

# WORK2017

Work and Labour in the Digital Future  
**16-18 August 2017 Turku, Finland**

## Abstracts



Turun yliopisto  
University of Turku

**TCLS**  
Turku Centre for Labour Studies



|                                                                               |     |
|-------------------------------------------------------------------------------|-----|
| KEYNOTES.....                                                                 | 4   |
| 1. CHANGING MODES OF DIGITALISATION AND ITS IMPACT ON WORK.....               | 9   |
| 2. EDUCATION, WORK, EMPLOYMENT.....                                           | 31  |
| 3. GENDERING WORK.....                                                        | 56  |
| 4. HEALTH AND WELLBEING AT WORK.....                                          | 66  |
| 5. HISTORY OF WORKING LIFE.....                                               | 103 |
| 6. JOB CRAFTING SYMPOSIUM.....                                                | 106 |
| 7. LABOUR MARKETS AND LABOUR POLICIES.....                                    | 112 |
| 8. LEADERSHIP, WORK AND INNOVATION.....                                       | 118 |
| 9. LEGAL ASPECTS OF WORK AND EMPLOYMENT.....                                  | 136 |
| 10. MIGRATION, WORK AND ENTREPRENEURSHIP.....                                 | 141 |
| 11. OPEN STREAM.....                                                          | 150 |
| 12. ORGANISATIONS AS PLATFORMS OF WORK IN THE DIGITAL FUTURE.....             | 173 |
| 13. OVERWORK AND ITS EFFECTS.....                                             | 184 |
| 14. PRECARIOUS EMPLOYMENT AND DIGITAL WORLD.....                              | 189 |
| 15. RECONCEPTUALISING WORK.....                                               | 194 |
| 16. ROBOTS AND THE FUTURE OF WORK.....                                        | 204 |
| 17. SKILLED EMPLOYEES – SUCCESSFUL LABOUR MARKET.....                         | 214 |
| 18. SOURCES OF MEANING IN WORK.....                                           | 230 |
| 19. SUSTAINABILITY AT WORK.....                                               | 233 |
| 20. TOWARDS INTERDISCIPLINARY THEORISING OF WORK IN THE PLATFORM ECONOMY..... | 239 |
| 21. TRANSFORMATION OF PUBLIC SECTOR WORK.....                                 | 241 |
| 22. WORK AND FAMILY.....                                                      | 250 |
| 23. WORKPLACE CHANGE DUE TO THE DIGITALISATION OF WORK TOOLS.....             | 257 |
| 24. WORKPLACE CHANGE: PANEL DISCUSSION.....                                   | 268 |
| 25. WORK PRACTISES AND QUALITY OF WORK.....                                   | 269 |
| AUTHOR INDEX.....                                                             | 282 |

## KEYNOTE ABSTRACTS

### K1

#### **Future of Work and Universal Basic Assets: Equitable Prosperity in the Digital Coordination Economy**

Marina Gorbis

*Institute for the Future (ITF), USA*

Today we are in the early stages of building a new infrastructure for work; think of it as a new operating system for creating value and getting things done. A combination of next-generation networking, distributed computing, and artificial intelligence (AI) is laying the groundwork for this transformation, catalyzing the emergence of a worldwide digital coordination economy. In this economy, algorithms are being deployed to identify and match those in need of something with those who can fulfill their needs, including both human and non-human agents. The emergence of companies like Uber, Upwork, TaskRabbit, and many other coordination platforms that rely on algorithms to directly match human consumers and producers is just the first stage in the evolution of the new system for value creation. Many next-generation platforms could take humans out of the production role by delivering autonomous vehicles to people who need rides, for instance. From there, it's easy to envision a system where economic value is often created entirely without humans. In this capitalism of things, smart objects and systems will exchange value and trade services autonomously. This emerging digital coordination economy, with its efficient matching and fulfillment of both human and nonhuman needs, has the potential to generate tremendous economic growth. However, as software engineers essentially author a growing segment of our economic operating system, it may take deliberate design choices in platform architecture, business models, new civic services, and public policy to prevent this increasingly seamless "coordination economy" from becoming highly inequitable as well. How do we prevent this from happening? Marina Gorbis, Executive Director of the Institute for the Future, will describe the concept of Universal Basic Assets, which she sees as a necessary solution to the challenges facing us as we transition to the new operating system for creating value.

### K2

#### **The Platform Economy: W(h)ither Work, Competition, and Social Life?**

Martin Kenney

*Community and Regional Development Unit, University of California, Davis, USA*

Digital platforms are becoming intermediaries for increasingly large portions of social and business life. In the process, they are restructuring the nature of work, jobs, and value creation. Already, workers are increasingly experiencing a work process that is increasingly structured by algorithms and machine learning. Effectively, they are working with increasingly intelligent tools. As a result, consumption, production, and distribution are being reorganized.

The increasing centrality of digital platforms for organizing jobs, work, and value creation also are changing the balance of power between labor and employer. Not only are the salient cases of work platforms for contracting such as Upwork and services platforms such as Uber and Lyft discussed, as are new opportunities for generating income such as YouTube. Even when, workers are not displaced platforms such as Yelp and TripAdvisor affect workers' experience of work.

In addition to reorganizing work, digital platforms are affecting the dynamics of competition in a wide variety of industries from the services, logistics and finance through entertainment and music. We describe these dynamics and speculate how inter-firm competition might be impacted particularly as firms such as Amazon and Google become increasingly powerful by leveraging their digital power to move into yet other value-creation opportunities.

### K3

#### **Using History to Inform the Future of Work**

Jerry A. Jacobs

*University of Pennsylvania, USA*

In this presentation, I offer a critical assessment of predictions regarding the "jobless future." In the US, headlines regularly appear proclaim the imminent demise of up to half of all existing jobs. The public, business leaders and many prominent policy analysts appear to accept key elements of this scenario. The idea that a set of new technologies represent a powerful and irresistible wave of change has clearly taken hold, despite objections raised by a variety of critics. I focus here on two key criticisms of the notion that technology will overwhelm all obstacles in its path. The first is a critique the "task displacement" framework that is at the core of these predictions. Task displacement is neither a necessary nor sufficient condition for job displacement. The second part of this paper examines the argument that "this time is different" by assessing the speed of occupational change. This analysis uses data from the US decennial censuses (and other sources) spanning the period 1870-2015. The results suggest that in recent decades the rate of occupational change has been slower than during earlier periods of industrial transformation. This evidence is consistent with the relatively slow rate of productivity growth in recent years, but is difficult to reconcile with the predictions regarding the "jobless future." I conclude with an effort to place this debate in a broader theoretical and historical context. I seek to steer a path between several different poles: utopian and dystopian technological futures on the one hand, and the view of some economists that the only public policy needed is to enhance the education of the labor force. I term my approach "technological realism." The broader goal is to develop a framework for the development and implementation of new technologies that will enhance human capabilities, dignity and meaning.

**K4****A Social Science Agenda for the Technology Economy**Peter Levin*Intel Corporation's Datacenter Group, USA*

In 2011, Marc Andreessen argued that “software is eating the world.” In 2017, it's still hungry. The dynamics of this technology economy – the concentration of power, digitization, networks, the post-industrial social contract – demand new social science engagement. From the perspective of a company sitting at the intersection of technology and manufacturing, social sciences would benefit from a new agenda, and a new professional orientation: 1) A research agenda at the intersection of social science, technology, and strategy; 2) A model of engagement that sees social sciences' jobs being “done” when we influence actors in the new economy. There are opportunities in the technology economy, for social scientists to be agents of history, and not simply critical observers of it.

**K5****Migrant Entrepreneurship: Reflections on Research and Practice**Monder Ram*Birmingham Business School, UK*

The convulsions that Europe is experiencing over migration are increasingly evident in academic debates and the more expedient interventions of policy-makers. Scholars have long ruminated on factors that so often lead to migrants becoming self-employed at rates significantly higher than their counterparts in countries of destination. Early studies in the US pointed to the importance of so-called ‘ethnic resources’: the norms, values, characteristics and practices that supposedly belong to a particular ethnic group. Although superficially appealing in explaining varying rates of self-employment amongst migrant and ethnic groups, the obsession with ethnic characteristics was misplaced. European scholars have been particularly active in identifying other salient factors that explain the phenomenon of migrant entrepreneurship, including:

- the socio-economic position of migrants;
- economic opportunities;
- the state of the labour market;
- the places where migrants live;
- and the sectors in which they establish their businesses.

Put simply, context matters. And it matters even more now as states desperately try, on the one hand, to stem the flow of migrants, and on the other, promote initiatives to support entrepreneurship. Researchers need to be sensitive to the varying contexts in which migrant entrepreneurs operate; and they also need to look more closely at the regulatory environment, including the debilitating and continuing impact of racism on the capacity of migrant businesses to flourish.

How far policy-makers and practitioners have grasped the lessons from migrant entrepreneurship

research is a moot point. Converting academic insights into concrete actions is often challenging. But it is nonetheless worrying that the interventions of many European states still have the traces of the problematic ‘ethnic resources’ approach. That is, they focus on individual qualities (or lack of them) of migrants rather than the structural barriers they face. Hence, initiatives tend to comprise business training, language classes, and personal mentoring rather than more fundamental action to tackle racism, the gendered and classed position of migrants in the labour market, and broader structural disadvantage.

Equally concerning is the rarity with which ‘mainstream’ entrepreneurship policy grasps the importance of diversity, particular in respect of the potential contribution of migrant entrepreneurs. Migrant business support measures and initiatives tend to emanate from a bewildering array of policy actors and institutions, rather than the domain of entrepreneurship. Who actually ‘owns’ the policy challenge of promoting migrant entrepreneurship is difficult to establish with any precision. This applies with particular force to austerity-blighted Britain, a country which previously had a tradition of interesting policy experiments to encourage ethnic minority enterprise.

What is the role of academics in a context of heightened political sensitivities? Is it sufficient to remain detached, proffering complex explanations and little else? Or does such an abstentionist stance constitute little more than armchair theorisation and imply a lack of stomach to push forward the insights arising from academic work? Some activism amongst scholars is evident as they engage with non-academic stakeholders to develop initiatives more securely grounded in the evidence base. But it is clear that the scope for more agile, fluid and concerted interventions by academics is large. Migrant entrepreneurship is being invoked as response to an array of diverse challenges, from enhancing competitiveness to promoting integration. The opportunities for meaningful and engaged scholarship are considerable.

**K6****What's in the black box?: Automated hiring and labor market stratification**Daniel Greene<sup>1</sup>, Ifeoma Ajunwa<sup>2</sup>

<sup>1</sup>Microsoft Research, New England, USA, <sup>2</sup>Berkman Klein Center for Internet and Society at Harvard University, Cornell University's Industrial and Labor Relations School (ILR), USA

Since at least the late 1980s, corporations have sought to automate the process of soliciting, analyzing, screening, and even interviewing jobseekers. Automated hiring technologies are sold by vendors to enterprises with the promise of reducing costs, centralizing control, and seamlessly selecting only the exact number of employees you need, with the exact skills you need, exactly when you need them. This paper explores the design history of online job applications and the infrastructure for automated hiring, particularly for hourly workers in the US, in order to map out how these technological intermediaries reconfigure the hiring process and the power relations between hirers and job seekers. We examine the discrepancies between what's offered and what's built by focusing on one major actor in the automation of hiring and the design of online job applications: Unicru, founded as Decision Point Systems in 1987 and acquired by workforce analytics giant Kronos in 2006, drawing on a diverse set of archives that include financial disclosures, court cases, mainstream and trade press coverage, instruction manuals, and policy guidance from human resource professionals. This reveals important tensions. For example, for



most of the systems active in this ecosystem, it is not hiring that is being automated as much as rejection of the lowest-rated jobseekers. Humans remain in the loop to make hiring decisions, but the work of interviewing is deskilled. The conversation between manager and jobseeker is increasingly pre-scripted and the criteria of interest are set centrally, managed and measured by software purchased by corporate headquarters. A similar dynamic is visible around attempts to automate away 'bias' by removing local managerial discretion.

Exploring the history of automated hiring and the relationships between vendors, employers, and jobseekers, reveals a corporate push for on-demand labor that is far broader and longer-lived than the contemporary, app-driven gig economy. These systems are sites for the management, measurement, and transmission of 'human capital'. Systems like Unicru's HirePro attempted to fragment workers into discrete sets of skills and provide to employers only the precise amount and type of workers they need, exactly when they need them. The goal is to remove all friction from the labor market. Unsurprisingly, humans chafe under this system and build a robust community of practice online attempting to cheat automated hiring systems--particularly personality and skills assessments. We draw on organizational studies and brokerage theory to conceptualize how these platforms restructure the labor market. Technological intermediaries like Unicru's Total Workforce Acquisition System become powerful by controlling the relationship between parties with congruous needs but conflicting interests, here: jobseekers and employers. These mundane black boxes dictate the life chances of millions, and so we conclude by reflecting on the potential for auditing protocols that can examine patterns of discrimination in these systems.

## 1. CHANGING MODES OF DIGITALISATION AND ITS IMPACT ON WORK

### 1.01

#### Entrepreneurs' thoughts about digitalization and e-shopping

Satu Parjanen, Mirva Hyypiä

*Lappeenranta University of Technology, Lahti, Finland*

Many cities have long-standing objectives to strengthen their city centres, while at the same time experiencing city centres losing market shares to external shopping areas. In addition, the growing number of Internet users and the increasing volume of online sales gives rise to speculation about how e-shopping will affect physical stores in the city centre. If e-shopping becomes a serious alternative to physical shopping this could of course have consequences for many shops and vitality of the city centres.

In this paper, we study entrepreneurs' thoughts about the digitalization and especially e-shopping. The data is collected with help of semi-structured interviews. These interviews were part of a larger development project and the questions about digitalisation was one theme of the interview. In the interviews it was discussed about the role of digitalisation in general and in interviewee's own business, e-stores and reasons that hinder engaging in the digitalization. All together six interviews were made in the Lahti city centre. The interviewed entrepreneurs represented different line of business including, for example, the clothes store, the jeweler, the pharmacy and the second-hand shop. Most of the stores were micro enterprises.

In the interviews, it was acknowledged that e-shopping is a threat for small stores and in that way it is also a threat for the vitality of the city centre. Actually, in several interviews this issue was brought out before asking it. Digitalization and especially e-shopping was mentioned several times as a reason why some entrepreneurs have closed their stores in the city centre. One of the interviewees has also decided to close her store and concentrate more on her other store outside the city and especially in her online store. Reason for this was the declining amount of clients in the city centre and lack of low-priced parking spaces nearby the store. This implies that if the attraction of city centre deteriorates, the probability of closing store in the city centre and adopting online store increases.

What is immediately clear from this study is that there are several barriers to stores entering the digital economy. Especially, the lack of time and necessary IT skills are central barriers. Also, some interviewees considered that technologies and techniques are not applicable to the products and services they offer. For example, selling jewelry differs a lot from selling other products. In the online store it is demanding to explain what kind the unique jewelry is and how it is possible to wear. This implies, that there should be more information, education and support that are targeted at to help entrepreneurs better understand the nature and importance of digitalization.

However, the attitudes towards digitalization were not necessary negative. There were interviewees who have or have tried online store. Several interviewees were also considering having an online store. One interviewee use actively social media to introduce her products and considered social media as an important tool in creating broadening awareness of her store. It also facilitates communication between entrepreneur and her customers. The most positive

attitude to the digitalization was found in pharmacy. The potential of digitalization is huge in pharmaceutical companies. For example, there is opportunity to create further value from data and analytics using internal and external data sources in order to generate evidence about a drug's efficacy and clinical practices. However, at the moment the legislation does not allow the use of digitalization in its full potential.

According to the interviewees the general trend is that digitalization will not be avoided in the near future and it will change the way customer service work is done. It was considered essential that e-shopping will not totally replace physical shopping. The clear wish was that the role of the e-shopping is complementary meaning that the e-shopping facilitates the use of physical shopping. For example, clients can use the Internet to get information about a product and make a decision what to buy before going to a physical store. As a result, physical trips to stores still happen, but clients take less time in the store and are better informed beforehand, and therefore, can make a faster selection. The interviewees have already noticed this kind of behavior. Clients use the online store to search for suitable products and then collect them from the store on their way somewhere else. The interviewees stressed that in the future it is important to have both an online and offline presence and remember that business is always a human activity.

## 1.02

### Digitalization in social and health care services: A case study on the speed of its introduction

Juha Ovaska, Satu Pekkarinen, Helinä Melkas

*Lappeenranta University of Technology, Lahti, Finland*

#### Introduction

Social and health care services are supported by and at the same time confronted with a large variety of digital solutions. Many people have problems with digitalization and novel technologies. Yet, the usage of such technologies becomes more and more crucial, since many social and health care services will be – if they are not already – digitalized. In Finland, mainstreaming of digitalization in social and health care services is picking up speed. This change affects ways and contents of work in a fast pace. In earlier research, many kinds of preconditions for successful digitalization have been found. With the numerous preconditions in mind, how can we reach an appropriate speed of digitalization?

#### Objectives

In this study, the speed of introduction of digitalization in social and health care services will be investigated. With the help of a case study, we look into whether the speed of introduction and widening of digitalization is optimal or whether there are problems and bottlenecks. Positive and negative sides and preconditions of digitalization that have been identified in earlier research will be reflected with regard to the speed. The target group is social and health care personnel.

#### Methods

Data collection involved 18 thematic interviews, conducted in 2015, in a public social and health

care organization and its collaborator organization, both from management and employee positions. The interviews were transcribed and analyzed qualitatively. The case organization provides primary and secondary health services, family and social welfare services, and services for senior citizens. It is responsible for the integrated social and health care in one region in Finland (population: 132.000, employees: 4000). The organization is a national forerunner in organizing social and health care services in a novel way and one of the benchmarking models in the ongoing national social and health care reform.

#### Results

According to the results, the organization has recognized the second “wave” of digitalization and aims at it, but there are several obstacles in realizing it in practice. The first wave made the information systems familiar, but the second one focuses on change of practices and the amount of information. Digitalization has led to information flooding in from multiple channels. Indeed, the interviewees referred to new value thinking: added value during the digital era does not come from professions or hierarchies but information and knowledge. The citizen becomes part of professions.

Yet, technology has often dictated the digitalization processes in the field of social and health care. There are multiple systems in use, and when the systems are not compatible, work practices have not come along, as these have not been planned together. When the speed is considered, it is not just about the speed of technology development, but also about continuously upcoming new challenges at work otherwise. There is change after change, work is in general busier and one does not have time to learn new things. The personnel also feel that the digital systems change all the time; new versions keep coming so that older ones have not been learned, when there is already a new version available. Thus, in introduction of digital solutions it is not just a question of a problem in attitudes, it is about how busy people are in their daily work, not having time to learn.

In the case organization, the speed of change in activities has been so high that technology lags behind. The products are unfinished and faulty or have not enough capacity for sufficiently large amounts of information and numbers of customers. The interviewees noted that it is tiring to correct faults and negotiate with technology companies about the faults of highly unfinished products. Operating across municipal borders is also a technical challenge in practice.

#### Conclusion

The study showed many difficulties and challenges in the ways in which digital solutions are introduced. On the one hand, the speed of technology development is felt to be too high, but on the other, the context-related adaptability of technologies is felt to be too slow. There are thus several kinds of “speed processes”: the speed of technology development, the speed of change in work practices and the speed of coordinating and combining these. The reasons behind this are multiple. There are other sectors, where the change towards digital solutions has been fast, such as the banking sector, and some of the interviewees felt that this should be possible also in social and health care. However, the types of issues and work are in many ways different. A clear good practice is allocation of time and resources for technology use and introduction to it, of which interesting examples were given. Enthusiastic individuals – physicians, for instance – are also needed in the field to incorporate ‘the voice of practice’ into technology development so that the digital solutions truly respond to the needs.

## 1.03

**Digitalization of Manufacturing in Germany: Production Models, Control and Autonomy**

Eva Susanna Kunze<sup>3,1</sup>, Christian Manfred Wilke<sup>3,2</sup>

<sup>1</sup>Bielefeld University, Bielefeld, Germany, <sup>2</sup>Paderborn University, Paderborn, Germany, <sup>3</sup>Research program „Design of Flexible Work Environments: Human-Centric Use of Cyber-Physical Systems in Industry 4.0“, North-Rhine Westphalia, Germany

The digitalization of Sutiindustrial production processes which finds its way into German factories is broadly labeled as “Industry 4.0” and demands new entrepreneurial strategies as well as the rethinking of work organization and its embeddedness in institutional surroundings. The ideal type of a “smart factory” with its heavily digitalized and networked structures thus not only the production model but as the organization of work and the way in which it corresponds to employment relationships.

A framework of economical and sociological theories is constructed in order to analyze the layers, which production models consist of and how they are effected by changing markets, advancing technologies and the resulting change in organizational problems and the solutions to them through institutional circumstances.

This is a conceptual contribution that tries to deepen and broaden the view on technological change and its effects on work organization. It does so by adapting a perspective on production models which are empirically present in real world economies, in this case Germany. Their possible developments based on the strategies which changing markets demand and institutional environments that provide guide rails for any changes in the organization of work and labor relations are analyzed. Predicated on the characteristics of an ideal type smart factory the analysis continues to predict possible outcomes of the digitalization of industrial production processes in the German economy for enterprises as well as for employment relationships.

As a first step The German version of the post-tayloristic production model named “Diversified quality production” (DQP) (Streeck, 1991) is first analyzed in order to demonstrate the functionality of the analytical framework and the historical relevance of the analysis. Wolfgang Streeck (1991) argued how a quality-competitive flexible mass production arose in Germany in the 1970s as consequence of changing markets and a certain institutional endowment of the German economy. This endowment with strong labor unions, cooperation networks and governmental regulations led, according to Streeck, to the production model at hand with its high quality and qualification standards as well as high worker autonomy and protection leading to “professional motivation” (1991).

Streeck’s analysis is taken further by also implementing the phenomenon of advancing technologies into this development process (Schneider, Iseke, Wilke, submitted). It assumes that technologies and the resulting production models are as well subject to economic considerations of a trade-off between cost degression and product diversity. It is argued that the DQP was one step in minimizing this trade-off and that the ideal type of a smart factory will resolve it.

The third step of the analysis concentrates on the organizational coordination and cooperation problems arising from production models and especially the changes in those. This reveals potential tensions between German institutions of work regulation and the new production model “smart factory”. The changes in work organization are assumed to provoke changes

within the employment relationship, e. g. regarding aspects of employees’ work place autonomy (Caroli & van Reenen, 2001).

Employment relationships are characterized by the employees’ hierarchical status as well as their level of autonomy and exposition to measures of surveillance and control during execution of work related tasks (Goldthorpe, 1984). Levels of autonomy vary at any time between different groups of employees and differ depending on each context of labor and the individual factors like formal qualifications of employees. As digital technology enforces possibilities of flexible working hours (work time autonomy), spaces and hierarchical structures for some, other groups of employees do not benefit.

Varying with an organizations’ production model, institutional regulations and the technology implemented, employees may be confronted with new ways of external control : As Industry 4.0 work environments are strongly associated with adaptive human-machine-interfaces whose adaptiveness relies on data about the state of the employee to adjust to him/her, personal data on individual work performance and individual state is made available and lays ground for new qualities of control and especially surveillance (Krzywdzinski, 2015).

For those who avail, the new flexibility is construed as autonomy and possibly thought of as entrepreneurial requirements. These requirements can be directed from the company towards the employee or can be as well intrapersonal requirements within the employee towards him/her work performance. The latter can be understood as entrepreneurial forms of self-commodification, e. g. social, emotional, chronological self-regulation (Lohr, 2013). This notion is supported by recent surveys with employees which show a relation between increasing work place autonomy and a higher intensity of individual work performance (BMAS Monitor 2016).

Nevertheless, as the larger part of an actual implementation of Industry 4.0-technologies remains uncertain it is necessary to evaluate its possible impacts on existing institutional embeddedness of modes of work regulation. A transdisciplinary analysis is argued to be suitable in this case to overcome blind spots resulting from a sole emphasis of either economical or sociological perspectives.

## 1.04

**What is digital work? Observations on the effects of digitalization on business-to-business sales work**

Hanna Timonen<sup>1</sup>, Johanna Vuori<sup>2</sup>

<sup>1</sup>Aalto University, Espoo, Finland, <sup>2</sup>Haaga-Helia University of Applied Sciences, Helsinki, Finland

It has generally been accepted that work is currently being reconfigured due to digitalization. Organizations face pressures to be more flexible (Schreyögg and Sydow, 2010) and ambidextrous (Raisch et al., 2009) facing the increased complexity provoked by the digitalization of traditional work (Gaskin et al., 2014). However, much of current research has focused on the effects of digitalization on organizational levels (e.g., Gibson and Gibbs, 2006), while less focus has been on how the affordances offered by digital technologies shape individual ways of working and collective work practices (see Forman et al., 2016).

We focus on the effects of digitalization in the context of business-to-business (BtoB) sales



work. Compared to business-to-customer markets, the digitalization of the BtoB sector has been quite slow (Karjalainen et al., 2015; Michaelidou et al., 2011), as sales professionals have been concerned about the effects of digital technologies on the sales processes and on their personal connections with the customers (Johnson and Bharadwaj, 2005; Speier and Venkatesh, 2002). However, there is now increasing pressure to adapt these technologies in BtoB sales, as most customers already use them in their personal communications (Rantala et al., forthcoming). This context can be seen as especially fruitful for studying the effects of digitalization on work, as it becomes more a question of adopting new ways of working, instead of adopting new technologies per se.

In our study, we explore how the introduction of new digital technologies in sales organizations reconfigure ways in which individual salespeople work, especially in how they interact with business customers, and how this changes work practices of the whole sales organization. In this, we adopt a practice approach that centers around people's everyday doings (Feldman and Orlikowski, 2011). This means that we see work as 'a doing', something that is performed, and focus on the dynamic and situated activities that constitute working, emphasizing embodied practical understandings that are entangled with material configurations in particular times and places, rather than static or abstract tasks that make up 'the work'. In this, we follow the call made by Barley and Kunda (2001) by building our understanding of how BtoB sales work is changing based on specific accounts of actual work practices.

Our study is a qualitative single case study of a small company offering software as a service (SaaS). The case organization has recently changed their sales strategy and is now contacting their business customers through digital communication channels. In this digital sales model, the salespeople book online meetings with the customers, during which they speak with them on phone and share a computer screen through which they can demonstrate and let the customers test the offered service. Our data consist of video-recordings of real-life digital sales meetings, related debriefing interviews of both the salespeople and the customers from these meetings, and observations of the sales work. We currently have data from nine sales meetings with six separate customers, and will continue collecting more data during spring 2017.

Based on initial observations of our current data, there are at least two ways in which adopting a digital sales model has changed sales work in the studied organization. First, there are changes in the **visibility of sales work**. Compared to traditional face-to-face meetings, digital meetings enable less transparency between the interacting parties, enabling salespeople to use tools and communicate with colleagues during the meeting. This lessened visibility enables salespeople to multi-task, check information, and use various physical and digital tools in ways that would be socially unacceptable in face-to-face meetings. Simultaneously, while the visibility of the sales work toward the customer decreases, the visibility of the sales work within the sales organization increases. As salespeople are both physically and digitally present at the office during digital sales meetings, and as the details of these meetings and their results are documented in digital tools, their work becomes more transparent and analyzable for the rest of the organization.

Secondly, digitalization of sales meetings changes the **temporal aspects of sales work**. The salespeople need to temporally organize their work differently, as digital meetings are much more moved around and re-scheduled compared to face-to-face meetings. The salespeople are required to be much more available at different times of the day and also to get back in touch at much more specific times. As a result, they need to be much more organized regarding their own personal time. Also, sales work seems to become more tightly knit, as in having much less time and periods of recovery and reflexion as many high-paced performance periods follow each other in a quick rhythm. Simultaneously, salespeople are required to pay more attention

to the internal temporal rhythms and processes taking place in digital sales meetings, vocally guiding the customers while also thinking of the next steps of the process.

## 1.05

### Enhancing productivity, customer experience and wellbeing at work through information ergonomics

Laura Bordi, Kirsi Heikkilä-Tammi, Jaana-Piia Mäkinen, Jussi Okkonen

*University of Tampere, Tampere, Finland*

In many fields, work is becoming more information intensive as the use of information and communication technologies is increasing. Employees are often operating in quite complex digital work environments which may have various implications for wellbeing at work and productivity. The amount of information coming through various channels can be high and difficult to manage. The constant flow of information may inflict interruptions and cause fragmentation of tasks, which may, for example, increase workload and stress. Also, complex digital work environment often increases the need for multitasking, which can hinder concentration and increase strain. Many workplaces are in need of establishing organisational practices to promote information ergonomics to reduce information load and support wellbeing at work.

In this presentation, we present results of the research project "Enhancing productivity, customer experience and well-being at work through information ergonomics". The objective was to study how information ergonomics can be developed to enhance wellbeing at work and thus also productivity and the quality of customer service work. The research questions were: In what kind of digital work environment are the employees operating in? How is the use of ICTs associated with wellbeing at work and the quality of customer work? What kind of practices do the employees develop to reduce information load and improve information ergonomics in their work? The study was carried out as mixed-method action research. 36 employees of three organisations participated in the study. The research data consists of survey questionnaires, log data, measures of heart rate variability, and group discussions of nine workshops. The questionnaire data was analysed with statistical methods, such as t-tests and correlations. The log data was analysed by quantifying frequencies and scope of different communication activities. The HRV data was analysed with logging data applying straight and lagged correlation analysis. The method of qualitative content analysis was applied to the workshop research data.

The preliminary findings of the log data indicate, for example, that digital work environments are heterogeneous, and conventions and habits have great variance. Most distinctions can be explained by task dependencies, yet organisational attributes also have significance. The results of the questionnaire data indicate that employees with high job control and autonomy report less feelings of techno-overload. Organisation's and superior's polychronicity belief is associated with fragmentation of tasks. In addition, fragmentation of tasks is associated with employees' dissatisfaction with the quality of customer work. Employees with high polychronicity preference and belief seem to multitask more than others and also report less feelings of techno-overload and multitasking overload. However, the analysis of the HRV and log data indicate that shorter task sequences and increased application switching, along with higher communication intensity, result in increased stress among the participants. In the group discussions, the employees brought up that ICT malfunctions and usability problems are causing delays and piling up



the work. The employees also discussed how the multitude of applications, with sometimes overlapping functions, and changes in ICTs are increasing workload and need for multitasking. Many of the employees reported continuous flow of digital communication, which often causes interruptions and fragmentation of tasks. The employees also noted that digitalisation of customer work is increasing customers' expectations of being served right away. On the other hand, the employees perceived the use of ICTs to be an essential part of their job. They also noted that when implemented properly, ICTs offer them more flexibility in their job. The practices the employees aimed to develop to reduce information load and support wellbeing at work were mainly associated with establishing functional practices and etiquette of digital communication and increasing the opportunities to control one's own work and schedules.

Based on the results, it seems that the digital environment employees are operating in in their daily work can be quite complex and affect wellbeing in various ways. ICTs are perceived to be an integral part of work, and usually the load associated with ICTs is intertwined with workload in general. ICTs can act as a job resource (e.g. increasing flexibility) which helps in reaching the objectives of work and supports employee wellbeing, or as a job demand (e.g. interruptions, fragmentation of tasks) which may result in increased workload, frustration, and stress. Organisational practices play a substantial role in keeping the information load at a manageable level.

## 1.06

### **Old skills for new jobs or new skills for old jobs The challenge of changing job-requirements**

Robert Helmrich, Michael Tiemann

*Federal Institute for Vocational Education and Training, Bonn, Germany*

The aim of this paper is to assess the effects of changes in economic and technical production on the national workforce and occupational tasks. It contributes to recent research on polarization and task biased technological change in developing a theory-based model for analyzing occupational activities (their routine, knowledge and object-oriented shares) in different contexts (branches, occupations). The central question of this article is concerned with how and which jobs will change in structure and requirements. So far, this question cannot be answered directly, since there is no empirical evidence yet of the development of smart industry in the economy itself.

There are several megatrends acting on economic development. Some of the more pressing ones, which also have a considerable impact are the globalization and the digitization of production and consumption, technological progress, demographic changes (national and international), the changing of educational behavior towards an increase in academic qualifications, resource scarcity or climate change. Over time, these changes alter the demand for goods or production processes. This will also affect occupational requirement structures (Helmrich / Hummel / Neuber-Pohl 2015).

Theoretically the study is based on a combination of three frameworks. The first reference framework draws on work by PREDIGER/SWANEY (2004) who developed dimensions used to describe certain aspects of occupational contents and for mapping occupations. Of this framework we use the "people vs. things"-distinction. The second framework assesses requirements on

knowledge work by VOLKHOLZ/KÖCHLING (2001), where the working population is partitioned according to the type of knowledge work of their employment. This allows us to directly integrate information on the knowledge intensity of work(-places) in our model. The third framework is the task-approach initiated by a paper from AUTOR et al. (2003) about the share of routine tasks of occupations and its links to occupational developments, which is an enhancement of the "Skill-Biased Technological Change". This allows us to implement information on the probable impact of technological changes on occupations and work. Put together, these frameworks help us to assess and describe the characteristics of tasks, occupations, goods, and branches which determine their respective contents and thus tradability.

We examine requirements on the level of the working place: Firms structure their working places according to new requirements. Being able to describe occupational content and its links to new qualification demands puts us in a position to examine a) what the new requirements for firms and employees are and b) what their effect on the occupational structure is.

