is an increasing need for managing stress among employees as the resultant strain greatly impacts their efficiency and efficacy. The performance and productivity of people are hampered which reduces the return on investment of the workflow system and the overall profitability of the organization. Secondly, the Enterprise systems are designed to enhance systemic efficiency, but the key to success of the system lies in both technical ingenuity and its compatibility with the structure and culture of the adopting organization. While designing such systems it is imperative to take into account the changes the implementation of the system will bring. Thirdly, a well-designed system that integrates with the infrastructure along with the human resources of the firm would have great potential to help the firm reap most benefits out of its investments. It would also be then easier to integrate the system with the organization and better manage the change that it brings. Fourthly, a system that empowers people and not makes them feel that the organization is suspicious of their intentions has greater chances of being accepted, adopted and innovated with. Fifthly, the foresight of such change helps design systems that are adopted without much resistance. The utility of knowing what is causing stress to employees, post-adoption, is that management can take appropriate measures to either revise system use to align it with user expectations or adopt measures to help people combat stress. Most of the enterprise architecture literature focuses on the technical aspects of the system discounting the role the individuals, who use them, play in the success of those systems. To understand the nature of the resultant stress experienced by the end users, it is important to understand how enterprise workflow applications alter the job design and work environment for the end users, hence

**RQ: How do Enterprise Workflow Applications provide opportunities for monitoring and surveillance and how do these create stressors for the users being monitored and for those who are monitoring through these systems?**

To answer the question, we conducted a case study in a private bank. The bank has adopted various custom-built workflow applications for different processes in the organization. The systems were developed for both internal working of the organization like HR systems and also systems to conduct everyday banking operations. We tried to uncover the stressors created due to workflow systems by observing how these people made use of the applications to control subordinates and also how they were monitored by their supervisors using these systems. Our research has been guided by the literature from the field of Psychology and Technostress.
Literature Review

Here we examine literature from two domains – IS enabled surveillance and stress from the use of IS. Organizational control through monitoring and surveillance is one of the most widely used means to ensure employee process compliance and output standardization. Implementation of workflow applications such as ERP, CRM systems create opportunities for covert and overt monitoring and provides panoptic control (Bentham 1791). Zuboff (Zuboff 1988) explores the manifestation of panoptic control exercised through digital systems instead of physical structures. Workflow systems are designed for work simplification and work rationalization but, they also contribute to employee stress through monitoring and control (Amick and Smith 1992).

Employees can experience stress in any of the three forms- psychological, physiological and behavioral (Cooper 1998). The stress that arises out of electronic surveillance, especially due to workflow applications can manifest in the form of either psychological or behavioral stress. Stress can be defined as a response, as a stimulus and as a transaction between an individual and his/her environment. For this study, we adopt the transaction-based model. The stress originating in workplaces is called occupational stress. The process of stress is defined by Stressors, Strain and Outcomes. Stressors are the conditions or factors that lead to strain reaction in individuals, which eventually leads to certain outcomes. The stress arising out of user’s interaction with IS has been referred to as Technostress (Weil and Rosen 1997). Scholars have studied the process of stress and various stressors like Techno-Overload, Techno-Invasion, Techno-Insecurity, Techno-Complexity, Techno-Uncertainty and outcome variables like absenteeism, job dissatisfaction, decrease in organizational commitment, employee productivity, emotional exhaustion etc. (Ragu-Nathan et al. 2008; Tarafdar et al. 2014, Tarafdar, Tu, Ragu-Nathan, et al. 2011). The characteristics of IS like usability, intrusiveness and dynamism are related to stressors like work overload and role ambiguity(Ayyagari 2011). The literature focusses on user interaction with generic IS applications like social media, emails, MS office etc. However, there has been a dearth of studies exploring the stressors originating due to specific application attributes like organization’s ability to monitor and control employees through electronic surveillance. The studies hypothesize a relation between surveillance and stress but, they do not outline the exact nature of stressors arising out of these electronic workflow systems.

