

# LITERATURE REVIEW OF SOCIAL MEDIA IN PROFESSIONAL ORGANISATIONS 2000-2015: Work, Stress, Power Relations, Leadership, Librarians, Teachers, and Social Workers



Photo of image search of social media, edited by Kari Rönkkö

Kristianstad University Press 2017:4  
ISBN: 978-91-87973-16-1  
Tryck: Kristianstad 2017

The report is published by Kristianstad University (HKR), Digital Design, Department of Design and Computer Science, located within the School of Health and Society, in cooperation with Lund University (LU), Lund University Internet Institute (LUii).

The authors of this report are Kari Rönkkö, Rustam Urinboyev, Mans Svensson, Lupita Svensson, and Hanna Carlsson.

Dr Kari Rönkkö, Department of Design and Computer Science, School of Health and Society, Kristianstad University, Elmetorpsvägen 15, 291 88 Kristianstad, SWEDEN, [kari.ronkko@hkr.se](mailto:kari.ronkko@hkr.se)

Dr Rustam Urinboyev, Postdoc Researcher, Department of Sociology of Law, Faculty of Social Sciences, Lund University, Box 42, 221 00 Lund, Sweden, [rustamjon.urinboyev@soclaw.lu.se](mailto:rustamjon.urinboyev@soclaw.lu.se)

Dr Måns Svensson, Department of Sociology of Law, Lund University, Box 42, 221 00 Lund, SWEDEN, [mans.svensson@soclaw.lu.se](mailto:mans.svensson@soclaw.lu.se)

Dr Lupita Svensson School of Social Work, Lund Universitet, Box 23, 221 00 Lund, Sverige, [lupita.svensson@soch.lu.se](mailto:lupita.svensson@soch.lu.se)

Dr Hanna Carlsson, Department of Arts and Cultural Sciences, Lund University, Box 192, 221 00 Lund, SWEDEN, [hanna.carlsson@kultur.lu.se](mailto:hanna.carlsson@kultur.lu.se)

## Table of Contents

LITERATURE REVIEW OF SOCIAL MEDIA IN PROFESSIONEL ORGANIZATIONS .....	5
<b>1. BACKGROUND .....</b>	<b>5</b>
1.1 Researchers and funding .....	5
1.2 Why this study? .....	7
1.3 Purpose .....	8
<b>2. Literature Review Methodology .....</b>	<b>9</b>
2.1 Stage A) – Literature review planning .....	9
2.2 Stage B) – Searching, identifying and organizing studies.....	10
2.3 Stage C) –Extracting and evaluating data .....	11
<b>3. Social Media and Work .....</b>	<b>13</b>
Overview of work results .....	13
Ten discourses regarding work .....	14
<b>4. Social Media and Stress .....</b>	<b>22</b>
Overview of stress results.....	22
Four discourses regarding stress years 2010 to 2015 .....	23
Seven discourses regarding stress years 2000 to 2006.....	28
<b>5. Social Media and Power Relations .....</b>	<b>35</b>
Overview of power relations results .....	35
Two discourses regarding power relations .....	36
<b>6. Social Media and Leadership .....</b>	<b>37</b>
Overview of leadership results .....	37
Five discourses regarding leadership.....	37
<b>7. Social Media and Librarians.....</b>	<b>41</b>
Overview of Librarian results.....	41
Eight discourses regarding librarians .....	42
<b>8. Social Media and Teachers .....</b>	<b>48</b>
Overview of teacher results .....	48
Seven discourses regarding teachers.....	49
<b>9. Social Media and Social Workers .....</b>	<b>56</b>
Overview of social workers results .....	56
Seven discourses regarding social workers .....	56
<b>References .....</b>	<b>69</b>

# LITERATURE REVIEW OF SOCIAL MEDIA IN PROFESSIONEL ORGANIZATIONS

## 1. BACKGROUND

### 1.1 Researchers and funding

A group of researchers from Lund University's Internet Institute and Kristianstad University has conducted a Literature review on how the introduction of social media and digital media in professional organizations is discoursed in mainstream academic literature emphasizing the years 2000-2015. Years 2000-2010 was based on snowball sampling and covers the introduction of digital technology and early social media at work. The study focuses social media in relation to work, stress, power relations, and leadership. Librarians, teachers and social workers are professions that gained special focus.

The conducted literature review is part of a research project called SOMPO (Social Media in Professional Organisations). During the years 2013-2016 the SOMPO project have studied social medias' entry into professional organizations from a new-institutional perspective. As a phenomenon, social medias were and are still somewhat poorly researched, and are also undergoing rapid transformation. Whereby, the type of knowledge gained from this project is significant for better understanding how social media influenced workplace, work environment, workload, work life, pace of life, employer monitoring and controlling, privacy concerns, professional identities, management and power structures.

The SOMPO research project has resulted in:

- A. The present literature review report.
- B. An emperical report with results from school, library and social work in a Swedish municipality (Rönkkö et al., 2017).
- C. As part of the framing of this project it has also been carried out a nationwide survey study regarding the digitization and stress (see Rosengren et al., 2017 for results). It was performed in collaboration with the research project "Are you going to go home already" from Lund University.
- D. Publications based on A, B and C.

The research project is fully funded by the Swedish Research Council for Health, Working Life and Welfare (FORTE, <http://forte.se/en/>).

Kari Rönkkö is the project leader for the SOMPO project, the main author of this report, he had a lead position in the design of the literature review, handled the writing, elaboration and production of the this literature report, and was one in the the literature review group. Rustam Urinboyev has had a lead position in the design and execution of the literature review, and was one in the the literature review group. Måns Svensson has had a leading position in the design of the literature review, and been one in the the literature review group. Lupita Svensson has been one in the the literature review group. Hanna Carlsson has

been one in the the literature review group. All have contributed to the design of the literature review, and taken part in discussions and decisions related to its execution.

Dr Kari Rönkkö is associate professor within both Informatics and Software Engineering. Informatics is part of social science and study the combination of information technologies, design and society. Software engineering is an engineering science and study technical solutions, processes, methods, and how to ensure quality in technologies. The unique combination of backgrounds enables a solid foundation for understanding the digital technology as such as well as its impact on society. Rönkkö has years of expertise in implementation and analysis of ethnographic workplace studies, cooperative method development and action research together with industry, understanding collaboration from a language point of view, methods of human-centered software development, participatory design, and user experience studies as well as validation of information technology in real world contexts.

Dr Rustam Urinboyev is a Postdoctoral Research Fellow at the Department of Sociology of Law, Lund University. Rustam's current (postdoc) research focuses on the everyday life and socio-legal integration of Central Asian migrant workers in Moscow, Russia, specifically investigating how migrants negotiate and maneuver around Russian legal system (e.g. police, immigration officials, border guards) and informal structures (e.g. intermediaries, protection rackets). His main research interests focus on state-society relations, pre-Soviet (Islamic) traditional governance structures in Central Asia, corruption and legal pluralism, law and society in Central Asia, and migration governance in post-Soviet societies. He has conducted ethnographic fieldwork in post-Soviet Uzbekistan where his doctoral thesis examined the interlinkages between traditional governance structures and political stability.

Dr Måns Svensson, Associate Professor of Sociology of Law at Lund University, defended his thesis 'Social Norms and Legal Compliance' in 2008. Svensson's socio-legal research within for example digitization, migration, work-life or financial security, often has a global perspective and focus on law's influence and dependency on underlying informal social control. Since 2013, Svensson is a member of the Swedish Enforcement Authority's Scientific Board, and has acted as the Chair of the Board since 2016. Further, since 2014, Svensson is a member of an evaluation committee within The Swedish Research Council for Health, Working Life and Welfare.

Dr Lupita Svensson has conducted research in the areas of social work, social work and law, social work and digitization, social work and over-indebtedness among young adults. Focus on social work has always been central to Svensson's research. She is especially interested in the relationship between social work and law, and how non-lawyers are applying the law. In addition, she has also studied the method development regarding development of texts, investigations and decisions.

Dr Hanna Carlsson's researchers and educators in library and information science and digital cultures. Hanna defended in 2013 at the Department of Cultural Sciences, Lund University. Her thesis is based on ethnographic studies in the library world. The knowledge and experience that Hanna brought into the project from its fresh doctorate in right library equivalent to 4 years of study in the library area, 7 months physically fieldwork and 1.5 years of digital field work. Which has provided benefits in understanding and boundaries, and led to valuable knowledge, insight and perspective also in this project.

## 1.2 Why this study?

Social media is a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0. One important characteristic of social media is that it introduces the creation and exchange of user-generated content from a bottom up point of view. The most distinctive feature in social media affecting professional organizations might be precisely the fact that the content and the networks are user-generated. In this literature review we have focused some of the most common social media: Facebook, Twitter, email, web 2.0, and LinkedIn. Besides these social media examples we have also applied broader definition of social media, such as phone calls, SMS, MMS, email, Facebook, LinkedIn, Snapchat, Instagram, Wikipedia, Twitter, Flickr, Yovile, messenger, chat and blogs to name a few.

When digital technology and digital services were first introduced in the workplace in the 1980's / 90's onwards, this technique was used primarily as a way for management to direct and control the work. What can be considered as the "first digitization wave" brought more tasks of returning items and more complicated processes on top of existing work processes. Characteristic was that digital technology was often created and purchased on the basis of management's needs. One problem here was that, management's needs and the software code in its design was poorly matched against the end-user norms, perspectives and self-perceived needs for the execution of their shop floor work. The consequences are well documented in the Informatics and the academic areas Computer Supported Cooperative Work and Participatory Design. Workplace studies show that users were forced to construct different types of "workarounds" to carry out their work, often in secret for management.

Today we face a "second wave of digitalization", which challenges top down management and top down management models. This because social media is characterized by informal networking and end user content production and modification, based on their particular shop floor perspective and their own perceived needs. This usage takes place with little or no transparency for management. Social media brings new challenges which have not yet been fully understood. We could say that we are facing an organic "uncontrolled" bottom up upbringing of information flows that do not necessarily take the existing organization's management structures and work environment situations into account. Social media has also shown to influence the division between work and leisure. The growing flow of information and the division is something that many employees feel intuitively with the increased and, ironically, often self-created new information overload. One can in this sense to talk about a "second wave of

digitalization” within work life that involve new types of benefits and opportunities, but also new types of challenges and problems.

### 1.3 Purpose

The aim of this literature review was to generate a knowledge overview about our specific study interest regarding social media's entry into professional organizations. The objective of the study has been to increase the knowledge of how the second wave of digitalization emerging from bottom up use of social media in professional organisations has effected professional organizations. We have been looking for an answer to: -what type of gains or problems for professional identities, psychosocial work, and organizations' leadership and power structures has social media caused.

In this report we will present the identified recent academic discourses in this scope of investigation resulting from our literature review. More specifically we have taken a look at how social media is perceived in the main academic discourses in relation to:

- The impact of social media on work: workplace, work environment, and work life;
- Social media and stress, e.g. workload, pace of life, monitoring and controlling, professional identities, and privacy concerns;
- The impact of social media on organization's leadership/management and power structures;
- The workplace use of social media by three select professions: librarians, teachers and social workers.



## 2. Literature Review Methodology

This study has been carried out as a systematic literature review based on the method/guidelines as proposed by Tranfield *et al.* (2003). As Tranfield *et al.* (2003, p. 209) argue, systematic literature reviews highly differ from traditional narrative reviews as they can be easily replicated and are based on more transparent and rigorous data collection and selection process. Unlike narrative reports, in systematic reviews researcher is expected to clearly specify how he/she carried out the review, what type of literature (books, journal articles, book chapters, documents, etc.) was reviewed, and how and where those literature were found. In other words, review methodology and protocol should be explained and detailed in such a way that it should allow other researchers to fully replicate the review. In this regard, systematic review is a research methodology characterized as being a pragmatic, transparent, including reproducible manner of analyzing existing literature (Cook *et al.*, 1997; Cooper, 1998; Lettieri *et al.*, 2009). The literature review we conducted is informed by these insights and hence, in line with Tranfield *et al.* (2003), it was carried out through the following five stages: A) Planning the literature review process, B) Searching, identifying and organizing studies, C) Extracting and evaluating data, D) Presenting descriptive and thematic findings, E) Utilizing the findings in order to determine the current trends and gap in research as well as the possible changes in work life due to proliferation of social media.

In below section the stages A), B) and C) will be presented in order to give the reader an overview of how we conducted the literature review. Presenting descriptive and thematic findings, D) Utilizing the findings in order to determine the current trends and gap in research as well as the possible changes in work life due to proliferation of social media E), is presented as parts of our stage C).

### 2.1 Stage A) – Literature review planning

In Stage A) the main emphasis was placed on literature review planning and it included the following two phases:

1. Forming a panel of experts (review panel) that discuss and develop the review methodology and regularly evaluate the results,
2. Establishing the context of the field of investigation in order to acquire the subject vocabulary, discover important variables relevant to the topic and identify data collection sources.

In phase A), a review panel was established which included the faculty members from Lund University and Kristianstad University who also are the researchers in the SOMPO project. The review methodology was elaborated early in the project during the regular project meetings. Concerning the phase B), the context and scope of the field of investigation, i.e. relevant variables, literature search keywords and phrases (search vocabulary) and sources of information, such as databases (EBSCO) and citation indexes (Google Scholar) was determined by the review panel. The following variables/themes of investigation were identified for literature review:

- The impact of social media on work (workplace, work environment, and work life);
- Social media and stress (e.g. workload, pace of life, monitoring and controlling, professional identities, privacy concerns);
- The impact of social media on organization's leadership/management and power structures;
- The workplace use of social media by three select professions: librarians, teachers and social workers.

As can be seen in the index of this reports the results are also categorized according to these, i.e. social media and work, social media and stress, social media and power relations, social media and leadership, social media and librarians, social media and teachers, and finally social media and social workers.

## **2.2 Stage B) – Searching, identifying and organizing studies**

This specific setting up of context and scope of the themes in the Stage A) provided a solid basis for Stage B), enabling to determine those studies that fall outside or within the scope of the topic being investigated. Stage B) included the following process:

1. Writing up of a review protocol that provides guidelines on how the literature review will be conducted. The review protocol should enable other researchers to replicate the review.
2. Deciding the actual literature search process on EBSCO database.
3. Organizing the identified studies via Zotero reference management program.

### **2.2.1 Phase 1 – Review protocol**

In phase (1) we developed a review protocol, which provided the details on how the literature review should be conducted by the research team. In the review protocol we provide information about the search keywords (search vocabulary), literature search engines and databases used for data collection, the criteria for including and excluding studies, the criteria for assessing the quality of the studies selected (see Table 1 below for overview and details on inclusion/exclusion criteria). For this literature review the EBSCO database was used as the main source for identifying the relevant studies. The keywords used (search vocabulary) for literature search stem from the four variables/themes specified in Stage (1). The literature search exclusively focused on peer-reviewed articles, published in English between 2010-2015. Thereafter we did a snowball sampling based on the included set of papers and extended the most cited papers with papers older than 2010. We used Boolean search methods (AND/OR/NOT) and search within abstracts, using the following keywords: social media, Facebook, Twitter, email, web 2.0, LinkedIn, work environment, workplace, work life, stress, power relations, leadership, librarians, teachers, social workers.

### **2.2.2 Phase 1 – Search**

In phase (2), we conducted actual literature search on EBSCO database in accordance with the review protocol developed in phase (1). The use of the following 9 search strings on EBSCO database resulted in approximately 1400 hits:

(AB ("ICT" OR "social media" OR "facebook" OR "twitter" OR "email" OR "web 2.0" OR "linkedin")) AND (AB ("work environment "))

(AB ("ICT" OR "social media" OR "facebook" OR "twitter" OR "email" OR "web 2.0" OR "linkedin")) AND (AB ("workplace"))

(AB ("ICT" OR "social media" OR "facebook" OR "twitter" OR "email" OR "web 2.0" OR "linkedin")) AND (AB ("work life"))

(AB ("ICT" OR "social media" OR "facebook" OR "twitter" OR "email" OR "web 2.0" OR "linkedin")) AND (AB ("stress"))

(AB ("ICT" OR "social media" OR "facebook" OR "twitter" OR "email" OR "web 2.0" OR "linkedin")) AND (AB ("power relations"))

(AB ("ICT" OR "social media" OR "facebook" OR "twitter" OR "email" OR "web 2.0" OR "linkedin")) AND (AB ("leadership "))

(AB ("ICT" OR "social media" OR "facebook" OR "twitter" OR "email" OR "web 2.0" OR "linkedin")) AND (AB ("Librarians"))

(AB ("ICT" OR "social media" OR "facebook" OR "twitter" OR "email" OR "web 2.0" OR "linkedin")) AND (AB ("teachers"))

(AB ("ICT" OR "social media" OR "facebook" OR "twitter" OR "email" OR "web 2.0" OR "linkedin")) AND (AB ("social work" OR "social workers" ))

In phase (3), all 1400 found hits were exported to Zotero reference management program where each string was placed in separate folder. The placement of each search string in separate folders in Zotero was the start of the classification of the found studies, thereby sorting and organizing ideas into categories and sections and providing foundation of the literature review. As Hart (1998) suggests, classification is a necessary part of the analytical stage of a literature review. Without the use of classification, large amounts of information cannot be processed in systematic and progressive way. By organizing the studies in Zotero the basic analytical structure of the review was established, and hence Zotero did serve as the main platform for extracting, evaluating and synthesizing the data in the Stage (3).

### **2.3 Stage C) –Extracting and evaluating data**

As mentioned in previous section, the use of 9 search strings on EBSCO resulted in 1400 hits. Since this is considerable amount of data, the data extraction, assessment and analysis was undertaken in the following four phases:

1. Abstract screening (Inclusion/exclusion process one);
2. Looking at the full-text of the studies (Inclusion/exclusion process two);
3. Citation frequencies analysis;
4. Bibliography analysis of the most cited studies.

#### **2.3.1 Phase 1 – Abstract screening**

In phase (1), the abstracts of all found studies (1400 hits) were reviewed, i.e. skim read for relevance by the panel. After skim read of abstracts and based on the explicit inclusion/exclusion criteria (see Table 1), 245 out of 1400 studies were kept for the second inclusion/exclusion phase. The included studies were placed in a separate folder in Zotero for the next phase.

### 2.3.2 Phase 2 – Looking at the full-text of the studies

Due to strict inclusion/exclusion decision made in phase (1), the number of studies left was manageable and therefore in phase (2) we decided to quickly survey the full text of the included studies in order to do a more rigorous ‘relevance analysis’ and hence make a second round of inclusion/exclusion check. After the second round of inclusion/exclusion, the number of included studies was 105. As all 105 included studies gave the impression to be more ‘spot on’ the search area, the full-text of them was downloaded from the EBSCO database or directly from the website of the journal for the citation frequencies analysis in phase (3).

**Table 1.** Review protocol for including or excluding the found studies

Inclusion criteria	Exclusion criteria
Only peer-reviewed articles	Books, chapters, unpublished papers, reports and magazine articles
Research published in English	Research published in other languages
Research explicitly related to the four themes/issues outlined in Stage (1), i.e. related to the introduction of social medias in professional organizations: The organization’s management and power structures; work-life balance; professional identities; and psychosocial environment	Research related to e-government, e-learning, social media and political activism (e.g. Arab spring), copyright and ICT ethical issues, social media’s educational element, ICT’s socio-economic role in developing countries, ICT use by pre-service teachers.

### 2.3.3 Phase 3 – Citation Frequencies Analysis

While doing literature review it was quite obvious that we cannot closely read all relevant studies and therefore we decided to read selectively. But reading selectively runs the risk of overlooking some of the important studies. Hence, our central concern was directed towards identifying the mainstream debates and to determine influential studies on the topic of investigation. In this regard, we did a citation frequency analysis in order to determine which studies embody and disseminate the core ideas on the topic. The citation indexes Google Scholar were used to get the picture on which authors and works were most frequently cited by other authors, and thereafter ranked according to their citation frequency. It has been identified that Google Scholar may find more cited references than Web of Science or Scopus because overall, Google Scholar is indexing more journals and more publication types than other databases. There are several papers that provide good overviews of the problems associated with the use of the ISI Web of Knowledge as a data source, see (Harzing and van der Wal, 2008). Most of these problems revolve around ISI’s limited coverage, especially in the Social Sciences and Humanities. The citation analysis served as the quality check process, since 10 most cited articles from each search string were placed in a ‘most cited’ folder in Zotero.

### 2.3.4 Phase 4 – Bibliography analysis of the most cited studies

In the last phase (4) of the Stage C), we did a bibliography analysis of the articles in the ‘most cited’ folders where we read the full-text of the 10 most cited articles from each ‘most cited’ folder (9 folders), all together 90 articles. After first round of reading of 90 most cited articles, many papers were excluded and new relevant references were found by looking at the references in the included

papers. If the new references were not found in our initial literature search, they were added to appropriate folders (themes) in Zotero program. As a result of this new literature search process the number of relevant studies increased and reached to 246. After full text reading of all 246 papers in a final round we compared the papers with the aim of our study we finally ended up with 55 papers. Thus, the final number of studies selected for literature review reached 55 papers.