In order to assess we need to analyse the division of labour from different perspectives: the employers' and the employees' perspective. Firms have to amend to new trends and are innovative in developing new products and services; and these innovations put changing requirements on the employees. We link both perspectives on the level of branches, occupations, tasks and requirements, based on quantitative survey-data like the BIBB-BAuA Employment Survey 2012 (HALL et al. 2014) and Employer-Surveys.

As an example, we here present the development in the energy and health branches and occupations. The energy transition in Germany will produce no recent tasks. But the current tasks will be more varied and sophisticated. In the health and care sector however activities and requirements will change.

## 1.07

### **What is the structure of the professional identity of teachers, and how it is associated with the educational use of ICT among Finnish teachers?**

Antti Syvänen, Jaana-Piia Mäkinen, Jarmo Viteli, Kirsi Heikkilä-Tammi

*University of Tampere, Tampere, Finland*

#### Introduction

Digitalization is a megatrend in education, and in Finland there appears to be a demand for the more intensive integration of ICT in education. The digitalization of schools is dependent on the willingness of teachers to change their ways of working. We propose that if teachers do not feel that using educational ICT fits their style of teaching – with their style of teaching being seen as part of their professional identity – they will not use it. This is in line with an identified positive correlation between the perceived concordance of ICT with teaching style and the frequency of ICT use (Syvänen et al., 2016). Perceived concordance does not cover the full spectrum of professional identity, and therefore this study presents and uses a broader conceptualization of identity to study the phenomenon.

The professional identity of teachers can be defined as their perceptions of teaching in terms of pedagogical, didactic, and subjectspecific content knowledge areas (Beijaard et al., 2000). Teachers whose identity is centred on the dimension of pedagogical identity focus on

pedagogical matters, such as providing a model for the way students should interact with each other. When the didactic dimension of identity is enhanced, teachers pay attention to varied learning activities, while teachers whose identity is centred on subjectspecific content seem to highlight the importance of the subject's content. As far as we know, Beijgaard et al.'s (2000) Teachers perceptions of Professional Identity (TPI) scale has not yet been used in the Finnish context, and its associations with the educational use of ICT remains unclear. Therefore, the aim of the current study is to examine the underlying structure of TPI in the Finnish context and to determine how the professional identity of teachers is associated with the use of ICT in teaching.

#### Methods

The data were collected with a webbased questionnaire. A total of 183 teachers from Finnish comprehensive and general upper secondary schools participated. TPI was measured using 18 items (Beijgaard et al., 2000). For instance, the pedagogical area/dimension was measured with the item "As a teacher, I serve as a model for the way students mix with each other"; the didactic area/dimension with the item "In my lessons, I pay a lot of attention to varied learning activities"; and the subjectspecific content area/dimension with the item "The subject I studied determined my decision to become a teacher". The respondents were asked to indicate how strongly they agree with the statements (1 = totally disagree, 5 = totally agree). The frequency of ICT use in teaching was measured by asking how often the teachers used ICT in their teaching (1 = never, 7 = in every class).

The data were analysed using statistical methods. Principal component analysis (PCA) with oblimin rotation was used to explore the underlying factor structure of the TPI. The relationship between professional identity dimensions and the frequency of use of ICT in teaching was measured with Pearson's correlations.

#### Results

The TPI construct was subjected to PCA. The suitability of the data for factor analysis was assessed. A four-factor solution with a total of 53% of the variance explained was adopted, based on eigenvalues, a scree plot, and interpretability. The first factor included four items from the original pedagogical identity dimension; it reflects the teacher's pedagogical approach in terms of promoting classroom interaction and atmosphere. The second factor included four items from the original subject matter identity dimension; it reflects the teacher's subject matter area in terms of core knowledge and keeping up with current developments. The third factor included an item from the subject matter and an item from the didactic identity dimension; it reflects the teacher's subject content approach in terms of the importance and meaningfulness of the teaching content. The fourth factor included three items from the original didactic identity dimension reflecting constant evaluation and the varying of teaching methods. Pearson's correlation analysis indicated that the second factor (.245,  $p < .00$ ) and the fourth factor (.318,  $p < .00$ ) correlated positively with the frequency of ICT use.

#### Conclusion

The results indicated that the original teachers' professional identity structure did not appear in the data. For instance, the subject matter and didactic thinking were not separate constructs in the Finnish data. Two of the dimensions were associated with the use of ICT, indicating that those teachers who focus on knowledge of the subject matter or on evaluating and varying teaching methods use more ICT. For further, deeper analysis, a regression analysis will be used to explore how well identity predicts the use of ICT. In addition, group differences in identity endorsement will be identified.

#### 1.08

#### Digitalization of Manufacturing in Germany: The digital change in production

Christoph Fischer, Alexander Pöhler

*University of Paderborn, Paderborn, Germany*

The digitalization has arrived in most parts of everyday life. Nowadays working in a white-collar job without a computer or mobile device is nearly unimaginable. The impact on jobs in the production however has to be discussed. The digitalization of industrial environments promotes autonomously acting production systems. While it is widely discussed, that this will render many jobs obsolete (Frey & Osborne, 2013), most contributions lack a concrete description of which jobs will be replaced or will stay. From a human resources perspective this poses two questions:

1. How does the future of human work in these digitalized production environments look like?
2. How can the change to these new modes of work be supported?

To answer question these questions, it is necessary to understand what kind of possibilities the change to a digitalized industry offers. In literature two scenarios called "automation scenario" and "tooling scenario" describe the most contrary manifestations of this change (Botthof & Hartmann, 2015).

In the automation scenario the computer technology is going to be used for replacing employees (even in complex processes) with automated computer technologies, whereas in the tooling scenario these technologies are used for improving current working situations.

The tooling scenario assumes that the new technologies are used for supporting human working environments by providing additional information and assuming hazardous and harmful tasks like lifting heavy objects. Decisions however are still made by responsible employees and not by the computer system itself. Collaborating machines enable a process-integrated assistance. This scenario leads to a higher appreciation of human work and human decisions. Their knowledge is still the key success factor for an efficient production process. Also the operation of the introduced computer technologies demands certain abilities of assigned employees.

On the contrary, the automation scenario focuses on replacing human workforce by machines and modern computer technologies. The employees in this scenario are mainly performing the tasks given by the computer system. Through transferring these tasks to computers, their own scope of action gets limited. The knowledge of the process and the machines is digitalized and transferred into a knowledge basis and superordinate data management tools, which are needed for the decision-making process.

These scenarios describe working environments in which humans and machines continue to work together. This side by side working process requires adaption processes on both sides.

The introduction of digital production environments which, as described, change the role of the humans at work, can cause large resistances on the side of the employees (Oreg, 2006). Job insecurity (Frey & Osborne, 2013) the need for new skills and knowledge (Kagermann, 2015; Bochum, 2015) or privacy issues (Roth & Siepmann, 2016) are issues that lead to high resistance against the change among employees and hinder their adaption to these new working conditions.

One often proposed means to ensure a smooth introduction of smart production environments are investments in a flexible further education (Sendler, 2013, Harteis & Fischer, submitted). Apart of being a necessity for the acquisition of the required skills to work in these new production environments, a culture that promotes learning in general could help to lower change resistance and create commitment towards change among the employees (Fischer & Pöhler, submitted).

This authors take an interdisciplinary approach to the matter. On the first question, from an engineering perspective, an introduction on the possible scenarios with a concrete example in a laboratory setting will grant insights to the possibilities of human work in a highly digitalized production environment.

The second question will be answered from an educational perspective. To investigate the proposed connection between learning culture and commitment to digital change, a survey study is currently being carried out that comprises scales on learning culture (Hilkenmeyer, unpublished), error culture (Putz et al., 2013) and affective commitment to change (Herscovitch & Meyer, 2002). In order to control for positive attitudes towards the change goal aside from the change process, a scale measuring technological commitment (Neyer, Felber, & Gebhardt, 2012) has been included to the survey study.

This contribution comprises two different views on the digitalization of work. On the one hand the engineering perspective on the other hand the educational perspective. This combination ensures a discussion of the matter without losing the touch to the industrial reality (educational) or forgetting the human element in the production design (engineering).

## 1.09

### Lessons from pioneers of digital work

Jose Teixeira

*Åbo Academi University, Turku, Finland*

Work practices are being digitized and digitalized. However, we are not always fully aware of the implications of such phenomena.

In our research, we attempt to learn from the open-source software communities as pioneers of fully digital work. After all, the open-source software development work practices are fully digital as geographically distributed 'hackers' develop software most often over the Internet (i.e., without meeting physically) – they develop digital technologies by digital means. By making sense of digital trace data produced by the open-source communities (software source code, websites, wikis, bug-fixing discussions, forums, blogs, mail lists, and 'chat' messages among other), and by using a multitude of established methods within social sciences, we argue that digital work practices leave much digital trace data that enable an easier retrospective analysis of work practices. In other words, digitalization paves the way to work that can always be retrospectively analyzed.

Much of the computer-based technology that powers our world was developed within open-source digital ecosystems. Such "formula" worked in different R&D intensive sectors – it can be observed in the development of web, cloud computing, mobile, automotive and medical technologies among others. Across disciplines, open-source software communities have been

studied as new production mode, as a new form of organizing work, or as a new innovation model. Furthermore, open-source software communities were considered as an instance of virtual organizations, open innovation communities, virtual teams, knowledge firms, global distributed collectives, online collaborative networks, communities of practice, online communities, peer production communities, and organized volunteering forms. Such multiplication of labels is an evidence of cross-disciplinary efforts that relate what happens in open-source communities to other forms of human organization.

Digital trace data are unobtrusive measures that directly capture the digital mediated work of individuals. Indeed, some researchers see the availability of digital trace data as a golden opportunity for research. Thanks to the open nature of open-source ecosystems, much digital trace data is available in the public domain and therefore available for scientific inquiry. If the open characteristic of such ecosystems allows us to access to such data, the digital characteristic of such ecosystems allows us to compute and to more easily analyze such digital trace data.

In a multiple case study, we pointed out our lenses to three open-source software communities with a strong industrial background (i.e., where many of the contributors are firms). Our approach relies on naturally occurring data which emerges *per se* on the Internet. Such data are not a consequence of researchers' own actions, but rather are created and maintained by the open-source communities in their own pursuits of developing an open-source software. Among others, we collected data in the form of software source code, websites, wikis, bug-fixing discussions, forums, blogs, mail lists, and 'chat' messages. In order to make sense of such digital data, we combine Qualitative Analysis of archival data (QA), Netnography (NET), Mining of Software Repositories (MSR), and Social Network Analysis (SNA) on top of naturally-occurring data that is publicly available by open-source manners. Such naturally occurring data is used to reconstruct and visualize the evolution of collaboration and communication in a sequence of social networks.

As we attempted to make sense of individual work and collaborative work within open-source software development, we noticed that much digital trace data is left behind and can be used for a retrospective analysis of work practices. For example, it's possible to know: (1) who introduced software source code that caused a forthcoming bug, (2) who worked with who in a specific software component and when, and (3) what messages each worker exchanged while discussing a bug-fixing task or implementing a new software feature.

By analyzing open-source communities as pioneers of digital work (i.e., as collective producers of digital artifacts by digital means) we found and leveraged much data that is created for supporting the individual and the collective work. Such data allowed us to retrospectively analyze in a quite straight forward way who worked on what, when and with who over long periods of time (i.e., up to six years). As it was easy to retrospectively analyze digital work practices within open-source digital ecosystems, we suggest that digital work can be quite easily retrospectively analyzed. Compared with non-digital work practices, it is much easier to retrospectively analyze digital work practices. We argue then that, in the world of digital work, it is unchallengeable to audit who worked on what, when and with who. Digitalization paves the way to work that can be always be retrospectively analyzed. Future research is needed to understand the implications of such characteristic (i.e., easiness to be retrospectively analyzed) have for the work itself.

To conclude, we attempt to show that digitalization paves the way to work that can be always be retrospectively analyzed. Something with unknown implications.



## 1.10

**Digital jump into pocket? On the transfer of work into mobile phone**Ismo Kantola*University of Turku, Turku, Finland*

The development of smart phones has made it possible to perform data processing operations on the phone such that were earlier manageable only on computer or laptop. From this it also follows that work can be carried everywhere instead of being constrained to remain on the work place. The threshold between work and non-work has been lowered. It is now far more easier to start or continue working than it was earlier. Work is becoming ubiquitous. Also large scale unawares unpaid work has become common as the users the social media continuously update their profiles or improve their connections in digitally networked systems and platforms. Following questions can be made:

How does this change of work and working conditions look like?

What kind of impact does it have on the digital divide?

Does the ubiquity of work change the nature of leisure time or family life?

How are users of modern digital media drawing the line between work and non-work?

The paper is based on review of recent research literature on the digitization and the use of mobile phones in and for work. Qualitative smart phone user interviews and social media content analyses will be used for elaborating views that were found in the research literature.

## 1.11

**Digitalization of work – new challenges for survey research**Anna Pärnänen*Statistics Finland, Helsinki, Finland*

There is a long tradition of measuring quality of work through working conditions surveys. For example the Finnish Quality of Work Life Survey (FQWLS) has been conducted by Statistics Finland since 1977 and European Working Condition Survey by Eurofound since 1995. Both survey data are widely used among researchers.

Digitalization of work will be the main new theme of the next FQWLS 2018. But what does this mean in practice? What is the digitalization of work that should be measured in survey research? The digitalization of work can be located at least into three different aspects. First one is social relations; how the use of digital equipment affect to the social relations at work places or at home? This is in connection to the second aspect: working time. Digitalization of work makes it possible to work free from rigid time spans and location. It also reflects to blurring boundaries of work and free time. The third aspect is control. Digitalization makes the control of the worker easier. It also increases possibilities to collect data about the worker including such rather new and surprising issues as abilities to learn, mistakes made at work or even blood pressure.

In the light of the work life surveys the question is how to measure these kinds of aspects within the survey questionnaire. How to operationalize new aspects of work so that questions are understandable or they are measuring right things? In my presentation I will discuss what kinds of challenges digitalization brings to survey research. Example used include measurement of gig economy for instance.

## 1.12

**Resources of embodiment and multimodality in technology-mediated work meetings**Margarethe Olbertz-Siitonen*University of Jyväskylä, Jyväskylä, Finland*

## Introduction

The observation that human interaction is a multimodal accomplishment has contributed greatly to our understanding of social conduct. In recent years, especially studies within the framework of conversation and interaction analysis have consistently shown that the achievement of mutual understanding relies not only on co-participants' verbal activities including intonation and prosody, but also on their concurrent posture and line of gaze, on their gestures and facial expressions, on their orientation to objects, etc. Multimodality results from the finely tuned interplay of such resources – both on an intrapersonal and interpersonal level. More precisely, interactional events are demonstrably brought forth by often simultaneous, multimodal contributions of all participants.

While the involvement of the entire body in coordination with others' embodied conduct has been found to be constitutive of face-to-face interaction, the ubiquitous utilization of communication technologies in everyday life and particularly in support of work place interaction poses a number of questions with regard to embodiment and real-time coordination of modal resources. Indeed, how does the body figure in the context of technologically mediated interaction?

## Objectives

This paper aims to call attention to multimodal aspects of technologically mediated communication at work. The intention is to demonstrate in some detail the ways remote co-workers in interaction resort to on-screen tools provided by the communication technology in use and employ them as bodily representations of sorts.

The main focus of this presentation is on visible activities, in particular on clearly directed movements of the mouse cursor and on drawing tools in explanation and clarification sequences. I will show, how these resources are aligned with activities in other modalities, and discuss some of their functions.

## Methods

The work presented here utilizes multimodal interaction and conversation analysis, which in the tradition of ethnomethodology rely on co-participants' displayed relevancies and their observable orientations. The naturalistic, data-driven approach allows for a detailed examination of authentic situations, aiming to reconstruct peoples' orderly ways of accomplishing social interaction.



The data consist of recordings of naturally occurring events, namely technologically mediated meetings of distributed co-workers employed by small to medium sized companies in Finland. Although uniformly screen-based, the data vary from situations where participants cannot see each other (e.g. due to them using screen-share) to such which involve the use of webcams. Drawing on schematic representations of singular cases, in my presentation I will concentrate on passages, where technological tools demonstrably function as nonverbal resources for participants.

#### Results

Co-participants in the analyzed technology-mediated meetings regularly resort to tools such as the mouse cursor to guide others through documents, Internet pages or similar representations on-screen. At the same time, the movements of the pointer can fulfill functions such as projections (i.e. preface a next activity or a new focus), and thus help coordinate remote interaction. Such mouse cursor movements as well as related on-screen actions (such as clicking items) are usually finely tuned with verbal activities. In addition, drawing tools are occasionally employed in situations that include specifications. In such cases, by drawing on-screen a mutual focus is secured and certain processes made visible. Also the use of drawing tools often takes place simultaneous to and in concert with other activities.

Other than more traditional views on technologically mediated communication suggest, the quality of interaction does not appear to suffer from lack of so-called non-verbal cues. Rather, co-participants innovatively make use of technological affordances, constituting a complex – even embodied – interaction.

#### Conclusions

Information and communication technologies play an integral part in contemporary work life, enabling and supporting so called new forms of work such as virtual teamwork or remote work from home. Correspondingly, the body of research on technologically mediated communication at work has grown notably over the recent years. One of the most important underlying questions permeating much of this previous work relates to the *impact* of technology on social interaction and on human relationships. While this is a relevant point, the study presented here shows that it might be worthwhile to look also at technology-in-interaction. Here the focus is on the ways remote co-workers adapt technology to current activities. The analysis shows that (and how) technology can become a part of work-interaction: technology provides co-workers with tools, which can function in ways that are similar to bodily conduct in face-to-face settings.

In addition to contributing to research, for example in the area of computer-supported cooperative work, such findings can be of import to the development of group support systems and communication tools that take the multimodal nature of screen-based interaction into account, e.g. leaving room for an intuitive utilization by the user.

#### 1.13

##### Digitalization and its impact on work and workers – a literature review

Marianne Keyriläinen

*Statistics Finland, Helsinki, Finland*

The digital economy and the new technologies are changing the nature of work. In many industrialized countries, work has changed from routine and manual to more complex and high-skilled. Ways of working is also changing – it's becoming more flexible. The Finnish Quality of Work Life Survey (FQWLS) has been conducted by Statistics Finland since 1977. Survey data is widely used among researchers. Digitalization of work will be the main theme of the next FQWLS 2018. Our focus will be on how workers perceive the technological change.

The main purpose of the paper is to examine what previous research have found about the digitalization of work. Aim is to summarize and synthesize what is known about digitalization and its impacts on work and workers.

In my presentation, I will discuss about the digitalization of work in the light of previous research and reports. I try to delineate the main findings on how digitalization of work have or will effect on workers. Main findings are used as a base on the new FQWLS 2018. More specifically, literature review will help us to design the new survey questionnaire 2018.

#### 1.14

##### Mixing work and private activities in the digital working life. A diary study.

Ann Bergman<sup>2</sup>, Kristina Palm<sup>1,4</sup>, Calle Rosengren<sup>3</sup>

<sup>1</sup>Karolinska Institutet, Solna, Sweden, <sup>2</sup>Karlstad University, Karlstad, Sweden, <sup>3</sup>Lund University, Lund, Sweden, <sup>4</sup>KTH, Södertälje, Sweden

Laptops and smartphones are now challenging the traditional borders of work and have contributed to new ways of combining work and other parts of life. Both time and room dimensions have been resolved or taken new forms through the new information and communication technology. Questions like when and where you are supposed to, or can or want to work are likewise important to companies and employees. Issues around the relationship between working life and family life have in addition to this become more important when the traditional roles between men and women are changing. When work is being done on the cost of engagement in the private sphere it often leads to stress and role conflicts, so-called spillover. Spillover is a risk factor for health and well-being, but there are still knowledge gaps on how this risk can be managed by organizations as well as individuals.

This conference paper is based on an ongoing research project with the overall aim of developing guidelines for how organisations may work to promote a sustainable working life. There is a special focus on how women and men in different periods of life can be offered good prerequisites in combining work and private life. In close collaboration with two global companies in Sweden we are doing an explorative diary and interview study with employees, the employees' families and managers and human resource on how they manage the challenges

of the digital working life.

*Specific research questions:*

- 1) What strategies do employees use to handle the demands on and possibilities that the digital technology creates for being available to work and family?
- 2) How do the employee, its partner and children experience the effects of digital technology on family life?
- 3) How do managers and human resources handle the digital technology in relation to a sustainable working environment?

In this conference paper we are presenting preliminary results from the diary study that will be carried out by about 40 – 50 employees. These employees have been chosen because they have the possibility to locate part of their work outside the workplace and outside normal office hours. The respondents should during seven days in a manual diary log how they 1) during normal office hours are doing private related activities (such as talking to the phone with the partner or child, or booking a doctor's appointment) and 2) outside normal office hours perform work tasks (such as reading and answering emails on the phone or preparing meetings in the computer). The diary entails what kind of task has been performed, with what technology, how long it did take, when and where it was performed, who else were in the room and with what feeling it was made. The diary is divided into seven time slots during a day, and the respondent should also summarize each time slot with words like stressful, relaxed, and chaos. Finally the respondents should describe if the time slot is "normal" or not, and if not how it differed from the "normal".

The diary data material will be analyzed from dimensions of sex, period in life and the experiences of the work-life relation, but also the working conditions and well-being.

The overall results of the study should contribute to improving the systematic work on work environment that also include the work conditions that managers normally don't see and have control over. That is when work is done outside the four walls of the office and the normal office hours. This is up-to-date crucial in Sweden since the Swedish work environment authority has new regulations on organizational and social work environment (AFS 2015:4) that also includes workloads and working hours.

## 1.15

### **Working on a Shared World – A Systems View on Digitalisation at Workplaces**

Sanna Ketonen-Oksi

*Tampere University of Technology, Tampere, Finland*

Due to the rise of digital and mobile technologies, significant changes have appeared in how organizations of all kinds are being increasingly confronted by the effects of intensive digital connectedness. Above all, the recent development of Web 2.0 -technologies and of social media applications has had significant impacts on the value constellations (information creation and sharing) in the virtually networked and interdependent communities and channels.

The core of this new worldview leans on creativity and the constant emergence of novelty.

According to service scientists, more systemic thinking is needed in the form of thinking in terms of relationships, patterns, connectedness and contexts. As to service science and to Service-Dominant logic in specific, they both refer to a certain coexistence of changes and stability as a fundamental characteristic of all living systems – of all e.g. political, economic and social systems. (Vargo and Lusch, 2016; Spohrer et al, 2017). In doing so, all these systems a) self-renew in cycles and b) are structurally "coupled" as they are affected by every interaction that takes place in the system. That is, with life and learning being interconnected, the same system may behave differently in different situations. (Capra, 2014).

Hence, Fritjof Capra, a world-known scientist engaged in the systematic exploration of paradigms leading to a new vision of reality and a new understanding of the social implications of this cultural transformation, says that, "Where ever we see life, there are networks" (Capra, 2014). Yet, it is not always the optimal solution that survives and thrives, but different qualities may end up being important for survival and continuation. This being so, the "autonomy of individuals" is coming to the center of attention, and the focus shifts from information acquisition to the emergence of senses and of sense making. But even if companies are urged to re-evaluate their organisational cultures, management practices, patterns of behaviour and structures (Anderson et al, 2014; Bilton, 2014), the common understanding of organisations is largely built on ways to control physical and social environments, thus weakening their organisational abilities to learn and create completely new things (Senge, 2006).

In order to strengthen their abilities to build up smart service systems capable of adapting to future situations through self-detection, self-diagnosing, self-correcting, self-monitoring, self-organising, self-replicating or self-controlled functions (Spohrer et al, 2016), organisations should focus on the following 4 key areas: Intention, behaviour, culture and systems (Choudary, 2017). In practice, organisations should devote time and effort to build value relationships with their stakeholders and customers (Nuutinen and Lappalainen, 2012).

In my presentation, I will first illustrate the key elements driving for changes at workplaces by mirroring the Systems View on Digitalisation with the recent research on Work and Working Life (beginning with Foresight 2030 and Työ2040 reports). Then, I will present new insight on how to turn work places into dynamic worlds of cocreation and sharing in the emerging platform economy – requiring multiple changes in attitudes and behaviour. In doing so, I will introduce a shift in thinking of value creation in terms of value cocreation by referring to the concept of cocreation as a "joint creation and evolution of value with stakeholding individuals, intensified and enacted through platforms of engagements, virtualised and emergent from ecosystems of capabilities, and actualised and embodied in domains of experiences, expanding wealth-welfare-wellbeing" (Ramaswamy et al, 2014). With some empirical data on cocreation in a novel, complex, multidisciplinary platform of innovation, the need for continuous organisational development and the importance of empathy and storytelling to organisational growth will be highlighted.

## 1.16

**Poster Presentation: Evaluating distributed knowledge work in global value networks**

Katriina Vartiainen, Mikko Ruohonen

*University of Tampere, Tampere, Finland*

The future of the Finnish software industry, and in a broader scope that of expertise and knowledge intensive work, is largely determined by our ability to adjust to the changes in the global marketplace. During recent years, we have witnessed a strong shift to different types of networked, distributed and outsourced work settings. Our previous research discovered that the interconnections between software work productivity, required competences and management practices of distributed work are dynamically changing. Therefore, a focal question is, how to manage those relationships in order to remain competitive in the global value networks. Successful new business models in the markets, production processes and outsourcing strategies require continued contributions from research and development (R&D). Particularly, the information systems and versatile organization modes in company networks offer this evolution significant opportunities, but if they fail, those opportunities turn into a heavy burden.

To respond to these challenges, we continue our effort to increase understanding of high-performance distributed organizations: As a result of a preceding study we formulated a baseline for an intellectual capital based evaluation framework, which can be used to help to assess the productivity of dynamically distributed software teams. The aim is now to test and expand this framework by using it to evaluate the impact of chosen elements, such as continuity and wellbeing, on distributed team performance in different organizations, work modes and business models. As we are dealing with work that is dispersed across locations, virtual team (VT) research is also relevant. Therefore, we will include aspects such as teams' functioning "across organizations, industries, positions and skill levels" while recognizing the impact that "triggers", such as disruptions, cross-cultural factors, teams' compositions and technological issues, have on team adaptation. These issues have recently been identified among the promising areas in VT research.

Overall, the research approach follows the principles of Design Science Research (DSR), which is one of the central paradigms in Information Systems (IS) research. IS research itself lays in the intersection of fields such as information, technology, human and organization studies. The aim of DSR is to build artefacts and knowledge for solving real problems in real organizations. We plan to collect data by both qualitative and quantitative methods: Surveys can be used to assess the perceived value and state of chosen attributes within an organization. In combination with the survey results, social network analysis can be used to uncover hidden "team dynamics" and formations. Techniques derived from philosophies such as Personal Construct Theory can be used to shed light on the similarities and differences that various work related concepts carry for team members. Additionally, confluences to results from other studies in related and neighbouring domains should be evaluated.

The next practical step in our research is to gather a group of interested companies, organizations, research institutions and other stakeholders to engage in these research activities and contribute to responding to challenges posed by business environments in transformation. The expected outcomes include: 1) knowledge of the feasibility, utility and further requirements of the intellectual capital based evaluation framework, 2) knowledge on how the performance of distributed team work can be assessed and predicted by utilizing this kind of a framework, 3)

understanding on how chosen elements, such continuity of teams, influence their performance, and finally, 4) tools for the management for evaluating, assessing and steering global knowledge work practices. The results will be shared in academic and managerial conferences, seminars, journals and other relevant publications in the fields of information systems, organization and managerial studies.

Lastly, we want to take a perhaps daring glimpse beyond the current research. As an even broader societal and more far reaching question of work, we want to ask how the diverse knowledge gained from this study could be utilized in the domain of "impact sourcing" of information intensive work in the future. The question is important, as impact sourcing efforts have the potential to pursue economic and societal development goals in poor or otherwise marginalized areas: Impact sourcing aims at sustainable societal impact by creating jobs, and in doing that it opens avenues for increased incomes, local innovations and empowerment of people in these communities. This potential research stream would have clear confluences to the current efforts, and ultimately, as understanding of risks and opportunities improves, it may lead to companies considering impact sourcing as one of the viable options in their sourcing palette.

To conclude, with these thoughts we want to invoke discussion on, and promote the importance of distributed team research from both the view of agility in networked and outsourced work in Finland and working and wellbeing globally.

## 1.17

**Poster Presentation: Insufficient and outdated digital skills as an obstructive factor in the careers of the ageing**

Maarit Mäkinen, Loretta Saikkonen, Marjut Muhonen, Mika Sihvonen

*University of Tampere, Tampere, Finland*

The digitalisation of work is a challenge to everyone with outdated skills in information and communication technology (ICT). Continuous fast-paced technological developments pose challenges especially to the older age groups, who are now expected to retire later and later in life. This article examines how insufficient basic ICT skills affect work for the ageing. The target group of this study are over 45-year-olds who work in the business sector and have taken an ICT skills test and received ICT training in conjunction with this study.

The EU's Lifelong Learning Programme defines eight key competences needed to act as an active member and employee in a digital society. Basic digital skills include the ability to search information, use applications, understand information security, communicate in various channels, and store and manage information. In business, ICT competence is a central future skills need. As routine tasks are increasingly becoming automated, different skills are required of those doing manual work. The digitalisation of society and work is considered especially challenging to the ageing population. In our study, 'ageing' refers to people over 45, which is considered the threshold for social ageing in Finnish societal debate.

Our research data are based on an online survey and personal semi-structured interviews. We carried out the survey in Autumn 2016 for 42 people who took part in ICT training in a project entitled *Työelämän ICT-taidot kaupan alalla* ['Working life ICT skills in business']. The training



took place in Southwest Finland and the Uusimaa region. All participants worked in business sector. The participants were adults who, based on our test, had insufficient ICT skills. At first, their skills were measured using a browser-based test with multiple choice questions and simulation exercises. The training aimed at improving basic ICT skills focused on three themes: the use of spreadsheets and word processors, the use of electronic means of communication and social media, and the management of files and operating systems. One or two days of training was offered for each theme. After completing the survey, we interviewed eight over 45-year-old employees and two employers. With the employee interviews, we aimed to acquire more detailed information about the significance of ICT skills for the careers of over-45-year-olds and about the possible relationship between age and skills. The interviewees were 45–54 years old. With the employer interviews, we aimed to find out how employers recognise insufficient skills and how they respond to this lack.

The survey and subsequent interviews demonstrate that, in business, there is a need for better ICT skills. Although employees use ICT daily, many think that their skills are weak in at least some areas. Insufficient skills slow down work and hinder career advancement and new employment opportunities. As many as two-thirds of the survey respondents had not received IT training previously in their career. The lack of training applied especially to the ageing and to lower-level workers.

The observations made in the study demonstrate that outdated skills are a greater career obstacle than age. The digitalisation of work is a challenge, especially for employees who completed education and training in their field decades ago. This study confirms previous research findings that indicate that a good educational background and socioeconomic standing increase both the opportunities and willingness to receive further training and update skills. A lower-level educational background and a weak standing at work often correlated with insufficient skills. The better skills people have, the more they use them, leading to skills cumulation. This creates a positive cycle and causes the skilled to see positions in which they can further improve their skills.

Recognising skills is important for planning and targeting staff training, both at an organisational and a personal level. Recognising skills requires both structural and methodical testing methods. In this study, ICT skills testing was seen as a good way to determine skill levels. Most (83%) survey respondents thought that their test results reflected their actual skills.

Training proved to be a good way for people to update their skills. The project's ICT training seemed to initiate a positive progression for many participants. People's own level of activity in updating their skills was highlighted, but employers were also expected to assume a greater role in developing staff's ICT skills. Insufficient digital skills are especially trying when adopting new roles at work or looking for work. At worst, insufficient ICT skills can lead to a marginalisation of the ageing from digitalised society and jobs. Although the digital skills of the ageing are often insufficient, the findings demonstrate that, in seeking out training, a person's attitude is more relevant than age. The ageing are best motivated to update their skills by making the learning an integral part of their tasks at work but also their personal life.

## 2. EDUCATION, WORK, EMPLOYMENT

### 2.01

#### Entrepreneurship education: What is promoted, what is expected in Finnish universities?

Ulla Hytti<sup>2</sup>, Päivi Eriksson<sup>1</sup>, Kaisa Henttonen<sup>1</sup>, Tero Montonen<sup>1</sup>, Kirsi Peura<sup>2</sup>

<sup>1</sup>University of Eastern Finland, Kuopio, Finland, <sup>2</sup>University of Turku, Turku, Finland

To strengthen their role in society, universities are launching policies and practices with an entrepreneurial focus. As part of this development, entrepreneurial universities (Etzkowitz 2014) are encouraging faculty and students to become more entrepreneurially oriented. This development affects most universities, which means that entrepreneurship is becoming an important subject of practical interest and a key topical area of higher education research (Bozeman, Fay & Slade 2013; Link, Siegel & Wright 2015). Recently, Finnish universities have started to extend their entrepreneurial activities outside the 'hard sciences', making space for broader definitions of what is called 'academic entrepreneurship' (Abreu & Grinevich 2013; Wright 2014) which include researchers, teachers, students and administrators as key actors.

Entrepreneurship education plays a key role in helping individuals and groups at different stages of their careers and with varying disciplinary backgrounds, genders and ages to be involved in the current entrepreneurial developments in universities (Komulainen et al. 2010; Korhonen et al. 2012; Hytti & Heinonen 2013). In Finland and globally, entrepreneurship education (e.g. in the form of entrepreneurship courses, workshops, events, mentoring and coaching from real-life entrepreneurs, etc.) has often been provided by business schools within universities, but recently this 'isolation' has been questioned (Kirby 2004; Heinonen & Hytti 2008; 2010) and policy initiatives established to extend these educational activities across campuses. This type of development is ongoing in most Finnish universities.