There has been an absence of studies that focus on the surveillance and monitoring capabilities afforded by electronic workflow applications and of electronic performance monitoring systems. Although the mere presence of electronic performance monitoring tools does not create negative consequences for the end users. However, when the data collected is reviewed and used for evaluating people’s performance and even behaviors, undesirable effects can happen (George 1996).The adverse effects may cause stress for employees and impact their well-being (Aiello and Kolb 1995). The stress experienced by end users due to electronic monitoring can be attributed to changes in the job design, and lack of job control and social support (Carayon 1993). Workflow systems like ERP can alter the power structure and hence affect the organizational control on individuals.(Sia et al. 2002). The control exercised by organizations through workflow systems cannot be studied in isolation but needs to be studied in a context (Dechow and Mourtis 2005). An interaction between both ERP technology and organizational culture is needed to create a panoptic gaze (Kayas et al. 2008).

From the above, we note two gaps in the literature. First, although studies on IS enabled surveillance allude to the potential stress creating effects of such surveillance, they do not elaborate on the actual stressors arising out of these systems. Second, while research on stress from IS use has examined stressors experienced by end users from use of general workplace IS and other applications such as social media, they do not examine the stress experienced by individuals as they face monitoring and surveillance at work through their use of enterprise workflow applications.

Method

The study examines the effects of CMC and surveillance, made possible due to workflow systems like ERP, CRM etc. on the stress experienced by an employee using them. We have adopted a qualitative and interpretive approach (Dubé and Paré 2003; Walsham 1995; Yin 2003) as the phenomenon of interest is subjective, i.e. the users at different levels of hierarchy face different implications of the system based on
their role and job demands. The unit of analysis is the individual experiencing stressors and feeling the strain. The unit of analysis has been considered to be an individual as the stress experienced by different people under similar circumstances is quite different. The difference in the experience comes from the nature of the interaction between the users and their environment, here the environment being the monitoring and surveillance through workflow systems. The traits of the individual along with their hierarchical position in the organization create a very exclusive case. Hence the unit of analysis has been an individual. These individuals were chosen based on their use of the workflow systems.

The existing literature guided our initial research questions (Eisenhardt 1989). Our findings emerged through an iterative process of comparison between our data and existing literature (Yin 2003). The study was conducted in a large private bank operating across India. The banking industry is one of the most information intensive and uses a variety of Information Systems for smooth functioning. The bank was selected as the site for our study as it has extensively implemented enterprise workflow systems such as a banking software that exclusively caters to the operational needs of the banking business like managing accounts, creating FDs, RD’s, managing everyday withdrawals and deposits, etc. Apart from the core banking software, the bank uses an enterprise-wide system that subsumes all other sub-processes needed for smooth functioning of the bank. A few examples of the process workflows include Procurement, HR management, Customer Relationship Management system, Lead generation for new accounts and Insurance etc. Based on the job description of an individual employee s/he is granted access to various processes through ID and Password. None of the systems was younger than 1.5 years. The bank has branches all over India and has invested significantly in developing IS applications. It was the first to provide its sales people with tablets and has been committed to reducing footfall in their physical branches by providing more and more services through its website and mobile app. They have even developed mobile apps for their internal use, and people can access their leave and reimbursement records, send and approve/reject official requests, access their emails and bank system. They have implemented a platform for conference calls, and the employees are making extensive use of Whatsapp to communicate with each other. The data collection phase lasted for three months from April 2017 to June 2017. We conducted interviews with 40 people working in Regional Office and 3 Retail-banking branches. The Regional office is the regional headquarters where senior level management and people from support departments like HR, Legal, Procurement and IS. To ensure our data collection covered people at various hierarchical levels; we interviewed Salespeople, Branch Managers, Assistant General Manager, Deputy General Manager, Deputy Branch Managers, Regional Managers, Regional Manager’s support staff, Senior Managers, HR managers, Clerical staff and staff working in bank branches. The interviewees were spread across Legal, HR, Procurement, Corporate Banking and Retail Banking division of the bank. The average length of an interview was 60 minutes with individual interviews lasting from 45-90 minutes each. We conducted interviews till theoretical saturation was reached and the added information from each subsequent interview became insignificant. We interviewed people from different departments and hierarchies to understand their use of workflow systems and its impact on them. Table 1 presents the distribution of interviewees across hierarchies.

