

# Public Disclosure versus Private Practice: Challenges in Business Process Management (Position Paper)

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**Abstract.** This paper explores the gap between *actual* work practices and their articulation. Our goal is to bring this gap to the forefront as an important consideration for operational process modeling. Business process models presuppose accurate disclosure of employee work practices. However, the presence of a gap between personal practices and their public disclosure is a challenge for accurately representing the true nature of business operations. We describe a field study of the working practices of a municipal organization where we identified this gap. We then offer several underlying motivations that contribute to the existence of this disparity. These findings hold important implications for global enterprises, and for process modeling efforts in general.

**Keywords:** Information Sharing, Business Process Management, Privacy, Process Model.

## 1 Introduction

Businesses and organizations are increasingly becoming interested in ways to manage their operational processes efficiently and, whenever possible, utilize information systems to support the work practices of their employees. Business Process Management (BPM) is the field that encompasses these efforts and offers concrete approaches to enable specific business or organizational goals. In order to streamline operations, design appropriate workflow systems, and to identify and eliminate work redundancies, the *correct* elicitation of processes is sought.

This work-process identification relies heavily on participation of, and disclosure by, the persons who carry out the work, and assumes reliability of the information obtained. However, there has been little focus in BPM on the gap between the information an employee may disclose publicly and the *actual* details of their work practices. This gap, which emerges through concerns of privacy and information sharing, leads to practices that are often undisclosed and may greatly impact the accuracy of the resulting information representation (e.g. a business process model).

This paper describes a field study of a municipal organization in which we encountered this gap when trying to understand intra- and inter-departmental work processes and communication. Based on observations and interviews conducted during the field study, we initiate an examination of motivating factors for withholding public disclosure of the details of one's work in Section 3.2. These findings hold important implications for business process management efforts (Section 4.2). We plan to extend this work with investigations that include additional governmental and corporate entities.

## 2 Background

A key component of business process management (BPM) is process identification and documentation as the foundation of workflow systems. van der Aalst [1] states that earlier approaches to BPM encouraged the adaptation of business processes to available information technology, but more recent approaches emphasize explicit modeling of operational processes. Numerous methods are employed to understand business processes including consulting sessions with the employees who enable the operations. These methods, in general, rely heavily on the belief that the information shared by the employees correctly reflects their actual work practices. However, we maintain that people invariably distinguish between the actual details of their practices and how they describe them publicly.

Literature in the Human to Computer Interaction (HCI) and Computer Supported Cooperative Work (CSCW) fields shows that people distinguish between information that should be publicly available and information that they want to remain private. Some examples include investigations of privacy in relation to e-commerce [2], ubiquitous computing [3], and social networks [4]. People are often concerned about whom information should be shared with and in what form, and they have complex understandings of others' views of them, and the possible effects of disclosure [5]. Similar work in regard to privacy in work environments includes studies of workplace monitoring [6] and groupware [7]. We focus here on concerns related to privacy when disclosing and describing one's individual work practices. We highlight the underlying issues and discuss their impact on BPM and process elicitation efforts.

## 3 Investigation of Work Practices of a Town Government Office

Information sharing in the workplace has been noted to serve as a foundation for collaboration [8] and to reduce duplication of effort [9]. As noted above, detailed information sharing regarding work practices is also critical for building models of the work and designing information systems that can support these practices.

### 3.1 Setting and Methodology

We conducted a field study that investigated the work practices of a municipal organization. Over a period of five months, the authors organized twelve site visits employing informal and semi-structured individual and group interviews, work process observations, and formal discussions with employees. Nine employees from three departments and two members of the municipality's management participated in these

sessions. Each participant used multiple information systems as part of their work routines. The work of the departments was heavily interconnected; each department produced information for and/or received information from another department.

Our goals in this endeavor were to understand how the employees accomplished their work and how information was transferred inter-departmentally. Towards this end, we held group interview sessions with the employees from two departments and also conducted individual interviews to refine the knowledge gained from the group as a whole. In total, three group interviews were conducted, and fourteen individual interviews (including follow-up interviews to elicit additional details or clarifications). Notes from each session were documented by at least two members of our research team and were discussed and analyzed in detail afterwards. Additionally, significant amounts of electronic and paper records were collected to enable realistic simulations of work efforts and data flow amongst the employees and aid in process analysis.

During our investigations we noted that employees provided more detail regarding their personal work practices in individual interviews than in group interviews. In fact, one of the employees commented that she specifically did not wish to provide finer details of certain practices and to reveal a few other practices during the group discussion. Observations that people communicate different levels of information in individual versus group settings have been reported in other literature [10,11]. We chose to investigate this point further to determine the underlying motivations for this type of phenomena. When reconciling the data collected from the observations against the information gained from the individual and group interview sessions, we discovered that the gap between personal work practices and their public descriptions<sup>1</sup> often contributed to misunderstandings and lack of communication regarding each other's information needs, duplication of effort, following of unnecessary procedures, and so on. Moreover, it also hampered our own efforts of modeling the work activities of the two departments. We suspect that our experience is typical of most organizations – government or corporate. Thus, we believe that by exploring this gap further, we can make important contributions to how process models are generated and utilized.