Related to the on-going changes in and around universities, Kyrö and Hytti (2014; see also Byrne, Fayolle & Toutain 2014) have pointed out that axiological discussions (Do we want to? Should we? How should we do it?) are largely missing from entrepreneurship education research (notable exceptions include Komulainen et al. 2009; Korhonen et al. 2012). Consequently, there is an urgent need to ask what kind of entrepreneurship education Finnish universities wish to promote and what kinds of outcomes they wish to gain (e.g. better employability, flexibility of careers, increased academic entrepreneurship).

Finnish universities have taken somewhat different paths in developing their entrepreneurship education activities. In addition, different individuals occupying different positions and/or representing different disciplines and academic traditions may have very different ideas and expectations of (academic) entrepreneurship. Consequently, entrepreneurship education may face different prospects and problems that are related not only to the university strategy (if any) on these matters, but to the localised interpretation of these matters by the decision-makers at the university. This will also influence on how entrepreneurship education is understood and developed in and within each Finnish university.

In our study, we ask how the academic top and middle management of Finnish universities understands and justifies the need for entrepreneurship education? What strategies, policies and activities do they consider important and beneficial concerning entrepreneurship education,

what ones are they are planning to adopt or wish to promote in the future and why? What approaches or activities are considered harmful or risky and why? The research materials comprise of personal interviews from the academic top and middle management of Finnish research universities (excluding universities of applied sciences). In this preliminary phase, the research materials will be analysed with qualitative content analysis. Our interest is focused on the meanings assigned and given to (academic) entrepreneurship education and related activities in the universities.

## 2.02

### **Students' social positioning towards academic entrepreneurship in Finnish higher education**

Päivi Siivonen, Kati Kasanen, Katri Komulainen

*University of Eastern Finland, Joensuu, Finland*

Higher education institutions (HEIs) have become key suppliers in boosting national competitiveness and economic growth. They are under a lot of political pressure to maximize graduates' potential upon leaving higher education, not only in so-called liberal economies such as the UK and Australia, (see e.g. Tomlinson, 2017) but also in Finland. In the Finnish context entrepreneurship education has become one of the key components of boosting the national economy and making graduates 'employable'. Consequently, Finland has been an early adopter and reformer of entrepreneurship education, which has spread throughout the school system, from early childhood education to universities since the 1990s (see e.g. Korhonen). Finnish HEIs strongly encourage both faculty and students to become more commercially oriented and re-orientate their strategies and policies towards academic entrepreneurship (AE).

Our paper is part of a research project '*Academic entrepreneurship as a social process*' (ACE, 2016-2020, financed by the Academy of Finland, Eriksson et al. 2016). In the research project the starting point is that AE is a multifaceted phenomenon with a variety of motivations and goals in relation to various entrepreneurial activities, such as skills development for better employability, career projects for increased status and income, and reputation-building in science. We have adopted a broad definition of AE that includes students, researchers, teachers and administrators as key actors of AE. Moreover, AE can range between 'commercialization of knowledge' to 'internal entrepreneurship'. We argue that there is an urgent need to ask more broadly than before: How do universities, 'academic tribes' and individuals engage in AE? What are the consequences of this engagement? What kind of entrepreneurship education universities wish to promote? How is this education realized in daily social processes of education?

This presentation is based on the theoretical underpinnings of ACE and the subproject focusing on AE education as well as our preliminary results of a narrative ethnographic (Gubrium & Holstein, 2008) study including observation field notes in AE educational activities and courses, e.g. *Entrepreneurship Week*, *Business Game*, and individual interviews (interviewing in progress) with students in HE who have/have not taken part in AE educational activities and courses. In the life history interviews we ask students about their experiences and views, e.g. on employability and AE. The participants represent different positions in relation to discipline, gender, class, and academic position (Bachelor's, Master's, doctoral students).

We are informed by the theory of intersectionality and the politics of belonging (Yuval-Davis, 2011) and analyse our data from a discursive-narrative point of view (Davies & Harré, 1990). In our analysis we ask: What kinds of (contested) meanings are negotiated for AE and entrepreneurship education? How do students representing different positions in higher education position themselves in relation to the discourses of AE? The changing nature of HEIs and the world of work may be interpreted as a great opportunity to fulfil individual potential and creativity or vice versa as full of risks and uncertainties. The expected outcome of our study will be a context-sensitive understanding of the relationship between organizational academic entrepreneurship practices and individual engagement and social positioning with AE.

## 2.03

### **University students' perceptions of their ability selves and employability**

Hannu Rätty, Katri Komulainen, Kati Kasanen, Päivi Siivonen

*University of Eastern Finland, Joensuu, Finland*

This study set out to investigate university students' perceptions of their 'ability self' and the contribution of such perceptions to students' views of their own employability. The participants consisted of a group of male and female students, representing different fields of study. They were asked to describe their abilities or ability-like characteristics and to respond to a set of statements describing self-perceived employability. It was found that ratings of ability selves were subsequently related to the optimism they had about their own employability. 'Ability self' seem to play a role in the multifaceted process of subjective confidence formation regarding one's employment prospects after graduation.

## 2.04

### **Constructing entrepreneurship, entrepreneurial abilities and teams: analysis focusing on university faculty**

Kirsi Peura, Ulla Hytti

*University of Turku, Turku, Finland*

Entrepreneurial university as a concept and as a way of operating has clearly found its way in many universities across the globe (Etzkowitz 2014; Foss and Gibson 2015; Siegel & Wright 2015). Initiatives, such as HEInnovate, supported by strong institutions like the OECD and EU have been established to support the evolution and strategic orientation of universities towards entrepreneurship. In our university, this was marked by the development and acceptance of entrepreneurship strategy in 2015 and the related branding of the university as an "Entrepreneurial University". Two entrepreneurship programme managers were appointed in the university and different initiatives have been launched.

Thus, similar to many other universities our university started to expand entrepreneurial activities outside 'hard sciences' making space for broader definitions of academic entrepreneurship (Abreu and Grinevich 2013; Wright 2014), which include, not only researchers, but also teachers,

students and administrators as key actors of academic entrepreneurship. Consequently, there is an urgent need to ask more broadly than before, how do universities, groups and individuals engage in academic entrepreneurship, and what are the consequences of this engagement?

In our university one of the activities organized was a 24-hour business idea development Camp for faculty in November 2016. The idea was to introduce the entrepreneurship process to faculty members representing different disciplines, and to enable them to experience entrepreneurial behavior within a facilitated learning process. One key element in the process was forming and working in multidisciplinary teams in order to produce novel business ideas. The Camp consisted of short introductory lectures and a set of interactive group assignments to support the team formation and idea development, including getting-to-know exercise, collaboration exercise, SWOT analysis, naming the team, and finally, facilitated idea development.

There were ten participants from five different university faculties and independent units to the Camp with five external enterprise facilitators. One of the co-authors of this paper had a dual role in the camp. First, she attended the Camp as one of the university's entrepreneurship programme managers and as an organizer. Second, she was a researcher interested in analysing the entrepreneurial university and academic entrepreneurship. Hence, the Camp was video-recorded and the researcher/entrepreneurship programme manager made field notes during and after the Camp. The participants also wrote learning and reflection diaries after the Camp.

In this paper we are interested how the participants construct entrepreneurship, their own abilities in entrepreneurship and working in entrepreneurial team during and after the camp.

The paper assumes an ethnographic approach to analysing the 24-hour Business Idea Development Camp in the context of the Entrepreneurial University Strategy and Action Plan (Pilegaard, Moroz and Neergaard 2010; Rasmussen 2011; Rasmussen, Mosey and Wright 2011). The research inductively analyses the videotaped sessions as well as the student reflective notes after the Camp, in combination with the researcher's field notes. The findings will be reported in the form of vignettes to give the audience the opportunity to develop an understanding of the lived experience (Alexander, 2005; Mienczakowski, 2001), evoking feelings in the reader similar to if they were personally involved in the situation (Van Maanen, 1988). In this case, the vignettes were constructed from the research data using both transcriptions and video materials.

The analysis of the research materials is on-going. Our preliminary findings suggest that the participants make sense of what entrepreneurship is by referring to concrete examples and questioning if for example publishing a book is entrepreneurship. They also investigate their own abilities stemming from the academic background – such as being analytical, and then aim to make sense if those abilities are strengths or weaknesses in entrepreneurship. Since in the Camp the participants work in multidisciplinary teams, their strengths and weaknesses as well as the team dynamics are discussed.

Much of the entrepreneurial university literature focuses on the organizational level, and represents an idealized version of reality. In this paper we wish to contribute by adding a more bottom-up roots level understanding entrepreneurship in the context of developing an Entrepreneurial university.

The paper responds to the call for, first, approaches and interpretations of academic entrepreneurship in the context of entrepreneurial university and the ways they are being formed

over time, and, second, on the ways that university faculty representing different positions (discipline, gender and academic position) negotiate themselves vis-à-vis contradictory discourses of academic and entrepreneurial abilities. Our research contributes to the emerging field of processual and ethnographic studies of entrepreneurial university and academic entrepreneurship (Pilegaard, Moroz and Neergaard 2010; Rasmussen 2011; Rasmussen, Mosey and Wright 2011).

## 2.05

### **Learning outcomes of entrepreneurship education and occupational status choices of Bachelor business graduates in Estonia and Latvia**

Inna Kozlinska<sup>1</sup>, Tõnis Mets<sup>2</sup>, Anna Rebmann<sup>3</sup>

<sup>1</sup>University of Turku, Turku, Finland, <sup>2</sup>University of Tartu, Tartu, Estonia, <sup>3</sup>Aston University, Birmingham, UK

#### Introduction

Scholarly interest in entrepreneurship education (EE) has expanded exponentially, with an increasing number of modules in HEIs and widespread diffusion into all levels of the education system. Increase in EE is occurring in conjunction with an ongoing shift towards more experiential learning. EE is seen as a structural force capable of generating long-term socio-economic changes through developing entrepreneurial, creative, flexible, and wise individuals. The question of pay-offs from these initiatives, however, remains open. The higher the rigor of studies devoted to measuring the EE impact the less evident it is that EE produces desired outcomes and the more evident that positive impact is overestimated.

EE is commonly assessed using subjective measures, such as self-efficacy and intentions, often referred to as perceived learning outcomes, and/or objective measures such as nascent entrepreneurship and number of established enterprises manifesting career choices of graduates. The empirical studies of EE based on objective outcomes tend to overlook other crucial outcomes pertaining to professional life of graduates, for instance, organisational employment entry and status, and intrapreneurship. This is a surprising gap as EE provides students with the opportunities to develop personal qualities, beliefs, understandings, and transferable skills to increase their employability both as an entrepreneur and as an employee. Recognising this, there is increasing interest among educators and policy makers in the impact of EE beyond traditional venture creation. Furthermore, in spite of the widespread encouragement to teach entrepreneurship experientially, the evidence supporting the assumption that experiential EE is associated with superior outcomes if compared to non-experiential EE, is still lacking.

#### Objectives

We fill the aforementioned gaps by analysing the relationship between the type of EE, learning outcomes and occupational status choices of Bachelor business graduates in two post-transition Baltic countries, Estonia and Latvia.

This paper contributes to contemporary EE research by answering the following research questions: 1) What is the relationship between learning outcomes and occupational status



choices of Bachelor business graduates? 2) Does the type of EE intervention influence graduate occupational choices?

We add to the literature by suggesting an integrated and theoretically grounded framework based on a revised version of Bloom's taxonomy of educational objectives. The framework puts forward a tripartite structure of learning outcomes comprising cognitive, skill-based and affective outcomes, which represents a more holistic view of measures spanning beyond models of entrepreneurial intentions and being specifically designed for educational context. Cognitive learning develops knowledge or understanding of the subject matter; affective learning improves positive attitudes and willingness to learn and act within that area, and skill-based learning increases subject-related skills making learners apply knowledge acquired. Following the premises of human capital theory coupled with the theory of planned behaviour, the level of one's entrepreneurial competences should influence selection into self- or paid employment as well as being employed versus unemployed, thus determining the occupational status choice.

We hypothesize that: H1 Occupational status choices are positively dependent upon learning outcomes, and H2 Graduates who underwent experiential EE are more likely to engage into nascent intrapreneurship, private early-stage EA and are less likely to be unemployed.

#### Methods

We collected data from 509 final-year bachelor students and recent graduates from business-related programmes taught at HEIs in Latvia and Estonia (4 per country). The study uses a cross-sectional design with a matched comparison group. We analysed occupational choice through measuring employment entry and status, nascent intrapreneurship and early-stage entrepreneurial activity. We ran multinomial probit and binary logistic regressions on occupational choice to estimate the hypothesized relationships. Composite indicators of cognitive, skill-based and affective outcomes, and type of EE intervention acted as explanatory variables in these models. We also controlled for covering prior entrepreneurial competences and experience of the respondents.

#### Results/Implications

The findings of our study are somewhat unexpected and question the widespread assumptions about EE, including the emphasis placed on experiential EE. Only affective outcomes had a significant positive effect on nascent intrapreneurship and early-stage entrepreneurial activity. The influence of cognitive and skill-based outcomes on the occupational status choices was non-significant. The positive effect of experiential EE on employment entry and status evaporated when we controlled for country as well as was weak in the case of intrapreneurship. The type of intervention did not have a direct effect on the involvement into early-stage entrepreneurial activity.

The results may seem rather provocative for EE stakeholders because they indicate on a mismatch between the competences taught and required in the job market either of self- or paid employment in the period of the study; they also question the overall quality of experiential EE. Yet, prior to stimulating further shift towards more experiential learning or cutting the expenditures abruptly, it is necessary to reveal what drawbacks of the current implementation of EE are to counteract them in the future.

## 2.06

### Does it make any difference? Students' learning outcomes in a corporate entrepreneurship course

Sanna Ilonen (os. Suomalainen), Jarna Heinonen

*University of Turku, Turku, Finland*

The responsiveness of higher education institutions (HEIs) to the demands of working life has become ever more important due to changes in work and careers. New features of jobs and forms of work challenge HEIs to find new and innovative ways to provide students with the up-to-date competences and skills needed in working life. In recent years, entrepreneurship education (EE) has become a means to address labour market demands; subsequently the assessment of its outcomes has become increasingly important (Fayolle, 2013; Katz, 2003). In general, EE aims to help students learn a) to become an enterprising individual (through entrepreneurship), b) to become an entrepreneur (for entrepreneurship) and c) to become an academic or teacher in the field of entrepreneurship (about entrepreneurship) (see Fayolle and Gailly, 2008; Hytti and O'Gorman, 2004). Prior research has identified several types of EE learning outcomes; such as cognitive, skills-based, and affective outcomes, where cognitive outcomes indicate retention of the basics of specific contents such as of marketing and finance, skills-based outcomes include such skills as dealing with customers and managing people, while affective outcomes include for example commitment to the business venture and entrepreneurial spirit. (Fisher, 2008; Kozlinska, 2016.) Although these subjective outcomes are informative with regard to the entrepreneurial competences the students have gained, they do not yet tell how these competences are translated into entrepreneurial activity (Kozlinska, 2016). In this study, we focus on students learning outcomes in a 6-weeks long experiential entrepreneurship course 'Corporate Entrepreneurship and creating entrepreneurial mindset' in a HEI setting. We aim to identify and explore different types of learning outcomes.

We applied a qualitative research design in analysing the learning outcomes of 75 university students participating at the bachelor level 'through' entrepreneurship courses in winter 2015 and 2016. During the course students became familiar with the concept of corporate entrepreneurship/intrapreneurship and why it is beneficial for employees and organisations. They were expected to learn what the antecedents of corporate entrepreneurship are and how it can be promoted in different organisational contexts. Most importantly, the course provided tools for students to assess themselves as entrepreneurial actors and understand what it takes to create entrepreneurial mindsets and organisations. The research material consists of the students' learning diaries based on which student learning was assessed in the courses. Students prepared the learning diaries during the course and submitted them two weeks after the concluding session. The diaries consist of their learning reflections based on the articles studied and discussed, as well as on exercises and activities conducted during the sessions and related wrap-up discussions. The thematic content analysis of the learning outcomes was carried out using NVivo qualitative data analysis programme version 11. To reveal the types of learning outcomes, the learning diaries were first reviewed in detail for general learning outcomes and then the existing coded data was reviewed for a second time drawing out secondary themes from the data.

Our preliminary findings show that students achieved different types of learning outcomes during the course. First, the data demonstrates learning of declarative knowledge on the topic. All the students were able to refer and discuss the core concepts and contents of the given

articles and discussions as well as to describe the activities done during the meeting sessions. Second, the course clearly opened up some students eyes to how they see themselves as entrepreneurial actors. Some, for instance, described that prior to attending the course they didn't see any entrepreneurial qualities in themselves because they thought that only business owners and entrepreneurs can be entrepreneurial. After the course, some students however were able to identify some entrepreneurial qualities and behaviour in themselves. Third, some of the students were able to demonstrate learning that went beyond the expected learning outcomes by pondering the role of corporate entrepreneurship and an entrepreneurial mindset in their forthcoming working life. These future-oriented quotations illustrated how students aim to take proactive roles and be shapers of organisations and economies in the future. In all, this study provides interesting future research avenues on some important learning outcomes of entrepreneurship education courses and, thus, what kind of difference such course and its active exercises and interventions can make among the students.

## 2.07

### Poster Presentation: Overqualification of tertiary educated persons of foreign origin

Jasmin Luukko<sup>1,2</sup>

<sup>1</sup>Statistics Finland, Helsinki, Finland, <sup>2</sup>Jyväskylä University School of Business and Economics, Jyväskylä, Finland

The aim of this paper is to analyze overqualification among Finnish foreign population. Two different measurements were used; subjective and objective. Subjective measurement is based on self-assessment whereas objective is based on technical definition that consists of international occupation (ISCO) and education (ISCED) classifications. Person is objectively overqualified if he or she is highly educated (ISCED 5-8) and works in occupation that is defined as low or middle skilled (ISCO 4-8).

First overqualification rates are presented for Finnish and foreign population. Then the probability to be overqualified is analyzed. Person can be overeducated by both measurements, by the other one or by neither one. Analysis is conducted with multinomial logistic regression. The results are reported as marginal effects instead of parameters. Marginal effects are easier to understand because they can be interpreted as differences in probabilities. In this study, data from Survey on work and well-being among persons of foreign origin (UTH14-study) was used. This data set includes far-reaching data of the Finnish population of foreign origin, which makes it unique. In practice, this is the first time overqualification can be analyzed among persons of foreign origin reliably.

The objective overqualification rate for Finnish population is 0.18 and subjective one is 0.16. For foreign population rates are 0.33 and 0.30, so the difference is clear. Overqualification rates differ also in sub-groups of population. The objective overqualification rate is higher than subjective one, also in most of the sub-groups. In every sub-group persons of foreign origin are more overqualified than natives. Exceptions are foreign people from EU and EFTA countries and from North America. Also foreign people who have moved to Finland when they were under seven years old are less overeducated than natives.

In logistic regression analysis, most of the explanatory variables are stronger connected to

objective overqualification than subjective one. For instance, level and sector of education, country of origin, reason to migrate and years of residency are statistically significantly connected to overqualification. Marginal effects are bigger for foreign population than for Finnish population, which suggests that foreign population in Finland is quite heterogeneous. Marginal effects are negative for subjective overqualification and positive for objective one. This means that others are less likely overqualified by subjective measurement and more likely overqualified by objective measurement than reference group. Altogether this indicates that persons who are not objectively overqualified, still feel that they are overqualified for their job.

According to the results of this study persons with short-cycle tertiary education (ISCED 5) are 26.4 percent more likely objectively overeducated than those with master level education (ISCED). The difference exists also between bachelor and master level education, but persons with bachelor level education are only 10.4 percent more likely overeducated. When studying reasons to migrate, the results state that persons who moved to Finland because of the job are 20.2 percent more likely subjectively overeducated than those who came because of studying. Also people who moved because of their family feel that they are overeducated compared to others. Persons who have lived in Finland for 5 to 10 years are 10.9 percent more likely overeducated both subjectively and objectively than those who have lived over 10 years.

As conclusion, I state that persons of foreign origin are more overeducated than natives. Sub-groups are also different when considering overqualification. Depending on which measurement is used, one can end up interpreting very different results. High overqualification rates among tertiary educated immigrants indicate that foreign degrees aren't well acknowledged in Finland. This might be because immigrants don't have enough information about Finnish labor market or their counselors don't know about their education. Situation could probably be improved if counselors had more time and resources to interview immigrants and sort out their real skill level. This way employers could also be advised better about immigrants' skills and education.

## 2.08

### Pinball Transitions: Exploring the labour market experiences of non-graduate young people in the UK

Darren Nixon, Beverly Brozsely

*Leeds Beckett University, Leeds, UK*

There is general agreement that over the last 20 years youth transitions are being 'de-standardised' and have become more fragmented, uncertain, unstable and risky (Walther and Plug, 2006). Literature typically invokes late modern terminology in order to describe young people as confronted with increased choices, risks, uncertainties and opportunities. Walther and Plug (2006) describe 'yo-yo' transitions characterised by non-linear transitions and movement back and forth through various (contradictory) employment statuses. Young people are increasingly compelled to reflexively reconstruct their biographies in line with changing market conditions and expectations. Their ability to do this has been described as 'biographicity' (Pohl and Walther, 2007) – the capacity to work on the self and navigate uncertain life course transitions. De-standardisation and individualisation processes place increased importance on young peoples' subjectivities (motivations and attitudes towards education, work and training) as the decisions and choices young people make increasingly impact on their

transitions and trajectories (Walther, 2006). This is not to repeat what Furlong and Cartmel call the 'epistemological fallacy' of assuming social-economic outcomes reflect choice rather than patterns of structural opportunity and constraint, but to recognise the importance of agency as well as structure in shaping youth transitions (see Walther and Plug, 2006; Pohl and Walther 2007, Walther, 2006). Understanding the interrelationship between structure and agency in shaping youth transitions is key. Highly educated young people are more likely to make what Walther and Plug (2006) term 'smooth' transitions or the more entrepreneurial, risky, but intrinsically rewarding 'alternative' transitions. Less qualified young people are more vulnerable to 'repaired', 'stagnant' and 'downward' transitions. In recent years it has been young people in the UK, particularly poorly skilled young men, who have suffered the biggest increases in unemployment and long-term unemployment in the wake of the Global Financial Crisis and its accompanying austerity (Grint and Nixon, 2015).

In the UK, knowledge economy theory has underpinned a significant expansion in Higher Education provision and the extension of the compulsory schooling age. Knowledge economy theory (i.e Bell, 1973; Castells, 2000) suggests that both individual employability and national economic competitiveness will be increasingly dependent on the knowledge and skills of workers. In the UK the number of people gaining a first degree more than quadrupled between 1990 and 2011 rising from 77,000 to 350,000. Participation rates in HE rose from 19% in 1990 to 33% in 2000 (Bolton, 2012). These highly significant increases reflect the fact that the possession of higher education qualifications is seen as the primary pathway to good quality jobs in the UK. However, in recent years the growth of graduate level jobs has not matched the growth of graduate students leading to the oversupply of qualifications at the top-end and hence some 'bumping-down' of graduates into non-graduate jobs and displacement of those further down the occupational hierarchy (Gangl, 2002, UKCES, 2009).

The term 'knowledge economy' can be seen as problematic given that around 20-25% of jobs in the UK require no formal qualifications whatsoever (Grint and Nixon, 2015) and 39% require level 1 or less (UKCES, 2009). Thus, some scholars have been keen to highlight the bifurcation of the UK employment structure, with work argued to be increasingly polarized between 'lovely' (graduate level) and 'lousy' (low-level) jobs (Goos and Manning, 2007). Whilst the growth of 'lovely' jobs (professional, well-paid, highly-skilled) reflects the growth of the knowledge industries, the growth of 'lousy' (low-skill, low-pay, flexible) jobs reflects the continued growth of low-level service jobs and of non-standard, 'flexible' contract forms. The decreasing middle is an effect of the decline of skilled manufacturing work due to automation and globalization. Thus, whilst the bifurcation of the UK employment structure suggests the increasing polarization of employment-based rewards, young people with degree-level qualifications, despite increasing competition, are in pole position for good quality jobs.

In this paper we draw on two separate pieces of in-depth qualitative research to explore and compare the labour-market transitions of two groups of young people who don't attend university and are on the periphery of the knowledge economy— 'middling kids' – young people who achieved at least some GCSEs in school and aspire to carve an occupational identity in a job with progression; and 'unemployed lads' - young very poorly qualified unemployed men on the margins of the labour market. We seek to explore how young people negotiate their options in their attempt to access good quality employment and how their experiences 'pinballing' between different college courses, training providers and employment statuses informs their occupational identities. The paper argues that while superficially the experiences and prospects of the two groups appear quite distinct, on closer inspection, it appears that both groups share very similar experiences of 'wasted' time, energy and resources attempting to gain qualifications and skills with very little leverage in the labour market, and growing resignation regarding their

prospects of finding a 'good' job.

## 2.09

### Developing a digital tool for self-evaluation and self-reflection for people outside the labor market

Jennie Nyman

*Helsinki Metropolia University of Applied Sciences, Helsinki, Finland*

#### Introduction

During the last few years the number of people outside the labor market has increased, which is a challenge for our communities and countries. Working life is changing all the time and the skills needed for working life have become more diverse. In addition to the specific skills needed for a certain job the general working skills, for example life control, communication and leading skills, have become even more central. However, the personal skills needed in working life don't give us the whole truth when it comes to evaluating work ability. As a part of a two-year EU project on enhancing the preconditions of employment and working ability of people outside the labor market we are developing a new digital tool for self-evaluation of work ability.

People outside the labor market are in a different position than persons that are a part of a work life community, also when it comes to evaluating work ability. Work ability and occupational performance are not only personal qualities. The extent to which a person is able to perform in any occupational situation is the sum of the interaction between the occupation (or activity), the environment and the person. A successful interaction will lead to a successful performance.

According to theories used within the field of occupational therapy, good occupational performance (or work ability) starts with the person recognizing occupations or activities that are engaging to him or her. This means that the person is genuinely interested in the activities and wants to participate in them. All change is driven by the person's own engagement. After finding the engaging occupations the person will be able to build on with more complex skills.

The reason for evaluating work ability has traditionally been to write documents for sickness retirement or to describe different needs for social insurance or rehabilitation. These needs are still valid but in addition there is a growing need to evaluate in order to support work ability. In order to be able to support work ability it is crucial to understand the personal grounds of the client. And for this the clients' perspective is needed.

In this project we have taken it one step further. Instead of looking at the work ability from the outside, we want the person him/herself to look at his/her own work ability and reflect on it. The digital self-evaluation tool is designed to work this way\*. It is supposed to be a tool for the person him/herself and not for a third party, unless the person him/herself decides to share the results and the reflections with others. "I recognize my own capacities instead of someone else defining them for me".

#### Objectives

The aim of the project is to develop a digital tool for self-evaluation and self-reflection for people



outside the labor market. The purpose of the tool is to help people identify the factors that affect their performance in different occupational contexts, and reflect on them either by themselves or together with someone else. The idea is that the person collects information for his/her own use in order to enhance participation in meaningful occupations and activities.

#### Methods

Co-creation and modeling. The developing is carried out in collaboration with the users and with occupational therapy and welfare technology students and teachers. During the spring 2017 we are testing the first version of the tool and collecting feedback on it from people outside the labor market.

#### Results

Results of the development process and feedback provided by the users will be shared.

### 2.10

#### **How sensitive do you need to be: The role of the teacher in a 21<sup>st</sup> century FE Business classroom.**

Dominic Thompson, Alec Dyer

*South Downs College, Hampshire, UK*

This paper reports the findings of a small-scale practitioner-research study funded by the Education and Training Foundation (ETF) as part of its Research Development Fellowship programme. The aim of the project was to explore if/how traditional theories of learning and teaching inform practice in business education courses in a further education (FE) college in England.

The research population consisted of 4 teachers and a total of 80 students who were observed and interviewed over a period of 60 days to identify the role that the teacher plays in enabling learning within an FE business classroom. A key focus of the research was to establish the importance business education teachers placed on theories of teaching and learning.

A major consideration at the outset was to explore the role of technology in business education contexts. However, as the research progressed this became a secondary focus of the study. Whilst this research project does not seek to diminish or dismiss the role of technology in business education contexts in FE its impact upon teaching and learning in business education will be discussed where relevant.

Wood and Middleton (1975) talked about cognitive socialisation, the moment when the adult enters the ZPD in order to facilitate some sort of joint development. In their 1975 study they highlighted an extremely important factor which will be discussed at length later in this paper. They argued that development depends on the adult/teachers ability to recognise the child/student's "region of sensitivity." If the adult/teacher can successfully recognise what they called the "recognition-production gap" (p.182), then the student has an increased chance of development. They took this idea a little further stating that the effective teacher "continually modifies their approach to the teaching tasks on the basis of the tutees response" (p.190). More

recently, Black and William (2009) discuss formative feedback in terms of "the creation of and capitalisation upon moments of contingency" where instruction seeks to regulate the learning process and how instruction is used, and where necessary the lack of instruction, is down to the ability of the teacher (2009, p. 6).

If the teacher is able to, over time, gradually shift responsibility over to the child, then more complex tasks would be able to be completed. Vygotsky described this process as "internalisation" (1978). In our view this is something that can and should be seen in teaching and learning regardless of the age of the child/student.

A major consideration is the role that technology plays not only in FE but in teaching and learning in general. Technology has been seen as the solution to many issues and the wide range of different platforms, software packages and programmes is astounding (see Wild et al, 2008; Attwell, 2007; Dillenbourg et al, 2007). In addition, authors such as Prensky (2001) who termed the phrase "digital natives" and more recently the growth of *self-organised learning environments* as designed by Sugata Mitra (2013) have been prevalent in the development of teaching and learning strategies within FE. However, is technology the answer? Many authors refute this view, in particular, Helsper and Enyon (2010) who argue that there is no real empirical evidence to support this view. In addition, Collins and Higgins (2013) ask the very pertinent question "If technology is the answer, what is the question?" and in their Times Educational Supplement (TES) article they make the valid point that whilst technology can be a great motivator for young people without the foundations of sound pedagogy it cannot be relied upon to produce favourable student outcomes.

Many studies have been completed looking at infant, pre-school and primary child development and linking theoretical underpinnings to them (as demonstrated above) however, very few have been conducted in FE contexts which is arguably to the detriment of traditional teaching and learning in FE. This study seeks to see if theories of teaching and learning with sound underpinnings in robust educational research are influencing educational practice in business education contexts in FE.

All of the teachers in the study regardless of experience and background understood the importance of creating students that are self-directed, problem-solvers who develop through an increase in difficulty of task and an increase in responsibility. It is also quite clear from the data that improvements can be made via a greater understanding of theories of learning and educational research to enable less experienced teachers to be able to observe the physical manifestations of these gaps in student understanding.

From the limited amount of observations and interviews completed as part of this study it seems that, whilst there is a definite application of theories of learning such as scaffolding and knowledge of the region of sensitivity, for example, these applications are based on as Doherty and Sneddon (2007) put it "intuition". This intuition however was notably something that each teacher would use, and would use effectively, but would not necessarily share with others. This concept of, as Shulman (1993) calls it; "Pedagogic solitude" is something that, via inclusive and effective collaborative CPD, could be broken. Fielding et al (2005) developed the concept of joint practice development (JPD) where rather than CPD being developed and enforced centrally teachers are able to take ownership of their own development via the creation and fostering of links between practising professionals.

## 2.11

**Skilled or not? The teachers influence on health care students choices in High school**

Else Marie Johansen, Nina Amble

*Oslo and Akershus University College (HIOA), Oslo, Norway*

**Introduction:** Students on health care worker education program shifts to academic study (Skålholt et al., 2013). Even if the students are satisfied with their education, they do not see career opportunities, and they cannot find the health care profession satisfactory. The health care worker is seen as an assistant, there is no jurisdiction, no job they govern, they are dependent on nursing professionals permissions to decide what tasks they are allowed to perform (Høst et al., 2015). While many students choose not to be health care workers, the profession is urgently needed. In its estimate Norway Statistic (2012) report a significant shortfall of health care worker by 2035 (Gjefsen, Gunnes og Stølen 2014).

Research indicates that school is a frame of reference for the development of professional identity. Asked whether academic socialization and forming of professional identity; students emerged that the teacher is a rolemodel. Along with the experience of deployment in practice, this is crucial for health workers students' identity development (Høst, 2012). Many vocational teachers in the healthcare work education program are trained nurses, not skilled health care workers (Høst, 2013). The research project (Amble et. al 2015) and empirical basis for this paper (Johansen, 2016) will examine what factors in the study that may help explain why so many of the students on the health care education program choose to go for general admission for university instead of being an apprentice and train to be skilled as health care workers.

According to Holland (1997), theory about making career choices and the development of professional identity and positive identification with a profession - in the education phase - has to explore abilities and interests. Practical experience in the trade's work community will be essential. The theory is concerned partly on personal and environmental characteristics that lead to satisfying career choice, and partly on commitment and achievements. Holland (1997) says that people search environment that will allow them to exercise their skills and abilities, in which they can express their beliefs and values, and meet appropriate challenges and roles. Holland (1997) is based on professional identity as a clear and stable perception of own goals, interests, abilities and personality related to professional practice. According to Holland (1997), the professional identity is constantly changing and being constructed and reconstructed in collaboration with colleagues in a working partnership. He further claims that those students who have a certain conception of future professional identity often have few but clear goals for their education, while students with weak academic identity can have many alternative and goals for the future without a clear foundation. This theory will be basis for the papers objectives and choice of method.