<table>
<thead>
<tr>
<th>Hierarchical Level</th>
<th>No. of people</th>
<th>Referred to as:</th>
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<tbody>
<tr>
<td>Below Manager Level</td>
<td>25</td>
<td>L1-L25</td>
</tr>
<tr>
<td>Above Manager Level</td>
<td>15</td>
<td>M1-M15</td>
</tr>
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Table-1 Distribution of Case Interviewees

We have classified case interviewees based on the hierarchical level as it defined whether the individual had more monitoring responsibilities or if they were the ones being monitored. The hierarchical levels above the Manager level had more management responsibilities, and the people below had more operational responsibilities. From the Monitoring and Surveillance perspective, the people above
Manager level had more monitoring responsibilities and were monitored less than people below Manager Level. The people below Manager level were mainly monitored but had some indirect monitoring power. For example, the salesmen could now track where the account opening form was stuck and could give a more accurate description to the customer as to the status of their form.

We interviewed users using the same application at different levels to triangulate our findings. We followed the process of Constant Comparative Analysis. Two of the authors conducted semi-structured interviews and took extensive notes. The notes taken by both the authors were analyzed and compared at the end of each day. Each day at the end of the interview process, both authors went over their notes and added additional insights. We proceeded with data examination and development of theoretical insights simultaneously. The authors, through detailed discussion and analysis of the data, identified the patterns and coded them into categories based on the prior literature and through the process of uncovering relationships experienced by the interviewees. The first level coding involved grouping the interview segments into various issues as alluded to by the participants. These categories were refined as more data was collected. The first level coding process was followed by a rigorous iterative process of finding higher-level codes and finding relevant empirical support from data for each category. We finally coalesced these codes into prominent categories that have most empirical support.

**Enterprise Workflow Applications and Technostress**

The bank has been a pioneer in adopting IS in the industry. They are the market leaders and are constantly upgrading and updating their IS applications. They have introduced a number of workflow systems to bring structure to tasks and open avenues for CMC. The system enabled bank managers at middle and higher level to exercise control without the need for being physically present. The monitoring was precise and fed the real-time information about what the person is doing and how they are doing it to the relevant authorities. The people were connected to their supervisors through these elaborate and extensive systems that recorded all activities of the people and raised red flags as and when it encountered non-compliance.

The organization had a Turn Around Time (TAT) for different tasks that put extreme time pressure on people. TAT bound them even in the absence of any reminders from their supervisors, and if a time to execute a task exceeded TAT, the supervisor got immediate information. The system recorded all that individual did and didn’t do which led to round the clock surveillance. The recorded data could be retrieved and analyzed at any time and didn’t require face-to-face interactions. The ability to retrieve past data gave additional monitoring abilities to the supervisors who could always go back and see what their team was doing and how they were doing. This increased manager’s interference on how people were doing their work. These systems provided an opportunity for constant monitoring and surveillance making employees directly noticeable to immediate supervisors, peers and even super bosses. They could no longer work according to their individual way as they were now under constant observation. We observed the presence of negative unintended consequences for the individuals leading to them experiencing psychological strain. In this section, we discuss in detail how the presence of CMC and surveillance impacted an individual and his/her work causing them to experience Technostress in a banking environment.

The workflow systems create stressors that led to strain on end users. We describe below the nature of these stressors and how they lead to strain on end users.

**Lack of Social Support and Interpersonal Relations**

Due to the presence of system and ability to manage subordinates using this system, managers found very little need to have face-to-face interactions with the people. The lack of communication hindered the development of interpersonal relations between people and their supervisors and between people and their peers. Workflow systems eliminated the need for people to interact with each other, as the tasks were well defined and allocated through the system. The control that workflow systems extended also bred unhealthy competition among the peers. The system credited people only with the work assigned to them or with goals associated with them, assigning no value to support provided to peers, leaving people...
with no incentive to help others. The lack of social support put people under stress as they were unsure of where to look for assistance.