In the next seven sections, two separate types of analyses of the information will be presented in each section, a descriptive and a thematic analysis. The descriptive analysis is useful to understand the main characteristics of the field of investigation, such as theories and methodologies used, types of data collected (qualitative, quantitative), classification of countries, the focus for the study (people, policy, programmes; breadth vs. depth, case study, survey, chronological, comparative and so on) and the units of analysis i.e. things we examine in order to study our chosen topic (individuals, groups, organizations, social phenomena and artifacts). The thematic analysis focuses on synthesizing the main outcomes extracted from the literature and its main aim is to highlight current trends and gap in research as well as inform future research and practice.

Below we will examine social media in relation to work, stress, power relations, leadership, librarians, teachers and social workers. Each of these have an own chapter starting with an overview of the identified relevant papers, and thereafter a for this study relevant presentation of each papers argumentation. Common information in all sections are the amount of citations and main threads relevant for the focus of this study that are discoursed for each area of interest.

### 3. Social Media and Work

#### Overview of work results

The term work in the title represents the three search areas, i.e. work environment, workplace and work life. It covers areas such as the organizational situation and developments, the actual work practices and conditions, and the understanding of life and work contrasted with life and leisure. In this theme we identified 22 papers in total, of which 10 was included in our study. The total amount of citations for these ten papers was 450. Hence, work environment, workplace and work life has been discoursed a lot in academic literature the latest five years.

With 300 citations the largest theme is *legal issues with social media*. It includes subjects such as how social media have blurred the boundaries between privacy and worklife, and how this is perceived by Supreme court versus the Millennials (Sánchez Abril et al., 2012) with 99 citations; employee surveillance (Ball, 2010) with 60 citations; legal and regulatory issues implicated by utility engagement in social media (Elefant, 2011), 50 citations; the impact of new work practices and ICT on working conditions in France (Askenazy and Caroli, 2010), 47 citations; and the problem of workplace harassment when it occurs in social media. Courts have struggled with how social media belongs to workplace in

relation to claimed harassments for a long time (Gelms 2012), 17 citations. Examination of and suggestion of policy guidelines for the legal and professional risks for teachers using social networking sites (Russo et al., 2010), 10 citations.

The second largest theme with 90 citations regards *how forward-looking organizations are adopting to IT consumerization and the consequent complexity of IT* (Harris et al., 2012).

The third largest discourse with 30 citations is about *better understanding the influence from social media on new workplace practices, effectiveness, workload and pace of life* (Chesley, 2010).

The fourth largest discourse with 18 citations is about *strategies for achieving work and private life balance* (Hubers et al., 2011).

The fifth discourse with 12 citations regards the *effects of new technology on firm productivity*. A study that is characterized by interest in market, productivity and economy, whereby the effects of what is discussed and its results are on a high abstraction level (Moshiri and Simpson, 2011).

In general there is a lack of applying grand theories, only one paper has included a grand theory, i.e. Erving Goffman's *The presentation of self in everyday life* from 1959 claiming that human beings control other's impression of them through performances within spatially defined social establishments (Sánchez Abril et al., 2012). The point made is that Goffman's theory is challenged today by the blurred boundaries following with Social Media.

All papers include literature overview; two of them are based on pure literature review (Ball, 2010), (Chesley, 2010). Two is mixed with case study (Elefant, 2011) and (Russo et al., 2010). One paper had a literature overview together with presentation of case (Gelms, 2012). Five papers have performed own surveys from which they interpret the data in the light of previous academic publications and reports from organizations, and media (Sánchez Abril et al., 2012), (Askenazy and Caroli, 2010), (Chesley, 2010), and (Moshiri and Simpson, 2011) and (Hubers et al., 2011). Countries studied are US (Sánchez Abril et al., 2012), (Elefant, 2011), (Gelms, 2012), (Chesley, 2010), (Russo et al., 2010), UK (Ball, 2010), France (Askenazy and Caroli, 2010), Canada (Moshiri and Simpson, 2011), Australia, New Zealand (Russo et al., 2010), and Netherlands (Hubers et al., 2011). Below follows a deeper presentation of each paper.

## Ten discourses regarding work

### *The problem of blurred boundaries in social media*

Sánchez Abril et al. (2012) studied the blurred boundaries between social media and the Millennials as twenty-first-century employee. Professionalism at work is all the about work-place performance. It includes demonstrating good judgment, respectable stature, and maintenance of competency as well as grasp of the situation. This means that traditional professionalism demands audience segregation between the employee's professional and private life. Erving Goffman's theory from 1959 that is identifying that human beings control others' impressions of them through performances within spatially defined social establishments is introduced. *Individuals preserve audience segregation by following the rules of decorum of each social situation and by filtering the information about themselves available to each audience* (Sánchez Abril et al., 2012 p63-64). It is then claimed that social media question the applicability of the theory, because in social media the borders for audience segregation are

difficult to control and blurred. Social media profiles and posts allow individuals to publicly express multiple facets of themselves, such as work life engagements together with diverse happenings in their private lives and private opinions. Hence the private spheres that were previously segregated now are easily accessible to colleagues, employers, recruiters and clients, and other unintended audiences. By its nature, social media is infinitely transferable and hard to control. This openness will have far-reaching effects on personal privacy, self-expression and others understanding of who you are. A sign of the challenge is visible in courts and legislation as there is a debate about the individual “right to be forgotten”, i.e. to allow individual citizens to delete unwanted online information about them. It is interpreted that the Millennials are not willing to sacrifice their multifaceted Internet participation for the sake of segregating their multiple life performances. Lacking legal ability or good technological solutions to shield their performances the Millennials have to rely on others to desist from judging them across different contexts. Millennials identity seems to be a mix of real space and online expression of self with a high expectation on privacy.

### *Workplace surveillance*

Ball (2010) provided a literature review of research findings of workplace surveillance. Ball identifies two forms of surveillance, i.e. social and technical. The author concludes that organizations and surveillance go hand in hand. The area of surveillance is developing, today it can include: Internet and e-mail monitoring, biometrics and covert surveillance, and location tracking. Workplace surveillance will affect employee well-being, productivity, work culture, creativity and motivation. The normality of workplace surveillance in management practice together with the lack of good arguments about how to ‘do it better’ makes it difficult to change the tradition of surveillance. Ball speculates of what will happen when employees begin to discuss their work lives in public forums. One identified issue here that needs more research is how much a company has the right to ‘clamp down’ on employee voice that is away from the workplace, and whether they are entitled to use information posted in social media to curtail the careers of specific individuals. Other question is what happens when surveillance extends into the bodies and minds of workers, rather than simply their performance, how will they resist it and negotiate its application? Where will the gaps be? And as surveillance polices the boundaries and internal hierarchies of organizations, how will it shape the accessibility of work for future generations? It can be claimed that organizations watch employees primarily to protect their assets. At the same time the nature and intensity of surveillance says much about how a company views and values their employees. Controversies often arise in three cases: When employee monitoring goes beyond what is reasonable or necessary; When they demand exacting and precise information as how employees use their time; and when monitoring compromises working practices and negatively affects existing levels of control, autonomy and trust. It is obvious that more research is needed to better understand what is taken place in management and employee’s minds, both in, and in relation to professional organizations.

### ***US legal and regulatory issues implicated by utility engagement in social media***

Elefant (2011) provided an exhaustive summary of US legal and regulatory issues implicated by utility engagement in social media. Utilities function in several different capacities, as corporate businesses, and regulated entities, and as employers. And the use of each raises unique legal issues. It is concluded that utilities must ensure that their participation in social media does not affiliate codes of conduct, SEC regulation, or host other compliance issues. Best practices and guidelines are suggested for the development of a social media policy that reduces the risk of social media for utilities.

Utilities are identified to harnessing the power of social media for a variety of business purposes, including implementing regulatory initiatives like smart grid and demand response, educating customers, coordinating stakeholder proceedings, and safety issues. Utility uses can be: advertising employment, creation of company page (Linked in), crisis communication (Twitter), present new programs or policy commenting (Blogs), share company photos and location, promote events (Facebook, Yelp, and Foursquare), presentations, share educational videos, photos, regulations and tariffs (Youtube, Flickr, Docstoc, and Slideshare).

### ***The impact of new work practices and ICT on working conditions in France***

Askenazy and Caroli (2010) studied the impact of new work practices and ICT on working conditions in France. Results are that in France new work practices, including quality norms, job rotation, flexibility of work schedules, are associated with increased mental strain and more risky work environment. Interesting is that there is no identified correlation with serious occupational injuries. Regarding ICT, particularly job rotation, quality norms, and work time flexibility are strongly correlated to the use of Internet, data interchange devices or e-mail. It is important to notice that a lot have happened in ICT between 1998 and 2015, 1998 only one third of the workers reported that they used one of these technologies. Further on regarding ICT, it is demonstrated that new work practices and ICT increase the pressure on expected worker performance, hence also intensity. Examples are: work time flexibility (which is strongly related to the use of Internet and data interchange electronic or e-mail) may disturb the organization of workers lives. It also implies that after short working days there will come very long ones, and with longer working days follows increased mental strain and environmental tensions; increased mental strain can also come from the difficulty of carrying out one's work properly through ICT.

Gelms (2012) discussed the problem of workplace harassment when it occurs in social media. Courts have for a long time struggled with how and what belongs to workplace in relation to claimed harassments. The author carefully argues for a solution here that builds upon the concept of benefit. If the social media where the harassments have taken place has demonstrated to be of substantial benefit for the employee's work, then the social media can be properly characterized as an extension of the employee's work environment. Whereby the evidence of harassment will include workplace.

### ***The legal and professional risks for teachers using social networking sites***

Russo et al. (2010) examine the legal and professional risks for teachers using social networking sites. Based on two cases it is also offered advices that schools might incorporate in their policies with regard to teachers' usage of social



networking sites. Teachers can argue that sites are personal and for private use, but it does not change the fact that social networking sites are essentially public domains and information on the Internet can remain long after it has been removed. It is concluded that in Australia the right to free speech is very limited. New Zealand has rights that protect free speech, but teachers still risk end up in difficult situation were free speech could end up seen as part of adequate censoring related to misconduct in duty. In US the use of social network sites related to work and profession goes under professional standards and compliance with codes of conduct here. Hence, in the United States, Australia and New Zealand, teachers have limited rights to free speech. Whereby, free speech and privacy are unlikely to successfully assert these rights in situations where postings on their social networking sites reflect negatively on themselves and their employment. Inappropriate content will most likely result in disciplinary action. Therefore, schools should develop policies designed to encourage employees to engage in responsible use of the Internet. Given practical advices for teachers and their lawyers when they develop policies addressing the use of social networking websites in the educational workplace are: 1. Local school board or school policies should specify that personal comments and information by student teachers, teachers, and other staff members placed on social networking sites could be accessed on employer-operated systems. The consequence is that users can be disciplined for the inappropriate content of their postings. 2. Policies need to explain that employees should limit their comments to matters of public concern, avoid addressing personal issues. 3. Users of school computers should sign forms indicating that they agree to abide by the terms of acceptable use policies. Awareness of the risk of being disciplined for inappropriate use of facilities is also needed. Employers providing an orientation session for all new employees would be one appropriate way here. 4. Student teachers need special information about their professional duties as they will be treated as employees rather than students in any case of suspected misbehavior. Meaning that they should be mindful about the kind of remarks made and material used and posted on social networking sites. 5. Educational leaders need to ensure that their personnel and computer use policies are updated regularly, e.g. annually, to ensure that they are consistent with any changes in the law.

### *The effects of new technology on firm productivity*

Moshiri and Simpson (2011) investigated the effects of new technology on firm productivity using the rich Canadian Workplace and Employee Survey for the period 1999–2003. The authors are discussing in how advances in information and communication technology have had effects on both individual and workplace performance. The authors identify that understanding the influence of ICT on the dynamics of the workplace requires information on both demand and supply sides of the labor market, but it is only recently that the study of both sides of the market has become feasible using linked employer–employee data. Based on data from 1999–2003 the authors answers four questions: 1) Does computer use affect the productivity of firms? Yes, 10% increase in computer use raises firm productivity by 0.67% and a one-hour increase in computer application use raises firm productivity by 0.3%. 2) Has the computer-productivity relationship lost its momentum? No; the proportion of computer

users squared has a positive effect on firm productivity, although it is often not significant at 5% 3) Is there any evidence for spillover effects of computer use within and between industries? No; not within Canada's borders at this (mature) stage of computer penetration 4) How does computer use interact with other inputs? Human capital (education, experience, training) raises firm productivity through computer usage but organizational capital (measured by four types of organizational changes) does not at this stage of computer penetration. In summary the findings indicate that computer use by employees has a positive and significant effect on the productivity of firms, the effect has not lost its momentum, and that spillover effects are not significant. Moreover, human capital enhances the effect of computer use on productivity, but organizational changes do not interact with computer use in our sample period. The paper is characterized by interest in market, productivity and economy, whereby the effects of what is discussed and its results are on a high abstraction level. This means that it is not easy to connect the results to concrete work practice situations at physical workplaces.

#### ***How forward-looking organizations are adopting to IT consumerization***

Harris et al. (2012) investigated and described how forward-looking organizations are adopting to IT consumerization and the consequent complexity of IT; including how IT consumerization is enabling individual and team work, while minimizing risks within business. The entrance of consumer-originated IT devices and applications into workplaces have created an employee driven IT revelation. Today there exist a huge amount of web based services and a million plus apps. On the one side employees are frustrated when they cannot use apps and devices at work that enhance their productivity at home. Experiences gained from private life could be seamlessly transferred into workplaces. Employees argue that their apps are cheaper, more readily and easier to use, more fun, quicker to implement, have more current technology, and foster innovation – than those provided by enterprise.. On the other side employers are concerned about data security, accuracy, availability, connectivity, performance and reliability. Businesses fear the unknown risks. The situation may be seen either as an opportunity or a threat. From a market perspective we have IT consumerization in front of us that is finding its way into enterprise through the employees and the previously sovereign territory of the IT department is heavily challenged.

The trend can also be spotted in that employers that previously paid for employees' technology at work are today sharing costs and also permitting employees to buy their own technology. The prize paid is a more complex computer environment in the organization. Benefit might be more employee driven innovation, productivity benefits, and higher employee satisfaction. Employers wants the consumerization benefits, but it also brings with it new risks, whereby strategies must be developed to meet the situation. Based on study data three main strategies are outlined by the authors. First is, the *Laissez-Faire management*, which allows external devices and applications to enter the enterprise without restrictions. Second is the four *Middle Ground Strategies*

1. Broadening the Scope, where management gradually opens up the list of allowable consumer devices and applications.
2. Providing a Gadget Budget, here

management provides employees with IT allowances as a job benefit. 3. Segmenting Employees by Role, here management develops an IT consumerization profile for each role within the company. 4. Advocating Uptake, here management proactively pushes cutting-edge consumer technologies into the organization. Third is *Authoritarian management* exercises with tight control and restricts the number of devices and applications entering the enterprise.

One third of the organizations studied had chosen the *Laissez-Faire management*, and another third the *Authoritarian management*. It was identified that security could be embedded in the network, in the application, and in the corporate policy. The authors predicted that the focus of future security will increasingly be on applications and policy as less confidence can be placed in device and network security. Different countries have different rules. In US email placed in corporate devices or networks are considered as property of, and thereby accessible by, the company. In the European Union or Canada, it's the opposite; email is the protected property of the employee even if is stored on a corporate email server. Young people have grown up with technology. Thereby they are also comfortable with both using and choosing it. It is concluded that the IT consumerization trend is strong and most likely also unstoppable. Ball, (2010) provided a literature review of research findings of workplace surveillance. Ball identifies two forms of surveillance, i.e. social and technical. The author concludes that organizations and surveillance go hand in hand. The area of surveillance is developing, today it can include: Internet and e-mail monitoring, biometrics and covert surveillance, and location tracking. Workplace surveillance will affect employee well-being, productivity, work culture, creativity and motivation. The normality of workplace surveillance in management practice together with the lack of good arguments about how to 'do it better' makes it difficult to change the tradition of surveillance. Ball speculates of what will happen when employees begin to discuss their work lives in public forums. One identified issue here that needs more research is how much a company has the right to 'clamp down' on employee voice that is away from the workplace, and whether they are entitled to use information posted in social media to curtail the careers of specific individuals. Other question is what happens when surveillance extends into the bodies and minds of workers, rather than simply their performance, how will they resist it and negotiate its application? Where will the gaps be? And as surveillance polices the boundaries and internal hierarchies of organizations, how will it shape the accessibility of work for future generations? It can be claimed that organizations watch employees primarily to protect their assets. At the same time the nature and intensity of surveillance says much about how a company views and values their employees. Controversies often arise in three cases: When employee monitoring goes beyond what is reasonable or necessary; When they demand exacting and precise information as how employees use their time; and when monitoring compromises working practices and negatively affects existing levels of control, autonomy and trust. It is obvious that more research is needed to better understand what is taken place in management and employee's minds, both in, and in relation to professional organizations.

### *Understanding the influence from social media on new workplace practices, effectiveness, workload and pace of life*

Chesley (2010) studied the perceptions about the role that technology plays in enhancing a) work effectiveness, b) increased workload, c) and if it is accelerating the pace of life. Chesley also investigated whether devices or applications used for work or personal needs, or both, influence worker assessments of productivity and demands in different ways. Conclusions drawn were that the use frequency of computer, e-mail, and mobile phone positively influence assessments, that these are related to greater workplace effectiveness, increased workload, and an accelerating pace of life. The results for computers are more convincing in the aspects of increased workload and workplace effectiveness when compared to mobile phones. Here Chesley add the comment that the study was performed 2001/2002, meaning that much have happened with mobile phones since the survey, and updated research is needed. It was identified that 2010 there is a limited amount of evidence regarding a positive association between ICT use and employees' work based assessments. Furthermore it is also identified that much of our current knowledge here comes from organizational literature on telecommunication workers. Hence the ICT role in shaping the assessments of work effectiveness, increased workload, and if it is accelerating the pace of life - needs more and broader studies. Chesley state that we need more research that can directly investigate whether ICT use influence important worker perceptions. (What are important worker perceptions, and from who's point of view and concerns)

In America there has taken place long latitude studies of subjective levels of time pressure. But, the research of perception of time pressure and ICT use is another area that has been limited. The existing research of time pressure have made clear that working hours, non-standard work schedules and spending more time on domestic tasks cannot alone explain the tendency towards perception of accelerated pace of life. Chesley also identify that the type of ICT, use frequency and use context, unsurprisingly, is of high importance when understanding ICT use and worker assumptions. There is a tendency that research focus on the use of single device or application in isolation. Few studies compare how use of different devices or applications might influence. The lack of attention to context also needs to be addressed, because the level of distraction about what ICT to use is very likely to vary across different contexts in important ways.

Chesley concludes that the results contribute to three general findings regarding the literature on social consequences of ICT use. First, ICT use is predictive of workers perceptions of work demands, workload, feeling of time pressure, and job performance. That is, ICT use is connected to real social consequences in people's heads. Second, the usage of different devices and applications may produce different social consequences. When it comes to mobile phones, the survey is a bit out of time even though it was published 2010, as much development has taken place here since 2002. The literature part in the study identifies that those in higher-status occupations are at greater risk for work-to-home conflict. In Australia mobile phone use was not typically work related 2008. Third, and more importantly Chesley identifies that context matters, also that the role, which ICT use play in shaping social consequences need much more research here. As we in the continuation try to further develop

theories of what influence ICT it is clear that context play a crucial role for understanding the social consequences. It was concluded that researchers need to pay much more attention to the variations in the social setting. Computers and e-mail are much more important for shaping work based perceptions, while the use of mobile phones and computers influence overall pace-of-life.

### *Strategies for work-life and private-life balance*

(Hubers et al., 2011) present 10 types of identified strategies for work-life balance. Adopting a quantitative approach the study investigates which combinations of coping strategies prevail, and are applied by which type of actor. The result shows that which type of strategy depends most strongly on the presence of young children, thereafter comes employment factors, dwelling and workplace. The authors suggest that work-life strategies can be classified along two axes, i.e. paid labor and domestic responsibility. They categories the studied based on their dependencies, and found the actors, i.e. individuals, dependent of material goods, dependent on professional workers, dependent on partner, dependent on social network. Twenty-one most frequently adopted coping strategies are identified. Information about average, life domain and type of agent is included in parenthesis: **1)** Buy timesaving domestic appliances (0.82 Domestic domain & Material agent), **2)** Do groceries for multiple days at once (0.79 Domestic domain & Individual agent), **3)** Flexible working hours (0.78 Paid labor domain & Individual agent), **4)** Teach children to do things independently (0.69 Domestic domain & Individual agent), **5)** Sacrifice leisure time for caring tasks (0.60 Domestic domain & Individual agent), **6)** Lower standards for cleaning/tidying up (0.52 Domestic domain & Individual agent), **7)** Stay home yourself in case of child being sick (0.47 Domestic domain & Individual agent), **8)** Work from home (0.46 Paid labour domain & Individual agent), **9)** Own second car (0.45 Domestic domain & Material goods actor), **10)** Regularly make work calls/send work email outside office hours (0.44 Paid labour domain & Material goods agents), **11)** Perform domestic tasks at fixed days (0.42 Domestic domain & Individual agent), **12)** Choose childcare close to home (0.42 Domestic domain & Individual agent), **13)** Combine daily shopping trips with other activities (0.40 Domestic domain & Individual agent), **14)** Do groceries by car (0.39 Domestic domain & Material goods agent), **15)** Adjust employment hours to opening hours of schools/day care centres (0.38 Paid labour domain & Individual actor), **16)** Save up domestic tasks to perform them all at once/bundle (0.37 Domestic domain & Individual actor), **17)** Perform domestic tasks faster (0.35 Domestic domain & Individual actor), **18)** Decrease number of hours paid labour (0.34 Paid labour domain & Individual actor), **19)** Regularly make private calls/send private email during working hours (0.33 Paid labour domain & Material goods actor), **20)** Adjust one's working hours to working hours of partner (0.33 Paid labour domain & Partner agent), **21)** Use timesaving services: take away food or ready-made meals (0.31 Domestic domain & Material goods agent), **22)** Regularly search for product information on the Internet (0.31 Domestic domain & Material agent)

It is interesting to note that only four of these are ICT related, i.e. nr 8, 10, 19 and 22. A conclusion that can be drawn is that ICT technology today seem to support by offer option to: work from home; Regularly make work calls/send work email outside office hours; Regularly make private calls/send private email

during working hours; and Regularly search for product information on the Internet.