**Objectives:** To determine in which way and how vocational teachers contribute to the professional socialization of health care worker students. What significance can the teacher professional backgrounds have for students choosing a career?

**Methods:** Data is going to be collected qualitatively as semi-structured interviews

**Results:** The results is not conducted, they will be in time for the presentation.

**Conclusions:** To examine if the teachers professional background as a skilled worker or as a trained nurse has any influence on the students' choice of profession as health care worker.

## 2.12

**Professional identities under current workplace affordances: Swiss retail apprentices' meaning-makings**

Kerstin Duemmler, Alexandra Felder, Isabelle Caprani

*Swiss Federal Institute of Vocational Education and Training (SFIVET), Lausanne, Switzerland*

The structural changes in the work world since the 1980s have transformed individuals' experiences of and relationship with work and employment. New forms of work organization have emerged that involve increasing demands for flexibility, skill development, and responsible autonomy. This presentation examines these modern work demands from a sociological perspective that focuses on their impact on retail apprentices' professional identity development.

Professional identities develop through meaning-making in response to learning and working experiences and within social relations in the work context. The image that individuals develop about themselves as professionals is constantly evolving and interrelated with the image others have of them. However, individuals do not simply adapt smoothly to work affordances and contexts, but actively negotiate them to find a balance with their interests, dispositions, resources, and ambitions. Exploring apprentices' identities allows us to study how newcomers in transition familiarize themselves with contemporary labour market demands and how they master or cope with them. We aim to understand apprentices' subjective experiences of working and training life, and the personal meaning-making that comes with them, in an occupation with difficult working conditions.

Retail work involves irregular work schedules, long fragmented workdays with evening and weekend shifts, low wages, and mainly part-time employment. The Swiss retail sector has become particularly competitive in recent decades, which has placed even stronger demands on Swiss retail workers. Retail apprentices study one and a half days per week in a vocational education and training (VET) school and learn as well as work three and a half days in retail shops. Training involves customer service, product knowledge, and management.

The study uses qualitative data collection and analysis methods. In-depth interviews with 25 retail apprentices and six focus groups were conducted in three Swiss VET schools. This research was mainly carried out in first-year classes (involving over 65 apprentices in total) and included observations during courses and breaks. The data was analyzed according to the coding methodology developed by Grounded Theory. The inductive method presents the advantage of being closer to the concerns and subjective experiences of the participants. We first coded openly and very closely to the data, and later developed more abstract categories and the links between them. Retail apprentices' experiences of modern work demands – especially flexibility, employability, and responsible autonomy – emerged as some of the more abstract categories from our analysis, and we became aware that these experiences are linked to the development of professional identities, in particular when apprentices search for personal meaning in their work and apprenticeship.

Studying retail apprentices' subjective experiences of the demands for employability, flexibility, and responsible autonomy makes it possible to understand not only the challenges they face (e.g. insecurities, stress or pressures), but also the possibilities they perceive. Although the apprentices identify with retail work, they have internalized the view that they have to adapt to labour market needs, as a result of which they see their retail apprenticeship as a stepping-

stone in their professional trajectory. Remarkably, the apprentices see employability demands less as a burden than as opening the possibility for professional reorientation, and thus for moving on to better jobs.

However, they see flexibility demands (e.g. multitasking, flextime schedule) more ambivalently, oscillating between accepting the reality and needs of retail work and companies, on the one hand, and recognizing their own personal needs and limits, on the other. Apprentices question their identification with flexible retail work if it affects their social life too strongly and if they are subjected to so much stress and pressure that it affects their learning progress. However, company demands for flexibility do not per se signify a restriction of learning opportunities and identity development. Instead, companies can provide these opportunities through supervision, support, and responsiveness to apprentices' needs.

Companies' demand for responsible autonomy is equally double-edged. Responsible autonomy is a precondition for learning and a source of self-esteem, which necessarily fosters professional identification. But not all apprentices were able to cope with open-ended tasks, take the initiative, successfully coordinate with colleagues in horizontal teams, or deal with insufficient guidance and support.

Apprentices' ability to cope with the demand for responsible autonomy depends on not only their skills and capacities, but also whether companies understand apprentices to be learners of an occupation or (cheap) employees. Some companies expect them to quickly become autonomous, skilled, and efficient workers. Others, in contrast, provide more support, are responsive to apprentices' needs, and accord responsible autonomy incrementally. In this regard, our findings echo other studies on the ambiguous status of apprentices as learners and workers.

## 2.13

### The Contradiction between Economic Imperatives and Individual Interests in Continuing Vocational Training

Daniela Ahrens

*University of Bremen, Bremen, Germany*

#### 1. Introduction

The contribution refers to the stream "Education, Work and Employment" and focusses the central question of work and competence development in the context of digitalization based on first results of the empirical research project "vocational professionalization in the production industry" (founded by the Federal Ministry of Education and Research). While in the 1970s and 1980s, the legitimation context of further education and training depended mainly on working conditions, in the early 1990s – the so-called "competence-oriented turnaround" the focus shifted on the subject and on new learning formats beyond institutional structures. Facing the technological development and the structural change in organizations nowadays a central challenge for continuing vocational training (and the imperative of lifelong learning) lies in the tension between the individual interests of the employees - education as personality development - and the company's interests - the human resource development. How can the individual goals and learning motivation be reconciled with the goals of the company?

On the one hand there is the need as well as the expectation of the companies that the employees bring in more subjectivity and self-responsibility into the work process and organization, on the other hand the workflows offers decreasingly opportunities. Particularly when solving problems, self-responsible action is required. At the same time, the experience-based knowledge is sufficient to deal with problems in digitized work processes. Furthermore, our research shows that automation is only slightly competency-activating. Faults in production processes can be handled less and less by experience-based knowledge, which is based on sensory perception. The result is that experts often perceive highly automated systems as a kind of "ghost machine" in which they use the control elements without, however, always having the appropriate context.

#### 2. Objectives

The change in the work organizations as well as in the work processes is often interpreted to the effect that due to the increasing intensity and concentration of the work, hardly any time for learning remains. How, however, can work and learning be combined if the work environment is anything but competency activating and, due to a high degree of automation, rather "learning-hostile"? Instead of the question how work can be designed for learning, the question of how learning processes can be facilitated in hostile working environments, becomes more virulent in the course of automation. Furthermore, the zero-defect policy, which companies are following as well as the increasing time pressure make the support and design of work-based learning even more difficult.

#### 3. Methods

The empirical data based on qualitative interviews with skilled employees, manager, members of the human resource development and the work council in the production industry. The main topics of the interviews were changes of the work tasks through automation and digitization, as well as the handling of faults and associated responsibilities in the analysis and management of faults. Reasons for the (existing or missing) learning motivation are often attributed to the individual characteristics. The challenge is to create learning environments in terms of content, communication and sociality in such a way that they create incentives for the learners to deal with the learning subjects. For this, we worked with the concept of microlearning.

To enhance the competence development videos were taken from the production process. Since automation processes are very fast or not visible to the human eye, the learning units are processed by means of video. Two aspects speak for the use of videos. In view of the visual appeal of most digital media, communication is now increasingly visual or audiovisual. Texts are no longer the primary medium for knowledge transfer. In addition to the pictorial conveyance of knowledge, secondly, the learning potentials of videos lie in the visualization of work processes, which are "hidden" by digitization.

#### 4. Conclusion

Based on empirical research the paper shows the ambivalence of automation: On the one side, especially experience-based knowledge is hardly to develop in highly automated surroundings, on the other side new competences are required facing the increasing complexity and decentralization of work-processes. Microlearning is an innovative form of competence development because they are first of all low-threshold learning concepts. A uniform definition of microlearning does not exist. Microlearning refers on a general level to learning units suitable to the specific context of work and strengthens the employability and enhancing the learning motivation. The educational potentials of videos lie in the combination of training factual



knowledge as well as processual knowledge and enhancing the reflection about the production process.

## 2.14

### The importance of reflection in employee-driven innovation in municipal care work

Nina Amble<sup>2</sup>, Marit Rismark<sup>3</sup>, Oscar Amundsen<sup>3</sup>, Solveig Waaler<sup>3</sup>, Sigrun Saur Stiklestad<sup>1</sup>, Olav Eikeland<sup>3</sup>

<sup>1</sup>*Oslo and Akershus University college of applied sciences, Oslo, Norway*, <sup>2</sup>*Norwegian university of science and technology, Trondheim, Norway*, <sup>3</sup>*Norwegian Labour and Welfare administration, Trondheim, Norway*

This article is part of the research project *#Læringslivet (Learning life) as Symbiotic Learning System of Employee-driven Innovation in Municipal Care Work*. *#Læringslivet* makes connections between three different concepts: *Symbiotic learning system* (SLS), *employee-driven innovation* (EDI) and *care work*. A symbiotic learning system (Eikeland, 2012a) seeks to build a new and mutually beneficial relationship between higher education and working life based on the understanding that the whole is greater than the sum of its parts. *#Læringslivet* is a metaphor and a knowledge-based hashtag that refers to such a symbiotic learning system (Amble, Amundsen, Eikeland, Rismark, Stiklestad, Waaler, unpublished1).

Focus on employee-driven innovation emphasizes a *humanistic and social approach to innovation*. New technical and science-based products in high-tech industries are still included, but innovation processes in low-tech firms and public organizations are also important areas (Høyrrup, 2010).

The municipal care services mainly consist of different kinds of home care based services, home nursing care and residential care homes as a supplement and alternative to nursing homes. People, both younger and elderly, with a variety of functional reductions are the largest group who receives municipal care services (Halvorsen, Stjernø & Øverbye, 2016).

In addition to traditional research projects, *#Læringslivet* aim to deliver both an education and a handbook in employee-driven innovation. *#Læringslivet* will visit four selected work places in the municipal care work and offer all the employees the opportunity to take 15 ECTS at the bachelor's level. *#Læringslivet*, in cooperation with the employees, will develop a handbook in employee-driven innovation in municipal care work. The study consists of six-day sessions within a year in all the four municipal care work places. Between the sessions, the employees will organize, develop and lead a development work at their workplace. That way the workplaces will develop a sustainable system for work place based learning and collective changing competency (HIOA, unpublished and (Amble et al., unpublished2).

The three basic categories of purposeful learning activities are formal learning, non-formal learning and informal learning. Formal learning takes place within the education system and leads to formal qualifications. Non-formal learning usually takes place alongside the formal education system, like on-the job training. Informal learning is the kind of learning that occurs in daily life, such as in daily work life (European Commission, 2000). In *#Læringslivet* formal learning meets experimental learning, arisen from both informal learning and non-formal learning.

The purpose of this article is to examine how reflection can contribute to employee-driven innovation in municipal care work. The article will draw special attention to how reflection can contribute to develop the interplay between the different learning activities described above. Of particular interest is: How do employees take advantage of the course reading material in the EDI process? How do employees grasp and transform the system of concepts in the syllabus into the EDI process? And vice versa, how do employees take advantage of their experiential learning in the municipal care work?

Based on a wide-range research project on competence development in working life Wahlgrén, Høyrrup, Pedersen & Rattleff (2011) conclude that reflection is a key concept to understand experience based learning at the workplace. Hence, experience-based learning is understood as a reflection on experiences based on actions, where the purpose is to improve prevailing actions and praxis. Concerning learning in the workplace, one of the main challenges is how to bridge formal learning and experimental learning, understood as both informal learning and non-formal learning. Research on how to develop competence in the workplace shows reflection as a core concept to understand experimental learning at the workplace and a process to connect the different kind of knowledge.

David A. Kolb believes "Learning is a process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p.38). Kolb's cyclical model of experimental learning, consists of four stages; *concrete experience, observation and reflection, forming abstract concepts* and *testing in new situations* (Kolb, 1984). Høyrrup (2004, 2010) emphasizes the significance of reflection as an important concept for both learning and innovation and can be seen as a core process in organizational learning.

*#Læringslivet* is rooted in the theory of action research, based on the Norwegian tradition (Svensson & Nielsen, 2006; Gustavsen et al. 2010; Eikeland, 2012b). However, this article is based on observation as a data source, consolidated in formative dialogue research (Finne, Levin & Nilsen, 1995). The sessions in the study are an arena for observation, resulting in raw data in the form of notes. Sixty-two written coursework requirements and reflection notes, as well as data from reading workshops. The IPE-method (Idea development, Prioritize, Evaluation), developed in *#Læringslivet* as a tool for employee-driven innovation (HIOA, unpublished,) will be both an oral and written data source in the project. The employee-driven innovation projects, informal conversations and face-to-face surveys with both employees and leaders will also be an empirical source.

## 2.15

### Salaries as an outcome of university education – differences between and within study fields

Päivi Vuorinen-Lampila<sup>1</sup>, Arja Haapakorpi<sup>2</sup>

<sup>1</sup>*University of Jyväskylä, Jyväskylä, Finland*, <sup>2</sup>*University of Helsinki, Helsinki, Finland*

Education is typically the most important resource affecting in allocation to different labour market positions. Higher education degree / university qualification is in relation to higher employment outcomes, such as higher occupational status and wage level than lower level degrees. With educational expansion, the field of study has also become a key definer of university graduates'

labour market outcomes, but less is known about the differences in outcomes within study fields.

Both occupational attainment and a particular income level are ultimately contingent to hiring process in labour market. The signaling theory assumes that the value of higher education degree in the process is based on the premise that the degree indicates the capabilities of graduates. In addition to the level of degree, the signaling value of higher education is related to study field and particular degree. Since the employers can't get direct information of job-seekers' ability, they need to trust on signals that convey the information. Along with educational credentials, there are other signals used by the employers in recruiting. The work experience is important, but other characteristics, such as gender, are also used in signaling the job-seekers. However, with the current substantial growth of higher education, a higher education degree is considered as less reliable signal. Thus, the other attributes are used in making difference between applicants who have a degree. Due to this trend, it is claimed that the value of higher education in labour market has been inflated. However, this argument has been criticized. Instead of inflation, polarization of professional labour markets into "good" and "bad" jobs has been presented. The higher education expansion has generated more diversification in graduate employment outcomes.

The aim of the presentation is to examine the employment outcomes of university graduates by focusing on salaries; in other words, the monetary rewards of the university degree from different study fields. The average salaries of the graduates from different fields are compared to explore the signaling value of university degree by study field. However, since the averages do not provide knowledge on the whole range of salaries, the wage variances by degree are studied to illuminate the whole picture of the salaries in different study fields. In addition, the average wages and wage variances are examined by gender and by the employment sector (private/public). The study utilizes the register data (e.g. Student Register, Employment Statistics) collected by Statistics Finland. The sample of one third of Finnish university entrants in year 2001 were traced through their studies. At the end of year 2009 less than two thirds (n=3,693) had completed the master's degree and entered the labour market. These graduates form the target group of the study.

The main results of the analysis suggest that the wages of university graduates from different study fields vary in a historically persistent way: the medicine graduates reached the highest wage level, and the graduates of arts and humanities reached the lowest ones. The wage variances usually vary with income level. The study fields of law and technology make a difference with their higher salaries and modest variance. It can be assumed that in the field of law that is related to bargaining power of professional occupational group. The smaller variation of salaries of the graduates from the field of technology cannot be explained in an unambiguous way. As general rule, the male gender and private sector employment increase the salary level, but it does not apply to all study fields. In terms of wage level, the public sector employment is more often beneficial for women. Following the higher salary, the variances are higher in men's salaries and in private sector. In all, the wages as an outcome of university degree are strongly differentiated by study field, gender and employment sector, and there is differing variation also within each group.

The theoretical conclusion is that the signaling theory applies as regards to the differences between study fields, indicating different signaling value of degrees from different domains. The theory is also supported by the results of wage variance, referring to a set of variables, a degree, individual qualities and labour markets having effect on salary level. The pay differentials between and within the study fields follow the recent trend of increasing wage differences. However, it needs to be noticed that the wage differences are not necessarily related to other qualities of the job.

## 2.16

### **Supporting Workplace Learning through digital media: A concept to overcome the gap between work and training**

Uwe Elsholz, Tanja Hilger

*FernUniversität in Hagen, Hagen, Germany*

Digitalization as a global phenomenon has already shown its influence on work and labour throughout the last years. While companies have to deal with different kinds of change processes that come along with digitization and digitalization, employees – as individuals – are to be prepared and supported to face these changes as well. Digitalization changes work, education and training – and the relationship between them. From educational scientists point of view, it therefore provides the ground and the objective of research. Thus, experts and researchers for continuing vocational training enhance scenarios, training courses or further programs with digital media.

Yet the objectives of continuing vocational education in Germany e.g. changed over the last few decades: Classical training like the German "Meister" still takes part in courses, without direct connection to work. The challenges lie in the combination of work and learning. Workplace learning has its great advantages when it comes to promote an appropriate way to develop competences that are necessary in a digital world: Employees have to be able to find answers to their challenges and have to estimate whether the answer is a proper solution. A rigid content orientation, that is still predominating continuing vocational education in German companies, needs to shift to a bias that encourages individual competence, experience, problem-solving skills and self-reflection.

Still, competences can only be developed where action and learning are associated. Therein work and labour need to provide structures, culture and environment that support learning processes, whereas continuing vocational education needs to describe how exactly workplace learning is to be conducted, especially when it is supported with digital media. Unfortunately, this is seldom based on adequate learning theories or solid research. Nevertheless, pragmatic- and constructivist-oriented understandings provide models and theories that can help to promote competence development processes in workplace learning – orientated towards the learner.

The research project stands as an example, how workplace learning can be realised in continuing vocational education in Germany – based on educational models and ideas, e.g. by John Dewey and Donald A. Schön. Qualified electricians, being participants of this project, autonomously process an operational scheme that contents different kinds of work stages. Enhanced with digital media the tasks have to be documented on an e-portfolio. E-portfolios are useful tools to document and reflect on learning processes. Although there are approaches to establishing portfolios as electronic reports in education, their potential remains largely unused supporting workplace learning. The presented e-portfolio is used in order to document the informal learning processes and to enable reflection on the participants' actions, their insights and how they manage difficulties. In order to break through institutionalized educational patterns, we consider methods of media-based documentation to be useful.

However, the deployment of the e-portfolio alone is not sufficient. The structure of the e-portfolio provides guidance for those that did not encounter informal learning and reflectional learning processes before. Especially for inexperienced learners or those with little experience in working

with e-portfolios, it is necessary to integrate e.g. questions and suggestions. The genuinely personal reflection is pedagogically supported by professionals within discussions about the documented tasks. The e-portfolio likewise stands as a documentation of the competences that are developed. Referring to the concept of the Reflective Practitioner by Donald A. Schön we differentiate reflection-in-action and reflection-on-action – both covered by the e-portfolio.

The research project includes the following research questions: a) How can workplace learning in the German electronic industry be supported by digital media, when reasoned on learning theories? b) How can the transferability of competences be secured? c) How can quality assurance be used to certify workplace learning?

The evaluation of our learning concept follows the methodology of design-based-research.

Digital learning can enhance educational processes within workplace learning in order to promote self-determined, creative and socially responsible action in a digitalized world. Digital media enables autonomous and individual, as well as cooperative and social learning.

Nevertheless, educational scientist and especially experts for continuing vocational education have to be aware, that a widely dissemination of digitalization comes along with risks and traps: Not every participant is able to use supplied enhancements, not every employee is able to transform work and labour into workplace learning, even if the learning processes are supported by digital media. The danger of a digital gap is imminent – those who are used to learning and working with digital media benefit of digital improvements. Those, however, who do not apply digital application, might fall back and will not profit from digitalization. Further educational research has to consider, how this gap can be closed and how digital media forms can enhance workplace learning. Furthermore, to counteract unequal access opportunities to continuing vocational education, our concept mainly addresses less educated people without an academic background.

The understanding of work changes: Work and learning are no longer separated, but rather linked. Work becomes an integral part of lifelong learning

## 2.17

### **Bridging academic and working life expertise by a procedure of using two advisors**

Kaisa Hytönen<sup>1</sup>, Tuire Palonen<sup>1</sup>, Erno Lehtinen<sup>1</sup>, Kai Hakkarainen<sup>2</sup>

<sup>1</sup>University of Turku, Turku, Finland, <sup>2</sup>University of Helsinki, Helsinki, Finland

#### Introduction

This study examines a training design for professional development at the continuing education level. It aims to support the learning of the new knowledge and skills needed in emerging professional fields by interconnecting academic and workplace settings. The training design is based on the use of two advisors, one from working life and the other from academic context (Hytönen et al., 2016). The question of how to prepare workers to meet the requirements of a changing working life is essential especially in emerging fields in which there are no established education programs for developing general expertise (Lehtinen et al., 2014; Palonen & Boshuizen, 2014). Workplaces have traditionally been important places for cultivating professional skills

but only a few workplaces are able to provide possibilities for learning complex competencies needed in emerging fields. Therefore, deeper cooperation between higher education institutions and working life is needed (Billett & Henderson, 2011).

In order to address the requirements of future education, a model called Academic Apprenticeship Education was initiated in Finland in 2009. It was a post-academic education model aimed for professionals who are already in working life but must update their expertise. In addition to workplace learning and theoretical studies, integration of learning within the framework of academic education and work was supported by providing guidance in both contexts. This study examines 1) how does the interconnection of workplace and academic knowledge and practices occur through guidance, 2) what are the features underlying the most successful guidance relationships and 3) do academic guidance and workplace guidance differ regarding these features?

#### Method

The study was conducted in the context of a year-long Academic Apprenticeship Education Programme in the emerging field of energy efficiency. The training was organized in collaboration with three technical universities. The participants were energy efficiency experts working in the public and private sectors (N=87). In their workplaces the participants pursued a study project bridging theory and practice. Each participant was assigned an academic advisor on behalf of the organizing universities and a workplace advisor. The academic advisors supported participants in their study projects by providing knowledge, discussions and information about valuable information sources. The workplace advisors were expected to support participants in the process of workplace learning.

The data collection relied on semi-structured interviews. A sample of 18 voluntary course participants was interviewed in the beginning and at the end of the training. In addition, interviews were conducted with 8 academic advisors and 8 workplace advisors of the interviewed course participants. Interviews were analysed according to qualitative content analysis independently by two researchers.

#### Findings

The results revealed that the academic and workplace contexts did not really become interwoven through the guidance practices. Successful interconnection of guidance would have required contributions from the advisors and the course participants and more resources from the organisers of the training. However, many of the trainees were independently able to connect theory and practice, e.g. by developing new practical tools for organisational use.

Even though the interconnection of the academic and workplace settings was not embedded as part of the guidance practices, the guidance relationship could be successful with both or either one of the advisors. Successful guidance process was affected by the features of the learner, the advisor and their interaction as well as the features of the learning environment. In both the academic and workplace settings successful guidance required the advisor's and the course participant's commitment. In the academic context, a successful guidance process was related e.g. to a course participants strong orientation to expand his/her professional competence, clear aims set for guidance and regular meetings. A match between the trainee's needs and the advisor's special fields of expertise was especially important. Features underlying successful workplace guidance, instead, were related to a close and daily interaction between the trainee and the advisor and the advisor's interest for supporting professional development of his/her subordinates.



## Conclusion

The study showed that the practical needs of workplaces and the scientific viewpoints and standards of the academic world do not necessarily meet when trying to find new forms of cooperation between higher education and working life. Interconnecting learning and guidance in these two contexts requires deeper negotiations for finding common practices and shared aims for learning. Even though actual interconnection of academic and workplace settings through guidance practices is challenging, having two advisors representing different kinds of professional perspectives can help trainees to find ways of connecting theoretical aspects to their practical work tasks. The procedure of using two advisors seems to be a valuable method for preparing workers to meet the new requirements of a changing working life, especially in emerging fields. However, it requires that different aspects of successful guidance process click into place. Above all, right people must be found and the trainees themselves must be oriented to utilise the novel resources provided to them.

## 2.18

### Learning assessment through higher education and working life partnership

Susanna Mikkonen<sup>1</sup>, Petri Nokelainen<sup>3,1</sup>, Tiina Anttila<sup>2</sup>, Tuire Palonen<sup>2</sup>, Timo Halttunen<sup>2</sup>

<sup>1</sup>University of Tampere, Tampere, Finland, <sup>2</sup>University of Turku, Turku, Finland, <sup>3</sup>Tampere University of Technology, Tampere, Finland

In today's world, working life is under constant and rapid change. The fast development of technology, the digitalization of work and the changes in the organisation of work call for the recognition of the value of learning throughout the working career. (Collin, Van der Heijden & Lewis, 2012; Tynjälä, 2010; 2013). Baartman, Gulikers and Dijkstra (2013) state that employers are in need of practitioners who are able to solve complex problems and have the ability to both acquire and develop new knowledge. To enhance expertise and to promote longer working careers, it is necessary to link education with working life and to examine the practices of working life reflectively using theoretical and conceptual tools.

In Finland, a new type of professional postgraduate education - specialisation education - has recently been created. Specialisation education is designed to support the professional development and specialisation of the participants and is meant for higher education graduates who already have prior work experience. Specialisation education is provided by universities and universities of applied sciences, and the studies amount to a minimum of 30 ECTS. The studies are based on higher education and working life partnerships: The research and development competencies of universities are utilised to answer the needs of and to develop the practices of working life.

The objective of this study is to look into the process of assessment of expertise and expert learning, and to gain insight into how assessment would best be organised in work-based higher education. Miller's Pyramid (1990) forms a well-known and widely applied framework for the assessment of professional competence. In Miller's pyramid, assessment at the higher levels focuses on performance in realistic tasks, and ultimately in complex, unpredictable professional situations. There is a growing need for assessments that capture all the main elements of competence: an adequate knowledge base, professional performance and the ability for life-

long learning (Baartman et al., 2013).

The data for this study was collected through the Delphi method. The Delphi method is a collaborative forecast and problem-solving method which relies on a panel of experts. During the Delphi process, research data is collected from expert panelists who anonymously answer questionnaires in two or more rounds. As the process progresses, the panel is expected to converge towards consensus. However, instead of achieving consensus, the focus can also be placed on finding many alternative and well-grounded ideas for future development (Landeta, 2006).

The Delphi panel for this study consisted of 36 experts from five interest groups including

- 1) researchers of workplace learning and expertise (n=8),
- 2) training officers of specialisation education (n=6),
- 2) experts of higher education policies (n=6),
- 4) working-life representatives (n=11), and
- 5) students of long postgraduate programs (n=5).

The data for this study was collected using a web-based method software, the eDelfoi (<https://edelfoi.fi>). The panelists provided their answers for 10 statements on the first and 7 statements on the second round. All the statements were concerned with specialisation education and/or assessment in the studies. The panelists were asked to estimate the probability and preferability of each statement and to write down arguments and reasoning to support their answers. For each round, the panelists were also encouraged to anonymously comment on each other's answers.

The analysis is ongoing, but the preliminary results indicate that the partnership of higher education and working life characteristic of specialisation education should be extended all the way to the assessment and evaluation procedures of the studies. Working life is a platform for assessment that is almost impossible to simulate. Thus, assessment in the workplace enables assessment under authentic circumstances and professional situations. According to this study, assessment in work-based higher education is best carried out via work-related development projects in which participants use theoretical and conceptual tools gained through their studies to address authentic problems related to their own work. The integration of theoretical and practical knowledge is also crucial to expertise development (Tynjälä, 2008).

### 3. GENDERING WORK

#### 3.01

#### Gender stereotypes predicts physicians' estimates of women patients' ability to work

Marie Gustafsson Sendén<sup>1</sup>, Hanna Bäck<sup>3</sup>, Stina Melander<sup>3</sup>, Emma Bäck<sup>2</sup>

<sup>1</sup>Stockholm University, Stockholm, Sweden, <sup>2</sup>Gothenburg University, Gothenburg, Sweden,

<sup>3</sup>Lund University, Lund, Sweden

#### Background

Pain is one of the most common sources for absences from work, and more than every fifth person suffers from pain at some point during their lifetime. While both women and men suffer, women are more often prescribed sick leave due to pain and stay on leave for longer period. Different causes have been proposed, such as hormonal levels or stereotypes and biases. This study focus on biases related with gender stereotypes. The female stereotype is associated with sensitivity, household work and family orientation. In contrast, the male stereotype is associated with being a breadwinner, strong and insensitive. In regards of pain and sick listing, stereotypes can influence in two ways. Stereotypes can facilitate sick listing of women because they are associated with the home, whereas the male stereotype is associated with work. Further, the male stereotype of being strong and insensitive may function as a barrier to report pain and sickness. Studies have also shown that when men seek help, the health care system handles them more seriously.

#### Objectives

The goal of the present research is to determine if and how patient gender stereotypes affect judgments of future work ability in pain patients. Specifically, we investigated whether domestic roles and credibility of the patient differentially impact judgments of female and male patients.

#### Materials/methods

An experimental survey was administered to 134 Swedish medical students (females 44%, males 54%, no information 2%). The participants read a description of pain patient, describing the patient's trajectory. The patient was referred to as a woman or a man in two different versions of the description, with all else identical. Participants then rated the patient's perceived work ability, credibility, and amount domestic work performed by the patient.

#### Results

The responses were analysed by comparisons of means and regression. We found that judgments of physician students were gender biased. Women and men were perceived to have the same work ability, but men were seen as more credible in assessing their own work ability whereas women were expected to do more domestic work. Moreover, level of domestic work moderated affected perceptions of work ability, such that women who work more at home were considered as having higher work ability than women who did less work at home. This means that women who meet gender stereotypical expectations have higher potentials of going back to work, although work at home could have a negative effect in the rehabilitation process.

#### Conclusions

Gender stereotypes influence assessments of work ability in patients. The effects may have relevance for the recovery of the patient, and hence are important both on an individual and socio-economic level.

#### 3.02

#### Calendar girls? Aesthetic labour in the digital age

Katrina Pritchard, Rebecca Whiting

<sup>1</sup>Swansea University, Wales, UK, <sup>2</sup>Birkbeck, University of London, London, UK

We explore the ways in which a 'new, natural' femininity (Lewis, 2014) is being positioned as positive, authentic and empowering for working women. We build on concerns that idealized representations of women and widespread use of digitalization effectively erase ageing and promote a perpetual youth (Twigg, 2010). Analysing debates about an iconic visual representation of women, we explore how the 2017 Pirelli Calendar can be seen as a product of aesthetic labour which digitally circulates and recirculates as understandings of 'naturalness' become (re)constructed.

We suggest the 2017 Pirelli calendar can be seen as a significant discursive event (Hardy & Maguire, 2010) that can shed light on contemporary understandings femininity (and being appropriately feminine) as an achievement of aesthetic labour. Given the positive associations between beauty, femininity and youth (Trethewey, 1999), the depiction here of (relatively) older women (aged 28-71) further allows us to interrogate the way in which gendered ageing is implicated.

Adopting a critical perspective, we investigate the launch of the 2017 Pirelli calendar as a multi-modal discursive event. We use Web 2.0 tools to identify relevant online news sources and build a discursive event database, documenting 'who did what, when' (Hardy & Maguire, 2010, p. 1371). Building on our previous research utilising this approach, we use discursive and visual methods to analyse online news media about the calendar from November 2016 to February 2017.

Our analysis uses aesthetic labour as a conceptual framework (Entwistle and Wissinger, 2006). A developing body of literature has drawn attention to aesthetics and age: for example Dean (2005) highlights the significance of perceived age as a source of value within the entertainment industry. Relatedly there is concern about the impact of idealized representations and use of digitalization (Twigg, 2010). Indeed, such artificial representations of youthfulness might be regarded as central to the Pirelli Calendar. However in 2017 it featured actors aged 28-71, shot in black and white with limited make-up and apparently no digitization. Our focus then is on the emergence of this 'new, natural' aesthetic and its role in aesthetic labouring in the digital age.

Moreover, the launch of the 2017 calendar included a wide range of social and other online media, such that we might observe that the material object (the printed calendar itself) is almost lost. Preview photographs, behind the scenes images and films, accounts of the process by those involved, and online news about all of these circulated across a variety of digital and social media, as they were liked, shared and incorporated into other forms such as blogs.

In examining this discursive event our aim is to advance understandings of aesthetic labour in two significant ways:

- Firstly by situating this labour within an online digital context to review how the 'new natural' is performed across a variety of online news media surrounding the launch of the 2017 Pirelli Calendar and
- Secondly by adopting a multi-modal approach to unpack both the 'seeing' and 'hearing' of this labour through our utilization of both visual and discourse methods.

In our analysis we find that the laboring (of the females photographed and of the male photographer) is represented as a joint endeavor but that on closer interrogation different aspects of this labour become gendered and aged. This is significant given the supposed shift from photographs that exposed female models to an emphasis on portraits of women of different ages. Our ongoing research (to be completed by the time of the conference) is exploring how these gendered and aged aspects relate to the 'new natural' aesthetic said to be achieved and its construction as a discourse of successful liberation. This involves a significant repositioning of the notion of 'exposure': from naked flesh to the 'real' person. We suggest that it is possible to see this aesthetic labouring as both more and less natural and as more or less liberating, and highlight the ways in which perspectives of age and ageing are utilized and to what effect. What is particularly interesting to explore is the way in which the 'new natural' is positioned as authentic, but might be said to (digitally) exist in a liminal space between the real and unreal. Within the digital circularity that surrounds the launch of the Pirelli Calendar this naturalness is not achieved in isolation but requires positioning in respect to a binary logic (Dougherty & Hode, 2016). This 'new, natural' is compared to an alternative of fakery and inauthenticity; an excessive femininity even (Lewis, 2014). Since fakery (particularly by digitization) has been roundly criticized for creating unrealistic aesthetic expectations which require excessive aesthetic labour, surely such naturalness is to be welcomed? Our analysis seeks to expose and unpack this binary positioning to enable a scrutiny of the new natural discourse. We further aim to offer insights into the emerging processes of performing aesthetic labour in the digital age.