“Nobody here wants to help anyone else as everyone’s schedule is so tightly packed and there are no headers in the system to input your time for peer help. See this guy, he has been struggling with the……all day and going from one person to another, and nobody has helped him and, he has wasted all day.” - L21

The lack of communication and constant monitoring made people uncomfortable as they started to believe that organization didn’t trust them. This discomfort impacted their commitment to the organization. The system constantly puts people on the spot with no social support leading to anxiety and stress.

“They put GPS on us as they think we will go off to drink tea or waste time. It’s like they don’t trust us at all.” - L5

**Quick escalations**

The adoption of workflow system enforced processes only as supported by the system. The system drove the people and non-compliance escalated quickly and to higher hierarchical levels. If the task were still incomplete at the end of the TAT, the brunt of the penalty would go not just to the immediate supervisor but many levels up in the hierarchy creating a domino effect of pressure from the top to bottom. Hence, the CMC created tremendous time pressure on people, and there were no mechanisms for exception handling. The lack of exception handling mechanisms was especially stressful for people with client facing jobs as they were being questioned by both clients and the supervisors but were restrained by the constraints enforced by the system. The quick escalation and surveillance also lead to low error tolerance as it provided a very small window for individuals to find a workaround for any mistakes.

“We have TATs. If an assigned work is not completed within the prescribed time, the hit goes not just to my immediate supervisor but to his boss as well. They all then start calling and mailing. The boss is getting an earful from his boss which is passed on to us.” - L14

**Role Conflict**

The introduction of workflow systems brought about a change in the job description of the individuals. The nature of the work, the expectations of the management and the changes in the work environment left individuals confused and apprehensive. They faced role conflict and were unable to prioritize their work. With the banking staff we interviewed, the people who were in the client facing roles were distressed due to the contradictory expectations bank had from them. The workflow system defined user’s schedules and compliances. The control these people faced for these tasks was short term. They were time-bound and would receive immediate feedback from supervisors. At the same time, they had to face clients and work towards their satisfaction, and bring in more business from these clients. These targets were more long – term, and the controls would be activated locally (i.e. from the immediate supervisor) but not from the top management at once. They faced quarterly reviews for these tasks. The mid-level managers found themselves in a dilemma, as they had to ensure achievement of both compliance tasks and business targets. The compliance tasks were internal bank tasks that were scheduled at the start of the financial year whereas business targets were met through customer interaction and relationship. The employees had 8-hour workdays to achieve both where non-compliance was immediately admonished. The bank branches are open to customers in the first half of the day, and the footfall is unpredictable. The system generated schedules for internal bank tasks don’t take these tasks into account creating high levels of pressure on both managers and their teams. The team has limited time at hand and ends up working overtime and feeling tense.

“The compliance schedules are fixed in advance. We have to follow them even if we have customers coming in. We end up working for longer hours, as we can neither turn away the customers as the actual business is coming from them nor can we postpone the compliance for next day. It becomes very stressful as these compliances are put in our schedules at the start of the year, and they can’t be altered.” - L8
The rigidity of the system and processes created a scenario where system guided the business instead of the other way around creating difficult situations for employees. Due to constant visibility and need for compliance, individuals found themselves in a position where they were complying with the system requirements but were unable to achieve their actual targets. They were following the guidelines and schedules set by the system but spent most of their energies doing just that and were unable to contribute to organizational objectives.

“They are using GPS to track how many customers I meet in a day. Their expectation is that I make at least 4 visits in a day. It’s not always feasible as….So now I just focus on completing my 4 visits a day even if that means going saying hello and coming back without talking business.”-L23

**Loss of Control and Autonomy**

The enforcement of process through workflow systems provided the administration with ample opportunities for monitoring and administering control, but the same structure also curtailed the control and authority individuals had over their work. The CMC is driven by targets and doesn’t consider the human factors and human limitations. The system defined timelines and left people with no autonomy to manage their work according to their comfort.