## 4. Social Media and Stress

### Overview of stress results

Starting by identifying the most relevant papers between 2010-2015, and from this result applying snowball sampling we finally ended up with 67 potentially relevant articles in the time period 2000-2009 and 2010-2015. Judging from the total number of citations stress and digital technology is a subject that gained a lot of interest.

In this time period the 10 most cited papers were chosen, these were cited more than 1150 times in total. We identified four large themes published between years 2000 to 2006.

The largest theme was about *the frustrating impact of the increased amount of horizontal digital communication*, with 1130 citations: (Dewett and Jones, 2001) 696 citations, (Ceaparu et al., 2004) 254 citations, and (Bellotti et al., 2005) with 180 citations.

The second largest theme concerns regarded *new options for hidden information surveillance and the influence of personal characteristics, situation and context in information seeking* with 270 citations (Ramirez et al., 2002).

The third largest theme was about the *strategies for and consequences of controlling and monitoring employees*, with 240 citations: (Young and Case, 2004) 145, (Miller and Weckert, 2000) 101 citations.

The fourth large theme concerned *the effects and spillovers of IT on the work-family, and family-work situation*, with 200 citations (Kinnunen et al., 2006).

Regarding the methods applied in the studies from 2000-2009: Three of the earliest papers are built upon pure literature review results (Dewett and Jones, 2001), (Ramirez et al., 2002) (Miller and Weckert, 2000). Five of the papers included own survey (Ceaparu et al., 2004) (Kinnunen et al., 2006) (Bellotti et al., 2005) (Young and Case, 2004) (Tarafdar et al., 2010). Two of the papers included interviews (Kinnunen et al., 2006) (Bellotti et al., 2005). Two papers included laboratory tests and experimentation (Kinnunen et al., 2006) (Bellotti et al., 2005). Two papers included physical observation (Ceaparu et al., 2004) (Bellotti et al., 2005). One study built upon a 3 years in-depth study (Bellotti et al., 2005). Only one paper applied and argued based on classic grand sociological theory (Kinnunen et al., 2006); which possibly can be interpreted as a lack of applicable grand sociological theories regarding stress and IT? Of course all papers still used theoretical relevant concepts in their reasoning. Many of the studies were global (Ramirez et al., 2002) (Ceaparu et al., 2004) (Bellotti et al., 2005) (Miller and Weckert, 2000), four had focus on US (Dewett and Jones, 2001) (Bellotti et al., 2005) (Young and Case, 2004), and one the Northern Europe (Kinnunen et al., 2006).

What happened after 2009 when social media was established in people's private life, and also taken up in professional organizations? In the time period of 2010 to 2015 we identified and included 4 relevant papers in total. Judging by number of citations for the included papers, i.e. 131, 30, 18, and 5, we conclude

that these recent subject are part of the mainstream debate related to our interest of study. Still, as social media is a recent technology, and that we did not include more than 4 discourses we can conclude that *social media and stress* is a combination that is in need of more empirical studies. The identified discourses in order most cited to last cited regards:

The impact of technostress on end-user satisfaction and performance (Tarafdar et al., 2010) 131 citations;

Understanding the influence from social media on new workplace practices, effectiveness, workload and pace of life (Chesley, 2010) 30 citations;

Applying theory of decision style to describe employee email behavior (Day et al., 2012) 18 citations;

ICT demands effect on well-being and the moderating effect that ICT support can provide (Shirren and Phillips, 2011) 5 citations.

One of the papers refer to decision style theory in its arguing (Shirren and Phillips, 2011), the other papers do not use any social theory. Methodologies used are literature overview combined with survey (Tarafdar et al., 2010) (Chesley, 2010) (Day et al., 2012), and communication diary (Shirren and Phillips, 2011). Studied countries were United States (Tarafdar et al., 2010) (Chesley, 2010), Canada (Day et al., 2012) and Australia (Shirren and Phillips, 2011). Below the identified papers are presented in more detail, starting with a section covering the recent papers.

In summary, the most influential stress and information technology related subjects in academic discourses during the last 15 years have concerned negative impacts on organizations and individuals with special emphasis on information overload, employee monitoring, seeking behavior, and spillovers of IT on the work-family, and family-work. There was a peak in the most referenced papers the years 2000-2006.

#### Four discourses regarding stress years 2010 to 2015

##### *The impact of technostress on end-user satisfaction and performance*

Tarafdar et al., (2010) investigated the impact of technostress on end-user satisfaction and performance. The research in this area was scarce and emerging 2010. Technostress is caused by an inability to cope with the demands of organizational computer usage. Excessive information, frequent upgrades, and blurring of work-home boundaries can lead to inaccurate information processing, poor task related decision making, and dissatisfaction with ICT. One objective of the paper was to understand the negative effects of technostress related to user satisfaction and performance. Another objective was to identify mechanisms that can mitigate the effects of these. In the paper a model that analyzed the effects of those factors that create technostress was developed based on literature from end-user computing and technostress area.

Stress was defined as a cognitive state experienced by an individual when the environmental situation was perceived as exceeding the person's capability and resources for meeting it under conditions where there is a substantial differential between rewards and costs from meeting the demand versus not meeting it. Technostress is a problem of adoption in a situation where the users are unable to cope with the requirements related to usage of ICT. Three concepts have been identified, i.e. stressors (factors that create stress), strain (outcome of stress) and situational variables or interventions (organizational mechanisms

that provide means in which stressors can be reduced and their factors alleviated). Strains in general can be behavioral or psychological. Behavioral strain includes reduced productivity, increased turnover and absenteeism, and poor task performance. Behavioral strain has shown to reduce the productivity of the individual. Psychological strain includes emotional reactions to stressor conditions, e.g. dissatisfaction with the job, negative self-evaluation, and depression. Psychological strain has shown to reduce organizational commitment and job satisfaction. Both types of strain occur due to effects from ICT on organizational tasks, workflows and processes. Often technology determined pace and timing of required action together with workflow rigidity gives rise to behavioral strains such as boredom, dissatisfaction, ambiguity about performance expectations, reduced job control and increased perceived work demands. In the context of technostress the authors suggest a third type of strain, i.e. *ICT usage-related outcomes*. This strain is about the extent to which individuals are satisfied with the applications they use and can use them to improve their task performance. Here user satisfaction is an important variable, as is also performance to improve quality and efficiency.

The result from the performed survey revealed that the factors that create technostress also reduce the ICT satisfaction, and affect the extent to which users can utilize ICT for innovation and productivity in their tasks. For users to produce quality and be effective it is important to be satisfied with the applications and systems they interact with. Mechanisms were also identified that could diminish technostress, i.e. mechanisms that facilitate involvement and encourage users to explore new ideas, learn and experiment in the context of ICT use.

Due to techno-overload managers tend to end up in communications with more information than is necessary, and also receive more information that they can effectively handle and process. It is interesting that the managers tend to feel compelled to acquire and process the information just because it is available, with the consequence that they spend more time and effort in information processing than is necessary. This, at the same time as the managers are unable to identify information that is actually useful. It was also identified that the techno-invasion leaves the users with the feeling that they are never free of technology, that they are always on call, and that their space have been invaded. One identified result of this techno-complexity situation is that users spend too much time in learning how to use ICT to the possible exclusion of other important organizational tasks.

#### ***Understanding the influence from social media on new workplace practices, effectiveness, workload and pace of life***

Chesley (2010) studied the perceptions about the role that technology plays in enhancing a) work effectiveness, b) increased workload, c) and if it is accelerating the pace of life. Chesley also investigated whether devices or applications used for work or personal needs, or both, influence worker assessments of productivity and demands in different ways. One conclusion drawn was that the use frequency of computer, e-mail, and mobile phone positively influence assessments, i.e. that these are related to greater workplace effectiveness, increased workload, and an accelerating pace of life. The results for computers were also more convincing in the aspects of increased workload



and workplace effectiveness when compared to mobile phones. Here Chesley add the comment that their presented study was performed 2001/2002, meaning that much have happened with mobile phones since the survey, and updated research is needed. It was still identified that 2010 there is a limited amount of evidence regarding a positive association between ICT use and employees' work based assessments. Furthermore it is also identified that much of our current knowledge here comes from organizational literature on telecommunication workers. Hence the ICT role in shaping the assessments of work effectiveness, increased workload, and if it is accelerating the pace of life - needs more and broader studies. Chesley state that we need more research that can directly investigate whether ICT use influence important worker perceptions. (What are important worker perceptions, and from who's point of view and concerns)

In America there has taken place long latitude studies of subjective levels of time pressure. But, the research of perception of time pressure and ICT use is another area that has been limited. The existing research of time pressure have made clear that working hours, non-standard work schedules and spending more time on domestic tasks cannot alone explain the tendency towards perception of accelerated pace of life. Chesley also identify that the type of ICT, use frequency and use context, unsurprisingly, is of high importance when understanding ICT use and worker assumptions. There is a tendency that research focus on the use of single device or application in isolation. Few studies compare how use of different devices or applications might influence. The lack of attention to context also needs to be addressed, because the level of distraction about what ICT to use is very likely to vary across different contexts in important ways.

Chesley concludes that the results contribute to three general findings regarding the literature on social consequences of ICT use. First, ICT use is predictive of workers perceptions of work demands, workload, feeling of time pressure, and job performance. That is, ICT use is connected to real social consequences in people's heads. Second, the usage of different devices and applications may produce different social consequences. When it comes to mobile phones, the survey is a bit out of time even though it was published 2010, as much development has taken place here since their referenced survey from 2002. The literature part in the study identifies that those in higher-status occupations are at greater risk for work-to-home conflict. In Australia mobile phone use was not typically work related 2008. Third, and more importantly Chesley identifies that context matters, also that the role, which ICT use play in shaping social consequences need much more research here. As we in the continuation try to further develop theories of what influence ICT it is clear that context play a crucial role for understanding the social consequences. It was conduced that researchers need to pay much more attention to the variations in the social setting. Computers and e-mail are much more important for shaping work based perceptions, while the use of mobile phones and computers influence overall pace-of-life.

### *ICT demands effect on well-being and the moderating effect that ICT support can provide*

Day et al. (2012) have examined the impact of ICT on employee well being. The authors have designed measures of both ICT demands and support, and identified eight ICT demands (i.e., availability, communication, ICT control, ICT hassles, employee monitoring, learning, response expectations, and workload) and two support measures (personal assistance and resources/upgrades support). The ICT demands identified in the study were associated with increased strain, stress, and burnout. After controlling for demographics, job variables, and job demands these demands were still associated with stress and strain. The two identified types of ICT support (resources/upgrades support and personal assistance support) were associated with lower stress, strain, and burnout. Resources/upgrades support moderated the relationship between learning expectations and most strain outcomes. Personal assistance support moderated the relationship between ICT hassles and strain.

The purpose of their study was to (1) develop a multidimensional scale designed to assess ICT-specific demands and supports at work; (2) examine whether ICT demands and supports can explain additional variance in employee stress and strain outcomes after controlling for the effect of more general job-role demands; and (3) examine the direct and moderating effects of organizational ICT support on the ICT demands-strain relationships.

Perceived stress as a psychological threat is how the individual views a situation as potentially threatening. Here, demands and stressors can be distinguished from perceived stress coming from “objective” events and subjective reaction to demands. Strain is the physiological/behavioral/psychological outcome of perceived stress. Burn-out can be characterized as another long-term reaction to stress, which is contextualized to the work environment. It is operationalized in terms of emotional exhaustion, cynicism, and reduced professional efficacy.

### *Applying theory of decision style to describe employee email behavior*

Shirren and Phillips (2011) have identified that previous research has used self-reporting and rating scales to address employee email behavior; an approach that may fall short regarding managements capability to monitor the behavior. To remedy the situation they suggest that Janis and Mann’s model including four identified decision styles can be applied. They designed this study for trying out the relationship between each of the decision four styles, i.e. vigilance, hypervigilance, procrastination and buckpassing in relation to email behavior in organizations. In their study forty-four individuals completed a communication diary and questionnaires aimed at investigating the usefulness of the studied decision model.

The authors had identified that in resent study in across five countries it was revealed that 74% percentage of managers experienced stress from information overload. It had been identified that the amount of information available to employees had increased, this whilst workloads had not decreased. The constant barrage of increased information also lead to increased number of disruptions that again contributed to information overload. Another finding were that demands to respond immediately could extend beyond regular work hours. Many work related ICT devices are mobile, opening up for employees to

continue working even when they are not physically at work, also allowing individuals to be more accessible. Problem is that although ICT can foster flexibility for employees as it makes it easier to complete work away from the workplace, the increased accessibility tend to create a feeling of “always on work environment”. A feeling that also resulted in greater expectations for employees to be constantly available and accessible outside of work hours. The lines between work and nonworking became blurred. Such a constant connectivity to the workplace risked preventing employees from mentally detaching from work and leading to increase fatigue and negative mood. Conversely it was identified that employees who actually use less ICT at home for work purposes tended to be better at keeping work and home lives separate. Employees who frequently used ICT were more likely to report feeling of overload. ICT usage did lead to more efficiency, but it also increased the amount of workload. All in all the effects from these demands could be seen as having a lack of control over work related ICT, which in its turn could lead to increased employee strain. Another finding that could lead to negative feelings toward ICT was expectation from organizations for employees to master complex ICT. The work of constantly learning new ICT can be frustrating for employees. Effective communication is a cornerstone in organizations, and ICT-mediated communications can lead to more miscommunication. Frequent miscommunication may in its turn result in negative employee outcomes, such as employee anger. Another area is monitoring. Employees may perceive monitoring to be an infringement on their personal space and privacy. The results can be increased stress and strain symptoms including depression, anxiety, anger, health complaints, and fatigue.

It was also identified a large body of literature showing that general organizational support is associated with positive employee outcomes, e.g. improved mood, greater job satisfaction, and decreased strain. Organizational support can buffer some of the negative effects of workplace demands on employees’ health and well-being. ICT- specific support could also buffer the effects on the relationships between ICT demands and strain. A general supportive climate in organizations could include: organizations that ensure that they have competent IT professionals to assist and provide adequate resources. Providing resources in the form of training to employees when new ICT is introduced into the workplace can boost employees’ self-efficacy and confidence related to new ICT. Whereby reduced perceived stress and strain symptoms could be the result. Studies have demonstrated that employees who were properly trained to use ICT and also had been involved in the implementation of the new ICT experienced less stress, dissatisfaction and strain. Consistent technical ICT support can also increase employees’ engagement with ICT.

Identified results in relation to each identified specific decision style are as follows. A vigilant decisional style involves making a decision by carefully considering all alternatives, and using all the information available. The vigilant identified individuals in the study demonstrated to be less likely to postpone opening email that they receive, as it could include vital information. Hence, they seemed to deal with each email as they came. This also could explain the lower proportion of emails that were opened later, as they were replied to immediately. The vigilant individuals did delete a higher proportion of their personal emails, which indicated that they were better at monitoring and filtering out emails that was disruptive or inappropriate to their work.

Procrastinators have been identified to send work-related email as a way of putting off other tasks, whilst still giving the impression to others that they are working. They are also more likely to procrastinate on tasks for which there were few sanctions if they were discovered. It was predicted that individuals scoring higher in decisional procrastination would be more likely to reply to personal emails immediately, but the opposite was found. The present study suggested that procrastination appeared to lead to time lags during interactions, and delaying feedback and causing problems for effective collaboration.

The present study suggested that buck passers 'lurk' and are less likely to respond. As with procrastination, buckpassing was also associated with immediate opening and delayed response to personal emails. This relationship was not expected because personal email is usually addressed directly by procrastination and buckpassing personalities to these. The authors speculated if the findings arise because both buckpassing and procrastination are avoidant decisional styles.

The present study was unable to identify a relationship between hypervigilance and the email response measures studied.

The authors conclude that a communication diary can indicate decision style, which in its turn can enable prediction of behavior regarding personal and work-related emails at work. Based on their study results they also recommended organizations to educate employees in how to respond to emails in a more adaptive manner, or install systems which sort and prioritize emails in more efficient use of email and reduce the number of low-quality emails that employees get.

### **Seven discourses regarding stress years 2000 to 2009**

Many of the problems revealed in the literature between 2000 and 2009 still remain in professional organizations of today. Many of the tools, such as e-mail and newsgroups, are also considered to be part of what today goes under the term social media. We see that early information overload appeared among knowledge workers emails (Bellotti et al., 2005). Information overload often lead to stress (due to lack of control), loss of job satisfaction, and physical ill health. In this period of time the question was raised how long we should accept IT to be the driver instead of being a tool in the service of humans. Terminology such as analysis paralysis, information fatigue syndrome, and data smog reveals how the continuously growing amount of information was perceived in the worst cases. There was no doubt that having more information than one can assimilate is stressful. Overload of information, and worries about having missed an important piece of data in the massive volume of data often lead to distraction, stress, and increased errors.

### ***How the quality of activities and interdependent tasks influence email***

Bellotti et al. (2005) that focused email in three organizations identified that there is more to the issue of information overload than the issue of quantity. The complexity in email management is also related to the quality of email users activities, and besides this overload was also a result of demands of interdependent tasks such as waiting on responses from others. 2005 the authors identified that past research on email task management has conceptualized email as a filing cabinet. Consequently the identified largest

challenge has been the email volume, i.e. the time it takes to file and retrieve messages quickly increases until the user feels overwhelmed. In this study of knowledge workers the authors did identify a complementary understanding of email overload. It was identified that the email configuration tactics are as varied as the people themselves, again a viewpoint that seemed to be missed out in previous research. Quality of emails was just as important as quantity of emails. The number of people involved in emails mattered. In 45% of the email activities there was involvement of more than 20 people, 30% of the activities involved 2 people, 10% involved three people, 5% involved four people, and 4% five people. It is interesting to notice that even the most technology-sophisticated users only used a fraction of all possibilities in the email client.

Knowledge workers must accomplish a number of simultaneous goals in which email plays a big role, i.e. responding to requests, tracking requests to others, keeping up to date, managing information as it comes in, making deadlines, distributing information, and being prepared for events. Six key challenges were identified: keeping track of lots of concurrent actions, marking things as important or outstanding, managing activity over time or keeping track of threads of activity, managing deadlines and reminders, collation of related items including email and documents and event-based collation of documents and discussions, and finally getting a task oriented overview at a glance rather than scrolling around and inspecting folders. Knowledge workers often switched between separate activities with different objectives. Much of the work was non-problematic, but still very time consuming. The problems with independent tasks were: managing and switching between multiple applications or components of applications (each opening and closing takes time), keeping messages together within threads of activity and in view; making resources related to any thread easier to access from that thread, aggregating information about threads of activity (it is hard to find and get overview of the to do's) (Bellotti et al., 2005).

Strategies and task management tactics for accomplishing objectives are interesting as the details of these provide a basis for understanding the extent of the overload challenge. Strategies were to save content that might be needed again in the future, remind themselves of things to do in the future, preserve ongoing work-status of incomplete activities, prioritize the 'must do' against what would be nice to do, get rid of irrelevant content, finding things in an overwhelming growing mass of content, and keep relevant content at hand. Task management tactics were to scan mailbox regularly including scrolling up and down, deleting items to clean out irrelevant and distracting content, sorting by sender or flags to enable easier identification in time and date based view, storing currently relevant content in task bar, storing emails in folders and subfolders which are labeled; marking emails as unread to remember coming back to them, archiving emails, saving attachments in folders for reference, inspecting and searching in folders of emails, making calendar events as reminders of to do, checking and marking the calendar to confirm availability before responding. Regarding the tactical level there was also identified an enormous amount of variations, and outside of email resources such as paper-based notes, notepads, printed emails, sticky notes – sometimes in combination with computer based resources (spread sheet and calendar). In the light of these

strategies and task management tactics it becomes obvious that there is more to the issue of information overload than the issue of quantity.