### 3.03

#### Understanding the role of the post-doc phase for women's underrepresentation in science careers

Anne Kronberg, Matthias Revers, [Heather Hofmeister](#)

*Goethe University, Frankfurt, Frankfurt Main, Germany*

#### Introduction and objectives:

The gender dimensions of science careers have been studied from many different angles, and the processes that lead to disproportionately fewer women at the top are complex. Despite the progress made towards gender parity in earlier stages of science education, women continue to be underrepresented among science faculty. There are critical junctures within the life course career pathway that have remained black boxes. Explanations often focus on three major perspectives: discrimination, women's lower qualifications, or women's "self-selection" out of science. We focus on the self-selection aspect in this paper and seek to unpack the potentially gendered mechanisms around the transition from post-doc to tenured faculty for a cohort from

the same elite science institute. We're interested in understanding the cumulative advantage accruing to men, even in the case where the institutional context gives both men and women the best possible resources and chances on the academic labor market. Do women get pushed out or disadvantaged, or are they self-selecting out, or do they miss the opportunities offered compared to their male colleagues -- in the case where we control for the prestigious institute?

#### Method and research site:

We draw on 22 semi-structured interviews with post-doctoral researchers (13 men, 9 women) who are at the transition point for launching their academic career or leaving academia forever. We set our focus on the agency of post-docs at the time of this transition, and we embed that agency – as measured by their career plans – within the organizational context of one prestigious science institute where men and women are equally represented among post-docs, but men outnumber women 6 to 1 at the tenured level.

#### Hypotheses:

We argue that the highly insecure fixed-term contracts of the academic career track before the tenured level, in combination with the elite institute setting, create very high performance demands on post-docs, particularly to publish in the "Trinity" of top journals in their field. When the bar is set so high, the fear of falling short is also high. Failure is taken to mean personal incompetence or, in a best-case, bad luck. Family formation issues come into play at this phase in the career as well. The institute offers no parental leave, and time off for children is not added to the 3-year contracts. Nonetheless, eight of 22 of the post-docs, who are aged 30-43, have at least one child. The family factors add to the pressure to produce top science now to secure some kind of financial and geographic stability for the long term.

#### Findings and Conclusions:

Not only are the institutional and family life stage circumstances creating pressure. The supervisors add to the mix. Post-docs experience strong dependence on the supervisors' funding, science networks, letters of recommendation, data, lab resources, and permission to publish and attend conferences while these same supervisors are physically and mentally absent, and many supervisors have poor people management skills. The male and female post-docs praise and disapprove of their supervisors in similar proportions, but the coping strategies seem to take different forms. Women, especially mothers, tend to focus on playing the formal rules of the game, focusing on the meritocratic ideal of the quality of the research being the best ticket to a secure academic future. Men seem to reflect more about the unwritten rules of the career game for academic science as well as the alternatives in industry by discussing, observing, and admitting to strategies of delegation, networking, collecting further information about their options, and planning to follow in the footsteps of those who have been successful before.

The differences in men's and women's responses to the high-prestige, high-pressure science institute may have consequences for their long term career trajectories, which our future research will examine, but we can already see that their career plans and the justifications for those plans differ by gender. Even though women alumni from this organization tend to enter academic careers at lower rates than men do, the current women post-docs we spoke to are more intent on the academic pathway than their male counterparts. But while academic-focused men can explain why industry options aren't attractive to them and give more substantial reasons for their next career step, women seem to aim for the academic path in part due to a lack of perceived



alternatives. How successful their strategies will be is an empirical question, to be answered once the die has been cast within the next two years. In sum, we argue that the prestige of this organization fosters supervisors' physical and mental absence and controlling behavior, which impacts and genders the space for postdocs to negotiate their next career moves.

### 3.04

#### Gendered coaching and clinical supervision

Heli Inkinen

*Åbo Akademi University, Turku, Finland*

Clinical supervision landed in Finland in the 1950s from United Kingdom and USA (Ranne et al. 2015). Since then the employees from the social and health sector and in the Evangelical Lutheran Church have had an easy access to get clinical supervision as a support in their work. The work force in these areas has women as majority. I wanted to study the gender balance amongst the supervisors in Finland and amongst professional coaches in the Pan-European association European Mentoring and Coaching Council (EMCC). I also wanted to study whether the biological sex and social gender have any significances in a coaching and supervising process.

My research questions were:

1. Are coaches aware about the significances of gender in their coaching work?
2. If they are, which kind of consequences does it have in the coaching process?
3. If they are not aware, which kind of consequences does it have in the coaching process?
4. Which kind of similarities and differences might there be in the understandings and practices between the Finnish and the EMCC coaches concerning the significances of gender in coaching?

I utilised in my research a quantitative method through electronic surveys. I deepened my research with thematic interviews and diaries, in other words with a qualitative method. Of the 21 interviewees in total, 14 were women and seven men. The ages of the interviewees, at the time of the interviews, varied from 38 to 76 years.

The theoretical frame and method has been intersectional. It is a common frame and method in gender research (Lykke 2010, Buikema et al. 2011, Crenshaw 1989). With the help of the intersectional method, it is possible to study the relations and impact of sex and gender, race, ethnicity, class, tradition, religion etc. in the subject in focus. My focus has been coaching/supervising.

My research combined gender theories of gender research (Lykke 2010, Buikema et al. 2011, Butler 2006) and the psychodynamic and systemic frame of clinical supervision and coaching (Keskiluopa 2015; Ahteenmäki-Pelkonen 2006; Bion 1952, Schein 1985). It also combined gender research and work research. My research can be described as interdisciplinary and

intersecting several fields of sciences.

The basic data material in the survey resulted in interesting outcomes: EMCC and Church coaches have as members almost the same percent women, EMCC 62 % and Church coaches 64 %, whereas the Finnish Supervisors' Association (FSA) has 84 % women members. This means that coaching and supervising are rather gendered fields in Finland and amongst the EMCC. One answer could lie in the long supervising tradition in Finland in the social and health sector and in the Evangelical Lutheran Church of Finland. This leads to the female employees from these fields actively entering the training for supervision. The distribution of women and men also in EMCC strengthens the gender segregation and gender stereotypes in the work life (see THL 2016, Schigl 2014, 90). That means that therapy, supervision, coaching and mentoring, as well as social and health care are seen as soft fields of work (feminine), whereas science and technology are seen hard fields of work (masculine).

The gender distribution of the clients matches the distribution of the supervisors and coaches. The average percentages of women clients are: EMCC 55 %, Church 76 % and FSA 85 %. The clients of Church and FSA supervisors come in majority from the social and health sector, and the church, whereas the clients of EMCC members come in majority from private sector (69 %) and are managers (65 %).

Based on my research material, I conclude that gender can have many kinds of significances in coaching. They can be connected with bodies, how we perform our gender in all its diversity. The significances can be connected with the way of work with clients. They can be connected with the items of discussions and feelings and with the way to process them. The significances can be connected with the early childhood or sexuality. The awareness of the coach towards her or his gender, and a conscious observation of its many meanings while working with women and men, are important. This allows her or him to develop gender know-how and avoid gender-blindness.

This gendered phenomenon could be taken better into account in the trainings, concentrating on gender sensitive issues, on women's life careers from cradle to grave, and on supporting women in dealing with issues of combining work and other parts of life, often family, and encouraging them also to "male" work areas. The complementary way could be encouraging both women and men into coaching, both as clients and as professionals, training the gender know-how and enjoying all kinds of diversity. I suggest that it is possible to combine all these ideas.

### 3.05

#### Blogging as gendered work

Katariina Mäkinen

*University of Tampere, Tampere, Finland*

This presentation approaches practices of mom or family blogging in Finland as a form of gendered work. In the context of the precarious position of women in the labour market, the problems of balancing paid work and care responsibilities, and the culture of intensive parenting, many women are seeking ways to combine partial or full-time at-home parenting to paid labour or micro entrepreneurship. The recent monetization and commercialization of lifestyle and family blogging has opened up possibilities to blog for living, especially for highly educated

women with experience in media-related work.

Bloggers create social networks that can be used for commercial purposes. Different products can thus be branded, advertised and even sold through the blogs, and the bloggers can earn money through different forms of co-operation with commercial agents. Importantly, the social networks built in blogs are not only social and affective but also leave a digital trace: every download, every followed link can be counted and monetized.

Blogging as a form of work merges the intimate with the public, practices and spheres of work with those of family and home, and thus marks a reorganization of the relations that structure both work and family life. For some of the bloggers blogging is a means to be able to stay at home while children are small. For others blogging is a means to build a 'personal brand' that opens up other possibilities of work and entrepreneurship. For some, the peer support that they gain from blogging is significant and helps them to cope with burdens of parenting. All of these aspects might also come together to make blogging meaningful as a form of work for women with young children.

In this presentation, I ask how blogging as a form of gendered work shapes and organizes everyday life and social relations. My approach to blogging is based on Finnish mom and family bloggers' interviews.

### 3.06

#### **Never-changing story of gender bias among Computer Science professors: A Finnish Case**

Tarja Tiainen, Eleni Berki

*University of Tampere, Tampere, Finland*

Women's under-representation in the fields of Science, Technology, Engineering and Mathematics, the so-called STEM fields, is a fact, based on strong evidence worldwide. Computer Science is one of the STEM disciplines. The male dominance in this field has been discussed from several perspectives, worldwide, for decades. The low number of female ICT students (about 25 per cent of all ICT students) and female ICT professionals (something from 10 to 20 per cent) is a well-known and frequently mentioned phenomenon (e.g., Adam et al. 2006).

When we try to understand various gender biases in the ICT field, it is useful to start with thought-models, which include a connection between masculinity and technology. The connection is not inherent in biological sex differences, but it rather is a result of the historical and cultural construction of gender (Wajcman 1991). This kind of stereotypical thought-models has existed and re-produced for decades (Lie 1995).

We focus on the gender bias among computer science professors. They are in a crossroad of two male fields: besides of STEM and computer science, also highest academic posts (i.e. professors) have strong male bias (Arruda et al. 2009). The existing gender biases have also recently been known as *the science glass ceiling*. One reason for low numbers of female professors is that for women it is more difficult to become a member of the scientific community – and that is essential for making an academic career. Female post-graduate students get less

support from senior colleagues than their male counterparts (Husu 2001b). The awkwardness of the admission to the scientific community can also be evidenced in the low numbers of female journal editors. Their portion is only 9 per cent, whereas the portion of female authors is from 16 to 27 per cent (Vela et al. 2012).

For understanding how the male bias is re-produced over and over again, we chose to focus on one case to get deep information of the process. We chose to analyse a Finnish case, since Finland is largely presented as a country which values gender equality highly (see, e.g., Ministry SAH 2014). The Finnish case is exceptionally interesting for studying, since there is a dilemma: promoting gender equality without a gender perspective. This means that Finland is assumed to be presented as a gender-neutral country but the result is a gender-blind presentation (Saari 2013).

There is a strong segregation of the Finnish labour market. Traditionally women work in health and education, whereas science and technology are male areas. This dichotomy is also seen in the professors' positions: The overall total portion of female professors is only 25 per cent in all academic fields, whereas in Education 50 per cent of the professors are female, in Veterinary Medicine 52 per cent and, finally, 61 per cent of the professors in health studies are female. The very opposite holds in Technology areas, where only 8 per cent of the professors are female, while in Natural Sciences the women's percentage is just 12 (Ministry SAH 2014). In Finland, there were 136 computer science professors at 2013 and ten of them were women, which is 7 per cent. In 2016 the situation was even more biased: only five of 122 computer science professors were female; that is 4 per cent.

The general picture by statistics presents male dominance in Finland. For getting deep understanding about the process of gender bias reproduction, we focus on one university and its selection process of computer science professors' recruitment. Although the fulfilment of every professorship is a situated process, they all together shape a homogenous male-dominant picture.

### 3.07

#### **What is work of equal worth? Job evaluation systems as tools to achieve gender equal pay**

Anna Fogelberg Eriksson<sup>1</sup>, Minna Salminen-Karlsson<sup>2</sup>

<sup>1</sup>*Department of Behavioral Sciences and Learning, Linköping University, Linköping, Sweden,*

<sup>2</sup>*Centre for Gender Research, Uppsala University, Uppsala, Sweden*

The paper is part of a research project on salary mapping processes in municipal organizations in Sweden. The project will investigate job evaluation processes in order to find out to which extent these can be regarded as gender equal tools that result in gender equal salaries. This paper presents the first study within the research project: an analysis of job evaluation systems that are used when comparing jobs of equal worth.

The gender wage gap is recurrently discussed in Sweden. The main explanation to this gap is that women and men work in different occupations and with different tasks. To come to terms with the gender wage gap, all Swedish employers have been obliged to investigate differences between female and male employees' salaries in jobs of equal worth every three years, an

obligation that from 2017 has become yearly. Employers use a number of different tools, digital job evaluation systems, to identify these jobs.

These systems generally list different aspects of jobs: competence demanded, responsibility, complexity of working tasks and physical and psychological working conditions. For each job, each aspect is evaluated on a numerical scale. Often different aspects are weighted and the sum generated for each job is compared to that of other jobs, and jobs with sums within a certain interval are regarded as having equal worth.

By transforming work tasks into calculated figures, the systems produce an impression of objectivity. However, both the number, the description and in particular the weighting of the different factors are decisive for the final outcome of the job evaluation, and, consequently, the salary revision. All these aspects are arbitrary, which is clearly shown when different systems are compared. The resulting comparison between female and male dominated jobs is, consequently, also affected. As a primary example, differences in the description and weighting of emotional labour and psychological stress can be mentioned.

These differences can be accentuated by the fact that the systems are not used in a vacuum, but normally with support from those who create and market the systems. Thus, it is also the gender awareness of these actors which contributes to the final result. Conversely, the possibility of the HR professionals, most often doing the evaluation in the municipalities, to modify the factors and scales, may result in them achieving a result that better corresponds to their own image of the comparative worth of jobs and the current salary differences than what the system originally would indicate.

Job evaluation systems were, especially before the year 2000, seen as good tools for dealing with the gender pay gap in the gender segregated labor market. During the 1990s, there was a national research program on wage formation in Sweden, where job evaluation to overcome the gender pay gap was a prominent part. Since then, however, the research on job evaluation has been virtually non-existent in Sweden. Also internationally, job evaluations and salary mappings have not been a topic of recent research. The few recent studies of how male and female jobs are valued that exist have predominantly been made in fictional situations, not of real processes.

The objective of the paper is to examine the gender equality aspects in the design of job evaluation systems: What factors do they include, in what detail and how are these factors defined and weighted?

The empirical analyses are based on two job evaluation tools and interviews with representatives of consultancy firms that offer these digital tools and coaching services for job evaluation to municipal organizations.

The starting point for the empirical material as well as the theoretical lenses used in the paper is the gender segregation of labour which occurs on both societal and organizational levels and is deeply embedded in our notions of work. Acker's insights from partaking in a job evaluation project in Oregon in the 1980's; that male-dominated work is unintentionally valued higher than female-dominated work, has since been repeatedly shown by feminist researchers. Job classification systems are likely to reproduce not only the values of women's and men's work, but also the values of manual and intellectual work, work with different formal qualifications etc. Previous research shows that there is a risk that jobs with low qualification requirements more likely are valued on the basis of stereotypical perceptions.

As Bacchi argues in regard to a number of public policies, coming to terms with gender salary gaps by job evaluation schemes is a solution-oriented view on gendered salaries that assumes that the gaps can be addressed by performing calculative, administrative measures and leaving out more profound aspects of the problem. Rönblom also argues that in Sweden "gender equality is transformed into administration and into different forms of administrative techniques", of which job evaluation systems are a prime example.

### 3.08

#### Gender-based discrimination at work: consequences and coping

Marjut Pietiläinen

*Statistics Finland, Helsinki, Finland*

**Introduction:** According to the Quality of Work Life Survey 2013 four per cent of women and around two per cent of men have experienced gender-based discrimination at work. Women tend to report more perceived discrimination than men in all age groups (Sutela & Lehto 2014). Previous findings (Viitasalo & Nätti 2015) show that age discrimination is a significant risk factor for sickness absence. Gender-based discrimination may be a risk too. Discrimination may for example weaken victim's health, job satisfaction, self-confidence or economic situation.

**Objective:** This study investigates what kind of consequences people have faced after experiencing gender-based discrimination at work, how serious these consequences have been and how they have coped with their experiences.

**Methods:** The study is based on web-questioning and targeted interviews. The web-questioning was targeted to the respondents of the Quality of the Work Life Survey 2013 who had observed or experienced discrimination or unfair treatment at their workplace and a reference group. The ongoing interviews were targeted to the respondents of the web-questioning who had experienced gender-based discrimination.

**Results:** The preliminary results show that gender-based discrimination usually appears together with other discrimination grounds. The consequences are typically serious or very serious and discrimination is continuing. In this study I will look at the consequences and coping closer.

**Conclusions:** The consequences of gender-based discrimination are serious. It is not just the same how people cope with these experiences or do they cope at all – as employees also in the future.



## 4. HEALTH AND WELLBEING AT WORK

### 4.01

#### **Aging as a topic in a Finnish business magazine: Analyzing articles between 2002-2017**

Iiris Aaltio<sup>1</sup>, Hanna Salminen<sup>2</sup>, Qian Wang<sup>1</sup>

<sup>1</sup>*University of Jyväskylä, Jyväskylä, Finland*, <sup>2</sup>*University of Tampere, Tampere, Finland*

Aging workforce is one of the megatrends in the current working life. At the societal level, due to the aging workforce, there is a growing pressure for prolonging careers and increasing retirement age in many countries. At the organizational level, the changing demographics forces organizations to find ways to retain older employees and utilize their competencies. However, certain ambivalence is often associated with aging employees in the organizational context. On one hand, older employees' expertise and wisdom are valued. On the other hand, negative images, such as declining performance, are commonly related to older employees, even though research has not provided evidence for this. At the individual level, there are many issues (personal, work-related, non-work-related and societal) which can either facilitate or restrict older employees' possibilities to work until retirement age and the successful transition from work to retirement.

In the field of management studies, aging workforce has generated a number of studies in recent years. These studies vary greatly in terms of their theoretical background, level of analysis and methodology. For example, there are studies which have investigated the role of human resource management (HRM) practices and policies for the retention of older employees. Many of these studies have focused on the organizational and/or individual level when investigating aging workforce. Although, age and aging are complex concepts, majority of the studies in the field of management have focused on chronological age and aging employees have been presented as a fairly homogenous group. However, the need for more critically oriented age management studies has been stressed recently.

In this study, we investigate how societal, organizational and individual levels are interrelated in the discussions about aging. Our aim is to find out on how aging is presented and discussed in "Talouselämä" which is one of the central Finnish business magazines. Keyword "ikäntyminen" – aging – was used when articles were searched between 2002-2017. All together 244 articles were found of which 76 the most relevant articles were selected for this study. Both content and discourse analysis was applied.

The content analysis resulted in 7 categories: 1) general perspective on ageing and its influence on society, 2) aging individuals as consumers, 3) consequences of aging to the labor market, 4) aging employees and working life, 5) aging citizens, 6) pension-related issues and 7) relevant policies needed to response to the aging population in Finland. The first theme highlighted that aging is a challenge for our society and economy in the same way as climate change, for example. This was justified, for example, by presenting figures of the increasing number of aging population. The second theme stressed the positive consequences of aging population, such as aging individuals as active consumers, for example. The third theme related to the consequences of changing demographics for labor markets. Whereas, the fourth theme concentrated on older employees' workability and willing to continue working as well as age management practices.

Family-related issues, such as caring responsibilities were discussed under the fifth theme. The sixth theme concerned issues related to pensions. The final theme discussed about actions needed due to aging population, such as pension and healthcare reforms.

These themes were further analyzed by using classification and discourse analysis. Articles, like those published in professional magazines, such as Talouselämä, can be seen as manifestations of norms and values present in the current society and working life. Articles can also be seen as a discourse between journalists and readers. Therefore, it is not indifferent how aging is discussed in these publications. It seems based on the analysis that the societal level dominated in the selected articles. In other words, aging population was often presented as a burden which has negative consequences to the economic growth, for example. Organizational viewpoints, such as organizations' possibilities to response to the challenges related to aging workforce was rarely discussed. Although, age management or age-sensitive HRM has received more attention in the field of management studies in recent years, this was not the case in the analyzed articles. Furthermore, aging was not discussed in the context of social responsibility, for example. At the individual level, aging was approached from a relative narrow and health-related perspective. Only a few articles focused on the active role of aging citizens.

It can be concluded that the selected articles highlighted the chronological perspective on age and aging was presented as a relatively passive, deterministic and gender-neutral way. Therefore, discussions on greying workforce and society could be broaden by providing more multidimensional perspective on aging in Finnish business articles. A deeper understanding of the individual and organizational level viewpoints on aging could also benefit organizations' decision-makers.

### 4.02

#### **Occupational Stakeholders in the Process of Psychological Risk Assessment and Mental Health Prevention - A Qualitative Interview Study**

Ines Catharina Wulf, Stefan Süß, Mathias Diebig

*Heinrich Heine University, Düsseldorf, North Rhine-Westphalia, Germany*

Due to globalization and digitalization, the dynamics and complexity of our work environment are steadily expanding. Employees face an increasing man-machine interaction and work activities are constantly changing. This technical progress might confront employees with new or altered psychological strains and requires an adjustment of occupational health and safety management. Across Europe, workplace-related psychological risks and associated mental health problems are of high socioeconomic relevance (EU-OSHA 2014). Therefore, national and international surveillance systems and legal frameworks promote the assessment of psychological risks to foster mental health prevention. Accordingly, organizations are encouraged to identify psychological risks and to derive occupational health interventions. Those occupational prevention activities are shaped by various professionals, e.g. safety officers, occupational physicians, works council members and managers.

In current practice, many organizations report implementation problems (Leitão & Greiner 2017) and only little empirically validated information for these health prevention methods is available (e.g. Lenhardt & Beck 2016). Moreover, the actual roles of and interaction between the

occupational health and safety stakeholders have not yet been considered in recent studies and fully investigated (e.g. Leitão & Greiner 2017). Therefore, the aim of this study is to explore the perspectives and interactions of all relevant occupational health and safety stakeholders in the process of psychological risk assessment and mental health prevention to present a balanced view on their respective perspectives. Further, conflicts due to divergent interests, which could jeopardize the process, are considered in this study to explore possible antecedents of employees' frustration and failure of the occupational prevention activities.

In order to investigate the stakeholders, their perspectives and their interaction within the process, thirty-eight semi-structured interviews were conducted in German organisations. The sample was based on two criteria. On one hand the interviewed stakeholders were employed in different organisational functions and conducting occupational health and safety interventions (e.g. human resources department, works council, managers, or occupational physicians). On the other hand, stakeholders worked in organizations that are specialized in health and safety related interventions (labour union, government agency, or university). The interview data were transcribed and evaluated in several cycles under intensive discussion about the category system by the analysis team.

Results show that stakeholders' point of views differ in regard to the process. Works council members express a strong awareness of their rights to participate in organizational-level health interventions. Executives report a lack of qualification and criticize the lack of timely resources as well as financial pressure for implementing interventions. Occupational physicians portray that they are capable of performing a risk assessment themselves on a basic level, but they identify the need to engage organizational psychologists to perform a deeper analysis. Safety officers are understood as advisors, but they mention that necessary interventions are limited by their small political power. The HRM feels highly responsible for the subject, although its knowledge about risk assessment methods is limited.

Most stakeholders stated that they had experienced strong conflicts particularly when discussing which methods and instruments should be used for the assessment of psychological strain. Different goals and expectations regarding the process, the documentation as well as interpersonal conflicts between stakeholders affected the success of mental health prevention. We found that the implementation of organizational-level health interventions is highly dependent on the general interaction quality between works council and management. Especially the politicization of the subject and the abuse of power to uphold someone's own interests, instead of finding a joint solution for occupational health protection, lead to conflicts between all stakeholders involved.

The results of the present study contribute to science and practice in different ways: First, the study complements the work of Leitão and Greiner (2017) in regard to meet the requirements of the organizational-level health interventions from the point of view of all stakeholders involved. Second, the results stimulate the scientific discourse on conflict of interests between social partners in the field of occupational health and safety. Third, the results of this study support organizations in fulfilling their legal task by discussing potential success factors of mental health prevention methods.

#### 4.03

##### Fostering Generation Y's well-being with managerial coaching

Susanna Kultalahti, Riitta Viitala

*University of Vaasa, Vaasa, Finland*

##### Background

During the last few decades there have been lively discussions on employee well-being among the practitioners and academics. Unfortunately, in these discussions young employees have received only a little special attention, even if they have some special stressors due to the early career stages which predict their well-being at work (Elfering et al., 2007).

The aim of this paper is to examine whether and how well-being among Generation Y can be supported by managerial coaching at work. Especially we investigate the relationship between managerial coaching and work engagement among employees representing Generation Y, i.e. people born between 1981-2000 (Kupperschmidt, 2006). In addition, we monitor the role of issues that Generation Y values at work, namely flexibility, organizational climate, and relationship with the supervisor (see qualitative study by Kultalahti, 2015).

According to Grant et al. (2007), employee well-being is the overall quality of an employee's experience and functioning at work, in which work engagement is an essential factor (Hakanen et al., 2008). An engaged employee feels that his/her work is motivating and inspiring, s/he has a lot of energy and is enthusiastically involved in work (Hakanen, 2012). Work engagement has been related to several positive work outcomes, including task performance, organizational citizenship behaviour, better physical and psychological health, and innovativeness (Bakker & Bal, 2010; Bakker & Demerouti, 2008; Hakanen et al., 2008; Salanova et al., 2006; Salanova & Schaufeli, 2008; Xanthopoulou et al., 2009).

Several studies have revealed that supervisory support is an essential job resource predicting work engagement, even though more research is yet needed (Bakker et al., 2011). In this study we chose especially managerial coaching (leadership style of supervisors) to be monitored, because many of the typical coaching behaviours such as communicating clear expectations, supporting employee in developing new skills, and encouraging employees to solve work-related problems, have been proposed as predictors of work engagement (Babcock-Roberson & Strickland, 2010; Bakker & Demerouti, 2007; Choi, 2013).

The realm of coaching leadership encompasses providing effective feedback (Anderson, 2013; Popper and Lipshitz, 1992), goal setting and planning, orientation toward development and performance (Anderson, 2013; Hamlin, 2004; Popper and Lipshitz, 1992), and empowering employees (Anderson, 2013; Hamlin, 2004; Ellinger and Bostrom, 1999). It is supposed to foster positive outcomes, such as organizational performance, individual development (Liu and Batt, 2010), job satisfaction, and role clarity (Kim et al., 2013).

However, there are certain gaps that warrant more attention, such as understanding coaching leadership preferences among the young (Beattie et al., 2014; Ladyshevsky, 2010; Hawkins and Smith, 2006; Heslin et al., 2006). This view is even more important now when it is argued that the new generation, Generation Y, has greater and different expectations of its supervisor than previous generations did (e.g., Weyland, 2011; Dulin, 2008; Arsenaault, 2004).

## Methodology and results

The data were collected in 2015-2016 from small- and medium-sized companies. Total of 1438 employees representing Generation Y from 88 companies filled in the survey. The companies represented different fields of businesses, such as manufacturing companies, technological industries and knowledge work. Coaching leadership was examined with nine items (Viitala 2004), work engagement with nine items (Seppälä et al., 2009), flexibility with three items (Lyly-Yrjänäinen 2013), organizational climate at work with five items (Elo et al. 2008), and relationship with the supervisor with 12 items (Graen & Uhl-Bien 1995).

Results are presented below. Coaching relationship is correlated with issues that Generation Y values. When the supervisor is showing coaching leadership style, it increases Generation Y's level of work engagement. Further, both coaching leadership and work engagement are also correlated with positive work climate and flexibility. Thus, when the level of coaching leadership is higher, also work engagement, work environment, and flexibility are perceived to be on a higher level.

|                                                      | 1 | 2     | 3     | 4     | 5      | 6      |
|------------------------------------------------------|---|-------|-------|-------|--------|--------|
| 1.Coaching leadership                                | 1 | 0,862 | 0,493 | 0,594 | -0,418 | 0,447  |
| 2.Relationship with the supervisor                   |   | 1     | 0,498 | 0,572 | 0,407  | 0,452  |
| 3.Work engagement                                    |   |       | 1     | 0,527 | -0,345 | 0,433  |
| 4.Positive work environment                          |   |       |       | 1     | -0,613 | 0,468  |
| 5.Negative work environment                          |   |       |       |       | 1      | -0,303 |
| 6.Flexibility in ways of working                     |   |       |       |       |        | 1      |
| All correlations are significant at the <0.01 level. |   |       |       |       |        |        |

## Discussion

The preliminary analysis shows that the role of managerial coaching in relation to work engagement of Generation Y is unquestionable. Overall, managerial coaching promotes flexibility and positive atmosphere, which are also related to Generation Y's perceived work engagement. Moreover, managerial coaching is directly related to work engagement among Generation Y.

The results are not self-evident, as managers' possibilities to influence on flexibility are sometimes limited. Further, influence on work climate shows that managerial coaching has also organization-level outcomes. Interestingly, managerial coaching is also strongly related to the quality of relationship between the manager and Millennial subordinate. In the light of our findings we can say that Generation Y benefits a lot from a managerial coaching style in enhancing work engagement.

## 4.04

### Perceived gender discrimination at work and subsequent long-term sickness absence among Finnish female employees

Marjut Pietiläinen<sup>1</sup>, Jouko Nätti<sup>2</sup>, Satu Ojala<sup>2</sup>

<sup>1</sup>Statistics Finland, Helsinki, Finland, <sup>2</sup>University of Tampere, Tampere, Finland

**Introduction:** There are growing concerns in many European countries that higher employment rates are needed and employees should prolong their working careers. However, various adverse working conditions, like the incidence of gender-discrimination, may cause disincentives for workers. Gender discrimination is described as unfair treatment caused by the prejudices related to gender.

**Objective:** The aim of this article is to examine how perceived gender discrimination at work is related to the number of sick leave days in the subsequent three-year period among Finnish female employees.

**Methods:** The data consists of the representative Finnish Quality of Working Life Surveys (FQWLS) from the years 1997, 2003 and 2008, conducted by Statistics Finland, and merged with register-based follow-up data. The questionnaires comprise a comprehensive set of questions including questions about gender discrimination. The present study was restricted to 20-60 -year-old female employees (n=5,744). Long-term sickness absence information was drawn from the register data. The Finnish Social Insurance Institution (KELA) keeps records on sickness allowances paid for medically certified sickness absence of more than 10 days for the entire population. Long-term sickness absence in the years before each survey (1996, 2002, and 2007) were treated as baseline absenteeism, and the accumulated number of days on long-term sick leave during the subsequent three years (1998-2000, 2004-2006, and 2009-2011) was used as an outcome measure. A negative binomial model was used in the analysis of subsequent sickness absence days.

**Results:** Perceived gender discrimination was associated to long-term sickness absence after controlling various background, work, and health-related factors.

**Conclusions:** Gender discrimination at work is a significant risk factor for sickness absence.

## 4.05

### Lengths and diagnosis of sickness absence spells as predictors of disability retirement in different occupational classes

Laura Salonen<sup>1</sup>, Jenni Blomgren<sup>2</sup>, Mikko Laaksonen<sup>3</sup>, Mikko Niemelä<sup>1,2</sup>

<sup>1</sup>University of Turku, Turku, Finland, <sup>2</sup>Social Insurance Institution, Helsinki, Finland, <sup>3</sup>Finnish Centre for Pensions, Helsinki, Finland

## Introduction

Although life expectancy and health continues to improve in Europe, health inequalities within



and between countries remain consistent (Marmot 2013). Large numbers of workers leave the labour market early due to health problems (OECD, 2010). In order to prolong work lives, which has become an important aim in many OECD countries (EU-OSHA, 2013), identifying those with increased risk of work disability is crucial.

Previous studies have discovered several socio-demographic, work- and health-related predictors (Labriola et al. 2007; Virtanen et al. 2010; Laine et al. 2009; Harkonmäki et al. 2007) of disability retirement. Especially those with low socio-economic status have an increased risk of health problems and further work disability (Borg et al., 2001; Gjesdal, 2004; Gjesdal and Bratberg, 2003; Lund et al., 2008; Polvinen, 2016). Sickness absence is an important marker of higher risk of further work disability retirement, but the predictive value of sickness absence is known to vary depending on its diagnosis and length (Alexanderson et al., 2012; Jansson and Alexanderson, 2013; Karlsson et al., 2008; Kivimäki et al., 2004; Kivimäki et al., 2007). Less is known about how the predictive value of the length or the diagnosis of the sickness absence differs among socio-economic groups. Some studies have examined the associations between socio-economic groups and the diagnosis of sickness absence (Gjesdal et al. 2009), but many of the previous studies have been retrospective studies (Laaksonen et al. 2016) or based on selected or small samples. There is a lack of information on how the length and the diagnosis of sickness absence function together in predicting disability retirement in different socio-economic groups, which is the question which this article aims to answer.