### 3.2 Motivating Factors for Non-disclosure of Work Practices

Through the experiences of our field study, we formulated possible motivating factors for the hesitance of or incompleteness in public disclosure of one's private work practices and we describe the factors in detail below<sup>2</sup>. We do not presume this list to be exhaustive; extending our work to more organizations will likely reveal additional factors. Moreover, it should be noted that although we present the factors separately for the sake of facilitating their description, these are often intricately interrelated.

*Specialized skills* – A person may possess skills that other employees in the workplace do not share, e.g. accounting, programming, or computer-aided design knowledge.

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<sup>1</sup> Although the individual interviews are more private compared to a group session, these are still “public disclosures”. As a result, it is quite likely that there was a further gap between the descriptions of work practices in the individual interviews and how the work is *actually* carried out. The discussion in Section 3.2 relates to both of these gaps combined.

<sup>2</sup> Part of this discussion was inspired by observations reflected from the authors' experiences in other process modeling efforts.

These skills may be used to develop reusable techniques that help make work more efficient. However, descriptions of the methods may be generalized to avoid communicating details of these methods or personally developed techniques. The perceived drawback to disclosing the methods may be that the employee is rendered less competitive; other employees may then learn the same techniques thereby reducing the ability to differentiate one's working methods from others. An example of this was seen in our study; an employee created an excel spreadsheet to perform computations and track historical data. The employee ensured that the others in the department and organization group were not aware of the existence of this customized spreadsheet, but the others were aware that this employee was the person to ask for information related to a specific area.

*Job security* – The above example also points to the motivation for protecting one's employment. People may not want to share their work methods to help ensure their continued importance to the organization. Disclosing personal work practices gives others the opportunity to learn and use these methods and, as stated above, may limit a person's ability to distinguish themselves and their work from that of their colleagues. Work practices that help ensure job security can be tied to one's specialized skills (as discussed above) or could be a process or efficiency that others have the knowledge to implement, but have not yet figured out. Conversely, disclosure concerns may also arise from the fear that the discovery of inefficiencies or unnecessary processes may lead to job loss through consolidation of that work or replacement by an automated system that can accomplish the same work goals.

*Anxiety regarding being judged* – People are often hesitant to disclose their work practices because of anxiety regarding how their work would be judged by those to whom it is accessible, and in turn, regarding how their value as a worker or their value to their team would be evaluated. Co-workers may also criticize the methods, or compare them for effectiveness or efficiency against those of others. Ackerman [5] offers support for this factor, stating "*However, it has been found that people are aware that making their work visible may also open them to criticism or management; thus, visibility may also make work more formal and reduce sharing.*" In other words, public descriptions of an individual's work practices are tailored to avoid criticism and conceivable side effects, such as embarrassment, micro-management or surveillance of one's work.

*Convenience* – It is understandable that people may not want to spend significant amounts of time explicitly detailing their work methods. This could not just be bothersome for the discloser but also a burden on the recipient(s). As Schmidt [12] states "*An actor will thus routinely expect not to be exposed to the myriad detailed activities by means of which his or her colleagues deal with the contingencies they are facing in their effort to ensure that their individual contributions are seamlessly articulated with the other contributions*". It is indeed plausible that the recipient(s) may find some of the detail useful in their own work. However, depending upon the amount of information, level of detail, and the time consumed, this could be perceived as a fruitless effort by the discloser. Also, the practices being described may be complex, and therefore, not easy to articulate and/or communicate.

*Social aspects* – The interplay of social dynamics between coworkers introduce additional considerations that influence disclosure decisions. *Trust* is the primary factor that comes to mind for many people; this may apply to the perception of trust in coworkers, or in the entity or individual requesting the information, *if they reside outside of the circle of colleagues*<sup>3</sup>. Other factors include attitude (whether they like or dislike the other party), and the level of cooperation (denoting views of interaction formed from joint efforts) or competition (e.g., for promotion).

*Self-promotion* – When describing their work to others, people often make their work methods seem more complicated than necessary [12]. These actions may be motivated by one's need to ensure that others believe that the person works hard, and that their work is critical to the organization. In effect, this becomes a way of conveying the importance of oneself and one's work. This can also be linked to the job security factor described above. Such deliberate misrepresentation also contributes to the gap between actual work practices and their provided description.

*Concealing misconduct* – Deliberate misrepresentation may also arise from negative motivating factors e.g. people describing work practices to match the work expected of them. This includes methods that conflict with what the employee has previously communicated they do, are contrary to business policies, or that try to save time and/or effort in non-permissible ways. Therefore, such descriptions represent what *should* be done rather than what *is* done.