### *Negative impact of information technology (IT) on organizations and individuals*

Based on previous research (Dewett and Jones, 2001) provided a broad overview of how IT impacts organizational characteristics and outcome. Note that this paper developed an early understanding of IT as it was considered before the social media boom. The year of this publication, 2001, the first social media had just started to spread, the concept was not known as social media, and many social media applications did not yet exist. Still it is interesting to note that many of the identified challenges hold also today, more than 15 years after the publication. In this paper it is discussed which role IT plays in moderating the relationship between organizational aspects and the following characteristics: size, structure, culture, learning, interorganizational relationships and the most strategic outcomes, organizational efficiency, and innovation. The paper especially considers the negative consequences and limitations of IT. Five main organizational outcomes of applying IT that embody these benefits are identified, i.e. IT links and enable employees, IT codifies the knowledge base, IT increase boundary-spanning, IT promotes efficiency, and IT promotes innovation.

Regarding *IT links and enable employees* the authors identified that ICT has been shown in literature to increase the amount of communication in organization. This might be the most fundamental benefit of it. Especial the horizontal communication had increased. Critical information was more accessible and transparent to employees, which increased potential of problem solving. On the downside it was frustrating that there might be just as much bad advice as good advice. It was also identified that both soft information as well as meaning of information is hard to reveal.

Regarding *IT codifies the knowledge base* the authors did identified that human memory in general is both fallible and subject to erosion and error. ICT have greatly facilitated organizational memory and thereby also the ability to capture and integrate knowledge by making it easy to codify, store and retrieve, communicate and assimilate. Whereby an improved ability to apply past and current knowledge to issues facing the organization appear. On the downside the screening of, packaging of, and interpretations of the many messages and information networks easily lead to both information overload and problems of delivering timely decisions for managers. Note that pinpointing managers in this publication is a typical sign of the time period 2001 with early ICT. Due to the spread of social media today 2016 this problem concerns all employees in today's organizations. There was good hope for solution to remedy the information overload problems at this point of time based on pull technology and consultant support leading to information that has already been managed in size and utility. However, 2016 we still seem to have similar problems as 2001.

Regarding *IT increase boundary-spanning* activities. Through IT not just access to prior knowledge appeared, but also the option to search for and absorb new knowledge relevant to a problem at hand. Previously employees had to search in their networks for this information, not knowing if it exists or not. 2001 there was a new means available through IT. On the downside it was identified that generally accepted personal and professional boundaries of time and space was violated. The communication links mail and voice mail could be

maintained after hours away from the office, an act that leads to this erosion of working and leisure norms.

Regarding *IT promotes efficiency*, it was identified that communication can take place more easily and less expensively, across time and geographical location. Communication will be done more rapidly and with greater precision to targeted groups. It was also possible to record and index the context and the nature of communication events more reliably and inexpensively. Also to more selectively control access and participation in a communication event or network. It is easier to track progress when group members have a common electronic workplace. It will also reduce the costs of sending and receiving information dramatically. No longer must information move from person to person sequentially. This part did not mention what the downsides might be.

Regarding *IT promotes innovation* there was identified that the role of IT in promoting innovation was very underrepresented in literature 2001 because of the focus on efficiency enhancing properties. Improving the initial base of knowledge to draw from when engaged in problem solving and decision-making facilitates innovation. The sharing and integration of expertise within team and partnership through real time interconnected IT lead to knowledge leveraging and innovation. Results could be cross-functional synergies resulting in competitive advantages. This part did not mention what the downsides might be.

#### ***Causes and severity of end-user frustration***

Ceaparu et al. (2004) investigated causes and severity of end-user frustration. Applications where frustration happened most frequently were web browsing (122 reported experiences), email (49 reported experiences), and word processing (45 reported experiences). Due to investigating the users own choice of applications, the results did not say anything in comparison with other applications; it rather reflects some of the most popular task applications for users. Most cited causes were error messages, dropped network connection, long download time, and hard-to-find-features. Time lost due to frustrating experience was in-between 47% to 53% of the actual time spent on the computer. After removing all extreme cases the time was still above 38% of the total time spent. Other numbers were included regarding how the studied people themselves thought and responded to the frustrating errors, i.e. I know how to solve it as it has happened before (27%), unable to solve it (16%), figured out a way to fix it myself (14%). 74% of the reported frustrations were rated on a scale between 6-9, i.e. highly frustrating. The study also showed that a paper manual is not sufficient solution to the problem of frustration. In general the participants reported high levels of frustration as well as large quantities of wasted time. Other aspect of user frustration was the question if such negative experience impact how users interact with others during the working day.

#### ***Strategies for and the consequences of controlling and monitoring employees***

Miller and Weckert (2000) examined workplace surveillance and monitoring. It was identified that workplace surveillance and monitoring could be justified in some circumstances at the same time as these conflicts with privacy as a moral right. The aim of this paper published 2000 was to examine employee monitoring from a philosophical point of view, whereby the emphasis was on argument and analysis and not on original empirical work. In the paper the

monitoring of emails, listservers and Internet was examined. The authors did find that many of the common justifications for monitoring and surveillance do not stand up to close scrutiny. The problems around surveillance and monitoring did arise from A) New software and new possibilities of data collection. Year 2000 these authors pointed at the problem that computer were capable of enabling highly personalized and detailed voter profiles; telephone tapping; virtually undetectable listening and recording devices; and minute cameras. Keystrokes can be monitored for accuracy and speed, your screen can be brought up on someone else's screen without your awareness, all mails, listservers and sites you visit can be collected and monitored. The largest threat would be a combination of such new technologies. B) The conflict between the fundamental moral obligations to respect the individuals right to privacy and the employers requirements for monitoring work performance. C) The law enforcement agencies requirements to monitor communications and financial transactions of organized crime.

Privacy has both a normative and a descriptive side. The normative is that privacy is held to be a moral right or at least an important good. The descriptive side consists of not being interfered with or having some power to exclude. These sides are to be interconnected, what ought to be must be something that realistically could be. Definition of privacy is difficult. For example, there exists a definition that claim if someone in society is prepared to disclose everything about themselves it could be considered as part of privacy. Miller and Weckert (2000) claim that this clearly is not privacy; instead they argue that these people have rather chosen to abandon the condition of privacy. Privacy is a desirable condition, a moral right or power that a person have in relation to other persons with respect to information hold by other persons about him/herself, or observation of him/herself.

What then is private? Miller and Weckert (2000) have identified that a persons intimate personal relations are private, e.g. feelings of love and lowers feelings. What a person earns or how much money he/she has is often held to be private information. Ownership of something can be perceived as including a right to disclose information about that something. Various public roles and practices, e.g. voting, business plan and sexual preferences can be viewed as subjects where there are good reasons for being private to avoid that other people use the information negatively against you. There is also another type of general privacy that is required for autonomy, i.e. planning and reflection. Providing knowledge about your plans can enable others to hinder your strives and plans. Another view of privacy here relates to a person's inner self, which can include thoughts, emotions, beliefs, bodily sensations and states. Still, there are situations where providing information about inner self would be appropriate, e.g. to a doctor, psychoanalyst, or counselor insofar as this was necessary for successful treatment. In these cases it would be a matter of confidentiality

Why violating privacy? Employers and the general public might argue that higher profitability and higher quality of goods and services is one positive result from monitoring and surveillance. Computers might actually be able to help employees to do their job better as monitoring could provide a basis for coaching. Employers also claim that they have some rights in seeing that the employee is working satisfactorily. It is also in the interest of other employees



and the general public. The general public does not want to buy overpriced products, and co-employees do not want to work harder just because colleagues are lazy. In the end this could also be seen a question of violating human's rights, and possessing the role of employee does not confer the right to violate these rights.

Philosophical arguments identified by Miller and Weckert (2000) against monitoring and surveillance are: the unacceptable consequences to the persons well being, i.e. ill health, stress, and lowering of morale. Another type of reasoning regards infringement of employees right to privacy. There are evidences that monitoring can lead to that employees suffer health, stress and morale problem. Whereby the benefits of monitoring and surveillance must be weighted against the drawbacks of it. A counterproductive scenario is that employers that use surveillance and monitoring will not attract or keep good employees. Using a metaphor, slavery cannot be justified on the grounds that some slaves do not mind being slave given that they do not know of, or have a better choice. Translated to an employee monitoring and surveillance, violations cannot be grounded on the fact that employees are willing to accept it. Whilst a hospital patient might be monitored for her/his own good, and a prison inmate might be monitored for the sake of protecting the society – monitoring employees is a different story. Another metaphor, just because two people are conversing on my property or in my house it does not give me the right to listening to what they are saying. It is also interesting to reflect over what taking responsibility might mean, for many it must involve being left alone with option to fail, and from this point learn and do better. It is also interesting to notice that the conception of employees that those who favor monitoring tend to have in mind are those who do repetitive jobs that do not require much autonomy.

#### ***Management practices attempting to reduce and control employee Internet abuse***

Young and Case (2004) studied management practices attempting to reduce and control employee Internet abuse. The study examined the three areas: Internet use policies, management training, and employee rehabilitation – and their perceived effectiveness. Already 2004 it was possible to logging Internet conversation, screen shot capturing, web activity, keystroke monitoring to track employee Internet usage on daily or weekly basis. In this point of time some companies had also fired employees for distributing potentially offensive emails and violent subject matters, and terminated employees for spending time at pornographic and shopping sites. Also Internet addiction had started to gain increased attention in relation to firing and terminating employees. Employees that were fired had actually sued companies using on Internet addiction as the main explanation and requesting rehabilitation option. Moreover poor employee moral was identified as a risk when more control of employees was introduced. Out of the three investigated management practices the authors found that Internet policies was the most utilized (50%) one, management training came on second place (20%), and third came rehabilitation of employees (2%).

#### ***Computer mediated information seeking behavior***

Ramirez et al. (2002) did investigate the research on computer-mediated communication and identified that there at this point of time was provided a limited view on information-seeking behavior. The authors revealed new options for hidden information surveillance and the influence of personal characteristics,

situation and context in information seeking. The authors did propose a conceptual model for its examination via computer-mediated communication and new media. The authors discuss strategies for seeking social information and identify factors influencing their selection. The discussion is limited to social information seeking, which at that point of time was an understudied area of computer-mediated communication. It is argued that early perspectives do not acknowledge information-seeking behavior as a means to compensate structural limitations of a medium.

The growth of computer-mediated communication and new media have brought with it new instantiations of seeking information about others. The existing (old) theoretical perspectives does not account for this media. It is identified that new conceptual models need to be outlined. This article outlines one such theoretical model. Parts of this model are: New media offers *interactive strategies* that can direct the interaction between communicator and target, i.e. interrogate the target, or elicit reciprocal disclosure, or attempt to relax the target. *Passive strategies* involve acquiring information about target through unobtrusive observation, e.g. being carbon copied or blind cc in mail; logging in to but not participating in community forums or real time chat forums. *Active strategies* involve acquiring information about other individuals without direct contact with them. Can be to use of third party information sources, e.g. mail or chat with people familiar with the target. There are *communicator-related factors* such as personal characteristics, skills, and preferences which all influence the pattern of information seeking. There are *situation/context-related factors* that reflect the effect of external influences that matters in the information seeking, e.g. available time, time or day, or physical distance. There are *goal-related factors* that influence. Short or long-time goals, and difference in duration (e.g. in short time span synchronous and direct communication might be preferred) can all affect choices. Some goals require direct contact with target. There are *technology-related factors*; such as if a technology is transparent, or easy to use and trustworthy, e.g. email might be less attractive in comparison with phone call.

#### ***The effects and spillovers of IT on the work-family, and family-work situation***

The study by (Kinnunen et al., 2006) concerned work-family measure demands in both directions, i.e. family-to work and work-to-family, including both negative and positive spillovers. Due to a situation where the stress perspective has been emphasized, the study of benefits of the multiple roles has been neglected. The multiple roles in this paper hence refer to negative work-to-family spillover, negative family-to-work spillover, positive work-to-family spillover, and positive family-to-work spillover, i.e. a four-factor model. In this study positive and negative spillover was measured in family and work in both directions. The experience of spillover was also measured taking into account gender, number of children, occupational status and working hours. A third aim was to examine whether negative spillover from work to family and from family to work was equally related to decreased well-being; and whether positive spillover from work to family and from family to work was equally related to decreased well-being. Context free well-being (psychological distress), family related (material satisfaction), and work related well-being (job exhaustion) was studied.

Existing role stress theory points out that conflicts may originate from either of the domains family or work. Time based conflict relates to time pressure from either of the work or the family role, a pressure which prevent a person from fulfilling expectations in the other role. Strain based conflict is when strain or fatigue in one role affects performance in the other role. Behavior-based conflict appears when specific behaviors in one role are incompatible with behaviors in the other role. In conflict theory these are called negative spillovers. It is identified that negative spillover from work to family is related to negative spillover from family to work. Previous studies have reported that work-to-family conflicts occur more frequently than family-to-work conflicts. The two domains of conflicts are: *family* which includes family dissatisfaction and distress, poor family-related role performance; *work* which includes work dissatisfaction and distress, and poor work related performance. Both family and work are related to physical health, mental health, and health related behavior of employees. Hence, both types of conflicts may have same kind of effects on individuals.

In existing role enhancement theory one view points out that multiple roles brings rewards in the form of income, opportunities for social relationships, heightened self-esteem, and experience of success. Hence, a combination of roles can have positive rather than negative effects on well-being, and only above certain limits there will appear overload and distress. Positive identified concepts here are positive spillover, resource enhancement, work-family success or balance, and facilitation. In addition family can effect work life by offering social support, e.g. talk through difficulties at work.

Results of the study were: positive work-to-family spillover was reported most often and negative family-to-work spillover most seldom; negative work-to-family spillover was strongly connected to low well-being at work (job exhaustion); skills (e.g. time management at work and at home were of especial importance) and positive mood were seen as the main means by which spillover occurs; negative family-to-work spillover were related to marital dissatisfaction; both positive and negative work-to-family spillover were related to job exhaustion; long working hours is a risk factor for negative work-to-family conflicts for both genders; high number of children at home contributed to negative family-to-work spillover and positive work-to-family spillover for both genders; long working hours and high number of children at home was a risk factor for work-to-family spillover.

## 5. Social Media and Power Relations

### Overview of power relations results

Our literature review reveals that *social media* and *power relations* is a subject that is not included in the mainstream debate during the last five years. In fact, the combination only leads up to two included papers. Judging by number of citations for the included power relationship papers, i.e. 15 and 6, we can safely conclude that the subject is not part of the in this study identified main stream debate related to any of our study interests. We identified only two papers that clearly adressed this combination of subjects (still we can find the subject implicity included in many other papers). Rightfully, there is really just one

paper that actually can be claimed to be frequently cited, with 15 citations (Goyal, 2011) compared to the other paper that have 6 (Frizzo-Barker and Chow-White, 2012) citations.

What then can still be said about this theme based on the included papers? The subjects concern female participation in technology usage.

The first paper discussed household production technology as a means to increase female equity and efficiency in the labor force (Goyal, 2011).

The second paper provided evidence of how women actually use smartphones and apps to mediate paid and unpaid work, finances and health, relationships in the context of everyday life (Frizzo-Barker and Chow-White, 2012).

One paper refers to theories in its argumentation, i.e. *theory of technofeminism* plus *theory of network society* in its arguing (Frizzo-Barker and Chow-White, 2012). The methodologies used are literature overview together with quantitative model in one paper (Goyal, 2011), and in depth interviews in the other (Frizzo-Barker and Chow-White, 2012). Both papers have a global preference. Frizzo-Barker and Chow-White (2012) studied people in US that with China, Korea, East India, and white ethnic backgrounds. The focuses of the studies have been on how ICT can restore flexibility for female labor (Goyal, 2011), and to understand in-depth how women that use smartphones and apps on a daily basis use and make meaning through social media and popular apps to do with parenting (Frizzo-Barker and Chow-White, 2012). Both papers are presented below in more detail.

## Two discourses regarding power relations

### *Household production technology as a means to increase female equity and efficiency in the labor force*

Goyal (2011) introduced a concept called “household production technology” that had the potential to increase the equity and efficiency of female participation in the labor force. The author argued that ICT helps restore flexibility in female external labor supply since it facilitates flexi-time and location activity, distance work, making it easier to both match skills to jobs as well as to maintain and upgrade skills. A main identified problem is that social structures and perceptions require intervention to become supportive. In relation to this it is advocated that ICT has the potential to contribute to overall development for poorer women in less-developed regions of the world, that is, if appropriate policy exist. A model is introduced as a sort of laboratory allowing non-obvious insights into the process of understanding, or to the testable predictions it generates. The result of the paper is that participation of women in ICT should rise. But before it can do so exclusion due to power and self-reinforcing traps, perceptions of limitations have to be removed. Conclusions drawn were that participation of women in ICT should rise. But before it can do so exclusion due to power and self-reinforcing traps, perceptions of limitations have to be removed.

### *How women actually use smartphones and apps to mediate paid and unpaid work*

Frizzo-Barker and Chow-White (2012) presented results from a qualitative study based on in-depth interviews with women regarding their smartphone and app usage. Conclusions were that qualitative studies of women’s uses of mobile

technologies are in their early stages. This together with insights of how a diverse group of women use smartphones and apps to mediate paid and unpaid work, finances and health, relationships in the context of everyday life. Examples were presented of how women use digital technology to facilitate greater efficiency, flexibility, and connectivity. Also examples on how women handled the “always on” lifestyle were presented. It was made clear that more qualitative studies of women’s uses of mobile technologies are in their early stages needs to be don.

## 6. Social Media and Leadership

### Overview of leadership results

In this theme it was identified five papers in total. Judging by number of citations for the included leadership papers, i.e. 8, 4, 4, 3 and 3, we can safely conclude that the subject is not part of main stream debate related to our studies inclusion criteria. It can be said that *leadership and social media* is a combination in need of more empirical studies. The identified discourses in order most cited to last cited regards:

Leadership visibility and social media (Maslin-Ostrowski et al., 2011) 8 citations;

Leadership in different generations and social media (Venters et al. 2012) 4 citations;

Consequences of the rapidly growing amount of e-mails (Karhula et al., 2011) 4 citations;

Leadership/governance models for social media in companies (Candace Deans, 2011) 3 citations; and

What social media knowledge is needed for professional emergency management (Crowe, 2013) 3 citations.

One of the papers refer to a theory in its arguing (Venters et al., 2012), i.e. the Five Practices of Exemplary Leadership by Kouzes and Posner from 2007. Methodologies used are pure literature overview (Venters et al., 2012); and literature overview combined with in depth interviews (Maslin-Ostrowski et al., 2011); case study based workshop and questionnaire (Crowe, 2013); and on e-mail from two professionals collected during one months time (Karhula et al., 2011). Studied countries were United States and Finland (Karhula et al., 2011). Below we present all the papers in more detail.

### Five discourses regarding leadership

#### *Leadership visibility and social media*

Maslin-Ostrowski et al. (2011) present results from small qualitative study addressing how leadership visibility is complicated by social media. With the new media there has followed increased expectations, and immediacy of media reporting. Leaders of today must contend with media in a different way than previous leaders. People have become accustomed to information at ones fingertips, often through smartphones. In the study it is presented how social media challenge the integrity of leaders. There is often a painful disconnect between how they view themselves and what others are saying. Sooner or later the leaders will be misinterpreted and misunderstood. Having a good

relationship with journalists is no longer enough as Internet is open for anyone. Blog and e-mail are two main channels for communicating about leaders. Given the ease of making accusations online the situation today is that any leader can easily be a target. On Internet there is often no demands on having facts, it is rather a write what you want in a forum with no hard requests on accountability. Digital stalking appears, and you cannot control the story. Conclusions made are that leadership preparation needs to also include how to handle the new media; having a media relationship expert becomes important; or hiring a firm to protect the identity on the web; and being both self aware and mindful of human imperfections.

### **Leadership in different generations and social media**

Venters et al. (2012) discussed social media and leadership related to different generations of ICT users. The Five Practices of Exemplary Leadership by Kouzes and Posner (2007) is suggested as a way forward for incorporating social media in organizations. It is claimed that the generation differences will cause significant challenges. Negative concerns have been that employees will never embrace social media, employees will post incorrect information, post inappropriate things, and social media systems will contain sensitive information. The authors discuss differences between the generations called Millennials (born 1981-1997), generation born 1998- called Z, and the preceding generation called generation X and their preceding generation called Baby Boomers. Younger generations have higher expectations on promotions, and also seek employers whose values match their own. The older generation wants their challenging tasks to be solved over several days, whilst the newer generation wants them to be solved within the same working day. The younger generation wants to have flexible hours whereas older generation wants regularly scheduled hours. The younger generations were also more "me" oriented. It is identified that 75% of the youngest generation has profiles on social network sites. 2010 49% of the workforce was women, it is predicted that within the next decade this number will grow to 60 %, which is interesting because female are considered to have more potential to use social media networking than males (Bingham & Conner 2010). Five Practices of Exemplary Leadership, i.e. *model the way* by clarifying and affirming as well as setting example of why it is important for the organization to use social media systems; *Inspire a shared vision* by envisioning possibilities for the future and establishing a common vision for employees by aspiring to shared aspirations; *encourage the heart* of employees by praising them for using social media and communicating the positive impact of these systems; *Challenge the process* by challenging status quo and looking for innovative ways to use social media.