The aim of this study is to examine how the length and diagnosis of sickness absence predict transition to disability retirement and whether the results differ between occupational class.

### Research questions, data and methods

Our research question are:

1. Does the probability of disability retirement depend on the diagnosis of the sickness absence spell and does this association differ for among occupational classes?
2. Does the probability of disability retirement depend on the length of the sickness absence spell and does this association differ for between occupational classes?
3. How the diagnosis and the length of sickness absence together predict disability retirement for different occupational classes?

In this study we examine the relationship between the occupational class, and the length and the diagnosis of sickness absence on the probability disability retirement using Cox proportional hazards regression models. Our linked register data covers 1,674,414 individuals of whom 134,642 individuals (8 %) transferred to disability retirement. Each individual in the study population was followed from the 1 January 2007 until the 31 December 2014. Information on demographics and sickness absence were gathered in 2005. All analysis were performed separately for men and women.

### Key findings

According to our preliminary results, both length and diagnosis of sickness absence predict disability retirement differently depending on the occupational class. Further, there are also differences between men and women. In general, the longer the sickness absence spell, the higher the risk of disability retirement. However, the hazard ratios (HR) differ between the occupational classes. The association between diagnosis of sickness absence and occupational

class is more complicated. It seems that the diagnosis of sickness absence has more effect on the probability of disability retirement for upper non-manual workers than for manual workers or "others.". Generally lower socio-economic groups have higher probability of disability retirement, but here results show else. Possible explanation could be that receiving sickness absence is more important predictive factor of disability retirement for those in higher occupational class than for those in lower occupational class.

Further analysis will be made on how the length and the diagnosis together predict disability retirement among occupational classes.

### Conclusion

We found that the length and diagnosis of sickness absence predict disability retirement differently depending on the occupational class. Further, the results differ between men and women. The length and diagnosis of sickness absence may function as markers for future disability retirement but the predictive value varies depending on gender and occupational class. More attention should be paid on how work disability develops in different socio-economic groups. Identifying high risk groups and their most common routes to disability retirement is crucial in order to develop more efficient acts in social policy.

### 4.06

#### Effect of Organizational Justice on Organizational Citizenship Behavior, Do Psychological Capital and Quality of Work life matter in this relationship as mediators?

Shaghayegh Ghaffaripour

*University of Vaasa, Vaasa, Finland*

This research examined the psychological process that might impact the relationship between three kinds of organizational justices (distributive, procedural and interactional) with volunteer actions, organizational citizenship behavior, in Oil Company. The present study aimed to explore the predicting effects of three types of justice perceptions to organizational citizenship behavior, as well as the mediating effects of psychological capital and quality of work life to the relationship between organizational justice and organizational citizenship behavior. Studies on organizational citizenship and organizational justice are not new topic, but research on organizational citizenship and organizational justice in oil industry and context have been limited, also the new mechanism for activation of OCB behaviors by considering psychological capital and quality of work life as mediators in this relationship have been not reviewed in the past studies.

The variables of the study are measured through organizational justice Questionnaire, Quality of Work Life, Psychological Capital and Organizational Citizenship Behavior. The sample size of oil personnel was 200. Quantitative analyses were used to check the relationships and Andrew F. Hayes was used as an additional technique to test the mediating effects. Hierarchical regression analysis indicated that all kinds of justice perceptions are most strongly related to organizational citizenship behavior. Both psychological capital and quality of work life are mediators between organizational justice and organizational citizenship behavior.

At first social exchange and equity theories explain the strong relationship between Organizational

justice and organizational citizenship behavior, later broaden and built theory of positive emotion elaborate the mediation roles of psychological capital and quality of work life in the relationship of organizational justice and organizational citizenship behavior.

The finding points to the need for enhancing psychological capital and quality of work life, creating a fair working environment in order to encourage discretionary behaviors.

#### 4.07

##### **On the edge of a major transformation. How mental health problems were recognized as an occupational health risk in the Finnish insurance sector**

Anna Kuokkanen, Ari Väänänen, Jussi Turtiainen, Pekka Varje

*Finnish Institute of Occupational Health, Helsinki, Finland*

This study examines the emergence and growth of the discourse on mental health problems as an occupational health risk in Finnish insurance workers' professional debates. Neuropsychiatric disorders are a significant part of the global burden of disease and cause one third of total years lost due to disability. Mental disorders have increased in many Western countries in recent decades, causing a substantial amount of human suffering and lost work years. Consequently, concern for employees' mental health has grown considerably in Western countries since the 1960s.

The increase in mental health disorders, as well as the increased concern regarding employees' mental health are a manifold phenomenon, and cannot be explained in mere medical terms. Instead, many aspects of societal change, as well as scientific development, have to be taken into account when assessing the transformation of the occupational mental health discourse. In this paper, we aim to understand when, how and why mental health problems have become such an important topic in insurance workers' professional debate.

Our data consist of articles from two magazines: the company magazines of a large Finnish insurance company, Pohjola, from 1955 to 2007, and the magazine of the trade union of Finnish insurance workers, Vakuutusväki, from 1955 to 2014. We went through all volumes of both Pohjola's company magazines and Vakuutusväki and selected for our analysis all articles that discussed mental health issues. In total, we analysed 704 articles. Our method was theory-guided qualitative content analysis. In addition, we conducted a quantitative content analysis of Vakuutusväki to obtain a more detailed picture of the trends of the magazine's mental health debate.

The findings suggest that discussion on mental health problems such as work stress, anxiety, sleeping disorders and other mild to moderate mental disorders started after the mid-1970s in the magazines and increased rather steeply until the end of the 1980s. Discussion on work stress peaked in the latter half of the 1980s, whereas discussion on burnout peaked in the first half of the first decade of the 2000s. In professional discussion, mental health problems were most often associated with time pressure, the introduction of new information technology, increasing and more complex work tasks, growing employee demands, job insecurity, emphasis on the economic success of the corporation, and a general feeling that work conditions were deteriorating. In general, all these lines of development seemed to be attributed to one thing – change.

From the 1980s onwards, the issue of mental health problems seemed to become taken for granted in the Finnish insurance sector, and attracted less attention in the magazines. However, a new line of discussion concerning mental well-being emerged after the 1980s. Especially from the early 1990s, employees were made increasingly accountable for maintaining their own mental health. Stress management and the ability to regulate one's workload became an important task for the employee. In both magazines, there were many reviews of stress relief cassettes and self-help books, as well as introductory articles about yoga and other sports as a means of relaxation. Leisure also became an important aspect of stress relief. Employees were expected to spend their leisure time in a way that helped them recover from the burdens of work.

By the 2000s, even the trade union magazine had started to train employees to become stress resilient, mentally fit and socially competent individuals who could face the challenges of work life. In the second decade of the 2000s, preparing employees to take individual responsibility for their mental health seemed to have become more important than offering collective political solutions to improve working conditions that were considered as threatening employees' mental wellbeing. By the 2010s, the discussion on mental health was dominated by articles that emphasized employees' own roles in preventing mental disorders.

To sum up, discussion on mental health problems started in the 1970s and peaked in the late 1980s. In the 2000s, the discussion on employees' requirements to be able to comprehensively regulate their emotions replaced the discussion on mental health threats. Throughout the decades, the professional debate continuously emphasized the feeling of being on the edge of a major transformation, and this was seen as a major cause of anxiety among employees. However, as the experience of change continued over almost the whole research period, change alone does not explain the growth of the mental health discourse. Part of the explanation may lie in the individualization process, growing competition at work between employees, and the increasing solitude of employees, especially because of weakening social support from colleagues and the trade union. In both magazines, employees were represented as being increasingly alone – and increasingly responsible for enduring continuous changes and other work life challenges.

#### 4.08

##### **Does Work Engagement Facilitate Creative Behavior among Japanese R&D workers?: An Empirical Investigation for the Effects of Job/Individual Resources**

Hideki Shimizu-Tanaka

*Aomori Public University, Aomori City, Japan*

##### **Objectives**

In knowledge economy, organizations expect more innovative workers to keep their competitiveness. One of the key driver to foster innovation is the contribution by R&D (research and development) workers. The purpose of this study is to present evidence of how job and individual resources relate to R&D workers' work engagement. Also, we examine the effect of work engagement on their creative behavior / thinking in R&D activities.

##### **Data**

We collect the data from 1018 R&D workers working in Japanese firms. In this questionnaire,

we ask R&D workers about their workplace climate, supports from their supervisors, their hope and feeling of happiness and self-efficacy. We do statistical analyses by using that data. Work engagement, the focal variable, is measured by using the Japanese translation of Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006; Shimazu et al., 2008), also creative behavior / thinking as dependent variables, self-efficacy, hope and the feeling of happiness, supervisors' supports and innovative climate as independent variables are measured by original scales based on previous research (e.g., Scott & Bruce, 1996; Morris et al., 2011).

### Methodology

To analyze the effects of work engagement, one of the states as positive psychological well-being, on R&D workers' creative behavior / thinking at R&D activities, we draw the Job Demand-Resource Model (J D-R Model) (Schaufeli & Bakker, 2004; Bakker & Demerouti, 2007) to framework the relationship among job and individual resources, work engagement and creative behavior / thinking for Japanese R&D workers.

### Key Findings

The results by multiple regression indicate that (1) supervisors' support and innovative climate as job resources exert significant positive impacts on R&D workers' work engagement, and (2) self-efficacy and hope and the feeling of happiness also exert significant positive impacts on their work engagement. Also, the results shows that (3) R&D workers' work engagement has a significant positive impact on their creative behavior / thinking. In addition, it shows that (4) R&D workers' self-efficacy has directly a positive impact on their creative behavior / thinking.

### Conclusion

Using JD-R Model, we analyze whether the effects of job and individual resources relate to R&D workers' work engagement. Also, we examine the effect of work engagement on their creative behavior / thinking in R&D activities. The results suggests that job and individual resources are important factors to improve their work engagement, and that work engagement can foster their innovative behavior.

### Originality / Value

Past research focuses on work engagement and its effects among Japanese professionals (i.e., nurse), however, little research has paid attentions on work engagement and its effects among innovative workers (i.e., R&D workers) and their creative behavior / thinking. Therefore, this study addresses deficits.

## 4.09

### Discourses of burnout in knowledge work and care work

Charlotta Niemistö, Annamari Tuori, Sari Lappi

*Hanken School of Economics, Helsinki, Finland*

The new economy with a neoliberal ethos stresses the need for high levels of effectivity, professionalism and flexibility. Work demands a lot from the individual, and very often work

becomes a "state of mind" (Kivimäki 2004), which can be hard to switch off. Notions of "extreme work" and "extreme conditions" have gained more interest in research, especially in relation to work intensity, long hours' cultures, as well as organizational behaviors and cultures (Granter et al. 2015). This kind of work can challenge the boundaries between work and non-work of employees in different fields, also at different stages of their careers. Blurring boundaries between work and non-work can have some negative consequences for work well-being both on individual and organizational levels. This has increased the importance of questions related to work well-being and burnout in our society (Allvin, Aronsson, Hagström, Johansson & Lundberg 2011).

Burnout has been studied since the 1970s, and care work has been the most frequently studied sector throughout times (Maslach 2001). It has been concluded, that stress and burnout caused by work is found most frequently in studies of service work and so called "people work" (Houtman 2005). In the new economy and the expanding service sector, "people work" has become increasingly important yet diverse. As burnout cannot be limited to care work, service work, or if you will, "people work" (Schaufeli and Bakker 2004; Demerouti et al. 2001), it is essential to continue to explore burnout, in different ways: from different perspectives and in different contexts, especially so in organization studies, where burnout has been relatively invisible.

### Objectives

The objective of the paper is to examine discourses of burnout in two different fields of work, namely knowledge work and care work. Both fields are represented by two organizations that are similar to each other. The differences between the two fields and work designs within them are, however, substantial.

Our research question is: What kind of discourses of burnout can be found in knowledge work and care work? We conduct the study as a comparison between fields, and partly as case studies of the studied organizations, yet we approach the question initially through individual discourses found in our interview data.

### Data

Our data consists of 37 semi-structured interviews with employees in lower levels and middle management in two knowledge-intense businesses, and 27 semi-structured interviews with employees in lower levels and middle management in two care sector organizations. The data is from two separate research projects but the themes discussed in the interviews are very similar; they have very much concentrated on the boundaries between work and non-work. In neither, burnout has been a central and initial theme, but rather been reported by respondents, which then has led to our interest to examine these two fields together. The data from the knowledge sector is from 2013-2014 and the data from the care sector is from 2016. All the interviews are conducted in Finland, either in Finnish or in Swedish, depending on the respondent's preference.

### Method

We have examined how burnout is talked about in the different organizations in the two different fields; what is similar and what is different, and what kind of sub-themes arise from the two datasets. The starting point is in individual discourses that then construct a picture of the two case organizations in each field, and, finally, allows us to construct a rough analysis of the differences between the two fields. The data, altogether 64 interviews, has been analyzed both manually and by using NVivo. In the initial, manual analysis, initial coding was decided upon



among the field researchers and further analysis was carried out in NVivo.

## Results

The main results show that burnout is discussed very differently in the two fields but rather similarly within the fields, in the two organizations in each field.

The main discourses found in the knowledge sector were linked to “extreme work”, regarding both the work design, intensity and demands, and the corporate cultures of extreme competition. Burnout was not “acceptable” in the field, it was described as a sign of weakness in the kind of business where the tough survive and the weak perish.

In the care sector, burnout was an acknowledged factor, yet not very openly discussed there either. Colleagues did talk to each other about coping at work, but middle management seemed to consider burnout somewhat a personal weakness.

## Conclusion

To conclude, despite some substantial differences in talk about burnout between the fields, the overall conclusion of our analysis is that burnout remains an individual “problem” in the studied organizations and fields. In care sector, there are longer traditions and better structures to cope on an organizational level. Further, the developing structures in knowledge work are consciously avoided by the individual employees.

## 4.10

### Poster Presentation: Corporate restructuring: whose health is impacted?

Katja Draksler, Nataša Dernovšek Hafner, Metoda Dodič Fikfak, Niko Arnerić

*University Medical Centre Ljubljana, Clinical Institute of Occupational, Traffic, and Sports Medicine, Ljubljana, Slovenia*

**Introduction:** Work-related changes require companies to constantly adapt to market conditions, which often demands a certain degree of reorganization. Restructuring has thus become very common and can assume a wide range of forms, in periods of both crisis and economic growth. Even though all forms of restructuring can pose a certain health risk for employees, restructuring that involves downsizing has the greatest impact on employee health, both for those that lose their jobs and for those that keep them (the “survivors”).

International studies show a correlation between restructuring and increased morbidity and mortality among employees affected by restructuring. Such employees report poorer health status and are more likely to suffer from various conditions, such as cardiovascular diseases, mental disorders (especially depression and anxiety), type 2 diabetes, and gastric and duodenal ulcers. Their existing health problems may also be exacerbated.

In 2012 and 2013, the Clinical institute of Occupational, Traffic, and Sports Medicine carried out the first Slovenian survey on restructuring and occupational health among the workers of what was once the largest Slovenian textile company, which dismissed 2,635 employees during its 2009 restructuring.

**Objective:** The objective of this survey was to determine the health status of employees affected by restructuring, their self-rated health, the disease symptoms they show, the diseases they typically experience, whether their existing health problems deteriorated during restructuring, and whether there are any health differences between various groups of employees.

**Methods:** Among those that consented to participate in the survey ( $n = 2,036$ ), 51% responded to a telephone questionnaire consisting of 78 questions. The data were processed with the SPSS statistical software package, using descriptive statistics. The health differences between the group of employees that retained their jobs (the “survivors”) and the group of employees that had been fired and were still jobless at the time of the survey (the unemployed) were determined using a chi-square test.

**Results:** The 1,046 respondents included 86% women. Half of the respondents were between 41 and 50 years old, and one-third of them were between 51 and 60. They were predominantly less educated, with nearly 80% having completed only primary or secondary school. Poor or satisfactory health status was reported by 70.6% of the respondents from both study groups, 26.3% of them rated their health as good, and 3.2% rated it as very good or excellent. Compared to the unemployed, the greater frequency with which “survivors” reported good and very good or excellent health was statistically significant.

Compared to the “survivors,” the unemployed significantly more often reported elevated blood pressure and cholesterol levels, heart problems, and having already been treated for depression. During restructuring, approximately half of the “survivors” and unemployed that had a health condition before the restructuring experienced a deterioration of their condition. The unemployed significantly more frequently reported increased hypertension and depression than the “survivors.”

Poorer health status is also indicated by the results related to the various symptoms that employees experience and can be connected with restructuring. These can include symptoms of cardiovascular diseases, depression, and anxiety. Compared to the “survivors,” the unemployed significantly more frequently reported problems with sleep, restlessness and anxiety, heavy breathing, chest pain, memory problems, poor concentration, headaches, and excessive sweating.

The fact that 14.7% of respondents had already thought about committing suicide is an additional indicator of the poor mental health of both study groups. In this case again, the unemployed significantly more often reported suicidal ideation, which once more shows that their (mental) health is worse than that of the “survivors.”

**Conclusion:** The survey results demonstrate poor health status of employees subjected to restructuring, which can be ascribed to a number of factors related to restructuring. The considerably poorer health status of the unemployed compared to that of the “survivors” can be ascribed to the fact that being able to make a living is still more important than the pressures brought about by the status of a “survivor.”

Based on the results of this and a number of international studies, as well as expert hypotheses that the effects of restructuring on employee health may have irreparable consequences, further research into the relation between health and restructuring is vital. However, this research should also have a practical impact in terms of creating effective support mechanisms for employees dealing with restructuring processes, ensuring that the burden of restructuring is evenly distributed across all stakeholders, and stimulating companies to engage in socially responsible restructuring.

## 4.11

**High performers, those in the middle, and the disgruntled: three characterizations of the performance and well-being outcomes of ambidextrous work**Ani Raiden<sup>1</sup>, [Christine Räisänen](#)<sup>2</sup><sup>1</sup>*Nottingham Trent University, Nottingham, UK*, <sup>2</sup>*Chalmers University of Technology, Gothenburg, Sweden*

Academic work demands behavioural ambidexterity, the ability to simultaneously demonstrate exploration (creativity in innovative research and/or in teaching and learning practice) and exploitation (compliance with quality assurance processes and procedures). However, little is yet known about the effects of ambidextrous behaviour on the well-being of individual employees, especially men. We explore the experiences of men working in academic roles at Universities in Sweden and the UK. Our focus on men in Sweden and the UK stems from the uneven attention that is afforded to gender-specific research on well-being in general, and work-life balance issues in particular. There is a large body of research concerning women's (especially mothers) struggles to navigate the demands of the contemporary workplace. Our research adds to an emerging body of knowledge on men and how fathers manage their work-related well-being.

We examine the relations between their work design, ambidexterity ability and their perceptions of well-being. We draw on a well-established holistic definition of well-being based on healthcare, philosophy, psychology and sociology literatures, which have converged on three core dimensions of well-being: psychological (happiness), physical (health) and social (relationships).

An interpretative approach based on narrative analysis was adopted, comprising in-depth interviews with seven academics from each country. Despite societal and cultural differences between Sweden and the UK, we found many similarities in our respondents' views on their work and well-being. The academics felt ill-equipped to fulfil the demands of ambidexterity imposed on them, which resulted in negative outcomes for their central academic contributions: creativity and intellectual input. This compromises their ability to deliver high performance work outcomes beyond those demonstrating exploitation. Mixed well-being outcomes indicate concerns with work design and how demands for behavioural ambidexterity are managed.

We develop an understanding of behavioural ambidexterity using a multilevel approach that brings together work design and individual circumstances as key antecedents for behavioural ambidexterity, and highlight the interrelatedness of performance and well-being outcomes. Behavioural ambidexterity is not only relevant in the work context. To achieve behavioural ambidexterity at work, adjustments in exploration/ exploitation are also required outside of work. We also reveal the influence of personal circumstances and the role of agency in work design as two key antecedents for positive well-being outcomes in work contexts with demands for behavioural ambidexterity. Three characterizations are discussed: high performers, a middle group, and the disgruntled, as a basis to develop an in-depth understanding of both theoretical and managerial implications.

## 4.12

**Interactional practices of peer support for fire chiefs in enhancing work ability of their employees**[Sanni Tiitinen](#)<sup>1</sup>, Elina Weiste<sup>2</sup>, Sanna Vehviläinen<sup>3</sup>, Johanna Ruusuvuori<sup>1</sup>, Sirpa Lusa<sup>2</sup>, Jaana Laitinen<sup>2</sup><sup>1</sup>*University of Tampere, Tampere, Finland*, <sup>2</sup>*Finnish Institute of Occupational Health, Tampere, Helsinki, Oulu, Finland*, <sup>3</sup>*University of Eastern Finland, Joensuu, Finland***Background and Objectives**

The work of firefighters is extremely demanding both physically and psycho-socially during alarms, but it includes also other kinds of tasks at the fire station between alarms. Although individual employees' motivation has been typically highlighted as an essential requirement for maintaining work ability in demanding jobs, an equally important element is leadership. However, the dual nature of firefighters' work sets challenges for fire chiefs who need to balance between strict operational management during alarms and more engaging staff management between alarms.

Getting social support in challenging work situations and striving for developing work practices is important not only for the employees but also for the managers. Previous studies have shown, however, that providing social support is not an easy task: social support and feedback from others typically facilitate changing one's own behavior but sometimes it can have even a negative effect on achieving change. Thus earlier results suggest that the way in which social support is provided is highly significant.

This study investigates the micro-level practices of peer support in professional guidance sessions for fire chiefs during which they aim at identifying and developing effective leadership practices for promoting work ability among their staff. We approach peer support through focusing on the stories that the fire chiefs tell about their work during the sessions as previous research has shown that stories are one central locus of interaction in which personal experiences are shared. We focus on the following questions:

- How do the fire chiefs initiate telling stories about their work? How do the counsellor and the peers respond to the stories?
- What type of presuppositions and expectations the stories produce about a) the fire chiefs' own work and role as a leader and b) about the fire fighters' work and role as an employee?

**Methods**

The data comes from a research and development project aiming at identifying practical tools and models for workplace health promotion in fire stations. The data consists of video-recordings of five professional guidance sessions (a total of 8 hours of interaction) collected in two different municipal fire departments in Finland. Each session was conducted by four to six fire chiefs and two counsellors. Video-recordings were analysed in detail by using methods of ethnomethodological conversation analysis and membership categorisation analysis.

**Preliminary results**

The stories of the fire chiefs are implemented to transmit norms and concerns about their leadership practices. In most of the stories, fire chiefs describe the challenges related to the staff management between alarms. In these descriptions, motivation and good attitude towards work are treated as unchallenged presuppositions about a “good” fire fighter. At the same time, the motivation problems are treated as solvable: a “good” chief can find practical solutions to get his employees to take action. These stories are responded by other group members with affiliation towards the challenging nature of handling unmotivated behaviour by employees. Thus, the fire chiefs treat each others’ stories of challenging management situations as descriptions of unmotivated employees rather than of poor leadership practices.

There are, however, a few stories in the data in which managerial situations are framed as demanding and problematic. In these stories a teller describes himself as indecisive and unsure of how the event he reports should have been handled. A teller also conveys his affective stance towards the event and invites the others to meet his concerns. In these cases, the others seem to resist the “worrying” action a storytelling is designed to implement. Rather than affiliating with the teller’s affective stance, they respond to other elements of the story by focusing, for instance, on the behaviour of the employee or providing practical solutions.

Responding to the stories of the fire chiefs provide a challenging task for the counsellors. The counsellors actively engage the other group members to share their thoughts. They also focus the talk on the fire chief’s own behavior, leading the discussion towards a more reflective approach of leadership practices.

Conclusions

Professional guidance peer groups can provide fire chiefs a significant arena for reflecting one’s own leadership practices of supporting employees’ work ability. During group sessions, participants jointly produce norms and expectations about chiefs’ work and employees’ characteristics highlighting for example, the importance of motivation and good attitude of fire fighters. These norms have interactional consequences for the ways in which peer support in these situations unfold. On the one hand, the group can support self-reflection required in developing one’s own leadership practices. On the other hand, if the group members focus on strong normative presuppositions about the fire fighters’ motivation and attitudes, they may miss the opportunity to support each others’ self-reflection and emotional coping in the challenges of leadership. Thus, the role of the counsellor in leading the peer group has an important impact on the effectiveness of peer support.

4.13

Out of sight, out of mind? Well-being and Leader-Member Exchange relationships among international business travelers

Milla Heikkilä, Liisa Mäkelä  
University of Vaasa, Vaasa, Finland

International business has increased enormously during the past years due to advanced communication technology, falling trade barriers and highly developed transportation. This transformation in business has created a new and ever increasing group of employees called International Business Travellers (IBTs). It is presumed that the nature and demand for an

employee’s work is influenced by this increase in their respective mobility, having therefore an effect also on an individual’s experienced occupational well-being.

This article focuses on examining the direct and moderating effect of leader-member exchange (LMX), which refers to the quality of the relationship between the leader and the follower (Graen & Uhl-Bien 1995), on the relationship between international business travel intensity (travel days during past 12 months) and the well-being of IBTs. Exhaustion (as a core indicator of burnout) (Maslach, Schaufeli & Leiter, 2001) and international business travel related exhaustion were adopted as indicators of IBTs’ well-being.

The study was conducted in one multinational company in 2015 and the data consists of 570 employees working in jobs requiring international business travel. Our preliminary data analysis shows (moderated hierarchical regression analysis; see Table 1) that low LMX had direct link to general exhaustion. High travel intensity (high number of international travel days) and low LMX had direct links to international business travel related exhaustion. In addition, significant interaction effect (see Figure 1) was found and gave evidence that for those who had low quality LMX relationship, increase in IBT days decreased their international business travel related exhaustion and the situation was opposite for those who had high quality LMX relationship. This finding may indicate that if the dyadic relationship with immediate supervisor is not good in quality, employees may feel better when they have a possibility to take physical distance from the supervisor for longer periods. However, if they do not have that many IBT days, they feel very exhausted also during international business trips. On the contrary, employees who have good quality LMX relationship get more exhausted during their international business trips if they need to be apart from their supervisor for longer periods.

Furthermore, in our model, we controlled for gender and age as demographic variables and found that either of them were not related on general exhaustion but older age of IBT was related to higher IBT exhaustion. We also controlled for role overload as an indicator of job demands in general and it was related on both general and IBT related exhaustion. The number of domestic travel days were also controlled for and it was linked to IBT exhaustion.

Table 1. Results of hierarchical regression

| Independent variables                 | IBT related exhaustion (n = 534) |                 |                | Exhaustion (n = 543) |                 |                |
|---------------------------------------|----------------------------------|-----------------|----------------|----------------------|-----------------|----------------|
|                                       | B                                | ΔR <sup>2</sup> | R <sup>2</sup> | β                    | ΔR <sup>2</sup> | R <sup>2</sup> |
| Step 1: Controls                      |                                  | .16***          | .16***         |                      | .31***          | .31***         |
| Gender (men/women)                    | -.05                             |                 |                | -.02                 |                 |                |
| Age (in years)                        | .01*                             |                 |                | .04                  |                 |                |
| General job demands                   | .37**                            |                 |                | .54***               |                 |                |
| Domestic business travel days         | .00*                             |                 |                | .05                  |                 |                |
| Step 2: International business travel |                                  |                 | .18***         |                      | .00             | .31            |
|                                       | .03***                           |                 |                |                      |                 |                |
| IBT days past 12 months               | .17***                           |                 |                | -.06                 |                 |                |
| Step 3: Leadership                    |                                  | .01*            | .19*           |                      | .01*            | .32*           |



|                      |       |      |      |        |     |     |
|----------------------|-------|------|------|--------|-----|-----|
| LMX                  | -.11* |      |      | -.12** |     |     |
| Step 4: Interactions |       | .01* | .19* |        | .00 | .32 |
| LMX× IBT days        | -.15* |      |      | .03    |     |     |
|                      |       |      |      |        |     |     |

analyses for IBT related exhaustion and exhaustion

Note.  $\beta$  = standardized beta-coefficient from the final step,  $\Delta R^2$  = change in explanation rate in each step,  $R^2$  = explanation rate

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

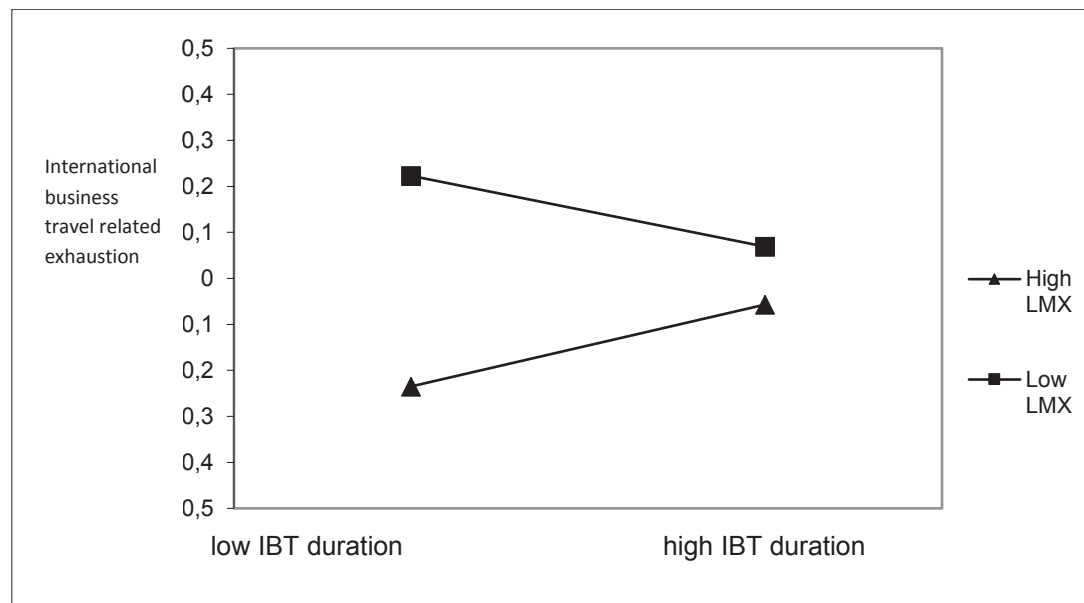


Figure 1. The significant interaction effect between frequency of travel and internationalism on WLC.

The findings indicate that organizations should pay greater attention to the complex nature of mobile work and to the pressure under which IBTs operate. Moreover, organizations should help supervisors and IBTs to establish high quality LMX relationships, and over time, both employers and employees will benefit. We suggest that interventions aimed at reducing general and IBT related exhaustion among international business travelers should focus on improving dyadic relationships between supervisors and their subordinates, and also pay attention to general workload these employees have. Organisations should also monitor the number of travel days (both international and domestic) employees do in order to foster their well-being, especially during their international business trips.

#### 4.14

#### The teacher-led development process as a tool to enhance the digitalization of teaching and work wellbeing: What do teachers want to develop, and why?

Jaana-Piia Mäkinen<sup>1</sup>, Antti Syvänen<sup>2</sup>, Kirsi Heikkilä-Tammi<sup>1</sup>, Jarmo Viteli<sup>2</sup>

<sup>1</sup>University of Tampere, School of management, Tampere, Finland, <sup>2</sup>University of Tampere, Faculty of Communications, Tampere, Finland

#### Introduction

Digitalization is a global megatrend in education. Accordingly, ICT competence is mentioned in the new Finnish school curriculum, as a broad based competence, which requires the more prominent digitalization of Finnish education. The digitalization of schools depends largely on the willingness and ability of teachers to change their ways of working. The digitalization of work often demands a redesign of the work done and extra efforts, and may therefore lead to technostress, which in turn can decrease the willingness of those involved to adopt novel technologies. Conversely, the collaboration of teachers – for example, through peer learning or peer training – seems to enhance the digitalization of schools and teaching in addition to the use of innovative teaching methods and improved job satisfaction. Thus, the collaboration of teachers appears to be a promising approach for enhancing the digitalization of education. With this in mind, the primary aim of the research project was to assist the digitalization of Finnish schools while taking into account its possible threat to work wellbeing. In the present sub-study, we were particularly interested in whether the collaboration of teachers can boost the digitalization of schools and work well-being, and if it can, how it does so.

#### Methods

A total of fifteen Finnish comprehensive and general upper secondary schools participated in the larger research project. In the first part of the project, all teachers were asked to answer a web-based questionnaire about their use of ICT in teaching and its associations with work wellbeing. The results of the questionnaire were delivered and presented to the participating schools by researchers. The teachers then formed eleven development groups that commenced the teacher-led development process based on the findings of the questionnaire and the teachers' other needs.

The data of the current sub-study was collected from the first meetings of the development groups. The group discussions were audiorecorded and transcribed verbatim. A total of 43 teachers participated in the groups' first meetings. One group was excluded from the analysis due to a technical failure in recording. The data was qualitatively analysed, and after reading the data several times and making initial analysis, we formed two "analytical questions" for examining the data, namely "What kind of aims did the development groups establish?" and "How were the selected aims justified?" All the parts of the text that answered the questions were identified and included for deeper analysis.