## 4 Discussion

These findings do not suggest that employees are against information sharing entirely, rather they point out that public disclosures of private work practices may be neither complete nor fully accurate, especially when such disclosure is impacted by one or more of the aspects described above in Section 3.2.

For process identification and documentation efforts, information about how people carry out the operations must be understood and employees are often encouraged to share a level of detail of their working practices that they typically would not divulge in normal day-to-day work. This raises interesting challenges and questions regarding the granularity at which process information should be and *could be* collected for the purposes of operations modeling.

Also, incomplete, or less-than-accurate descriptions of work practices is an issue that can be at an individual, group, or organizational level. Although the motivations described above were prompted through study of a number of individuals, many of the factors could also apply in disclosure from one work group or organization to another. For example, a human resources department may have sensitive information such as employee personal data, or strategies for compensation, employment, or termination that they are unwilling to share with people outside the department. This “data security” issue is in addition to the motivating factors described in the Section 3.2 and may arise from concern of sharing proprietary or highly sensitive information.

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<sup>3</sup> Organizations interested in utilizing BPM methods may engage personnel who have specialized expertise to lead the effort, and the personnel may be external to the company as a whole or to the originating organization.

#### 4.1 Applicability to Global Enterprises

Although the gap between private work practices and public disclosure was noted through the study of a co-located team, we believe that similar issues can be expected to exist in globally-dispersed teams. In fact, in such distributed teams, these issues are likely to be felt even more acutely because of the lack of face-to-face social interaction. The social cues available through face-to-face interaction, such as looking people in the eye and shaking their hands, have been stated as a pre-requisite to establishing working-level trust in the business world [13]. And trust, in turn, has been reported as a key factor for disclosure and knowledge sharing in the workplace [14]. It has also been reported that attitudes toward privacy and willingness to share information vary significantly across cultures [8] which could further impact these considerations in global teams since they are invariably comprised of members from disparate cultures. Additionally, organizations often impose country-specific export regulations that limit the sharing of certain types of information outside of national borders. Global enterprises must be aware of these regulations and provide applicable mechanisms to ensure compliance. Thus, we believe that extension of our findings to the global collaborative enterprise could hold great importance.

#### 4.2 Implication for Business Process Management

Section 3.2 speaks to the complex interplay of individual, social, and organizational factors that contribute to the reluctance in disclosing one's work practices. One of the main implications for BPM is the need to embrace the inherent inaccuracies, incompleteness and ambiguities in the disclosure of work practices rather than attempting the impossible venture of eliminating them. How to achieve this in practice without losing the benefits of process modeling is a critical challenge for future research. We offer some preliminary thoughts on ways to address these issues:

- At the launch of a BPM effort, aim to identify people's willingness to share details related to their work methods. This may help the organizers gauge which of the methods specified below may be useful in the work-practice elicitation effort. This may also help identify additional methods (not stated here), or a combination of methods, in order to address any hesitancy in disclosure.
- Allow mechanisms for specifying and distinguishing between public and private information. For example, utilizing encryption to protect private data or enabling specialized views through access controls. An example of this is seen in [15], which describes a system designed for use by multiple collaborating enterprises that partitions global data (information needed and used by all participants) and local data (information needed only by the employees within a specific company).
- Encourage *organizations* to develop policies identifying the types of information that are publicly owned, and the information and methods that can be retained privately.
- Encourage *employees* to share useful and efficiency-improving private work practices in exchange for an incentive or positive reinforcement. For instance, public verbal accolades, awards, compensation, and promotions can

be offered as a way to encourage employees, who have developed or identified methods to accomplish work more efficiently/effectively, to share these methods with other employees.

- Offer information systems that facilitate the sharing of individual work practices. Information sharing in the workplace has been noted as a foundation for collaboration [8] and to reduce duplication of effort [9]. In our observations, we also noted that work efforts were sometimes duplicated unbeknownst to the parties involved due to lack of communication and sharing regarding specifics of individual work practices.

## 5 Conclusions and Future Work

Based on field work conducted to study the work practices of a small town government organization, we identified the disconnect between how individual work practices are carried out as opposed to how they are described to others. Interviews and observations from the field work as well as prior literature points to a host of interrelated factors that contribute to this gap. Since BPM relies heavily on the accuracy of description of the processes being modeled, these insights point to important implications for how such models are constructed and utilized. In particular, we suggest that BPM techniques ought to treat such disconnect as inherent and unavoidable. This presents fruitful avenues for future BPM research on how models can be reconciled with the practices *on the ground*. We are currently extending this work to provide statistical data drawn from a larger population (employees from additional government organizations and corporate enterprises) to further support the factors mentioned above.

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