### **Consequences of the rapidly growing amount of e-mails**

Karhula et al., 2011) discussed the consequences of the rapidly growing amount of e-mails for physicians within primary healthcare. The authors have investigated how physicians feel about the use of e-mail in-between themselves, with their managers, and with other people contacting them - when information about individual patients is excluded. The objective of the study was to reveal what the attitudes of primary care physicians are towards e-mail at work. Comparison of data was done regarding rural and urban locations, those who received education from Finland and elsewhere, and lead position or not. SWOT

analysis revealed the following strength of email: ability to reach several people at the same time, fast media to reach people, ability to use convenient time, easy to use. Weaknesses were too much information to read whereby main point risks being missed, impersonal tool for communication, excess of junk mail. Other findings was that different educational background/country resulted in different views regarding familiarity and usage, and that employees in lead positions where more positive to the idea that e-mail is good for mediating information. The latter group was also more active users of e-mail. E-mail was not considered as a suitable alternative communication means that could compete with personal communication. Employees also reported that the limited time resources allocated to read and answer e-mails during working hours placed e-mails in the box of “not highly appreciated.”

### *Leadership/governance models for social media in companies*

Candace Deans (2011) present four leadership/governance models for how social media is controlled and steered in companies. Another result was to provide evidence for the paradigm shift in the Chief Information Officer role that has been predicted by other researchers. Social media have changed the way companies can engage and interact with customers, as well as the way they can collaborate and interact internally. The movement caused by social media has also been identified as the dawn of a new era which IBM coined as “social business” to describe the business transformation and the pervasiveness of this phenomenon across the organization. This is a shift leading to a need of rethinking organizational structures and the functional silos and strategy developments. Hopefully also a shift with potential to gain new competitive advantage for companies that succeeds here.

Internal strategies need to address employee social media networks and the use of collaboration technologies, recruiting applications and research and development applications that may include both employee and external constituencies. External strategies need to address customer-facing applications that rely on marketing expertise, as well as social media applications for business partners in a business-to-business context that may or may not involve marketing. The distinction between internal and external strategies is of importance because of brand protection and other social media implementations that anyhow involve marketing. Hence, these types of implementations fall under a marketing responsibility for a Chief Marketing Officer. On the other hand, employee-facing strategies and other social media applications fall under an information role responsibility for a Chief Information Officer. Alignment across these two domains and roles is an organizational governance challenge. There existed guidelines 2011 for helping leaders to develop social media strategies, but none of these specifically addressed solutions to the leadership, governance, and ownership issues of social media even though the need was identified. According to studies marketing tends to be fast-paced and creative, always looking for new opportunities, whilst at the same time marketing leaders are less likely to understand fully how technology works or which the included security challenges are, and other risk concerns faced by the IT organization. Whereby it is identified that social media strategies require a close partnership between information and marketing roles. Four existing social media leadership/governance models were discovered in their own study.

In model A the Chief Information Officer lead the technology initiatives, including social media. In model B the Chief Marketing Officer was leading the customer-facing social media strategy, this with or without formal IT involvement and technical support. In this model, social media goals, accountability, objectives and incentives remain in the separate domains of IT and marketing. In model C there is a joint ownership including strong collaboration between Marketing and Information roles. Identified evaluations, compensation and incentives are based on mutual performance and deliverance of shared objectives and goals, i.e. new suggestions will be created jointly. Model D was based on the assumption that social media transcends both marketing and IT in a situation where neither the marketing nor the information role has ownership of the social media strategy. Collaboration across executives is essential, and there is a need for strong leadership and involvement from the Chief Executive Officer.

Based on the results the author came up with four recommendations. First, involve marketing management roles in IT governance. Second, Align customer-facing marketing initiatives with IT. Third, establish collaborative relationships between marketing and information roles. Fourth, Assess both current and future needs for social business.

#### ***What social media knowledge is needed for professional emergency management?***

Crowe (2013) discuss what social media knowledge is needed from professional emergency management to cope with today's disaster situations. At the same time as social media systems of all kinds have grown exponentially it is also identified that the general public has adopted social technologies at an astronomical rate. Citizens are utilizing social media during disasters of all sizes throughout the world. Nearly every minor and major emergencies, as well as large-scale disasters are overwhelmingly affected by social technology such as Facebook, YouTube and Twitters. Some of the first larger recognized evidences emerged during the London bombing 2005 and in the Virginia Tech shooting in 2008, and thereafter globally on all types of emergency situations. The level of public adoption of social media systems is revolutionary to public organizations. The old view has been that local constituents needed the oversight, control and approval of governmental organizations to fully function after a disaster. Many government leaders and emergency managers saw themselves as the sole source of support, resource management, and recovery means in communities that had been affected by disasters. This at the same time as many communities had begun to address needs outside of official government sources through third-party donations management groups, emergency volunteer networks, and other organizations that could leverage the capability. Also the ways disasters are reported have changed radically.

The previous messages by media and authorities were often funnel structured to allow the most important details to be present early in the message. Additionally, these messages were designed to be empathetic in nature, accomplished in the form of a quote from an elected official or community leader. On the contrast, one of the characteristics of social media is that it communicates at a pace significantly faster than the customary model of engaging traditional media. Another characteristic is that it is organic and often presented in a raw format and wording. Problem is that many in the general



public have begun to see these types of funneled and empathetic messages disingenuous and insincere. Social media is extreme in mass-connectivity and cost-effective. It has a speed and pace that is fundamentally different compared to previous old ways, unlike major traditional postal services, conversations communication via social media systems is nearly instantaneous. All in all together the old way actually risks create a lack of trust and, thus, loss of effectiveness in emergency situations. The entrance of social media has thereby distorted traditional leadership methods.

Social media has impact because it empowers the citizens or the body of followers to engage or deny leaders. A process that is often done organically and without the sway of financial burdens often seen in political campaigning. At the most fundamental level, social media can be said to represent a natural connection between people. Social media systems also leverage technology to facilitate conversations, collaboration and partnerships among co-workers, family and friends, and sometimes even with strangers. In the past, this level of connectedness would have been limited for geographical reasons to shared office spaces, household activities, church pews, water coolers or bar stools. While the technology does not allow the exact same level of connectivity that would be presented face-to-face, it is still obvious that more and more people are comfortable enough with the technology and the actual connectivity that it allows for. At its root, social media provides a kind of connectedness that proved to facilitate conversations. There is also a high cost-effectiveness following with social media as all large social media systems maintain full services that are free to any user interested in their services. Another characteristic is that because social media is available to anyone, it is very difficult to hide information or limit its access to the social media realm. Consequently, there follows a central concept in social media about being open and honest with all intentions. Social media allows also the affected user to have a voice and platform equal to the media outlet in a system where corrections, defense and updated versions can be released immediately rather than later via multiple other channels as would be the case in traditional media. This individual self-correction option supported by larger masses willing to spread the information also leads to systematic self-correction within social media.

All in all social media sort of pushes emergency management of today to structure own style and approach to meet social media. These leaders must consider how social media tools and methodical ways can help improve efficiency, magnification and collaboration with their own leadership challenges. Finally also how emergency management adopting this new leadership paradigm can maintain the high levels of humility and ethical principles necessary to ensure they are highly trusted by the social media component of their own community?

## **7. Social Media and Librarians**

### **Overview of Librarian results**

We initially identified 36 relevant articles, all published between 2010 and 2015, where librarians and social media are discussed in relation to the inclusion criteria's. After a review round the eight most cited papers was finally included.

The citations for the included papers are ranging between 12 up to 31. This gives Librarians 164 citations in total, and approximately 21 citations in average. We found that all of these included papers did qualify based on their implicit relationship to the inclusion criteria *professional identities* and *psychosocial environment*. But, we must make clear here that none of these papers discussed either of these two inclusion criteria explicitly as their main subject. Hence, the relationship to our studies themes of investigation is a weaker relationship than we hoped for. Instead the main subject that is discussed in all of the eight included papers is that new digital technology has caused different types of changes that influence librarians' role, work tasks and work situation. Carlsson (2012) with 13 citations, discourse is identified as closest to our area of interest, having both psychosocial environment and the identity of librarians in mind. From an ethnographic point of view she revealed that librarians in their psychosocial environment are not victims of technology change, instead they possess the means and power to control the interplay between social media and librarianship. In her view the identity of librarians can be characterized as active co-constructors in the ICT-developments rather than victims of technology change.

Three of the papers discuss new expectations, obligations and preferences between librarians and their customers (Chow and Croxton; 2012) 21 citations; (Pacheco et al. 2010) 16 citations; and (Sachs et al. 2011) 28 citations.

Two of the papers present detailed experiences of specific tools, which for us reveals a new complexity that librarian' have to incorporate in their identity and work environment. (Hricko, 2010) 17 citations; and (Glassman and Sorensen, 2010) 12 citations.

Two of the papers investigate the new role that librarians will need to take on to the entrance of new digital social technologies, i.e. (Shank and Bell, 2011) with 31 citations, discuss it from a partner role dependency point of view, and (Carlsson, 2012) discuss it from a technology change and being victim point of view.

In summary the low range of citations together with the fact none of the papers explicitly discussed any of our four inclusion criteria's tells us that our searched for discourses are not part of the mainstream discussions.

None of the included papers have used a specific theory as part of their reasoning; instead they discuss the different subjects based on empirical data. Carlsson (2012) have used ethnography for understanding librarians work practice in a Swedish context. The remaining 7 papers are discussed from a US context. Pacheco et al. (2010) have used survey and interviews as the method of investigation; Chow and Croxton (2012) have used online survey, focus groups and interviews; Sachs et al. (2011) have used survey; Shank and Bell (2011) and O'Dell (2010) used pure literature overview, and reasoning in the papers are based on own experiences. Below the eight included papers are presented in more detail.

## **Eight discourses regarding librarians**

### ***Social media change the expectations on librarian's role***

O'Dell (2010), one of the top five most cited papers, have identified social media opportunities and obligations for librarians. In their paper social media tools for

communication and collaboration among scientists are examined together with the role that librarians can have in supporting faculty here. The starting point is that the situation regarding publication of research data and networking has changed with the entrance of social media. Identified hindrances for scientists to utilize social media are the fear of being scooped by competing scientist or lab, ethical issues related to collected data, and protecting commercial opportunity to patenting their work. Many scientific areas and funders have organized groups for how to handle sharing of data, and taken steps towards earlier sharing of data, openness, and increased communication and cooperation possibilities. Also many researchers are using social media such as blogging for reaching out and discuss research issues with other colleagues. In the paper a large number of social media tools are reviewed. Advices of how librarians can support researchers are provided. It is concluded that the library is not a separate archive of old information, but a part of the ongoing discovery process. It is important that librarians ensure that the research community knows the value that they can add to research processes. In today's situation we are freed from geographical and spatial restraints, and new problems need to be addressed, e.g. large-scale storage and retrieval of published data. It is clear that social media has impacted the expectations on librarians' role, services (identity) and the psychosocial environment. However, we did not identify any studies deepening in the psychosocial side that would be affected by this subject.

#### *Different user preferences on the librarians support role*

Another top five most cited paper by Chow and Croxton (2012) examined the information seeking preferences of university faculty staff, students and librarians. The subject of interest was in which way users would prefer having both research questions and factual questions answered by the library. User preferences for face-to-face, and the following five not in person support services offered by library was investigated: email, telephone, online chat, Skype videoconference, and text messages. Earlier studies have identified that users prefer particular types of mediums for particular types of questions rather than general solutions. Online video as a reference medium is beginning to emerge at academic libraries. The literature has also shown that regardless of role or age, information seeking behavior tends to follow the 'principle of least effort'. Users are naturally attempting to minimize the overall work associated with a subject of interest both now and in the future. What is considered as 'depth of information' differs among information seekers, more sophisticated information seekers may demand more in depth assistance and services. Email is a typical 'more in depth information service' compared to chat. Faculty and graduate students would typically be more advanced than undergraduate students. Despite a wide variety of digital options existing studies suggests that interaction with librarian is the first choice for the majority users seeking assistance. Current studies also suggest that information seekers may select their digital medium according to the type of question they have. The results of this study both support and extend previous research. *Support:* Face-to-face is still the preferred method among university users; Email, telephone and chat will remain as viable options; and the type of question does influence the type of medium. Information seekers will attempt to minimize the overall work associated with information seeking, and also seek the most convenient source for their

information needs. *Extend*: A person's role may determine the depth of an information need, which will influence their choice of preferred medium. Based on university status, age, gender, and race, specific users have particular preferences based on type of question. Faculty and graduate students ranked telephone for factual questions at higher levels than undergraduate students. Faculty prefers mail for factual questions at a significantly higher level than graduate and undergraduates. Students have higher preference for using text messages. Students tended to see online chat and texting to be quicker, more convenient, and allowing for exchange of links, whilst telephoning made it harder to multitask. All roles rated online chat relatively high for seeking help with factual questions. There was no significant difference between male and female, except for text messages that were ranked lower by female users. An insight was also that information seekers tend to use the mediums they are already familiar with. It is plausible that the social media channels have impacted the expectations on librarians' act of response, and thereby also their identity towards being more of a digitally related role, and the psychosocial environment as well towards being more of a digital environment. However, we did not identify any studies deepening in the psychosocial side of this digital influence.

#### *New demands on collaboration and services from a new digital generation*

One of the papers below top five by Pacheco et al. (2010) investigated the library use of blogs, Twitter and Facebook. Special emphasize were placed medical students, and on understanding if these social media tools are used for facilitating more collaborative library services, or if they leave the students swamped with yet more information to manage. An important point made for the paper is the claim that the next generation university students will have no memory of a pre-Web 2.0 world. The consequence of this is that they might be less accepting of a non-collaborative, hierarchical higher education system. Previous research has demonstrated that the digital generation students want their education to be fun and interesting with option to talk back. Previous research has also demonstrated that a majority of students use Twitter. This whilst librarians seemed to think that it was too early to implement Twitter in their standard repertoire of routine communication year 2010. Library organizations already struggled with staff capacity to implement and keep up with information flow of news in social media. The use of Facebook was evolving at libraries, often directed to all students rather than specialized groups of students. Facebook was often used for posting information about library opening hours, new books and other customer service style announcements. Typically service provided was that links are made available for search of library catalogs. A lot of the information on Facebook was not library information in a strict sense. The dialog when engaging with students was in a sense less formal and replies were given in direct response available to all viewers to the questions in the Facebook flows. It was concluded that two-way communication still seemed to be a rarity despite the inclusion of discussion boards following with Facebook. When it comes to blogging it had been identified as the best means for addressing information literacy. Posts were commonly made about information services and providing guidance on search techniques, as well as skills needed for understanding evidence based. The blogs were identified to primarily be of a push nature, this as commenting back were rare, unless invited, or encouraged

with incentives. All in all the researched for two-way communication was identified as not established among the studied librarians year 2010. Again we see that social media has impacted the expectations on librarians' role and thereby identity, and which in turn influence the psychosocial environment. However, even though the paper identified that librarians struggled with staff capacity, we did not identify any studies deepening in the psychosocial side of these digital tools influence on the work and profession related subjects.

### *Digital technology steers librarians work situation*

The second most cited paper by Sachs et al. (2011) discuss the most common use of Facebook. In this paper it is visible how the customers expectations of the library use of social media steers librarians work situation. It is also stated that Facebook serves well for promoting services and events that librarians wants to advertise. Technologies have permitted libraries to extend themselves beyond their physical building. The goal of university libraries is to provide service, support and relevant information to students and faculty. Social media has been identified as a tool that can promote and market library resources and services, provide information and also offer asynchronous instructions tips on research concepts, and also offer reference help. The study investigated how receptive students were to library-related news, instructions and resources via Facebook, and dissemination of library-related news. Research questions concerned: If users were comfortable with librarians contacting them via Facebook? If users did find Facebook useful for finding out about library resources and services? If users would ask a reference or research related question via Facebook? According to the authors previous research had identified that library use of Facebook for interactive purposes such as reference and user forums was lower than predicted. Facebook appeared to be more useful for library marketing and marketing. Also that a librarians presence on students Facebook could be perceived to be intrusive as students clearly tend to separate their social lives from their academic lives. Students Facebook include spaces where a librarian would not ordinarily be found (parties and other networks), and also the fact that students expose more private side of themselves in Facebook than they do in academic situations talks against inviting a librarian to their Facebook. Earlier studies had also demonstrated that students' academic usage of Facebook was negligible, and at most included day-to-day logistical details of classes. Other research had identified a somewhat contradictory view saying that half up to two thirds of the students could accept librarians on their Facebook. In the study it was concluded that 70% of the students preferred the librarians to update their own posts, which was shown in the students flow of information, rather than being contacted by messages. 90 % of undergraduate students said yes or "sort of" regarding Facebook as a good way for librarians to stay in contact with students. 68 % of the students were comfortable asking librarians for help on Facebook, 8 % were somewhat uncomfortable and 29 % neutral. In a multiple answer question 90 % of the students answered that information about events and services were the most popular information for them. Information about specific recourses and research tips got 70 % response. All together this indicates that students seemed generally enthusiastic about receiving information from the library. The study also identified that Facebook was a useful tool for reaching subset of users for marketing purpose. It is clear that

Facebook has impacted the expectations on librarians' identity as well as the psychosocial environment. However, we did not identify any studies deepening in the psychosocial side of this work and profession related subject.

#### *Microblogging, an example of the new technical complexity for librarians*

Another of the top five most cited paper by Hricko (2010) provided an overview of existing microblogging tools for library services and discussed issues to be considered when using these in the professional role as librarian. Microblogs are ubiquitous web technologies that enable users to share information, interact with content, and generate resources. Microblogs can be used for instructional activities, generate resources, and event promotion. Microblogs can also be combined with other social media to promote personal learning networks. Most microblogs enable users to share information, interact, and message. Most of these available tools combine the mobility of text messaging and push technologies. Several of the tools allow file sharing, video/audio/music sharing, and multiple streams for sending information to targeted user groups. User can also add tools that extend the characters for the post, synchronize content with other social media networking applications, and expand the interactivity with other existing of web services. All microblogs have timelines and some of them are stored in reversed chronological order. The tools can allow public view, as well as restricted view. In short, this is a tool for building network and relationship with other individuals based on gathering and sharing of information. Most tools allow for one stream, and some tools allow multiple streams. Specialized services may include file sharing, archiving data storage, and streaming information, all in a private and secure network; allow longer tweets to be linked to an initial post; dashboard to organize multiple blogs within one account; book marking favorite posts; geolocation services; anonymous microblogging; and concepts for sharing emotions. Identified challenges for librarians using them are that some microblogs are open office source solutions that easily can disappear; they are often targeted by spam; if an account is not well managed the network will dissolve by itself; updates by many people can be chaotic, updates by one can be a burden for that employee as they might not have time to manage it; to keep posts interesting, useful and informative; not all microblogs are free, payment may also be required for extended services, option to delete all evidence from inappropriate content in reply can be hard as part of it is in the community base; specific guidelines is needed dependent on what it will be used for, e.g. marketing. In a sense this paper extend previous presented discourses by revealing the complexity to be handled by librarians in relation to just one social media form, i.e. micro blogging. It is visible that the inclusion of the social media called microblogging has impacted librarians' role and thereby also their identity towards being more of a digitally role and identity, and the psychosocial environment as well towards being more of a digital environment. However, we did not identify any studies deepening in what are the psychosocial sides of this digital entrance.

#### *A technology solution for solving the complexity issues of other technologies*

One of the papers below top five by Glassman and Sorensen (2010) present experiences from using a digital subscription based tool for creating subject guidelines that takes away complexity from librarians work. Paper based pathfinders that were popular in the 70-ties have evolved into media-rich

subject guides. In this technologically driven development it has been important for libraries to keep their own unique resource for their own specific populations, whereby copying guidelines from other libraries has been weak option. Libraries have been able to tailor their own guides to the specific programs at their own university. In the paper based versions there were no big concerns surrounding cooperation with many different roles and specialists. Compared with managing library web site content today, which often involves collaboration with multiple specialists, e.g. designers, writers, editors, and programmers. The different complex formats such as animated tutorials, audio and video further makes the process more complicated. Web-based services generally require less local technical support (with some exceptions from e.g. firewalls in e.g. hospitals), LibGuides is one of these resources. In LibGuides librarians do not need to be experts at web design for producing a professional guide; Links to more than 30 external applications such as Facebook, Twitter and Delicious are available; it is easy for administration; there exists online help; and content sharing for a community of users. In short a tool like LibGuides have shown to be increase the interactivity to the targeted users and at the same time make librarian feel empowered because they have control over their own work, can edit and update information as needed.