#### Results

Based on the analysis, all development groups were able to establish aims and steps for the development processes. However, the aims differed remarkably between the schools, which might indicate that the members of the development team were able to take into account specific institutional characteristics. For example, one group decided to start a systematic groupbased

teacher collaboration that supports the peer learning of novel educational technologies, whereas another group wanted to create new ways of participating in the process of acquiring new devices and applications, which is currently implemented mostly at the municipal level. The justifications for the selected aims also stemmed from the specific school context in addition to the results of the questionnaires. For example, the abovementioned aims were justified by highlighting that peer learning is important because there was no sharing among teachers, even though some teachers possessed a lot of ICT know-how that could be shared with others quite easily. On the other hand, it was noted that a lack of participation in the acquisition processes had already raised negative emotions, since it contradicted the common principle of teachers' autonomy.

#### Conclusion

The results indicated that teachers are at the very least able to start meaningful development processes to enhance the digitalization of teaching and work wellbeing in their own schools. The development groups were able to form context-specific aims that stemmed from their real needs, and to create development processes that seem to fit into their schools' everyday schedules and work practices. We assume these qualities are the key strengths of the teacher-led development processes in general. The results also support the idea that employees, such as teachers, are able to re-design digitalized work practices through collaboration.

#### 4.15

##### Prepared for Working Life!

Paula Naumanen, Jyrki Liesivuori

*University of Turku Dept of Future Technologies, Turku, Finland*

More than 50 000 students every year are seeking a job after completing their studies. Despite an ever wider array of skills, today's students and future workforce will require yet another: the mindset and abilities to get access to and adapt to the rapidly-changing working life. When recent graduates understand the roles and responsibilities of working life, it will help them to gain an equal access and opportunities of participation in the work community and to contribute to the continuous development of their organization. An awareness of factors affecting the well-being at work will help them maintain their work capacity and satisfaction. Despite its crucial relevance, systematic education on these themes has not yet been organized.

The ESF-funded Project ***Prepared for working life!*** (Fin. Valmiina työelämään! VALTE) produces a compilation of study modules that prepare young adults for their future employment. Strengthening students' understanding of the many dimensions and requirements of today's working life and the well-being at work will help them to negotiate their professional identities in the changing environment and to build and maintain a positive attitude towards work. The more young individuals learn about different aspects of working life already before entering their first employment, more likely it is for them to have the competence needed when flexibility and tolerance for change is required.

Led by the University of Turku, Project VALTE offers a unique combination of contents and methods that are both serving the goal of preparing future workforce with adequate skills. By conducting a survey for current and former students in/of higher education and thus HR

personnel in different organizations, the Project will gather important data (n = 3000-5000) on the subject matters and methods required for the further development of education on working life skills in Finland.

Study contents based on this empirical research will be delivered with the help of the latest technology. The VALTE contents will be accessed through *ViLLE*, a collaborative education platform, developed in the course of over a decade by a Team of Researchers at the Dept. for Future Technologies of University of Turku.

In the scope of the Project (1<sup>st</sup> Nov, 2015 - 31<sup>st</sup> Oct, 2018) - one of the largest in Finland - up to 10 educational institutions collaborate to ensure that different regional perspectives and foci of research will be acknowledged. Institutions involved in VALTE are

- Universities of Oulu, Jyväskylä, Vaasa and Lapland
- Universities of Applied Sciences of Oulu, Jyväskylä, Vaasa, Saimaa & Turku
- Oulu Vocational College.

Thematic approaches included in the Project are e.g. *health and well-being, organization and management, transitions from education to work, equality and diversity, management and organization, safety at work, and innovations in educational technology*. A nationwide joint reflection on the future of work in Finland will offer a unique forum for innovations on how to design and deliver the modern study contents to students within the reach of the Project and which will be available, at a later stage, also to other institutions and to individual employees in organizations.

By applying both theoretical and practical approaches to themes related to working life and the future of work, the ultimate goal of the Project is to create - with the help of the future generation - a new culture of well-being at work, which in turn will improve the quality of working life in Finland, increase productivity and decrease cost in healthcare. The Project will change the education on working life skills and well-being at work in educational institutions and organizations.

#### 4.16

##### Occupational health and safety in small enterprises: an integrative review

Ines Monteiro<sup>1</sup>, Simo Kaleva<sup>2</sup>, Helena Palmgren<sup>2</sup>

<sup>1</sup>*University of Campinas, Campinas, Sao Paulo State, Brazil*, <sup>2</sup>*Finnish Institute of Occupational Health, Helsinki, Finland*

Around the world the small business account for the majority of the percentage of the number of enterprises.

Aim: to identify and summarize published studies concerning occupational safety and health in small and medium-sized enterprises - SMEs.

Method: A methodological study with integrative review of literature. The PubMed and Proquest - PsycINFO databases were retrieved for the period 2011-2016 and following it, a free hand

search was performed.

Results: Fifty four articles were included. The main themes were methodological studies (12); intervention studies (12); self-reported illness/unhealthy lifestyle (9); prevention (9); owners' perspective (5), work exposure (4); and one article of each of the following themes: systematic review, study protocol and safety issues. Furthermore, the countries where the studies were carried out were mainly in high-income-economy countries, predominantly in the European Union (51.5%) and the United States (37%). The upper-middle and lower-middle-income-economy countries accounted merely for 14.8%. Only in 16.7% of the included articles were partnership among countries. The majority of the intervention studies were performed in the U.S. (11/12).

Conclusion: OHS research concerning SMEs presents a variety of approaches, focused on general and specific issues, conditioned by countries' socio-demographic, economic and cultural characteristics.

#### 4.17

##### **Does health care sector employees' affective commitment to the occupation moderate the relationship between occupational aggression & violence and work-related burnout?**

Liisa Mäkelä, Kati Saarenpää

University of Vaasa, Vaasa, Finland

Affective commitment to the occupation (ACOC) refers to employee's emotional attachment to their occupation (e.g. being a nurse). Commitment towards occupation can be seen as a personal resource and high affective commitment has been found to be related to lower risk of burnout. One significant risk factor and stressor for employee's well-being is occupational aggression and violence. Occupational violence occurs when person is abused, threatened or assaulted in circumstances related to his/her work, involving an explicit or implicit challenge to their safety, and health. Working in the field of health-care have been identified as one of the most violent work-place sectors, and health care professionals have been found to be at high risk of both physical and verbal violence. Both physical violence (e.g. hitting and kicking) and verbal violence and aggression (e.g. shouting and threatening) has been linked to negative consequences such as anxiety, depression, stress and burnout.

Furthermore, previous research has indicated that high affective commitment can moderate the relationship between work stressor and well-being outcome, and therefore highly committed employees may feel effects of stressors stronger than their less committed counterparts. This is explained by the argument that highly committed employees are emotionally more attached and have high identity with their occupation and take the problems more personally and are more anxious by them.

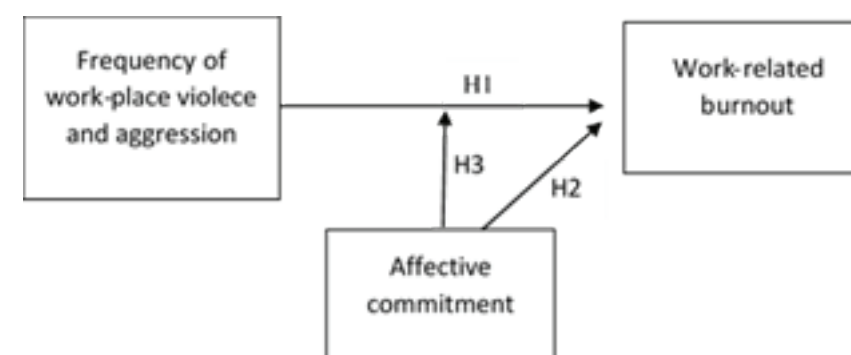
This study investigates the direct and moderating role of ACOC between experiences of work-place violence and aggression and work-related burnout of health care employees. On the basis of the job-demands-resources (JD-R) model we expect that as a job demand, high frequency of work-place violence and aggression will lead to ill-health process and therefore to higher levels

of work-related burnout. Based on JD-R model, personal resources - in this particular study, affective commitment - may moderate the relationship between job demand (occupational aggression & violence) and well-being outcome (work-related burnout). Following hypothesis are tested:

Hypothesis 1. Highly frequent experiences of work-place violence and aggression is positively related to work-related burnout.

Hypothesis 2. Affective commitment is negatively related to work-related burnout

Hypothesis 3: Highly frequent experiences of work-place violence and aggression shows stronger positive relationship with work-related burnout among employees with a strong affective commitment compared to those with weak affective commitment



#### Methodology

The study was based on a sample of members of The Union of Health and Social Care Professionals in Finland (TEHY) (n=194).

Measures: The frequency of experienced work-place violence and aggression was measured with 6-item scale in which occurrence during past 12 months of different types of occupational aggression and violence was asked. The items were rated on a four point scale (1= never, 2= once, 3= 2-3 times, 4= more than four times). The Cronbach's alpha: .87.

Work-related burnout was measured with the Copenhagen Burnout Inventory (Kristensen, Borritz, Villadsen, & Cristesen, 2005). The items were rated 5-point Likert scale, (1= never/ almost never, 5=always). The Cronbach's alpha: .72.

Affective commitment was assessed with Affective commitment scale developed by Meyer, Allen and Smith's (1993). The items were rated with 4-point Likert scale (1= strongly disagree- 4=strongly agree). The Cronbach's alpha: .92.

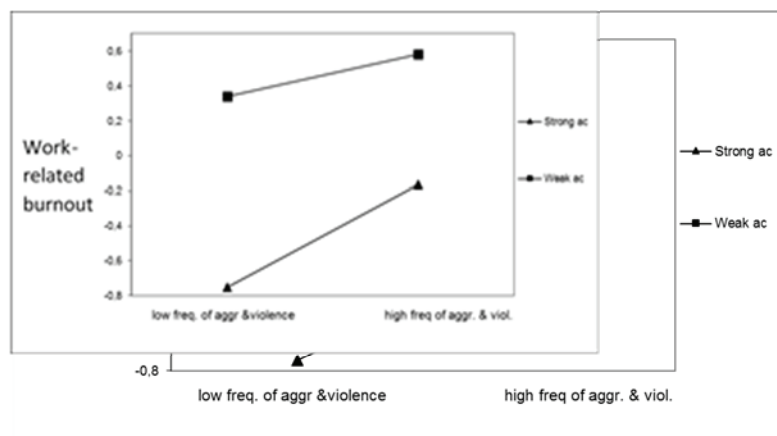
The age of respondent was used as a control variable.

#### Results

Our results supported the H1, as high frequency of work-place violence and aggression was positively related to work-related burnout ( $B=0.207^{**}$ ). As expected, career commitment was also negatively associated with work-related burnout ( $B=-0.46^{***}$ ) thus supporting our H2. Interaction



term was also statistically significant ( $B=0.086^*$ ) and the relationship between frequency of occupational aggression & violence and work-related burnout was stronger for those with strong ACOc and weaker for them whose ACOc was weaker (see Figure 2). Therefore, our H3 gained support.



## Conclusions

Our results supported the view that occupational aggression and violence is a job demand that increases the risk of work-related burnout and that ACOc to health care work is a job resource that decreases the risk of work-related burnout. However, even though employees with strong ACOc experienced overall less burnout than those with weak ACOc, the positive effect of aggression and violence to burnout was stronger for them who had strong ACOc. This finding is supporting the view that highly committed employees are more vulnerable to possible threats and take them more personally. Therefore, in a societal and organizational level, policies and practices should be developed to protect employees in health care sector from occupational aggression and violence. In general, ACOc should be strengthened and in the organizations. In jobs in which the risk or existence of aggression and violence is high, strongly committed employees may need special support, for instance, work supervision, in order to avoid work-related burnout.

## 4.18

### Promoting proactive practices for managing safety and well-being

Anna-Leena Kurki<sup>1</sup>, Hanna Uusitalo<sup>2</sup>, Anna-Maria Teperi<sup>1</sup>

<sup>1</sup>Finnish Institute of Occupational Health, Helsinki, Finland, <sup>2</sup>Finnish Institute of Occupational Health, Tampere, Finland

Ensuring the safety and well-being of both pupils and personnel is a vital issue in education. Schools are traditionally perceived as safe work environments. However, the number of school shootings in the 21<sup>st</sup> century has broken this illusion. Although the challenges to safety and well-being are currently widely recognized, the field's safety management practices are still in need of development.

Education and work at schools are continuously changing. For example, digitalization and

curriculum renewals are reshaping the methods and objectives of work. Parental challenges and socio-economic problems within families have increased, and these often overshadow teacher-pupil and teacher-parent interaction in practice. From the safety perspective, this means that in addition to teaching, organizations and employees now have to be able to manage disturbances and adapt their actions to varying circumstances. Safety is based on their ability to respond to situations that are not what they expected; to cope with situations that have become critical; to anticipate disruptions and their potential consequences; and to learn from these experiences. This is the focus and aim of recent new safety paradigms, resilience engineering and Safety II thinking, which emphasize the resources of individuals and organizations for both proactively and reactively handling safety risks.

In this study, our interest lies in proactive safety management and anticipation, in managing the occupational safety and health (OSH) of employees in particular. We will analyse safety management practices and tools and their developmental potential: how they can promote a collective view of the challenges of OSH in education, and proactively enhance safety and well-being.

We collected our data from CityX during 2016–2017. First, to gain an understanding of current safety management practices and tools, we conducted six group interviews. A total of 15 individuals were interviewed, including heads of education and cultural affairs, principals, and OSH actors. Next we arranged a series of Change workshops for the principals and OSH actors (3 three-hour sessions; 24 participants), which aimed to promote collective learning about safety and safety management practices. The particular focus was on anticipating and managing risks in changing education work. The workshops followed the ideas of the Activity theory: the principals and OSH actors jointly analysed the changing safety challenges and safety management practices and tools, and carried out developmental experiments. The role of the researchers (facilitators) was to offer models and tools to boost this collective learning process.

Our preliminary analysis revealed that safety promotion practices at schools are diverse. Although a school may have many collective tools for enhancing OSH, such as annual fire practices, safety instructions and workplace meetings, individual teachers (and other employees) face many disturbances and risks such as acts of violence and haste, which they have to manage alone, using their own "personalities", and learning by trial and error. This kind of error- and risk-based safety management, which depends on personal responsibility and competence, may challenge the well-being of personnel. Active use of more systematic safety management procedures would reduce personnel pressure. Pupils would also benefit from more systematic methods of safety management in cases of, for example, disturbances and other demanding situations, and could gain a feeling of security in their school environment. Our presentation will provide a detailed analysis of a joint development process that aims to build a collective view of OSH challenges in education. We will also promote understanding of how safety management tools and practices can support anticipation, and highlight their developmental potential.

Our presentation is based on the Safety Promotion at Education (EduSafe) project (2016–2018), which is funded by the Finnish Work Environment Fund.

## 4.19

**Participation in decision making in return to work negotiations**

Hanna-Leena Ristimäki<sup>1</sup>, Johanna Ruusuvuori<sup>1</sup>, Pirjo Juvonen-Posti<sup>2</sup>, Inka Koskela<sup>2</sup>, Sanna Pesonen<sup>3</sup>, Päivi Husman<sup>2</sup>

<sup>1</sup>University of Tampere, Tampere, Finland, <sup>2</sup>Finnish Institute of Occupational Health, Helsinki, Finland, <sup>3</sup>Finnish Institute of Occupational Health, Kuopio, Finland

Lengthening work careers is a central challenge to all European societies. An essential ingredient in this process is employee work ability. This study addresses questions of partial work ability as a current point at issue for the labor market, employers and employees. According to previous studies, the most important driver boosting employee's return to work (RTW) is a possibility and readiness to accommodate the work and working conditions to employees' health, work ability and functional capacity. This study investigates the ways in which employees' return to work after a long sick leave is negotiated between the employee, supervisor and representative of occupational health services.

In the negotiation on return to work, the potential work modifications, workplace accommodations and rehabilitation measures needed are identified according to the employee's remaining work ability. The occupational health care service coordinates the return to work process between all the main stakeholders: employee, the employer, health and rehabilitation service providers. The situation is a delicate one as the stakes of finding a satisfactory solution are high for both the employee and the employer, and the interests of the participants may differ considerably. Thus, it is important to examine how-participants of the negotiation participate in the decision making and are able to contribute to the decisions-in-process.

We use conversation analysis to describe the process of decision-making. Our specific focus is on the interactional practices through which the participants involve themselves and are included in the process. According to preliminary analyses the doctors mostly initiate the decision-making process by making suggestions. In our focus in this presentation is what kind of roles the doctors assign to themselves and other participants in their suggestions. The doctors design their suggestions 1) as advice, 2) as possibilities, 3) as expert evaluations, or 4) as formulations. In each design the positioning of the participants differs with regard to their rights and/or possibilities to influence the decision.

To conclude, we will describe the interactional consequences of the different designs by the doctors, and discuss the ways in which these results can contribute to knowledge on shared decision making process in return to work solutions.

The data consist of 150 decision-making sequences, drawn from a corpus of 12 return to work negotiations. The results of the analysis can be used in the training of occupational health professionals and in developing the skills of the employees and supervisors participating in the joint negotiations.

## 4.20

**The Stairs of Wellbeing at Work -five stairs towards better health, wellbeing and productivity at work**

Päivi Rauramo

Centre for Occupational Safety, Helsinki, Finland

**Introduction**

Work at its best can be a source for enthusiasm, health and wellbeing in life, not merely of income. At worst work, can be a burden and result in burnout or a fatal accident.

Personal wellbeing results from the fulfillment of the needs of an individual and the realization of values, goals and plans set for one's life. Wellbeing at Work (WBW) can be defined as employees' physical and mental state, resulting from the appropriate balance of work, environment and leisure time. Healthy, safe and functioning working environment, competent workers and supervisors, meaningful and rewarding tasks are elements that provide success of the business as well as the life control and wellbeing of an individual. The main challenges of WBW are connected to continuous multiple changes in working life.

The purpose of this study was to create a model and a practice for every individual, working community and organization to improve wellbeing and productivity at work. The innovated model is based on Abraham Maslow's well-established hierarchy of needs also known as motivation theory.

The hierarchy of needs consists of: **1. physiological basic needs, 2. need for safety and security, 3. need for belonging, 4. need for experiencing esteem and appreciation, 5. need for self-actualization.** These basic needs should be fulfilled as far as possible both at work and in life in general. The wellbeing of an individual has both direct and indirect impact on the organization. In the ever-changing world and working life the human nature may have trouble keeping up. The basic needs remain.

Wellbeing at work and the hierarchy of needs are typically compromised in modern working life for example for the following reasons:

1. Physiological needs: lack of sleep and recovery, unhealthy diet, excessive use of alcohol, drugs, smoking, lack of exercise, insufficient health care services and work place health and work ability support.
2. Need for safety, security: work-related incidents and accidents, threat of violence, hazardous working environment, unsolved conflicts and harassment in the working community, mobbing, continuous and multilevel changes related to work, insufficient income, job insecurity.
3. Need for belonging: deficiencies and problems concerning supervision, working community atmosphere, communication and cooperation.
4. Need for experiencing esteem: challenges concerning equality, salary and rewarding policies, lack of feedback and support as well as possibility to feel personal importance and meaning of work.
5. Need for self-actualization: challenges in continuous self-development and lifelong learning,

lack of core competences, creativity and innovativeness in the organization.

### **The Stairs of Wellbeing at Work model**

The Stairs of Wellbeing at Work model has been developed by comparing and combining different workability and wellbeing at work theories and models in the context of Maslow's motivation theory. According to the model the topics of the five stairs of wellbeing at work are: 1. HEALTH 2. SAFETY & SECURITY & TRUST 3. WORKING COMMUNITY 4. MANAGEMENT & LEADERSHIP 5. COMPETENCE & CREATIVITY.

The implementation of the Maslow's hierarchy of needs into the working life is examined stair by stair on three levels: individual, organizational and assessment. The goal for the actor is to climb stair by stair up to the top and reach the source of wellbeing and success. The essence of wellbeing at work should not only be discovered in theory but also put to practice.

Many organisations in Finland have implemented The Stairs of Wellbeing at Work Model into their development strategies for example Kouvola City. To support the implementation of the model training with use of a workbook has been widely arranged. The model is considered very logical, intelligible, comprehensive and practical. The theoretical background (Maslow's Hierarchy of Needs) is well known and the humanistic idea suits also well for wellbeing promotion.

## **4.21**

### **To be or not to be yourself – An emotional labor perspective on change management**

Riikka Harikkala-Laihin<sup>1</sup>, Johanna Raitis<sup>1</sup>, Melanie Hassett<sup>2,1</sup>, Niina Nummela<sup>1</sup>

<sup>1</sup>Turku School of Economics at the University of Turku, Turku, Finland, <sup>2</sup>Sheffield University Management School, Sheffield, UK

#### **Introduction and objectives**

Management is no longer a directing or a controlling task, but centers around building commitment and promoting receptiveness to change (Caldwell 2003). According to Whetten and Cameron (2011), managing positive change consists of establishing a climate of positivity, creating readiness for change, articulating a vision of abundance, generating commitment to that vision, and institutionalizing the change. This perspective emphasizes the role of positivity. However, employees tend to react to changes negatively. Change means a movement towards the unknown, and unclear future positions most often turn into change resistance. This is why it is important for managers to stay in tune with the employees' emotions, and to create positivity regarding the change. (Dhingra & Punia 2016)

From a young age, people seek out exposure to positive triggers and thus have a natural tendency towards positive change. However, as they grow older individuals tend to suppress such positivity and instead react more strongly to the negative. Thus greater emphasis on the positive over the negative eases organizational change. (Cameron 2008) Since employees tend to mirror their emotions against managers', displaying positivity during change is essential (cf. Ashkanasy & Daus 2002). To maintain the positivity, managers may need to express emotions they do not feel, or not express emotions they do feel. This is called emotional labor. (Hochschild 2003) Emotional labor influences well-being at work, because of the toll it takes both physically

and psychologically. The necessity to check one's actual emotions in order to express positivity may lead to emotional exhaustion and burnout, and eventually to a lowered immune system. (Ashkanasy & Daus 2002)

This study examines change in the context of post-acquisition integration. Mergers and acquisitions (M&As) can be extremely stressful change processes (e.g. Ager 2011), necessitating good-quality communication (e.g. Schweiger & DeNisi 1991). However, during M&As managers are also faced with uncertainty and anxiety. This may lead to increased emotional labor and consequently decreased well-being at work, when managers are forced to "put on a brave face" for the sake of their subordinates. Thus the objective of this study is to shed light on how managers experience their role during post-acquisition integration.

#### **Method**

30 interviews were conducted with 28 interviewees between April and December 2015. The interviews regarded the post-acquisition integration of a Finnish – British deal made in 2014 in the software engineering industry. The interviewees were divided between three locations: Alpha HQ in Finland (11), Alpha UK local office, which was in charge of integration (8), and Beta HQ in the UK (9). The analysis was an iterative process, where the interviews were coded according to themes arising from the data with the aid of NVivo10 software.

#### **Findings and conclusion**

The emotional climate at Alpha and Beta after the acquisition was, as expected, slightly negative. Changes, even if they were positive in nature, were found suspicious. In addition, the extra work brought on by integration caused a lot of stress. The extra work and changes also created some confusion regarding the division of responsibilities, and differences in management styles brought on conflict. Even though managers recognized the importance of positivity and cared about their subordinates' well-being, employees found managers unavailable. In addition, communication was found frustrating and slow; managers were looking for more support in what could or could not be shared, while experiencing pressure from their subordinates to communicate more. In hindsight managers thought the integration should have been planned better.

Managers did acknowledge the necessity of creating positivity, but experienced many challenges in this task. First, managers found it difficult to stay in tune with and ease the emotional climate among employees. Second, managers found arbitrating between clashing employees difficult, as each employee would see them siding with the "opposition". Third, "selling" the long-term objectives when employees were anxious regarding immediate change was demanding. Fourth, especially managers from Beta also had to go from being able to make agile decisions to having to go through the bureaucracy of a much larger organization. Fifth, some managers found it difficult to provide the emotional support their employees seemed to want. Sixth, managers found it difficult to cope with their own emotions, as they were unable to share them when it was their task to keep up the spirits of their subordinates. Finally, these difficulties led many managers to feel overwhelmed and stressed, and coping with that stress was one more challenge on their plate.

In conclusion this study finds, as suggested in the literature, that managers are faced with emotional labor when trying to maintain a positive perspective regarding post-acquisition integration. This emotional labor causes managers major stress, to the extent that some of them require sick leave due to burning out during the integration process. Thus we argue that further research on emotional labor during M&As is essential for helping managers cope with the process.



## 4.22

**Poster Presentation: Job Crafting aspects to Support Well-being at Work in an Activity-based Office**Johanna Horstia*Tampere University of Technology, Tampere, Finland*

Well-being at today's demanding and constantly changing work is important. The well-being of the employees can be seen as a strategic asset in organizations (Slomp et al. 2015). Besides the work itself, the context of work, *work environment*, is changing. The so-called activity-based offices are increasing in number (Kim et al. 2016). The activity-based offices differ from traditional cellular on open-plan offices in the way that they no longer provide a dedicated, personal work desk for every single employee. Compared to other office types, activity-based offices typically include many different work settings or areas, which differ from each other in terms of possibility to concentrate on individual or group work, collaboration, privacy etc. Objectives of such work environments relate to cost savings, improving cross-departmental collaboration (Kim et al. 2016), autonomy and job satisfaction. It has been stated that the activity-based working improves work satisfaction because of the freedom of choice and autonomy and improves the health and well-being of employees (van der Voordt 2004)

However, the activity-based office concept posits some challenges for workers and their well-being. Although the amount of activity-based offices is increasing, the satisfaction with the concept appears to be below expectations (Hoendervanger et al 2016). Activity-based offices are criticized for the loss of personalisation of workplace, risk of inadequate ergonomics and hygiene of shared desks. Additionally, Elsbach (2003) found that the activity-based work environment has the possibility to threaten workers' workplace identities. In her study it was also found that the office concept in question also negatively affected employees' sense of belonging to a group.

When considering the well-being of an employee, the work environment and the office design should be considered, too. Research has shown that the office design affects the identity of an individual, as well as their creativity, mood, comfort, ergonomics and safety (Elsbach & Bechky 2007) In general, occupational well-being is influenced by many factors. One model, which can influence employee well-being and performance, is the Job Demands-Resources (JD-R) model. The JD-R model claims that every work has their own demanding and motivating factors. Job demands are elements of work that demand sustained physical and/or psychological effort. On the other hand, job resources are elements of work that for example help to achieve work-related goals, reduce job demands and/or encourage learning, development and personal growth. (Bakker & Demerouti 2007)

By affecting or modifying the demands and/or resources, the employee can affect their well-being. This is called job crafting. Job crafting is a method of job redesign, in which worker create an improved fit between the demanding factors of their jobs and themselves. Job crafting affects the well-being, as it helps to improve the balance between job demands and resources. (Slomp et al. 2015) Job crafting is an effective method to improve well-being, as it increases job resources over time (Tims et al 2013). Job crafting typically covers the modification of three elements of work: crafting job tasks (number, scope, type), interaction with others (quality, amount) and cognitive task boundaries. (Wrzesniewski & Dutton 2001) It has been found that employee well-being and job crafting are correlated (Slomp et al. 2015).

Thus, the purpose of this paper is to better understand the characteristics of activity-based work environments and their potential risks and benefits. After analyzing the work environment we propose a model of job crafting in an activity based office. As the satisfaction with activity-based offices seems to be below expectations and the office concept seems to have some negative effects to health and productivity, it is reasonable to study well-being in the office type in question. Research question to be answered is *what job crafting possibilities lie in activity based offices to support well-being at work?*

The research methods include observation and interviews in the Finnish company Martela, in the capital area of Finland. The interviews (n=11) covered topics such as reasons to choose work settings, views of their work environment, pros and cons of the work environment, the values of the company, organizational house rules and individual work habits. The case organisation can be viewed as a successful case, as the employees seemed very happy in their ways of working and the supportive work environment.

Results of the study include a proposal of job crafting in an activity based office, leading to better occupational well-being. It also covers a comparison of job crafting and activity based working.

## 4.23

**Small and medium-sized enterprises and violence – preliminary results**Ines Monteiro<sup>1</sup>, Simo Kaleva<sup>2</sup>, Aparecida Mari Iguti<sup>1</sup>, Helena Palmgren<sup>2</sup>*<sup>1</sup>University of Campinas, Campinas, Sao Paulo State, Brazil, <sup>2</sup>Finnish Institute of Occupational Health, Helsinki, Brazil*

Violence is a huge problem worldwide and "over the past 15 years, 3.34 billion people, or almost half of the world's population, have been affected by political violence" (OECD, 2016: 20). It affects countries development and inequality may have a crucial role in it.

The United Nations (2015) approved 'The 2030 Agenda for sustainable development' in 2015, and part of their goals have an intrinsic relationship with a fair and sustainable economic development, contributing to reduce inequity around the world. The following goals are related to it: 'no poverty', 'good health and well-being', 'gender equality', 'decent work and economic growth', 'reduced inequalities', and 'responsible consumption and production'.

Furthermore, government in different countries are giving incentive to poverty reduction, and one of the mechanisms utilized is to give support for micro and small enterprises, and, depending on the region, with emphasis on women (some African countries) and migrants (some countries in the European Union).

Through this perspective, try to understand the connection among micro, small and medium-sized enterprises and violence has an important role as to add knowledge in this area.

This paper aims to understand the occurrence of violence in small and medium-sized enterprises worldwide. A literature review and documents were searched to give support to this reflection. There are a few number of articles published concerning the violence affecting micro, small and medium-sized enterprises.

Some sectors have more chance to suffer violence, such as service businesses – restaurants, bars and motels; and retail (convenience shops, grocery and liquor shops) (Peek-Asa et al, 2006). The importance of workplace violence prevention is highlighted by authors (Bruening, 2015a; Bruening, 2015b), and intervention programmes have a key role (Peek-Asa et al, 2004; Casteel, 2008). Gender issues have influence in violence suffered by women entrepreneurs in Tanzania (Green et al, 2015) and Uganda (Vyas, 2015).

The preliminary results will be discussed.

#### 4.24

##### **Supervisor and coworker support as moderators of association between work environment preferences and work environment satisfaction in an open office context**

Maarit Laiho, Anni Paalumäki

*Turku School of Economics, University of Turku, Turku, Finland*

##### **Introduction**

Prior research has found evidence suggesting that physical work environment may influence relevant organizational outcomes, e.g. job satisfaction, work output, absenteeism, turnover, and, ultimately, organizational productivity (Lee & Brand, 2005). During the past few decades the need to promote communication and synergy in a workplace has resulted in a tendency to favour more open office environment. This trend may, however, despite the expected positive outcomes result in an unpleasant working environment. Lot of critique has been targeted towards open office environment. Better communication and collaboration may be facilitated at the expense of privacy and concentration (Lee & Brand 2005). Veitch et al. (2007) divide the causes of an unpleasant working environment into direct and indirect effects. Direct effects include conditions of physical environment (e.g. noise, lightning) and indirect effects cover psychological processes (e.g. stress, privacy).

##### **Objectives and hypotheses**

Despite the problems related to the open office environment, prior research has not studied the role of work environment preferences in the formation of work environment perception. Further, to our knowledge, prior research has not included supervisor and coworker support in the studies relating to work environment satisfaction. Thus, the purpose of this research is to study the relation between work environment preferences and work environment satisfaction together with the moderating effects of perceived supervisor and coworker support.

In this study work environment preferences (Rothe et al. 2011) covers the individual needs for interaction at the workplace and individual needs for privacy at the workplace. Thus, this study focuses on the psychological processes affecting satisfaction with the work environment (Veitch et al. 2007). Work environment satisfaction, in turn, includes individual perception of work effectiveness and ease of interaction in the open office environment.

First, (H1) we hypothesize that the need for interaction will be positively related to work environment satisfaction. Second, (H2) we hypothesize that the need for privacy will be negatively related to work environment satisfaction. Further, we propose that the supervisor

and coworker support buffer the negative relation between work environment preferences and work environment satisfaction in an open office context. Thus, (H3) we hypothesize that the perceived supervisor/coworker support will moderate the negative relationship between need for privacy and work environment satisfaction. In other words, we assume that the employees who receive more coworker/supervisor support will perceive the work environment more positively than those who receive less coworker support despite the strong need for privacy.

##### **Data and analysis**

In spring 2010, a questionnaire was distributed among all 1271 employees (working in unit 1 and 2) of an insurance company in Finland. A total of 889 employees filled out the questionnaire (response rate 70 %). The respondents (N=520) representing the unit 1 were selected for this study. The hypotheses of the study were tested using a moderated regression procedure with work environment preferences as predictors, work environment satisfaction as the dependent variable and supervisor support and co-worker support as moderators.

##### **Preliminary results**

The preliminary results of the study indicate that the strong need for privacy is, indeed, related to more negative work environment perceptions in terms of work effectiveness and ease of interaction. Strong need for interaction, in turn is related to more positive work environment perceptions. Further, the results support our presumption that the perceived supervisor and co-worker support buffer the negative relation between the need for privacy and work environment satisfaction. Despite the fact that employees' preferences for open office work varies, supervisor and co-workers have a role to play in easing the strain caused by the open office context.