“I no longer have any authority over anything I do. My customers tell me that ‘madam you have no authority, you only do what your computer tells you to do’. All I am asking is that at least let me open accounts. I turn down a customer for account opening due to system issues and I have lost all possible future business opportunities from that customer.”-L11

**Increased complexity of work processes**

One major impact that workflow systems brought was the shift in the approach towards performing tasks and meeting targets. In the absence of a system that monitors constant progress, managers were dependent on their understanding and analyses of the field and people. With a system that now captured all the data, managers inclined towards micro managing. It is especially counterproductive as managers are now far removed from the field and yet managing the “process” of achieving the goals. They are now deeply invested in how their team is achieving the results. There was a visible shift from managers having a goal orientation where they were satisfied with the achievement of targets however those targets might have been reached to a situation where they are now deeply engrossed with “how” of the target achievement. This disturbed people, as they could no longer employ their strategies to bring in business but had to follow instructions. This appeared to affect people’s relationships with their customers as they were no longer maintaining those relations on general instructions by bosses who were not aware of what the customers desired. The managers are no longer satisfied with the results but are trying to get involved with the whole process of achieving the results. The result is that managers have more work on their desk stressing them, at the same time creating stressful work conditions for subordinates who feel they have lost all control over their work.

“I am constantly on con-calls with my boss. He wants to know the status of targets. I know that my team has exhausted last month’s leads and first 10 days are spent in generating leads and convincing customers to do business with us. It’s only in the second half of the month that these leads get converted. My boss doesn’t understand this. He only sees that there has been slow business in first half and constantly calls me. I spend more time on con calls than actually working. I have customers sitting in front of me wanting to talk but am unable to talk to them as I have to attend the con-call and the customer gets upset that we don’t value their business.”-M3

“I can’t treat all my customers same. Some people want to sit, and chat and some just want to get done with business. The system keeps giving me leads which I know would not convert as I know why my customer has the spare cash in the account which he isn’t investing but the system doesn’t understand that and neither does my manager”- M11

The implementation of workflow systems also ends up complicating some processes by forcing users to go through the system. It ends up increasing the complexity and duration of the process, but individuals are unable to bypass the system due to stringent norms and control mechanisms. They end up feeling
frustrated and dependent on the system even when they believe the process is less efficient. It is especially stressful as they are, in the end, judged by what they could achieve and not with the efforts they put in it. The system only logs in results and not efforts and doesn’t account for the impediment it caused to work.

“The process of...was so simple earlier. We could just walk up to the person and get his signature but now due to the system the person approving could be sitting anywhere and we need to first update the system and then wait for them to respond. It has complicated and elongated a fairly simple process.” - M15

**Information Overload**

The workflow systems also created enormous stress for the supervisors. They had to constantly monitor their teams as they were, in turn, monitored for it. A manager could not get away with an “I didn’t know about it’ anymore because of all the information s/he received through the workflow system and the many reports generated by the business intelligence units and provided to them all throughout the day. With the plethora of information and all monitoring devices possible, they ended up being in a firefighting mode. They were chasing targets generated by the system based on averages without considering the actual situation of the field.

“We receive around 15-20 MIS every day. I used to spend 2-3 hours every day going through the MIS to see what is relevant for me. Now I have figured out which ones I need to look at and I don’t open the others at all. They send it to my boss as well, and I only look at the ones my boss forwards me.” - M7

The above discussion indicates the presence of varying levels of stress, CMC and surveillance facilitated by workflow systems, invokes in employees. The management control mechanisms act as a double-edged sword creating stress for both, the ones who are monitored and the ones who are monitoring. The impact of CMC and surveillance can be felt through the mechanisms that conspire through the stressors they generate by acting on how people perform their task and their work environment.

**Contributions for Research and Practice**

The paper contributes to the existing literature in the field of Technostress and Enterprise Workflow Systems by expanding the understanding of stress caused due to CMC and surveillance. We have tried to further the understanding of how workflow systems in general, and not just ERPs specifically, impact end users. We have explored the surveillance and monitoring aspects of workflow systems and uncovered the stressors generated due to them. We have contributed to the field of CMC by exploring the possibilities of electronic control through workflow systems and providing insights into the unintended consequences of such control. The insights into the “how” of use of ERP systems will help enterprise architects to design better systems that provide maximum returns to the adopting organization. We have extended the understanding of monitoring and surveillance and postulated the possible stressors generated due to them and described these stressors in detail. Future work can be done to explore the consequences of these stressors on end-user performance. The paper delves deeper into the post-adoptive effects of workflow systems on employees. We illustrate how certain system characteristics translate into stressors. The paper opens the avenues to further explore the stress process, to study how these stressors lead to psychological and behavioral strains in individuals and the effect of the strain on organizational outcomes.