#### ***A new role for librarians following from digital technology***

The most cited paper by Shank and Bell (2011) discussed a new role that is spreading among librarians, i.e. blended librarians. It is a role that emphasizes librarians being an essential partner and leader in the educational process where librarians educate students and faculty about the existing information discovery, creation, and tools for sharing. Blended librarian is a metaphor that depict librarian as an essential partner and leader in the educational process where librarians will work together with many different campus departments to enhance learning, teaching, and research environment. It is identified that the role of librarian is more essential today than in any other period of the profession's history. The metaphor is a means to rethink the traditional educational role of the librarian. Blended librarians should push the boundaries of student, staff, and faculty adoption of new educational technologies to improve learning. Librarians need to acquire this new knowledge themselves and also evolve their knowledge contiguously just as technology and information formats do. Librarians also need to develop new spaces of cultural, social, and technology gathering, i.e. it is places where users can collaborate and work with professionals to understand the broader contexts and issues of information technology. It is identified that the new role of librarian is to facilitate and impact knowledge, acquisition, student learning in the view of life long learning. It is clear that such a new role will impact both the identity of librarians as well as the psychosocial environment. However, we did not identify any studies deepening in the psychosocial side of this work and profession related subject.

#### ***Librarians are not mere victims of technology change***

One of the papers below top five by Carlsson (2012) examined the micro-level interplay between social media and librarianship. The common position of librarians being merely a victim of technology change is investigated. Carlsson claims that up to 2012 there has been paid little attention to how Library 2.0 is put to work in everyday practices. Previous work has mainly addressed the

Library 2.0 turn conceptually. What is the interplay between Facebook and everyday work at libraries? For what purposes are Facebook used? How does these purposes correspond to more generally ascribed meanings of the social network site? These are the main questions that Carlsson addresses in her paper. Carlsson explores the role of librarians as active co-constructors in ICT-developments by inquiry whether and how the situated meanings ascribed to Facebook influence the site's design and future development. In this way she opens up to see the potential for public libraries to resist the dominant victimization discourse and instead position themselves as the interpreters and participants in the ICT-development. Some of the findings of Carlsson's study were that the librarians repeatedly expressed that the freedom they enjoyed in forming their own routines for work were essential, as their daily activities depended on rapidly and continuously changing technologies. One identified main concern among librarians was to find ways of dealing with the uncertainty of suddenly changing terms of use regarding Facebook, which threatened the ongoing process of building relationship with users on the site. Librarians also expressed that they had few opportunities for personalizing and adapting the page to fit particular circumstances of their work needs. One identified innovation from librarians was a persona of "the nice and caring library" that was applied whenever something was posted to Facebook; a way of answering in the same way independent of what and how a question was placed. A widely accepted purpose of Facebook is as a commercial marketing tool, this view clashed at the library that aimed for a different type of relationship that a commercial one. The librarians rather created a free resource for information and knowledge, an act that allowed for a differ interpretation of Facebook, and thereby indicated being non-victim of technology change. In this way the library staff took control of their own story and demonstrated it to both politicians and library users. Facebook instead became an instrument to legitimize and justify the public library institution. The findings from the study could be characterized as a dance, where Facebook (technology) takes the lead and librarians (users) taking counter steps in many slightly different ways to design their own unique moves and choreography. Both the story telling and personas demonstrated two ways of being non-technology change victims. A creative interaction stimulated strategies of renegotiation, rather than being passive victims.

## 8. Social Media and Teachers

### Overview of teacher results

We initially identified 15 relevant articles where teachers and social media are discussed in relation to the inclusion criteria. After a detailed review round seven of the most cited papers with 115 citations in total was finally included. All of the included papers regarding social media and teacher are published after 2010 and range between 18 to 13 citations. On one hand, this indicates that academy has followed and discoursed the development in this area of interest. On the other hand, none of these papers explicitly adressed or discussed organization's managements power structures, professional identity, work life balance, and psychosocial work environment.



The most cited discourse (taken up in two papers) concerns teachers new vulnerable situation following from the lack of control in social media (Estrada, 2010) with 16 citations, and (Miller 2011) 15 citations.

The other papers discourses surrounded how well teachers recognize the signs of bullying and the felt preparedness to intervene with bullies and bullied (Glasner, 2010) 18 citations;

How ICT opens up for leaving the rigid classroom timetables and blocks of time (Bound, 2011) 18 citations;

The claim that digital technology is not neutral whereby we need to place the teacher in the driving position for future developments regarding both technology and pedagogy (Sappey and Relf, 2010) 18 citations;

The identification and influence of teachers' adoption factors for Web 2.0 in classrooms (Capo and Orellana, 2011) 17 citations; benefits of teaching beyond the traditional spatial and temporal terms within today's school boundaries (Blas and Paolini, 2013) 15 citations; and finally

Blogging provides a means for traditional teachers to step in to the Web 2.0 and the 21st century teaching (Bartholomew et al., 2012) with 13 citations.

Hence, the relationship to our study is a weaker relationship than hoped for. Instead, the main subjects discussed in the nine included papers surrounds how new digital technology has caused changes in teachers' role, work tasks and work situation.

In general there is a lack of grand theories in the papers reasoning or arguing, instead the papers discuss identified real world issues from a more pragmatic point of view. Capo and Orellana (2011) is the exception as they included the decomposed theory of planned behavior in their reasoning. Two of the eight papers presents results from own quantitative survey (Glasner, 2010) and (Capo and Orellana, 2011). Two of the papers are based on pure literature overview (Sappey and Relf, 2010) and (Estrada, 2010). The remaining of the papers have used survey and workshops (Bound, 2011), literature review and survey (Capo and Orellana, 2011), literature review and participant observation (Bartholomew et al., 2012), and the last one participant observation/own experiences (Blas and Paolini, 2013). Countries for the studies have been United States with exception for Australia (Sappey and Relf, 2010), (Blas and Paolini, 2013). The information that is relevant for this study is presented below from each study.

## **Seven discourses regarding teachers**

### ***Private social media are not private in relation to students***

Estrada (2010) discuss the situation that students through social media gained a way to peer into their teachers' personal social lives in a way that has not been possible before. Because a teachers' main objective with private social media is not to interact with students some content can be viewed as inappropriate in the light of their professional position. Teachers also tend to make poor choices regarding their posts with respect to students. Whereby teachers' professional reputation might be at risk. Many districts have recognized this problematic and started to enact policies and laws to restrict teachers' use of social media. Several teachers has also been disciplined or dismissed due to inappropriate content in their private social media. The author concludes that private sector have already taken steps to prevent problems with social media, and that state should follow

to combat prospective dangers for students. It is not enough to rely on common sense when it comes to irresponsible use of social networking sites. Miller (2011) discussed teacher speak rights in social media. The author identified that public often seem to hold teachers to a higher moral and ethical standard because they are examples for the youth. In the past it has been easier for teachers to keep their private and public lives separate, and generally students and parents were out of reach regarding what teachers said and did outside the classroom. Today social media has changed the privacy situation. In the paper the new challenge with social media was exemplified, i.e. a teacher had been forced to resign after calling students inappropriate labels, such as “germbags” and snobby” in social media. The labels were expressed on her own private Facebook account with the settings unknowingly set as public. In another case a teacher was suspended due to an inappropriate picture published by another person. As a reaction, many school district social media policies prohibit teachers from befriending students, they also tell teachers what they can or cannot post. Different regulation approaches are discussed and concluded; teachers and students should be prohibited to access one another’s social media areas. In this way the students are protected, as is the teachers Internet free speech rights on legal adult subjects.

#### ***Digital bullying a new phenomena for teacher to handle***

Glasner (2010) surveyed how well teachers recognize the signs of bullying and the felt preparedness to intervene with bullies and bullied. Teachers reported that they were able to identify bullying primarily because the students reported it to them. Three forms of bullying that were recognized most among teachers was verbal abuse, physical abuse and exclusion. Culture of bullying was not well understood by teachers, i.e. knowledge of the actual occurrences and the media of bullying. Teachers also reported that the nature of bullying had changed from physical to more discreet forms. It was concluded that more training of how to recognize and intervene in cyber-bullying was needed.

#### ***ICT opens up for leaving rigid classroom timetables and blocks of time***

Bound (2011) analyzed the tension between espoused and current pedagogical practices when teacher team adopts ICT tools. The study is done on vocational education and training in Australia. ICT has been identified as part of flexible delivery and a shift away from rigid classroom timetables and blocks of time. Hence, correctly used it can better meet employer and learner needs. The authors identify that professional development is typically thought of as taking place through formal structured learning sessions or individual reading and desktop searches. This is a view contrast a considerable body of literature that acknowledges learning as taking place through the everyday activities at a workplace. Advantage of learning at workplace can be that it includes activities that contribute to worker identity, cultural norms and situated ways of being and thinking. Professionals at workplace also learn and how they learn because the work itself, the structure and temporal factors of the workplace and social practices all provide opportunities or barriers for learning and mediating what is learned. These factors are part of a workplace culture. Situated factors such as structuring of work, cultural norms, and social practices are not developed in a vacuum; they rather interact in a dynamic relationship with the social, economic

and political contextual conditions at the workplace. Contextual conditions are deeply embedded in the tools, trajectories and relations of activities. They partially account for the contradictions and tensions experienced, consciously or unconsciously, in all types of activities and are often not 'visible' to the participants. Embeddedness of contextual conditions in part explains why there can be limited take-up by the team of the use and development of ICT resources and different pedagogical practices, despite the teams' enthusiasm for the idea of developing and using relevant up-to-date learning resources.

The findings from the study suggested that there is a need to plan for professional learning teachers in ways that are highly contextualized to the workplace and those in the workplace. Based on the study the authors argue for a three layers of analysis that need to take place when considering the planning of professional learning and development. First layer is the learning needs of the teachers themselves. The second layer is the tensions and contradictions within the activity of the teachers and the ways in which contextual conditions shape. The third layer is the influence by the activity of the teachers.

### *Business and marketing strategies sneaks in and blur the teacher role*

Sappey and Relf (2010) discuss the entrance of digital technology in higher education. Arguably digital technology has played a much larger role in changing the prerequisite for teaching and learning than often realized and admitted. There has been a debate whether technology merely delivers educational content unchanged, contra whether education is changed as a result of using different technologies. It is also claimed that new educational technologies, the human resource management of job design, motivation, skilling and work identity often are overlooked. The authors argue that quality of education in the end is pertinent to teachers' motivation, innovation and flexibility. Claiming that quality can only be achieved if more focus and resources are devoted for developing the multi-media literacy of teachers. Sappey and Relf also identified that in most educational literature labor is assumed to be neutral. They argue that it is important that the teacher's role as initiator, creator and developer of teaching remains strong also in our more and more digitalized teaching environments. The authors wants us to place the teacher in the center of the discussions rather than debating which one of technology or pedagogy is the best starting point for understanding the influence of the digital for teaching. In their arguing it is what teachers actually does that influence learning the most. In this view it becomes important to re-examine the teachers traditional role as the creator, developer and delivery agent in the light of the new digital working situation. The authors especially point out that the new situation has changed the work identity of teachers.

2010 many universities in Australia did not challenge the established assumption that digital technology offers a win-win to teachers and students. In an initial phase of the technological development this could have been ok, but 2010 e-learning technologies have become sufficiently stable to allow for a focus shift towards instructional quality rather than on the technology itself. The authors emphasize that pedagogy have never been independent of technology, it has rather been formed through the potentials and limitations (affordance) of the technology used. A big problem has been that the previous debate often placed teachers in a position where they are neutral, whereby the issues of skill

developments pace and work intensity, as well as motivation were overlooked. Today there is a growing evidence for the need of a critical perspective regarding the changing nature of the teaching process and performance as these are affected by resourcing, workloads and motivation linked to ICT adoption. There can be no excellence in teaching or learning without teachers' passion for, and enjoyment of, what they are doing.

Two concepts have often been used when discussing learning and technology, i.e. blended learning and flexible learning. Blended learning is a concept that capture how the traditional classroom can be combined with computer mediated activities, whilst flexible learning as a concept means performed purely over distance with help of computer mediated activities. In parallel to the discourses of these concepts that are related to learning and digital technology a market related phenomena has appeared, i.e. that ICT can bring education to a larger student population whereby digital technologies also have opened up for new markets. In literature the idea of two paradigms are presented here, the pedagogical paradigm and the e-corporate paradigm. The e-corporate paradigm focuses on the potentials of ICT as a means to allow larger student populations while also reducing the cost per capita. This paradigm also emphasizes business strategy and marketing, i.e. the potential to open new markets. Therefore it can be argued that blended learning today also is about market positioning with concomitant performance indicators. This is an economical influence that cascade down from institutional level to individual performance management targets. This type of conflicting paradigms of education and marketization confuse visions in institutional and internal politics. Traditionally the rhetoric surrounding change has focused external factors such as student needs and government will. Another important influencing internal factor identified in literature regarding flexible learning has been the interest of powerful individuals and groups. Problem with this factor was that none was set out to lead the change focus in a way where the concerns of academic staff have been included. Blended learning can significantly change traditional academic tasks, how they are done, as well as alter the control of the parties involved in the processes. In conclusion Sappey and Relf suggest a definition of blended learning as pedagogy, business strategy, marketing tool, and a teaching labour process. Sappey and Relf wants to emphasise the importance of the latter in this paper to enable restoring the balance between the labour process and the now dominant student learning focus that has ruled for the last twenty years. The student learning focus has de-centred teaching through discourses of the student-as-customer, the student-as-flexible-learner and institutional commitment to improving student learning through ICT. There even is a implicit assumption that a teacher's teaching will improve in both quality and moral fundamentals if adopting the student learning perspective. This, even though literature has emphasized that considerations needs to be paid in equal measure to human capital, pedagogy and technology. A consequence of Sappey and Relf's results is that improved performance with new ICT will require stronger focus on capacity building, through training embodied in the academic identity. One large problem is that the academic workload when meeting the demands of a myriad of new software applications often involves developing resources without adequate lead time. In this debate and practical execution pedagogy and digital technologies easily becomes the core of debate at the expense of

'what', i.e. the disciplinary knowledge. The identities of lecturers will shift, and this shift possesses significant dilemmas as the identities are torn between their perception of themselves as mentors of students, as employe who is increasingly hold accountable for measurable performances outcomes, and their own sence of what it is to be a university teacher.

### *Teachers' adoption factors for Web 2.0 in classrooms*

Capo and Orellana (2011) examined the factors that contribute to use of web 2.0 technologies for classroom instructions. Digital technologies have great possible implications for education and also continue to evolve rapidly, this at the same time as many studies have identified a tension of its implementation and usage. This paper investigates those factors that influence the adoption of digital technology in an educational context. It is claimed that researchers need to further study and better understand the impact of web 2.0 on learning as it seems to be the case today that educators actually does not harness the benefits or utilize digital technology successfully. It is claimed that we need more research regarding what schoolteachers are experiencing and what may be the tensions at school institutions, i.e. what is affecting teachers' acceptance and adoption? Earlier studies have revealed that there are some usages of web 2.0 tools, but it is not a sophisticated usage. Results are that the usage of web 2.0 technologies in schools seems to be poorly understood by both teachers and students. It is demonstrated that students do not use the technology for in-depth learning and only few of the students used them for creative activities. It is also suggested that students need more guidance and encouragement from teachers. When it comes to the teachers' situation there were identified many negative previous factors that might influence the adoption. One suggestion for further research was to investigate teachers' attitudes on student collaboration. A related study of 100 teachers indicated that not all teachers saw collaboration as desirable; this was partly related to the assessment system as anxieties about plagiarism existed. Other research had indicated that teachers strive to get students to work independently also could be a potential cause to the lack of student collaboration. Other researchers did find that teachers' expressed a need for time to evaluate and adopt digital technologies, time to develop a community of practice regarding social networking tools. The combination of social networking tools appeared to be confusing, as was also to judge the appropriateness of the tools as they were developed for socialization and not built for educational purposes. Another expressed fear captured in research of teachers was that the Internet way fostered a tradition of cut and paste, which hindered students to develop their ability to create unique own thoughts. The perhaps most influential hindering factor might still be that teachers have found themselves in troubles for using social networking sites, some even lost their jobs. Whereby the work of defining teachers' rights might be constitute an important contribution here. Again, this is one more paper that only implicitly includes expected changes in teachers' work-environment, role and identity due to the invasion of digital technology.

The research surrounding the question of successful adoption of Web 2.0 seems to surround the characteristics and conditions of the technology itself and revealed teacher opinions. This rather than, the characteristics and conditions of the teachers work situation and from here reveal how the technology can be

made to fit. The risk is that the discourses do not seriously introduce the complexity of the work situation to which the digital technology should add value. Hence, work-influences that hinder the adoption of social media technologies, e.g. *professional identities, psychosocial environment, and the organizations management and power structures*, are still just touched upon implicitly and not studied as subjects in their own right.

### *Teaching beyond the spatial and temporal terms in traditional schools*

Blas and Paolini (2013) study exemplify and discuss teaching beyond the traditional spatial and temporal terms that can be found within today's school boundaries. ICT enables teachers and learners to work together also when they are not at school. Key feature here is the access to "the world" via Internet and peer-to-peer remote cooperation. Today's multimedia tools provide students with an incentive to explore the territory, digital content can be both accessed, features of interest can be documented effectively, created and refined at any moment from both school and home. A large-scale (20,000 users) digital storytelling initiative was used to exemplify how the borders between formal and informal education can be crossed.

The definition of story telling was "the modern expression of the ancient art of storytelling" where "digital stories derive their power by weaving images, music, narrative and voice together, thereby giving deep dimension and vivid color to characters, situations, experiences, and insight" (definition by the Digital Storytelling Association; <http://electronicportfolios.com/digistory/>). "Digital stories are stories produced, stored and disseminated using digital media. The focus is on the story tellers' control over the medium, choice of words (narration), pictures and music so that the process is as powerful for the story teller as the end product is to the listener." (From The Progressive Communication who further clarified the concept: <http://www.apc.org/en/node/10567>).

In the present study students and teachers collaboratively create a multimedia story. As part of the provided task the students interviewed experts, visited local institutions, involved their families, the community at large, and cooperated through social media with their remote peers. As a result the students not only did get engaged, but also achieved substantial educational benefits. The class as a whole collaboratively created the story, the tool was not aimed at very young users instead encompasses all age-ranges, from pre-schoolers to adults, the creation process mixed formal and informal education, the work was coordinated by the teacher with many of the activities performed out of the school and following the students' own initiatives, there was always an educational goal, the technical tool was considered as easy and enabling accomplishment of "technologically" surprising results, the final result did undergo a competition which was made public. The paper is built up around the description of the digital story telling, the stakeholder, the stories produced and the gained benefits of this approach. It is first in the conclusions that a clear but still weak connection (in argumentation) appear in relation to traditional school environments in the following statements: "There are many reasons why educational activities should not be confined to the standard space-time constraints of classroom and school hours." One emphasized reason against is social pressure, i.e. the notion of being "always connected" is pervasive in the

society, and it is taking ground at school too. Another mentioned reason against is the danger that the very foundations of the school systems can be shaken by such evolution. Reasons for take on this challenge is that schools get a tool for getting out of their boundaries in several ways, and still retaining in control over the learning process as well as ensuring that sound educational benefits are gained. Blas and Paolini's data demonstrates that benefits are not just increased fun and engagement; there are also cognitive and behavioral improvements.

### *Blogging can be a step in to Web 2.0 for traditional teachers*

Bartholomew et al. (2012) discuss how Web 2.0 offers a new type of interactive technology that can change both the focus and approach of formal education in ways we are just beginning to comprehend. It is identified that Web 2.0 has become so pervasive in such a short time that it makes little sense to ignore it in educational settings. This at the same time as students often times have way more experience with and understanding of new digital technologies than the teachers who are developing curriculums and setting educational goals. Their paper suggests that blogging may be the most "education friendly" tool of the new interactive tools. Reasons are that blog posts offer students a chance to develop their own voice in the classroom, where commentary serve as an important reinforcement for self-reflection and continued participation. The challenge for teachers become to understand how to integrate, use and maintain course blogs in a manner were they become strong and positive educational force in the classroom. Therefor the authors argue that at the core of using blogs is the development of blog management strategies. Based on use of blogs in undergraduate courses the authors outline an approach to blog management.

It is claimed that education need to meet the technological and social demands of the 21st century, i.e. to embrace a new generation of Internet tools that can promote a collective learning experience for students. Identified challenges are that Web 2.0 technologies offer a degree of flexibility that is not typical for the content-driven methods that are used in many traditional classrooms. The flexibility inherent in the Web 2.0 tools can also intimidate teachers who instead choose to utilize more conventional information-delivery strategies where the teacher is the principal source of information. Educating the new generation of digital natives and embracing Internet challenges their role as expert. Blogging is close enough to the traditional academic communication that teachers who have not grown up with Web 2.0, or use it as one of the major communicative tools in their lives, still can understand and relate to. The rest of the paper provide details and advises about using blog for educational purposes, some of these are provided here. A blog can be an open system that encourages co-ownership and lateral communications. It may encourage learning through students extending out in to the larger information universe to bring new information back to the local blogging community. When students feel greater ownership, they are more likely to take on more responsibility for the blog as an educational force. The more open the blogging is the more problematic it becomes, but also more genuine and ultimately successful in the classroom. A blog is a living, growing organism when working well, hence different from academic traditional communication. Therefor it also needs to be tended and watched over in a similar way as someone might take care of a garden. Note that the blog is not suited for linear, top down discourse, specific due dates, and

grading rubrics. Instead it is interactive and breaks down topics and walls towards other students and teachers participating in the experience.

## 9. Social Media and Social Workers

### Overview of social workers results

In this subject we ended up with 30 potentially relevant articles, after closer reading we decided to include 7 of these with 414 citations in total. Five of the articles are from before 2010 (with 355 citations) and two are after 2010 (59 citations). Judging from the total number of citations stress and digital technology is a subject that gained academic interest, mainly before 2010. Academy has followed and discoursed the development in this area of interest. Many of these papers explicitly addressed and discussed organization's managements power structures.

The most cited discourse concerns that ICT is not adequately supporting the social work profession (taken up in six of eight papers before 2010, with totally 355 citations). Identified concerns were that: the implementation of the new technology was based on Taylorism and management view (Garrett, 2005) 148 citations; ICT did not address many of the existing key problems in social work (Munro, 2005) 74 citations; identifying reasons for (Tregeagle and Darcy, 2008) and explain the slow uptake of ICT among social work professionals (Parrott and Madoc-Jones, 2008) with 60 and 50 citations.

Another discourse came close to above main discourse as it touched on the same problem but from an opposite angle, i.e. the need of more explanations to social professionals regarding the potential uses of the new digital technology (Giffords, 2009) with 23 citations.

The last two included discourses identified that social work and ICT does not reach up to national and international expectations (Perron et al., 2010) with 38 citations; and that

Ethical guidelines are needed for social workers personal social media handling (Kimball and Kim, 2013) 21 citations.

With exception of Garrett (2005) there is a lack of grand social theories in the identified papers reasoning and arguing, instead the papers discuss identified real world issues from a more pragmatic point of view. Garrett (2005) includes theories from Marx, and Neo-Luddism. All seven papers present results based on literature overview and own arguing. Countries for the studies have been United Kingdom (Garrett, 2005), (Munro, 2005), (Tregeagle and Darcy, 2008), (Parrott and Madoc-Jones, 2008), and United States (Perron et al., 2010), (Giffords, 2009) and (Kimball and Kim, 2013). The information that is relevant for this study is presented below from each study.

### Seven discourses regarding social workers

#### *Social work and ICT is based the Taylorism view*

Garrett (2005) seeks to promote debate based on contributions from social work and social policy academics, users and providers of social services. Garret made a statement that it is beyond doubt that social work is becoming an activity that is characterized by a more frequent recourse to computer technologies. The digitalization in social work was expected to accelerate over the next few years.



Therefore a research agenda was also requested in the paper by Garret to map out the changes that would occur. There is a need to examine what is actually happening 'on the ground' concerning social work. It was identified that information and communication technologies (ICT) were becoming central to the remaking of social work with families and children. The technological basis for social work was changing 2005 and with it the function of social workers. Working practices and social workers way of viewing their role were also shifting and transforming. Integration of services between different societal agencies requires a freer sharing of data and here it was identified that ICTs can fulfill a crucial role.

ICTs were perceived to have many potential beneficial uses for both service providers and service users. Examples mentioned were: in children and families computers can offer a medium for communication with children that they may find less inhibiting than face-to-face discussion with adults'; ICTs can help in the collating and storage information of users and services and assist in identifying where particular groups are not receiving services. The Internet can provide interesting possibilities for childcare social work and politically for social movements seeking to combat neo-liberalism and to champion more democratic technics.

ICTs come with potential risks. The use of ICTs, particularly databases, risked having an adverse impact on the civil liberties of many children and families. Within an emerging lean work organization the work in social work seems to be increasingly ordered, devised and structured by both academics, policy makers and e-technicians far away from the day- to-day encounters which practitioners confront with the users of services. This can be seen in the emerging software architectures and in the more and more common use of centrally devised e-assessment templates that attempt to map the contours of social work engagements and construct new workflows. Social work can in this way be claimed to become more Taylorized, i.e. broken down into bytes with social workers, often aided by less costly social care assistants, and providing clients with discrete (often purchasable) packages, or micropackages, of support and intervention. In this development, related work has argued that social services' intake systems are now being modeled on similar principles as for call centers. Related to this social work is becoming an even more 'flexible' activity, partly on account of ICTs and the evolution of the techno-habitat. In such a development, the laptop and the portable office will begin to play a more substantial role.

In an act of prevention the International Federation of Social Workers (2000) has stated that 'new technology changes existing power relations and places a renewed responsibility on professionals to consider its implications for their services and for the interests of their clients and service users'. Whereby there is a need to give the users of services an opportunity to provide the information themselves, this rather than the information being obtained from computers or other agencies. Moreover, the person of interest should be provided with a paper copy of the information provided to other agencies or at least be informed of the information obtained about her or him. Theory and practice in this area should also be rooted in considerations of civil liberties and human rights.

An important standpoint is that there cannot be any return to the previous type of work practices elaborated on the basis of social and economic circumstances that no longer pertain. In the light of this Garret among others emphasizes the need to remain mindful of the prevailing social order's systematic tendency that lead to unsatisfying work. Social workers are finding the workplace at risk of being abolished or dissolved into life. Whereby the limitations in the Fordist time-discipline that influenced work life up to today will be transcended. In any case, this view on time, and the consumption of technologies facilitating this development is forced to be contested. A development that will give rise to more challenges within social work, because staff are not passive, compliant, and not always prepared to accept managerial innovations, new mechanisms of regulation or control. Whereby Garret suggests that 'in order to counter the threat to the civil liberties of users of services and to the working conditions of social workers, a dual strategy needs to evolve which will respond constructively to the negative consequences of ICT deployment in social work and related fields' (Garrett, 2005).

#### *ICT does not address many of the key problems in social work*

Munro (2005) argues that ICT to improve frontline social work being developed without sufficient attention to understanding the needs of frontline workers. In this paper social work and ICT challenges are exemplified by child protection work that 2005 was being transformed by the introduction of ICT. Munro demonstrated how this transformation was taking place by starting with the question 'What tools do we need?', which produced radically different answers compared to current proposed ICT tools. The approach suggested and advocated by Munro involved examining what aspects of tasks it is that frontline workers actually find most difficult, and to identify where social workers would appreciate ICT support the most. Information sharing had gained a lot of attention in relation to social workers and ICT. In relation to the problem of sharing information with minimal risk, it was argued by Munro that the key problems did not lie in the technical process of sharing data but rather in the professionals' ability to collect the information needed, to interpret it accurately, and also to communicate it clearly.

In relation to the example of child abuse, a failure to share information was a common criticism in abuse inquiries, whereby information technology that is able to both record and move data looks as it has a great deal to offer in approaching the problem, and making children safer. The author describes that it is hoped that ICT innovations will improve the sharing of information between professionals. An act that could enable more accurate identification of needs, including protection from abuse, as well as earlier and more effective provision of help. Government's at that point of time had an approach that Munro called back-to-front, with much hope for the power of databases to improve work practice, i.e. asking how can we use ICT here? Munro criticizes this 'tool centered' approach and instead suggests the need for an 'user centered' front-to-back approach by asking 'What do professionals find difficult and which tools, if any, could help them perform better?' The author also stated that there was emerging evidence in literature 2005 that some tools were having negative impact on child protection practice, e.g. early ICT decision support adding extra time for professionals when the decisions actually already were taken. In child protection

work a significant area of complexity is that relevant and sensitive information has to be collected from the families being investigated. Different family members require different interview techniques and skills. Hence, interviewing skills of a special, nature and highly skilled professionals is needed. Alleged abusers, whether innocent or guilty, tend to react with strong emotions such as anger, fear, distress, and anxiety. More important, their emotional state influences both willingness and ability to answer posed questions. In this context social workers need to operate with higher level of suspicion than usually, people who are anxious to hide abusive behavior are also likely to be dishonest. When abuse is investigated confrontations may be needed rather than the often wished for cooperative approach. Also, the type of information in child abuse investigations is rarely simple with verifiable facts, but rather descriptions of human actions. Whereby these involve interpreting meaning of observed behavior of the actor, with ambiguous results that are open to interpretation. Details that initially might be seen as no cause for concern can be crucial for understanding the whole situation. When making interpretations, social workers are drawing on own experiences about human psychology, culture and the individuals involved. Often they might be required to interpret the most intimate of family behavior, which can be hard to carry out.

In relation to the role and impact that ICT can have Munro presents the following view. The crux with a back-to-end approach is that the focus is primarily on the technical and procedural processes involved, this whilst analysis of child protection practice repeatedly has demonstrated that these factors play only a minor part in communication failures. The major problems for social workers are as described earlier instead found in the complexity of human communication. Munro states that 'Technical issues are relevant to the practical form in which the message is sent and received but not to the way the message is understood.' For social workers it is the understanding part that is the most challenging. Communication should instead be seen as an interaction, which would make clear that it is not enough for the speaker to send a message, as the recipient has to both receive it and understand it as it was intended. It is not just the communication in the field of the social workers; communication also includes the professionals themselves. Research here has demonstrated that communication in a professional network is influenced by the relationships between agencies and professional groups. In relation to child protection it has been identified that aspects such as territorialism, status and power, competition for resources, differing priorities, differing value systems and disrespect for each other's expertise affect successful communication.

The main point made by Munro is that a database does not address many of the key problems in social work. Worse is that it could even have a negative impact on social work. An example would be the increased ease of flagging for different concerns and the large amount of children that can be included in a database. 2005 there had not been made an estimate of what the possible numbers of flags might be. Actually, this is an impossible estimate to make since there was no clear definition yet of what the new term 'concern' should include. Munro states that 'it seems inevitable that hiding concerns about abuse among a myriad of other concerns will make them harder to spot'. Social workers might use the system to cover their backs by reporting all types of concerns, minor and large ones. Confidentiality and information is another are that might have a

harmful effect on children's and parent's willingness to cooperate. Ensuring that the database is accurate and up to date is another challenge, this both from an ethical as well as from an economical side. Error in data entry is another related issue here. Finally ensuring security presents significant technical problems.

### *Why social work has been so slow in the take-up of ICT when communication is so central to the task*

Tregeagle and Darcy (2008) explore social workers' limited use of Information Communication Technologies (ICT) together with providing an outline of the managerial interests in it. The authors suggest that current use of ICT is dominated by the managerial discourse, leaving the professional and community discourses relatively powerless. The authors state that the ICT usage 2008 in child welfare practice reflected dominant managerial interests rather than the professions and service users interest. ICT is identified to have potential strength for interaction between families and workers, i.e. it could change the conditions of initiation, distribution and use of spoken and written 'texts' in social workers practice. It is suggested that social workers should explore the advantages that ICT offers service users and challenge the digital divide. In this paper Tregeagle and Darcy ask why social work has been slow to take up on new approaches to its core business, i.e. communication. Potentially there are a number benefits and drawbacks following with ICT, whereby the authors ask themselves a number of rhetorical questions: 'Could web-based client records encourage participation by giving greater access to information to families and young people? Could email, instant messaging, blogs, chat-rooms and social networking sites encourage service-user-led communication? Could 'virtual worlds' (multi-user domains such as Second Life) give us new opportunities to develop social learning skills? Will the rapid convergence of technologies (such as hybridization of mobile phones and the internet) leave children more vulnerable to cyber bullying or pedophiles? Is social work's own use of ICT as effective as it could be? For example, is email usage effective with service users?'

The authors have identified what they call 'managerialism', i.e. a top-down positivist approach in which the accountability for the service is towards management and organizational goals. Meaning that ICT is employed for organizational ends with a focus on efficiency and hierarchical control. This while 'professionalism' is needed, i.e. accountability to both the social workers and the service users. The latter is also hierarchical but from a humanist perspective. Two ICT related examples of the latter would be the use of databases to argue against a perceived threat to services, or to identify growing needs. In an earlier study performed 2003 in thirteen countries it was identified that the use of ICT were overwhelmingly used to advance management interests. The findings concerned: improving governing processes (increasing productivity, cutting cost, improving information flow, automating decision making and measuring performance), control of staff (monitoring productivity and measuring performance), empower staff (by assisting to manage complexity, providing information for front line staff and improving working conditions) control claimants (through detecting over-payment and reducing fraud). These findings contrast with desired functions that would empower claimants (increasing the responsiveness of organizations, encouraging sensitivity to user

demand or enabling self-assessment). There are only limited examples of social work attempting to use ICT to enhance communication with service users.

Potential suggested usage scenarios are: ICT may provide users with a greater capacity to set the timetable in interactions with social workers. In traditional social work the timing of meetings between service users and professionals is largely determined by the social workers. The contact is often limited by office hours and worker availability, even more at times of crisis. In contrast, the Internet could allow service users to initiate communication at times that suit them. There are also physical hindrances to service user initiation of meetings that can be altered by ICT. Vulnerable families might be geographically isolated without decent transport options, or suffer from a disability that significantly limits their access to goods and services. Again the Internet could help side step these barriers. ICT could also be part in reducing social embarrassment. The anonymity of the Internet could assist in making approaches for help less stigmatizing. ICT could also overcome class and age barriers that can inhibit initiation of interaction. This seems to be the case for many young people that express discomfort about care planning meetings and find the office environments intimidating. ICT could offer option for service users to prioritize the issues that they themselves may wish to work on. Websites could offer the potential for non-sequenced communication, by for example a menu of options to choose from. This could be contrasted with paper-based forms that move a user sequentially through the issues. ICT could also offer opportunities for people who feel intimidated because of problems associated with their level of education and literacy. Young people have had problems with the language used in documentation and face-to-face communication workers. They often ask workers to use words they understand and have a glossary for “big” words’. In relation to ICT the level of spelling and grammar required for SMS or Internet communication is less stringent than written text on paper, whereby young people may feel more in control. Literacy problems could also be avoided through the audio capacity of computers. Websites could offer information at a wide range of literacy levels, as well as tailor vocabulary and grammar to the audience by use of graphics or photos. A move to ICT from paper-based technology is also a change in ‘genre’ that could have implications for the engagement of service users. The change from the bureaucratic feel of forms to an interactive web page could create different types of responses from service users.

ICT also has potential to offer service users greater control over the distribution of texts. ICT could ensure that information is predictably distributed to service users through applying automatic messaging. Another major potential contribution to developing participation in systems would be the effort to ensure that service users see and approve, what is recorded. This is to some extent limited in the ‘pen and paper’ technology since workers hold written text about a service user in their office. Whereby it can be amended without the service user’s knowledge. In contrast, records kept in real time on the web have the potential to make the most recent version available to the service users. Service users could have better access to what is written about them and even be able to add comments or contest what is recorded. Access to the most current records could provide with greater control to service users as it provides accountability of workers, as well as remind themselves of their own

undertakings. The capacity in ICT to attribute user-specific access and security levels to information could provide service users a higher degree of privacy, something that paper-based systems never could. Further advantage of ICT is the ability to distribute information automatically and reliably. In the existing system workers are responsible for co-ordination of decision-making and participation, whereby reminders of meetings may be lost in busy periods. Another subject is that service users complain of the difficulty of understanding the processes, timing and the opportunities to participate in decision-making in the system. This indicates a not taken care of need for professionals to inform and remind people of their rights within a case and care planning process. SMS reminders to many different stakeholders about care reviews are achievable within current technology.

ICT offers ways to change the communication. Internet and (social) media can offer feeling of company and entertainment that is particularly significant for people excluded from social interactions by economic and social circumstances. ICT can also help in initial communication with anxious people and sometimes offers advantages to those dealing with sensitive and taboo subjects. Computer-mediated communication can enhance the capacity to present one's self in a better light; it has less socially restricting features which stop communication in face-to-face relationships, e.g. shyness or concerns about personal appearance; asynchronous relationships allow people more time to consider and frame responses better due to that responses can be postponed; provision of greater detail regarding the social situation which otherwise risk be cut out due to attempt to reduce own uncertainty; provide greater option to focus on individual feelings and relationships; a feeling of being more akin to other people who also communicate electronically; it can also provide greater anonymity.

Identified risks are: increased vulnerability (pedophiles, cyber bullying); loss of assessment capacity (image management and dishonesty may increase); loss of change and life-enhancing aspects of the worker-client relationship (rigidity can appear due to the ability to define and control discourses, also the scope for imagination can become to unrealistic, the ability to negotiate online has considerably different dynamics, the dynamics of relationship development online may be different due to absence of social cues; online may also change the speed of relationship development); and finally the insensitivity to individual differences in skills and use of ICT.

The main question 'why has child welfare been slow in the take-up of ICT when communication is central to our task?' remains to be answered. Tregeagle and Darcy conclude that more research is needed.

### *ICT is rightly viewed with suspicion and narrowly used in social work*

Parrott and Madoc-Jones (2008) explore how ICT has been used in social work and argues that the social work profession needs to reclaim ICT for practice-oriented and service user-focused outcomes. Parrot and Madoc-Jones argue that ICT has been viewed with suspicion and is narrowly used in social work. The usage has been for primarily managerial and monitoring purposes. The potential of ICT is explored in this paper for the sake of empowerment of practice in social work. The authors seek to provide a rationale for using ICT in social work to address issues of service user powerlessness and economic and social exclusion.

Previous research (LaMendola et al. 1989) has reported suspicion

towards technology. Arguably the suspicion arises from a focus within social work on narrative and face-to-face dialogue, none of these are considered easily replicated by ICT. Phillips and Berman (1995) argue that common sense perceptions of information technology and its characteristics (logic, mechanistic processing, and systemization) often can be viewed as the antithesis to some of the important defining characteristics of social work (compassion, positive regard, empathy and the traditional personal counseling relationship). Parrot and Madoc-Jones state that there are signs that more and more households from also lower social economic groups are acquiring ICT technology, whereby the question of adequate usage is even more relevant. Developments in the use of ICT have often been based on the argument that besides facilitating co-ordination of services, ICT also brings with it efficiency gains that could lead to more investment into front line services (Gershon, 2004).

In practice it is demonstrated that ICT often change the balance of power in organizations. In social work there is a dominance of managerial uses of ICT that affect social relations within the organization of social work (Phillips and Berman 1995). In relation to social service agencies, Gould has argued that ICT balance of power is towards management (Phillips and Berman, 1995: xi). It has also been argued that within unequal market-based societies ICT has led towards greater social control over social workers and service users (Fitzpatrick 2002). The enabling of stringent monitoring of staff time, and closer monitoring of claimants are two identified effects (Henman and Adler's 2003). In earlier research it is identified that that the implementation of computerized managerial control of social workers professional discretion has had the consequence of transforming social work from a professionalized activity to a centrally controlled technical and administrative task (Sapey 1997). It is also claimed in previous research that the use of ICT has had de-professionalizing effect. At each stage in work practice social workers are required to log information under the purpose that it can be updated for the more effective management. The update concerns not only of the social workers time but also the content of their work. Whereby social workers skill and judgment is seriously circumscribed and remade as part of a technical process (Harris 2003). The same process also remakes social workers relations with their line managers.

Previous systems of managerial control within social work were characterized by breaks in the hierarchy of control where the dominance of a professional model of supervision between relatively autonomous professionals provided space for professional judgment and discretion (Harris, 1998). With the capabilities within ICT, supervision has moved from a process of peer consultant interaction to one in which the line manager acts as a chaser of progress closer to the assembly line approach. The use of ICT has enabled more immediate control through the workplace hierarchy than has been possible previously. This development has reframed the supervision process to one in which managerial control is interpreted as a neutral requirement. When a social worker fails to comply with a predefined practice element the problem is understood as a technically neutral one. Compliance will be required to meet the technical processes of the computerized care management system. This is a process that limits professional freedom and directs actions towards so-called approved activities. It could actually be argued that social worker's reluctance to take up and include ICT has been founded on the realistic concerns that ICT have

played a role in de-professionalizing and depersonalizing the social work task. Different types of empowerments are presented and exemplified, i.e. task, practical, social, economical, and political. Regarding practical empowerment the ability in ICT to transcend geography can result in significant practical empowerment of individuals who live at a distance from physical resources or who may otherwise be constrained in time. Regarding social empowerment ICT can potentially increase both the direct participation of service users in the services they receive and increase access to such services. Regarding economical empowerment ICT service users could access the Internet to purchase the cheapest services, access and share information about the suitability and quality of service providers. Regarding political empowerment ICT allows individuals eased access to obtain relevant information and also to attain critical mass. Online communities of influence can be established wherein the members regularly engage in shared learning or political activity based on common interests. Finally Parrot and Madoc-Jones claims that a more holistic approach is required for social work to reframe the use of ICT in a way that provides the right opportunities for service user definitions of how ICT can be used.

#### *Next generation digital technologies needs to be understood by social workers*

Giffords (2009) explored the next generation of Internet technologies that are relevant to the field of social work and related disciplines. Digital technologies investigated are blogs, social networking sites, tags, folksonomy, wiki mechanisms, and the virtual world Second Life. Gifford's state that these new medias can increase the capacity for practitioners to obtain and share information by enhancing traditional ways of communicating. The paper discusses how the Internet reshapes the means by which individuals form social relationships and acquire and utilize knowledge. This article also raises issues that are following with this medium. This paper moves beyond the state of the art technology 2009 (e-mail, mailing lists, discussion groups, and the www) and discuss Web 2.0 and emerging social media technologies. Previous research had shown that 43% of Internet users who are members of online communities felt just as strongly about their virtual communities as they did about their real-world communities.