The paper contributes to practice by highlighting the stressors induced by surveillance and monitoring afforded by workflow systems. The practicing managers will find it useful, as it will help them in managing the pressures on the employees and help them avoid negative consequences of workflow systems. The knowledge of the stress-inducing traits of these symptoms could better help the managers to administer control without agitating the employees. The knowledge of what causes negative consequences to the employees empowers management to derive maximum efficiency out of the workforce without compromising on their health and wellbeing. The awareness of how the stressors manifest themselves in actual situations provides organizations with a deeper understanding of employee’s feelings. The data has been collected from a banking corporation and can contribute significantly in helping banks design systems that improve their people’s efficiency and help them achieve organizational targets rather than falling into the routine of following the rules set by the system without actually putting in an effort to meet
their targets. For adoption of a newer system, this work provides a detailed description of what it is about these systems that hinder the organization from exploiting the full potential of the system and getting maximum returns on their investments in the system.

**Conclusion and Limitations:**

The presence of workflow applications provides organizations with innumerable opportunities for enforcing compliance through monitoring and surveillance. The constant monitoring enables organizations to detect errors early on and avoid systemic errors. It helps managers exercise control without the need for awkward interpersonal exchanges and altercations. These systems have shifted the management control from the humans to the system. The process of monitoring creates tremendous pressure on not only the people being monitored but also on people who are monitoring. The system captures every detail, and hence there is immense scope for analyzing the collected data. The managers are responsible if they miss out on cues provided by the system, and hence they end up being excessively involved in the work of their subordinates blurring the lines of the domain of responsibility. The system has replaced the need for human presence for supervision, but not the need for the human supervision itself, creating an excess workload for managers. Stressful work environment makes a person less efficient, and that directly impacts the business. The systems need to be designed in a way that the potential of the human resources is maximized while bringing in structure and monitoring capabilities.

The knowledge that the system registers their work enhances the confidence and desire to perform of the employees. The knowledge of being monitored also works as a self-disciplining mechanism. But at the same time, constant monitoring and surveillance leave people stressed out and suspicious of the organization’s trust in them. The introduction of a workflow system may alter the organizational culture, disrupting the interpersonal relationships and power balance. The altered culture may alienate people from their peers and supervisors leading to reduced social support. The lack of social support leads to building up of frustration and reduction in organizational commitment and job satisfaction. They lose control over their work and often find their job descriptions to be changed due to the adoption of workflow systems. They are always wary of escalations and at times find demands of the organizations conflicting. There is an abundance of information thus provided to the employees after processing by Business Intelligence Units, and it overwhelms the employees. The changes in the process flow, at times, complicate a rather simple process by removing informal mechanisms and bringing in structure and formal practices. Due to the constant monitoring and surveillance users realize that working more will lead system to set higher goals for next time without taking into account the environmental conditions responsible for the outcomes of that quarter or the financial year.

There are three main limitations of the paper. Firstly, as the data has been collected from one bank in one geographical location, India. The results provide a starting point for research in the field of monitoring and surveillance. It would be interesting to see how the stressors and strain vary across firms and what kind of social, cultural and individual characteristics impact the experience of strain due to the stressors arising out of monitoring and surveillance. Secondly, as interpretive researchers, the insights we offered are subjective and based on our interpretations of the interviewee’s accounts. The observations are made on the basis of our understanding and judgment. Thirdly, while we focus on the stressors – what they are and how they are caused, we haven’t deeply examined the outcomes of the strain on employees. Future research can explore the possible outcomes of the strain generated due to the stressors caused by monitoring and surveillance afforded by workflow applications.

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