Earlier research had called for trained social work 'informaticsticians' to assist with management information and knowledge to support social work practice as technology continues to expand. Informatics was explained as a combination of computer science, information science, and social work; designed to assist in the management and processing of data, information, and knowledge support for social work practice. A means to to minimize the digital divide not only on behalf of clients but also among the social workers themselves. These 'informaticsticians' could educate and advise the social profession concerning, e.g. ethical, legal, and licensing concerns. Already 2005 research had indicated that social workers had increasingly used the Internet to access research and collect data or to provide online counseling. Some even used Internet to treat addictions and some offered social support to a variety of people and needs including caregivers, individuals with chronic illnesses, and social workers with job stress. There also emerged advocates and activists that did use Internet tools for cyberactivism. Human service organizations can look and apply for funding online. Other more general developments following with Internet were to



generate reports, track personnel, automate billing, forecast budgets, and assist service planning. Also online social education and certification courses had appeared on Internet, e.g. NASW's Identification and Reporting of Child Abuse and Maltreatment Course for Mandated Reporters module. NASW and ASWB had recommend that social workers need to acquire skills to use technology ethically and competently to ensure the protection of clients, workers, and organizations. In total social workers had good reasons already 2009 to take up an amount of different Internet technologies in their profession.

Reasons to look closer at Social networking sites for social workers were that the interaction between individuals mirrors what can be observed in the real world or in face-to-face communication. Social networking sites had become a conventional tool for adolescents and adults to meet and share pictures, videos, and information. Reasons to look closer at Blogs for social workers were that it contributes with formation of various relationships. People can make new friends, network, and share ideas with irrespective of their geographic location. Blogs also enable incorporation of hyperlinks that goes beyond the blog site. Blogs can help people to both begin a conversation and as well as stay connected around shared interests or cultures. In a blogosphere users can find an array of topics and information relevant to social work. Blogs can provide social workers information, including links to various Web sites, academic peer-reviewed articles, videos and podcasts.

Suggested reasons to look closer at RSS for social workers were that it has the potential to save enormous amount of time for practitioners because chosen subscriptions help users to avoid rereading previously viewed information while attempting to locate new information or updates to a page; plus that RSS based engines are able to locate the most up-to-date information on a specific pages. Reasons to look closer at Tags for social workers were that these labels make it easier for users to find blog posts, photos, and videos that are related, so called tagged social media. Folksonomies is comprised of terms (tags) that allow users to associate several databases by using a single suffix. Tags are used to categorize information, or tagged content Folksonomy is an important factor for tagging as because it relies on language that is accessible beyond the originator's understanding and hence help to achieve a sense of shared meaning among users. Examples of sites that use these tags are a photo management and Web-sharing application called Flickr, and the social bookmarking sites called Delicious and furl. Reasons to look closer at Wiki for social workers were that it allows users to freely create and edit Web page content. Wiki's supports hyperlinks and has a fairly simple mechanism for creating new pages and cross-links between pages. Wikis are a useful tool for social workers because they can help organizing, sharing, and co-creating information among groups of people. It Have the potential to become a powerful collective action and networking tool for the profession and their clients. Virtual communities are a useful tool for social workers because it enables online role-playing game. Virtual communities can include practice quizzes, access to lecture clips, look at three-dimensional models, and chat. Online role-playing game and virtual communities have been identified as mean that is just as valuable to participants as their face-to-face contacts. Social workers must use technology in a manner that is consistent with the Code of Ethics of the National Association of Social Workers, social work values, and professional education.

On the downside it was identified fraudsters who send spam or pop-up messages to lure personal information, e.g., passwords, bank account information, credit card numbers, Social Security numbers, or all types of sensitive information. Another mentioned risk was phishing, i.e. rather than targeting individuals it is a security attack that has the capacity to damage computer systems beyond repair that is forcing victims to replace their systems. This type of attack is not devised for reasons of profit. Cyberbullying is another problematic. Social workers, especially those who work with children or teens need high awareness about this phenomenon. Finally there is also the challenge of assessing whether information is reliable or not.

### ***Social work and ICT does not reach up to national and international expectations***

Perron et al., 2010) argue that social work needs more attention ensure that social workers are responsive to the technological changes in the health care system, including the health care infrastructure and use of technology among clients. With the growth of the Internet people have transformed their social relationships. Earlier research has even argued that online relationships can have properties (intimacy, richness, and liberation) that rival or exceed offline relationships; this because online relationships tend to be based more on mutual interest rather than physical proximity (Bargh, McKenna, & Fitzsimons, 2002). Valued goods and services for anyone is one slogan indicating the inherent possibilities (Thomas Friedman 2005). Even the most remote areas of the world might have opportunities to gain access through the spread of ICT. It is identified that the attention that the field of social work has given to ICTs in research, education, and practice does not match the efforts of national and international organizations that place ICTs as critical media for improving the lives of disadvantaged and disenfranchised persons, and also necessary for all forms of civil engagement (CSWE, 2008; see also Beaulaurier & Radisch, 2005). Many social work students, and social work educators and social workers seem to be unaware of the technology standards. Review of syllabi of social work courses has also demonstrated that ICTs, beyond e-mail communication, are generally not present in the educational environment. Hence, social work students will not be adequately prepared in the use of ICTs, which are integral in the workforce today and will become even more important over time (Parrot & Madoc-Jones, 2008). To effectively use social networks (e.g. obtaining employment, securing resources, or obtaining information) social workers need to understand the capabilities of these media and networks, and how they can be effectively managed, and utilized within a relevant digital environment. In relation to education Perron et al also state that ICTs can help facilitate a more productive and effective learning environment for both social work students and professors. In the society in general individuals of all age ranges are heavily involved in maintaining social connections through Internet networks. The Internet and mobile networks have an enormous impact today when it comes to defining the future of human interaction (Bargh, 2004). The field of social work needs to understand how these changes are influencing and will continue to influence all aspects of social work. Here it is needed a research agenda, and it is important that such a research agenda builds an understanding of both the positive and negative

impacts of human interaction. Especially the ethical considerations are of importance for social workers. Already in later nineties there was a continuously increasing amount of information that was saved and shared electronically (Rindfleisch, 1997).

According to ethical standards: social workers need to protect the confidentiality of clients' written and electronic records and other sensitive information; Social workers should also make reasonable efforts to ensure continuity of services also in cases where services are interrupted by factors such as unavailability, relocation, illness, disability, or death; ICTs offer greater flexibility and support for seeking professional consultations, and ICT enables online supervision, here social workers should seek advice and counsel of colleagues whenever such consultation is in the best interests of clients; Creative uses of the Internet are emerging to support advocacy, here social workers (given their overall budget in the organization) should advocate within and outside their agencies for adequate resources to meet clients' needs; A growing body of research has demonstrated that distance education can be as effective or sometimes more effective than face-to-face education. Social work management should take reasonable steps to arrange for continuing education and staff development for all staff for they are responsible for; Social workers have a daunting obligation of remaining current with the research in their area of practice. Majority of research findings can be disseminated and accessed electronically via the Internet. Hence, many of the barriers that social workers face in accessing and also understanding research results may in part be overcome through the efficient and effective use of ICTs.

The authors conclude that given the growth and impact of ICTs and its implications for social work ethics it is critical that social workers have both competency and literacy with ICTs.

#### *Ethical guidelines are needed for social workers personal social media*

Kimball and Kim (2013) discuss and provide starting point for policies regarding the ethical use of social media outside the client-professional relationship. In real life, we can take advantage of physical cues to help us identify our role and put the appropriate boundaries in place, but online it is more challenging to determine where our boundaries lie. Previous research has covered the ethical challenges of social media in professional practice with clients, use of social media as an expansion of research, and for online learning. But, the discourse around ethical use of social media, outside the client-professional relationship, is missing. Identified areas in which more discussion is needed are: advising students, and setting agency policies on ethical uses of personal use of social media among professional relationships. This is about creating virtual boundaries and being aware about the identities they create and maintain in social media related to ethical codes and policies. Suggested recourses to start from are The NASW Code of Ethics (2008) and the Social Media Governance Web site (<http://www.socialmediagovernance.org>).

In the work of setting policies and guidelines, the authors state that it is important to identify the difference between personal and professional representation of your organization. One suggested strategy is disclaimer language that helps stating whether you are representing yourself or your

organization. It is also important to know about the expectations of the NASW Code of Ethics and other organizational policies when deciding your rules regarding the types of material that can be posted. Social workers in general understand the ethical considerations around protecting client confidentiality, but the guidelines around how to respect colleagues, the social work profession, and other professional relationships are less stressed in ethics trainings. Concerns also exist about how to set boundaries regarding clients' personal social media sites. For example, social workers maintaining social media will need to decide whether and how they will respond to comments written by clients on their sites. Five questions are provided to guide social work professionals when making decisions about sharing information on their personal social networking sites:

1. *What information do you want to share?* Use the inherent reflective nature of social work to think about the information you are putting forward. Is this information important, harmful, protected, and so forth?
2. *Why do you want to share this information?* Reflect on the purpose of sharing this information. What are the benefits of sharing? Is there an expected outcome from sharing this information?
3. *Who needs to see this information?* After considering the purpose of sharing this information, think about the role of your audience. Who are the people who will benefit or need to know about this information? Will clients see this information?
4. *Where do I want to share this information?* After determining who needs to see this information, the question of where to share this information follows. There are various social media tools that may have different or overlapping purposes. Where you share information depends on your answers to the three preceding questions.
5. *How does the NASW Code of Ethic or other organizational policies guide sharing this information?* After determining that you are going to share this information, examine and reflect on the NASW Code of Ethics and other policies that may affect the sharing of this information.'

Above proactive guidelines were suggested to encourage responsible and ethical use of social media for social workers that need help with the mediation between personal and professional boundaries.

## References

- Askenazy, P., Caroli, E., 2010. Innovative Work Practices, Information Technologies, and Working Conditions: Evidence for France. *Industrial Relations* 49, 544–565. doi:10.1111/j.1468-232X.2010.00616.x
- Ball, K., 2010. Workplace surveillance: an overview. *Labor History* 51, 87–106. doi:10.1080/00236561003654776
- Bartholomew, M., Jones, T., Glassman, M., 2012. A Community of Voices: Educational Blog Management Strategies and Tools. *TechTrends: Linking Research & Practice to Improve Learning* 56, 19–25. doi:10.1007/s11528-012-0583-3
- Bellotti, V., Ducheneaut, N., Howard, M., Smith, I., Grinter, R.E., 2005. Quality versus quantity: e-mail-centric task management and its relation with overload. *Hum.-Comput. Interact.* 20, 89–138. doi:10.1207/s15327051hci2001&2\_4
- Blas, N.D., Paolini, P., 2013. Beyond the School's Boundaries: PoliCultura, a Large-Scale Digital Storytelling Initiative. *Journal of Educational Technology & Society* 16, 15–27.
- Bound, H., 2011. Vocational education and training teacher professional development: tensions and context. *Studies in Continuing Education* 33, 107–119. doi:10.1080/0158037X.2011.554176
- Candace Deans, P., 2011. The Impact of Social Media on C-level. *MIS Quarterly Executive* 10, 187–200.
- Capo, B.H., Orellana, A., 2011. WEB 2.0 Technologies for Classroom Instruction: High School Teachers' Perceptions and Adoption Factors. *Quarterly Review of Distance Education* 12, 235–253.
- Carlsson, H., 2012. Working with Facebook in Public Libraries: A Backstage Glimpse into the Library 2.0 Rhetoric. *Libri: International Journal of Libraries & Information Services* 62, 199–210. doi:10.1515/libri-2012-0016
- Ceaparu, I., Lazar, J., Bessiere, K., Robinson, J., Shneiderman, B., 2004. Determining causes and severity of end-user frustration. *International journal of human-computer interaction* 17, 333–356.
- Chesley, N., 2010. Technology Use and Employee Assessments of Work Effectiveness, Workload, and Pace of Life. *Information, Communication & Society* 13, 485–514. doi:10.1080/13691180903473806
- Chow, A.S., Croxton, R.A., 2012. Information-Seeking Behavior and Reference Medium Preferences. *Reference & User Services Quarterly* 51, 246–262.
- Cook, D.J., Mulrow, C.D., Haynes, R.B., 1997. Systematic Reviews: Synthesis of Best Evidence for Clinical Decisions. *Ann Intern Med* 126, 376–380. doi:10.7326/0003-4819-126-5-199703010-00006
- Cooper, H., 1998. *Synthesizing research: A guide for literature reviews*. Sage, Thousand Oaks, CA.
- Crowe, A., 2013. Open and social leadership: A new paradigm in emergency management. *Journal of Business Continuity & Emergency Planning* 6, 253–267.
- Day, A., Paquet, S., Scott, N., Hambley, L., 2012. Perceived information and communication technology (ICT) demands on employee outcomes: The

- moderating effect of organizational ICT support. *Journal of Occupational Health Psychology* 17, 473–491. doi:10.1037/a0029837
- Dewett, T., Jones, G.R., 2001. The role of information technology in the organization: a review, model, and assessment. *Journal of Management* 27, 313–346.
- Elefant, C., 2011. The “power” of Social Media: Legal Issues & Best Practices for Utilities Engaging Social Media. *Energy Law Journal* 32, 1–56.
- Estrada, A.W., 2010. Saving Face from Facebook: Arriving at a Compromise Between Schools’ Concerns with Teacher Social Networking and Teachers’ First Amendment Rights. *Thomas Jefferson Law Review* 32, 283–312.
- Frizzo-Barker, J., Chow-White, P.A., 2012. “There’s an App for That” Mediating mobile moms and connected careerists through smartphones and networked individualism. *Feminist Media Studies* 12, 580–589. doi:10.1080/14680777.2012.741876
- Garrett, P.M., 2005. Social work’s “electronic turn”: notes on the deployment of information and communication technologies in social work with children and families. *Critical Social Policy* 25, 529–553.
- Gelms, J., 2012. High-Tech Harassment: Employer Liability Under Title VII for Employee Social Media Misconduct. *Washington Law Review* 87, 249–279.
- Giffords, E.D., 2009. The Internet and Social Work: The Next Generation. *Families in Society* 90, 413–418. doi:10.1606/1044-3894.3920
- Glasner, A.T., 2010. On the Front Lines: Educating Teachers about Bullying and Prevention Methods. *Journal of Social Sciences (15493652)* 6, 535–539.
- Glassman, N.R., Sorensen, K., 2010. From Pathfinders to Subject Guides: One Library’s Experience with LibGuides. *Journal of Electronic Resources in Medical Libraries* 7, 281–291. doi:10.1080/15424065.2010.529767
- Goyal, A., 2011. Developing women: why technology can help. *Information Technology for Development* 17, 112–132. doi:10.1080/02681102.2010.537252
- Harris, J., Ives, B., Junglas, I., 2012. IT Consumerization: When Gadgets Turn Into Enterprise IT Tools. *MIS Quarterly Executive* 11, 99–112.
- Hart, C., 1998. *Doing a Literature Review: Releasing the Social Science Research Imagination*. SAGE Publications Ltd, London.
- Harzing, A.-W., van der Wal, R., 2008. Comparing the Google Scholar h-index with the ISI journal impact factor. *Research in Int. Management Products and Services for Academics* 1.
- Hricko, M., 2010. Using Microblogging Tools for Library Services. *Journal of Library Administration* 50, 684–692. doi:10.1080/01930826.2010.488951
- Hubers, C., Schwanen, T., Dijst, M., 2011. Coordinating Everyday Life in the Netherlands: A Holistic Quantitative Approach to the Analysis of Ict-Related and Other Work-Life Balance Strategies. *Geografiska Annaler Series B: Human Geography* 93, 57–80. doi:10.1111/j.1468-0467.2011.00361.x
- Karhula, T., Kauppila, T., Elonheimo, O., Brommels, M., 2011. Use of email in communication between the Finnish primary healthcare system and general practitioners. *Informatics in Primary Care* 19, 25–32.

- Kimball, E., Kim, J., 2013. Virtual Boundaries: Ethical Considerations for Use of Social Media in Social Work. *Social Work* 58, 185–188. doi:10.1093/sw/swt005
- Kinnunen, U., Feldt, T., Geurts, S., Pulkkinen, L., 2006. Types of work-family interface: Well-being correlates of negative and positive spillover between work and family. *Scandinavian Journal of Psychology* 47, 149–162.
- Lettieri, E., Masella, C., Radaelli, G., 2009. Disaster management: findings from a systematic review. *Disaster Prev and Management* 18, 117–136. doi:10.1108/09653560910953207
- Maslin-Ostrowski, P., Floyd, D.L., Hrabak, M.R., 2011. Daunting Realities of Leading Complicated by the New Media: Wounding and Community College Presidents. *Community College Journal of Research & Practice* 35, 29–42. doi:10.1080/10668926.2010.526050
- Miller, R.A., 2011. Teacher Facebook Speech: Protected or Not? *Brigham Young University Education & Law Journal* 637–665.
- Miller, S., Weckert, J., 2000. Privacy, the Workplace and the Internet. *Journal of Business Ethics* 28, 255–265.
- Moshiri, S., Simpson, W., 2011. Information technology and the changing workplace in Canada: firm-level evidence. *Industrial & Corporate Change* 20, 1601–1636.
- Munro, E., 2005. What tools do we need to improve identification of child abuse? *Child Abuse Review* 14, 374–388. doi:10.1002/car.921
- O'Dell, S., 2010. Opportunities and Obligations for Libraries in a Social Networking Age: A Survey of Web 2.0 and Networking Sites. *Journal of Library Administration* 50, 237–251. doi:10.1080/01930821003634989
- Pacheco, J., Kuhn, I., Grant, V., 2010. Librarians Use of Web 2.0 in UK Medical Schools: Outcomes of A National Survey. *New Review of Academic Librarianship* 16, 75–86. doi:10.1080/13614531003597874
- Parrott, L., Madoc-Jones, I., 2008. Reclaiming Information and Communication Technologies for Empowering Social Work Practice. *Journal of Social Work* 8, 181–197. doi:10.1177/1468017307084739
- Perron, B.E., Taylor, H.O., Glass, J.E., Margerum-Leys, J., 2010. Information and Communication Technologies in Social Work. *Advances in Social Work* 11, 66–81.
- Ramirez, A., Walther, J.B., Burgoon, J.K., Sunnafrank, M., 2002. Information-Seeking Strategies, Uncertainty, and Computer-Mediated Communication. *Human Communication Research* 28, 213–228.
- Rönkkö, K., Svensson, M., Svensson, L., Carlsson, H., 2017. EMPIRISK STUDIE AV SOCIAL MEDIER I PROFESSIONELLA ORGANISATIONER 2013-2016: Skola, social omsorg, och bibliotek, Kristianstad University Press 2017:3, ISBN: 978-91-87973-15-4.
- Rosengren, C., Bergman, A., Palm, K., Svensson, M., Seddigh, A., 2017. DigiStress - Boundaryless Work and Feelings of Inadequacy, submitted to: Meeting the Global Challenge - Variations in Work and Family Life in India and Sweden. New York: Springer Publishing.
- Russo, C.J., Squelch, J., Varnham, S., 2010. Teachers and Social Networking Sites: Think Before You Post. *Public Space: The Journal of Law & Social Justice* 5, 1–15.

- Sachs, D.E., Eckel, E.J., Langan, K.A., 2011. Striking a Balance: Effective Use of Facebook in an Academic Library. *Internet Reference Services Quarterly* 16, 35–54. doi:10.1080/10875301.2011.572457
- Sánchez Abril, P., Levin, A., Del Riego, A., 2012. Blurred Boundaries: Social Media Privacy and the Twenty-First-Century Employee. *American Business Law Journal* 49, 63–124. doi:10.1111/j.1744-1714.2011.01127.x
- Sappey, J., Relf, S., 2010. Digital Technology Education and Its Impact on Traditional Academic Roles and Practice. *Journal of University Teaching and Learning Practice* 7.
- Schembri, A.M., 2008. www.why-social-workers-need-to-embrace-Web2.0.com.au. *Australian Social Work* 61, 119–123. doi:10.1080/03124070801998376
- Shank, J.D., Bell, S., 2011. Blended Librarianship: [Re]Envisioning the Role of Librarian as Educator in the Digital Information Age. *Reference & User Services Quarterly* 51, 105–110.
- Shirren, S., Phillips, J. g., 2011. Decisional style, mood and work communication: email diaries. *Ergonomics* 54, 891–903. doi:10.1080/00140139.2011.609283
- Tarafdar, M., Tu, Q., Ragu-Nathan, T.S., 2010. Impact of Technostress on End-User Satisfaction and Performance. *Journal of Management Information Systems* 27, 303–334.
- Tranfield, D., Denyer, D., Smart, P., 2003. Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *British Journal of Management* 14, 207–222. doi:10.1111/1467-8551.00375
- Tregeagle, S., Darcy, M., 2008. Child Welfare and Information and Communication Technology: Today's Challenge. *British Journal of Social Work* 38, 1481–1498.
- Venters, J.W., Green, M.T., Lopez, D.M., 2012. Social Media: A Leadership Challenge. *Business Studies Journal* 4, 85–93.
- Young, K.S., Case, C.J., 2004. Internet abuse in the workplace: new trends in risk management. *CyberPsychology & Behavior* 7, 105–111.