#### 4.25

##### **Work engagement, job resources and Finnish dairy farmers**

Marja Kallioniemi<sup>1</sup>, Janne Kaseva<sup>1</sup>, Christina Lunner Kolstrup<sup>2</sup>, Hanna-Riitta Kymäläinen<sup>3</sup>

<sup>1</sup>Natural Resources Institute Finland (Luke), Jokioinen/Vihti, Finland, <sup>2</sup>Swedish University of Agricultural Sciences (SLU), Department of Work Science, Business Economics & Environmental Psychology (AEM), Sweden, <sup>3</sup>University of Helsinki, Dept of Agricultural Sciences, Helsinki, Finland

**Work engagement** is defined as a positive state of mind including three dimensions, namely vigor, dedication, and absorption. A person with high vigor is mentally resilient, working with high energy, and putting effort into work. Dedication increases the involvement in work and a person experiences sense of significance, enthusiasm, inspiration, pride, and challenge. A worker with absorption is concentrated in work, time passes quickly and she or he has difficulties to disentangle oneself from work tasks.

**Job resources** are positive elements which have capacity to enhance engagement, commitment, motivation and human development. Different kind of resources and work engagement may form a cycle towards positive adaptation to the work environment.

These positive and remedial elements of work are not often combined with the well-being among Finnish dairy farmers. In a postal survey, a total of 265 completed questionnaires from

188 dairy farms, both work engagement (the Utrecht Work Engagement Scale UWES-9) and job resources were measured among Finnish dairy farmers.

The three parts of the data analysis were the following. First, the resource variables in order of importance were identified and compared by gender. A factor analysis was also carried out regarding the resource and stressor variables. Secondly, work engagement was explained by demographic and factor score variables. In addition, comparison (t-test) of work engagement and the dimensions with the reference sample (FIOH) was conducted. Thirdly, the scores for methods to enhance well-being on dairy farms were calculated.

The main risk elements for lower work engagement were a high work load and difficulties with one's health status. The most important resource variables were related to family and farm animals. These issues were also associated with work engagement. Surprisingly, higher work engagement was associated with having a larger number of cows. We assume that new cattle barns with more numerous cows and also with advanced technology (for example milking and feeding robots) may increase work engagement among dairy farmers who have enlarged their production volume.

The respondents assessed also the most important methods to improve overall well-being on dairy farms. These were "securing the profitability of the sector" and "improving the substitute assistance service" (the possibility to have a holiday period). We found also differences according to gender, as female dairy farmers considered the resource variables related to the family, love and work with cattle as significantly more important than male dairy farmers. On the other hand, male dairy farmers experienced higher work engagement and, related to the different dimensions, especially higher dedication and absorption than male respondents in a reference sample (provided by the Finnish Institute of Occupational Health FIOH) including workers in different occupations.

Human capacity is a crucial, fundamental element in the continuance of the farm enterprise. Interaction with family, work with healthy farm animals, a reasonable work load, and the profitability of production were the most important issues supporting well-being among dairy farmers. Well-being of farmers is a significant part of sustainable food production. The aim should not only be to prevent problems related to well-being. Rather, by enhancing the positive elements, adverse outcomes could be prevented before negative consequences emerge.

#### 4.26

##### **Learning Occupational Safety in Multi-Professional Groups in the HSEQ Training Park**

Maria Lindholm<sup>1</sup>, Liisa Kiviniemi<sup>2</sup>, Eija Rajakangas<sup>2</sup>, Seppo Väyrynen<sup>1</sup>, Heli Laitinen<sup>3</sup>

<sup>1</sup>University of Oulu, Oulu, Finland, <sup>2</sup>Oulu University of Applied Sciences, Oulu, Finland, <sup>3</sup>Oulu Vocational College, Oulu, Finland

Briefly said, occupational safety means freedom from injury and danger. It concerns accident prevention and risk analysis, and it covers both physical and mental safety. Beliefs, perceptions and attitudes affect to safety behavior both in individual and organizational level.

Every professional needs to have the basic knowledge of occupational safety in the beginning of their working life. The basics are the knowledge of the occupational safety regulations, the

knowledge of safe working environment and the strive to promote it. In addition occupational safety is the ability to recognize the safety and health risks at work, protect themselves and prevent those risks, and to take care of one's physical and mental well-being. In the changing and international working life the digital connections bring new challenges to the occupational safety. The challenge of the education is to prepare students for the operation in the digital environments safely and ethically.

The main aim of the project Prepared for working life! is to develop students' working life skills in all educational levels. Occupational safety is an important part of the working life skills and developing the occupational safety teaching model is the focus of Oulu project team. The team members are representatives from the University of Oulu, the Oulu University of Applied Sciences and the Oulu Vocational College. The team also cooperates with the HSEQ Training Park in Northern Finland. The HSEQ Training Park is a safety innovation where visitors can be trained on a practical level to perform safely at work. The HSEQ Training Park consists over 20 different training points which are practical, real working life demonstrations.

The HSEQ Training Park will help in the task to teach the basic knowledge of occupational safety. Students will visit the HSEQ Training Park in multi-professional groups as the groups will contain students from the University of Oulu, the Oulu University of Applied Sciences and the Oulu Vocational College. The groups will go through for example training points concerning safety management and responsibilities, ergonomics, working environment, and protective equipment. Studying in multi-professional groups promotes the understanding of the other professionals' knowledge and skills and furthermore strengthens cooperative skills.

When visiting the HSEQ Training Park with students the aim is to teach them and more specifically study if there are any differences in learning when students go to the HSEQ Training Park or when they are taught traditionally with lectures. The study is going to consist of two groups which go to the HSEQ Training Park and of two groups which are taught with lectures. The groups will answer a query about occupational safety at the beginning and at the end of the study. The purpose of the query is to identify the possible differences in learning between the groups.

At this phase of our project, we predominantly see our focus in the prevention of various accidents at work that are defined in the following way in the UK: "any unplanned event that results in injury or ill health of people, or damage or loss to property, plant, materials or the environment or a loss of business opportunity". Later during the project, we will discuss about our focus in details with our development partners around Finland. One possibility is that we finally emphasize the broader definitions of the Finnish Occupational Safety and Health Act. Generally in Finland, occupational safety and health is based on the concept of a good working environment, which, besides conventional occupational safety and health, covers, e.g., work ability, mental well-being of the workers, contentment with the work, participation, skills and motivation, good organization, leadership and management.



## 4.27

**Meeting a professional (nurse)**Mari Turja*Turku University of Applied Science, Turku, Finland*

## MEET A PROFESSIONAL -PROJECT

## DEVELOPING THE PROFESSIONALISM AND PROFESSIONAL COMPETENCE AND SKILLS OF A PUBLIC HEALTH NURSES - LONELY PARENTHOOD

Public health nurse studies, continuing education/on-the-job learning, Lonely Parenthood

The aim is to increase nurses' professional interaction skills, being aware of their professional role, when supporting early interaction between mother and baby, advising and counselling the wellbeing of mother and baby, and sharing the joy of motherhood and the happiness the baby brings. Students are from Bachelor of Health Care and there is also already working nurses.

## MOTHER AND BABY – FAMILY SUPPORT ACTIVITIES

These support activities are there to increasing a mother's feeling of agency, empowerment, capability and sufficiency, and sharing the joy brought by the baby's wellbeing and good care, also sharing worries and providing information about childcare, and discussing mother's own wellbeing. This all is nurse students practise/work and meeting mothers at home and also online where is further advices and discussions, there would be a digital platform to be developed.

MEET A PROFESSIONAL -STUDY The study discusses the concept of professionalism, handling the professional role, customer load and emotions at work, and themes of setting boundaries at and for work, and how one can develop one's skills in these issues through counselling and supervisory methods in training and at work. The aim is to put focus to the interaction happening there and there would be recording and filming when allowed. The study also surveys how of the participants felt their professionalism and their professional skills had developed as a result of the project, its effects on practical work and their own wellbeing and how they manage workload. The quality of the service to the customers is studied by means of questionnaires and discussions. The bodies we probably would cooperate with children welfare associations, also provide their own assessment. One aspect that is looked into is using the online environment for guiding and supervising the clients, for learning together and for developing in one's profession.

**5. HISTORY OF WORKING LIFE**

## 5.01

**Future challenged by history: tracing the learning actions and principles of development for overcoming discontinuity in software firm's logic of business**Päivi Ristimäki*University of Helsinki, Helsinki, Finland*

In this study I analyse the history of a software firm and the nature of the subsequent developmental efforts as learning actions when facing a turning point in its business activity. The turning point was embodied in a form of business discontinuity after software firm's parent company had made a decision to split the business activity of the firm in three different operating units in year 2005. The history of the business activity was based on a ground-breaking, long-term software technology development, but the success of business was not repeated within new technological domains as expected by the new owner and by venture capitalist. Thereafter, the business activity of the firm was limited to sales of licences and minor product development, support and maintenance of the original software product. Still, the aim of the firm's management team was to expand towards technology service business.

The analysis and theoretical framework of my study is based on cultural-historical activity theory intertwined with theories of management, technology business management and evolutionary studies of technological paradigms. An activity-theoretical approach highlights expansive learning actions for generation a new pattern of activity (c.f. Engeström & Sannino 2010). In a cyclic process of learning actions a new motivating object for activity is formed differentiating the new generating developmental cycle from the earlier cycles with culturally new elements and principles in the concept of activity. The cycles of development represent a temporary balance as a solution for asymmetry between the use value and exchange value in production and consumption of a commodity (Virkkunen 2007). Theories of technology management and business management are applied to materialize the social practices embedded in both technological industry and management activity and to trace the generalized logics in related these contexts. Furthermore, related theories reveal also how evolution of technology steers the development of activities within the line of business (see e.g. Cusumano 2004).

In this paper I scrutinize two "narrative interviews" (Czarniawska 2004) collected in 2010. Thematic discussions between the researchers and members of management team were conducted in February 2010 and in September 2010. In between these two research interviews the management team initiated their final effort for transforming firm's business logic. However, in August 2010 after several developmental efforts conducted between 2006 and 2010 the parent company made a new radical decision to close the ICT firm and merger the business activity of the software product to its Finnish daughter company's business activity. The narrative interviews consist of managers' retrospective reflections of ICT firm's process of developmental efforts, strategic business decisions and the outcome of the business developmental trajectory. The data reveals also the reasoning of the principles of conducted developmental efforts. Thus, combining the past developmental cycles with the learning actions is employed in this study not only to describe but to explain the nature of the developmental efforts.

The preliminary analysis reveals that developmental efforts covered planning actions and strategic work of managers but were rather focused on short ad-hoc trials and testing of selected practices and tools. Most of these developmental efforts were organized within internal projects supervised and implemented top-down by the management team. On the other hand, the strategic perspective was very much guided by the researcher's interventions. The preliminary findings of the data pinpoint to a historically adopted learning principle based on the logic of trial and error in a form of "fail fast" applied commonly among the ICT companies. The practices and tools used in the developmental efforts were formed of actions of searching and often quick abandoning of service-oriented products that would rather extend the business concept of the firm without expanding it with the logic embedded in the practices of a service business. The traditional modes of adapting to changing environments has highlighted product development and innovation with the method of fast learning as the most effective strategic path (see e.g. Eisenhardt & Tabrizi 1995; Argota 2012). However, the overcoming the gap between the logic of product-oriented and service-and customer-based logics calls for a transformational process from providing cutting-edge products, new features and applications to customizing the best possible solution for clients through shared learning within the firm and in user-provider relationships (see g.g. Galbraith 2002, Victor & Boynton 1998, Cusumano 2010).

The analysis of the study underpins the cultural connection between historically layered activity and the outcome of the strategic choices as future-orientated process in every-day level developmental actions (cf. Engeström 2004). This study also explicates that in every fragment of business activity profound qualitative changes are necessary when there is a need to break away from the activity concept of the past.

## 5.02

### Working with more than just hands: Industrial work in Finland during the Fordist period from the shop-floor perspective

Pekka Varje<sup>1,2</sup>, Jussi Turtiainen<sup>1,2</sup>

<sup>1</sup>*Finnish Institute of Occupational Health, Helsinki, Finland*, <sup>2</sup>*University of Helsinki, Helsinki, Finland*

**Introduction** Studies on the characteristics of industrial workplaces often draw a sharp distinction between the 'Fordist' and 'post-Fordist' work regimes. The former has been viewed as a 'passionless bureaucracy' that used to rely on strong hierarchical command structures, routinized physical labor and material incentives. The latter, in contrast, has been considered a flexible model for the organization of work, which offers workers significant amounts of autonomy and responsibility, and requires them to employ their emotions, interpersonal skills and personal aspirations in the production of quality and customer satisfaction. It has been argued that under the Fordist regime, workers only had to sell their hands to the employer, but that now they are required to bring their 'whole person' or their 'hearts and minds' to the workplace. However, the problem with such characterizations is that they are based, for a large part, on prescriptive textbooks and managerial representations of the workplace. Various ethnographic and historical studies have shown the image of the industrial workplaces during the Fordist period should be far more nuanced.

**Objectives** The purpose of this article is to examine the organization of work in industrial

organizations during the Fordist period from the 'bottom-up' perspective; from the viewpoint of shop-floor workers. By examining Finnish industrial workers' work experiences from World War II to the 1970s, we will show that the notion of workers selling only their hands to the employer is an insufficient metaphor for their work activities.

**Methods** The source material of this article consists of written autobiographies and memoirs from Finnish industrial workers who were of working age during the research period. The empirical data were gathered from the memory data collections of the Labour Memory Data Commission (TMT) of the Finnish Labour Archives (TA), including a total of 64 biographies. The analysis concentrated to the workers' experiences of the labour process and managerial control in their own workplaces.

**Results** Based on the recollections of Finnish industrial workers, it appears that the workplaces of the period were far less bureaucratic and rationalized than stereotypical images suggest. Even though supervisory control was nominally strict and there were many hierarchical conflicts between the workers and the management, in practice the workers were generally not constantly monitored and often they enjoyed significant autonomy in their work tasks. There were many examples of organizations in which the employees worked in pairs or teams, strived for quality and customer satisfaction, and strongly identified themselves with the employer. The workers showed initiative in their jobs and the employers benefited from their personal ambitions and camaraderie. As individuals, the workers were keen to learn new skills and seek more difficult jobs, and as groups it was important for them to earn the respect of others by showing proper workmanship and stamina. This bound the personal aspirations, emotions and social skills of the workers to the labor process.

**Conclusion** The results show that many of the stereotypical images of industrial work during the Fordist period appear only partially viable against the memories of workers who experienced this period in the Finnish industrial sector. The role of emotions, social skills and personal aspirations may have received little official recognition from many employers, but yet they were involved in the labour process and utilized by the organizations. This suggests that the increased demand for similar abilities during the post-Fordist period does not necessarily reflect a radical change in work and the work environment, but a new kind of political definition of the ideal employee.

## 5.03

### Understanding employment relations transition. Work characteristics in a historical perspective.

Jan Looise

*University of Twente, Enschede, The Netherlands*

Employment relations (ER) in are in transition, especially in the so-called developed countries like the US and the Western-Europe countries. Most dominant change is the fast growth of flexible contracts and the subsequent downturn of permanent contracts. The overall explanations for this change, such as globalisation, liberalisation of (labour) markets, technological innovation, labour migration, etc., are well known and have been abundantly described and analysed. However, a more in depth analyses of the way(s) these general changes impact on the employment relation is still largely lacking. This is also due to the absence of a suitable method to research these

changes in practice. Quantitative and qualitative methods do not apply because of their fixation on one moment in time and longitudinal research is scarce and difficult to execute for a longer period. Only a historical method can bring us further in this respect. For this reason, in this paper, we focus on a historical approach towards ER-transition.

Until now the historical approach to ER-studies and work and organization (W&O) studies is relatively unknown and not much used. In the few cases where there is any attention given to history in ER and W&O studies and textbooks, this is mostly restricted to the period since the Industrial Revolution (in Europe) or about 1900 (in the US). But both ER as well as W&O have a far longer history than that, especially also in Western-Europe. Wage labor developed in Western Europe already on a large scale in the fourteenth century as did larger companies and public organizations and so did employment relations and organization and management issues. According to labor historians the Industrial Revolution was not the 'watershed' in social-economic developments as has been thought for long. For a good understanding of the development of ER and W&O we have to look far broader and deeper, according to some of these historians even on a global scale and until 12.000 years ago (Lucassen, 2013). This paper will not go so broad and far back. It will limit itself to Western Europe (and especially the Northern Netherlands) and the period between 1400 and 1850. During this period Western Europe also experienced a profound change in employment relations, namely from a situation with dominance of the guilds with relatively stable employment relations to a situation in which trade capitalism and (early) industry became dominant with a growing segmentation of the labor market. An important role in this development was played by the 'putting-out system' (Lis & Soly, 1994). A closer look at the characteristics of both phases and the changes that took place in between and especially also the way they took place may help us to better understand the actual ER-changes and their consequences. Within the broad field of ER the paper focuses on a limited number of closely connected topics, namely: the labor market and labor contracts, education and training, wages and labor conditions.

## 6. JOB CRAFTING SYMPOSIUM

### 6.01

#### Symposium on Job Crafting

Jari Hakanen

*Finnish Institute of Occupational Health, Helsinki, Finland*

#### Introduction

An important type of organizational behavior is job crafting, i.e., how employees proactively shape their jobs in order to align them with their own abilities, needs, and preferences. By job crafting employees make self-initiated changes in their jobs to create a better fit with their job demands and resources.

#### Design and methods

This symposium bring together five presentations from three countries: Belgium, Portugal, and Finland. All contributions are based on empirical research using ambitious methodologies comprising daily diary studies, cross-sectional and longitudinal designs, multilevel analyses and intervention design. The participants of these studies consist for example of teachers, nurses, dentists and heterogeneous professional groups. Mervi Hasu and Laura Seppänen from Finland will discuss the studies and proactive approaches more generally.

#### Results

Piia Seppälä will first present an intervention study based on art methods among teachers. Next, Alda Santos will discuss her study related to the antecedents and outcomes of job crafting among nurses. Third, Anne Mäkikangas moves from individual to team level and present her findings related to the antecedents of team level job crafting. In the fourth paper, Els Vanbelle discusses three studies focusing on individual and contextual antecedents and work-related outcomes of job crafting as well as daily fluctuations in job crafting. Finally, Jari Hakanen, using two samples will discuss whether different states of employee-well-being may actually influence whether and how employees craft their jobs.

#### Conclusions

These five papers strongly suggest that job crafting is possible in various professions and worth encouraging in various occupational settings. It is important e.g. for employee well-being and meaningfulness at work and can be boosted by e.g. resourceful jobs and servant leadership. Thus, job crafting as a bottom-up approach to job redesign, may fruitfully complement traditional top-down job design approaches.

### 6.02

#### The unique contributions of work engagement, job satisfaction, burnout, job boredom, and workaholism to job crafting behaviors

Jari Hakanen<sup>1</sup>, Maria Peeters<sup>2</sup>, Wilmar Schaufeli<sup>3</sup>

<sup>1</sup>*Finnish Institute of Occupational Health, Helsinki, Finland*, <sup>2</sup>*Utrecht University, Utrecht, The Netherlands*, <sup>3</sup>*KU Leuven, Leuven, Belgium*

#### Introduction

Research on job crafting, i.e., what employees themselves can proactively do to improve their well-being, person-job fit and meaningfulness at work, has mainly focused on its consequences. By now, it is known that job crafting may, for example, increase employees' psychological capital and job resources, enhance meaningfulness at work, reduce exhaustion, and increase task performance, creativity, and contextual performance. However, much less is known about the antecedents of job crafting, and especially whether different types of employee well-being may affect whether and how employees craft their jobs. We assume that how employees feel at work has an impact on their behaviors at work.

#### Objectives



We integrated the circumplex model of affect (Russell, 1980) and the conservation of resources theory (Hobfoll, 1998) to hypothesize how various types of employee well-being, which can be differentiated on theoretical grounds (i.e., work engagement, job satisfaction, burnout, job boredom, and workaholism), may differently predict various job crafting behaviors (i.e., increasing structural and social resources and challenging demands, and decreasing hindering demands) and each other over time.

## Methods

We used two longitudinal datasets: Sample 1 comprised a four-year follow-up data on 1877 Finnish dentists and Sample 2 a three-year follow-up data on 2334 Finnish employees representing heterogeneous set of professions. In sample 1, well-being constructs (work engagement, job satisfaction, burnout, and workaholism) were measured in both 2010 and 2014, and the four dimensions (increasing structural and social resources, and increasing challenges and decreasing demands) of job crafting were measured only in 2014. In sample 2, both job crafting (three dimensions excluding decreasing demands) and different combination of well-being constructs (work engagement and job boredom) were measured both in 2011 and 2014. Structural equation modeling was employed.

## Results

The results showed that in sample 1: (1) work engagement positively predicted both types of increasing resources and challenging demands and negatively predicted decreasing hindering demands; (2) workaholism positively predicted increasing structural resources and challenging demands; (3) burnout positively predicted decreasing hindering demands and negatively predicted increasing structural resources, whereas (4) job satisfaction did not relate to job crafting over time. In sample 2 similarly: (5) work engagement at T1 predicted all job crafting dimensions at T2, but job boredom at T1 did not influence job crafting three years later.

## Conclusion/Practical implications

We distinguished four types of employee well-being based on two dimensions included in the circumplex model of affective well-being and expected resource investments vs. resource protection to investigate future job crafting behaviors: Depending on the level of employees' energy (high vs. low arousal) and valence (positive vs. negative) at work, work engagement, job satisfaction, workaholism, job boredom, and burnout lead to different job crafting behaviors over time. This study suggests that having engaged employees can be highly valuable for organizations, as these employees are most likely to be willing and capable of increasing their resources and also taking on new challenges in the future and they are more likely to cope with hindering demands too. On the other hand, many organizational surveys focus on job satisfaction with the aim to have satisfied employees. However, in this study job satisfaction (low to moderate level of arousal) did not have any unique contribution to job crafting in the future.

From a practical point of view, our findings suggest that for organizations striving for proactive employees, it may not be enough to merely provide opportunities for job crafting behaviors in general, as employees' well-being may determine whether and in what ways they will craft their

jobs. Therefore, organizations and managers should take into account individual differences in well-being, when encouraging employees to be more proactive and perhaps first to boost work engagement after which employees are energized to craft their own jobs.

All in all, next to the top-down initiatives for improving employee well-being and motivation, it is worthwhile investing in and encouraging bottom-up approaches such as job crafting.

## 6.03

### Antecedents of Daily Team Job Crafting

Anne Mäkikangas<sup>1</sup>, Arnold Bakker<sup>2</sup>, Wilmar Schaufeli<sup>3,4</sup>

<sup>1</sup>University of Jyväskylä, Jyväskylä, Finland, <sup>2</sup>Erasmus University Rotterdam, Rotterdam, The Netherlands, <sup>3</sup>Utrecht University, Utrecht, The Netherlands, <sup>4</sup>KU Leuven, Leuven, Belgium

**Introduction:** Job crafting – a process where employees self-initiate sculpting and altering their jobs and work experiences in personally meaningful ways – has typically been studied as an individual-level activity. The few studies conducted in team settings have been mainly focused on outcomes of team job crafting. The present study contributes to the literature by investigating a broad spectrum of potential antecedents of team job crafting. Specifically, we focus on the multilevel-nature of teamwork, including individual-, team-, and organizational-level antecedents of team job crafting that are known to facilitate successful teamwork.

**Objectives:** This study investigated potential antecedents of team job crafting defined as the extent to which team members together engage in increasing (social and structural) job resources and challenges, and decreasing hindering job demands. Based on the teamwork literature, we hypothesized that individual employee factors (self-efficacy for teamwork, daily affect), team features (team cohesion, climate), and the organizational context of teams (engaging leadership and organizational resources for teamwork) relate positively to daily team job crafting behavior.

**Methods:** Data were collected among 46 Finnish multiprofessional rehabilitation teams whose members (n = 119) filled in a quantitative diary twice after their weekly meetings. Most of these participants were women (75%). Mean sample age was 48 years (SD = 9.8, range 26–64) and the sample was highly educated, with 98% holding an academic degree. Mean team size was 4.28 (SD = 0.91). Multilevel regression modelling was used to investigate the relationship between antecedents and team job crafting at both the within and between levels.

**Results:** Main results showed that self-efficacy for teamwork and team members' positive affect were positively associated with team job crafting behavior at the individual (within-team) level. In addition, a team climate characterized by a clear vision of the teams' targets, supportiveness, and innovation and connecting leadership were positively related to daily team job crafting at both the within- and between-team levels of the data.

**Conclusion:** Overall, the study offers novel insights on the antecedents of teams' daily job crafting behaviors. For practice, the results suggest that actions and interventions that foster positive team processes offer the most promising route to enhancing team job crafting behavior.

## 6.04

### Job demands-control model and work-related well-being among hospital nurses: the role of job crafting

Alda Santos<sup>1,2</sup>, Maria José Chambel<sup>1</sup>, Filipa Castanheira<sup>3</sup>

<sup>1</sup>Faculty of Psychology - Universidade de Lisboa, Lisbon, Portugal, <sup>2</sup>School of Health Care - Polytechnic Institute of Setubal, Setubal, Portugal, <sup>3</sup>Nova School of Business and Economics - Universidade Nova de Lisboa, Lisbon, Portugal

#### Introduction

Nurses are the largest group of health care workers, having an important impact in the quality of care and patient safety. Therefore it is important to study the aspects related to their jobs that may affect their well-being. The Job Demands-Control Model has extensive evidence that the quantitative demands associated with the job and its control latitude impact employees' well-being. Also, job crafting has been considered an important variable connected to employees' work-related well-being, contributing to the motivational process associated with work engagement (i.e., the state characterized by vigour, dedication and absorption towards one's work) and buffering the strain process related to burnout (i.e., a syndrome that encompasses feelings of exhaustion and cynicism related to one's work).

#### Objectives

In this study we aim to research the relationships between job demands, job control, job crafting and work-related well-being. To our knowledge, this study is the first to investigate the relationships between these variables among hospital nurses. We expect that job demands show a negative relationship with work engagement and a positive relationship with burnout. We also expect that, inversely, job control shows positive relationships with work engagement and negative associations with burnout. We also hypothesize that job demands relate negatively to job crafting, while job control shows a positive association with this variable. We expect as well that job crafting shows positive relationships with work engagement and negative with burnout, and that it will play a mediating role in the relationships between job demands and control and the work-related well-being indicators.

#### Methods

Participants included 202 nurses from two public Portuguese hospitals. Data were collected using a survey available online and on paper. The survey included Portuguese translations, used in previous studies, of the following measures: job demands and control scales; short version of the Utrecht Work Engagement Questionnaire; the exhaustion and cynicism scales of the Maslach Burnout Inventory – General Survey. Also, job crafting was measured using a translation and adaptation into Portuguese of the increasing structural job resources and the increasing challenging job demands subscales of the job crafting scale developed by Tims and colleagues.

#### Results

Statistical procedures included multiple regressions. The hypotheses were partially supported. Job demands show negative relationships with work engagement and positive associations with exhaustion and cynicism; job control shows positive relationships with work engagement

and job crafting, while exhibiting negative relationships with burnout's dimensions. Job crafting is positively related to work engagement and negatively to burnout, and also shows a positive mediating effect in the relationship between job control and work engagement and a negative mediating effect between job control and burnout's dimensions of exhaustion and cynicism.

#### Conclusion/Practical implications

According to our results job demands show a direct relationship with work-related well-being but no significant association with job crafting. However, job control exhibits significant relationships with job crafting which, in turn, relates significantly to work-related well-being. Hospitals that foster opportunities for nurses to increase the control they have over their work and to craft their jobs (i.e., increase their structural job resources and challenging demands) are therefore contributing to the work-related well-being (i.e., higher levels of work engagement and lower levels of burnout) of their nursing workforce, which may reflect in the quality of care and patient safety.

#### Limitations

Longitudinal research is needed to further investigate the relationships between job demands and control, job crafting and work-related well-being. Also, these relationships should be researched with other populations.

## 6.05

### Can Participatory Art Project Enhance Job Crafting and Work Engagement?

Piia Seppälä, Heli Ansio, Pia Houni, Jari Hakanen

*Finnish Institute of Occupational Health, Helsinki, Finland*

#### Introduction

The national core curriculum in Finland is currently changing (National curriculum; Finnish national board of education). This ongoing reform has led to multidisciplinary and project-based classroom practices, which have required teachers to collaborate and develop new, innovative and multidisciplinary teaching methods. To date, some research evidence exists to show that participatory art (i.e., several people participating in the making of art) is related to improved quality of cooperation, increased interaction, learning new skills and becoming more creative and innovative at work (for an overview, Berthoin-Antal & Strauß, 2016). In addition, interacting with the arts has been related to widening and finding new perspectives to work tasks, seeing the work environment from a different standpoint, and to proactively making changes to work methods and utilizing new working practices. Furthermore, proactive, self-initiated changes that employees make to their own job conditions and characteristics, i.e., job crafting, have shown to support work engagement, a positive work-related state of mind (for a review, Bakker & Demerouti, 2016). However, to the best of our knowledge, no intervention studies have investigated whether it is possible to enhance job crafting and increase work engagement through a participatory art project. This study investigates whether a participatory art project can enhance teachers' job crafting and thus also increase work engagement.

#### Design and methods

This quasi-experimental two-wave intervention study was conducted during three one-month participatory art projects among teachers ( $n = 30$ ) working in five Finnish comprehensive schools. The teachers not involved in the art projects served as the control group ( $n = 37$ ). During the participatory art project, the teachers attended a two-hour visual art activity twice a week together with their pupils, which was led by two artists. Furthermore, teachers were encouraged to make use of visual art as a part of teaching during the average work day. Changes in job crafting and work engagement will be analyzed with repeated measures analyses of variance.

### Results

The participatory art projects were conducted during September–December 2016. The dataset will be complete at the end of January 2017.

### Conclusions

This intervention study explores whether a participatory art project can help teachers craft the design of their jobs to make their work more meaningful and engaging for them, while also crafting their work methods to reach the reformed work goals.

## 6.06

### Taking an overarching approach on job crafting in three Belgian studies.

Els Vanbelle<sup>1,2</sup>, Anja Van den Broeck<sup>2,3</sup>, Hans De Witte<sup>1,3</sup>

<sup>1</sup>KU Leuven, Leuven, Belgium, <sup>2</sup>KU Leuven, Leuven campus Brussels, Belgium, <sup>3</sup>North West University, Vanderbijlpark, South Africa

Over the past 15 years, job crafting has become a blossoming topic within the field of occupational health psychology. The extant literature advances our understanding on job crafting and emerging perspectives but also triggers intriguing questions to (be) tackle(d). In this contribution, we integrate and elaborate on the overall findings of three studies which were conducted in Belgium during my PhD research. We used data of three samples of Belgian employees that were collected through different types of studies, namely two cross-sectional studies (Study 1 & 3), and one daily diary study (Study 2). The overall aim of this contribution is to investigate both antecedents and consequences of an overarching approach of the job crafting construct (Study 1-3).

Building on extant job crafting streams, we conceptualize job crafting as the changes individual employees initiate to optimize their functioning in terms of well-being, work-related attitudes and behaviour. In response, we developed and validated an overarching job crafting scale (OJCS) in which we make abstraction of the specific changes employees make to their job and include the pro-self-focused purpose of these changes. The OJCS revealed to be a reliable and valid measurement to examine overall job crafting. We demonstrated construct validity, convergent and discriminant validity in relation to other validated job crafting scales (Slomp, & Vella-Brodrick, 2013; Tims, Bakker, & Derks, 2012), and predictive and incremental validity in relation to well-being and motivation.

In this contribution, we aim to investigate both antecedents and consequences of our overall job crafting construct by means of three studies. In Study 1, we found that both autonomy

and workload, characteristics of an active work environment, positively related job crafting and indirectly associated with the willingness to continue working until retirement age.

In Study 2, we investigated within-personal level relationships and found that daily fluctuations in both positive and negative active emotions positively related to daily fluctuations in job crafting, which in turn related to daily person-job fit. In addition, personal growth initiative, a more general personal resource, positively related to job crafting both in a direct way and in interaction with active emotions.

In Study 3, we turned things around and tackled the question whether and when employees running at risk of burnout engage in job crafting. We found significant relationships for two of the three components of burnout in relation to job crafting. Emotional exhaustion related to job crafting in a curvilinear way and showed a sharper increase in job crafting when moving from low to medium emotional exhaustion. Above a certain level, however, this relationship flattened. Personal accomplishment positively related to job crafting. Servant leadership demonstrated a boosting effect of the relationships from emotional exhaustion and personal accomplishment, to job crafting. It seemed like servant leaders help employees at risk of emotional exhaustion to translate their energy into job crafting. Above a certain level of emotional exhaustion, however, the effect of servant leadership diminishes. In addition, servant leadership boosts the positive relationship between personal accomplishment and job crafting. At low levels of personal accomplishment, a possible indication of employees at risk for burnout, servant leadership does not make a difference in relation to job crafting. No significant results were found for cynicism.

In all, our findings revealed that contextual as well as personal factors play a role in stimulating overall job crafting (Study 1-3). In addition, job crafting positively related to the willingness to continue work until retirement age (Study 1) and daily person-job fit (Study 2). We discuss the overall findings of the three studies in the light of the extant job crafting literature and in terms of implications for theory, methodology and practice.

## 7. LABOUR MARKETS AND LABOUR POLICIES

### 7.01

#### Re-skilling Workers for the Digital Future. The Case of Ageing Workers in Europe

Adele Bianco

University D'Annunzio, Chieti-Pescara Abruzzo, Italy

Work is undergoing technological and organizational innovations driven by digitization (Industry 4.0), the so called Fourth Industrial Revolution (Schwab 2016). These innovations make possible to achieve higher levels of economic productivity and to implement the Sustainable Development Goals (ILO 2016). The issue is particularly sensitive, because of the coming impact of technological innovation on employment.

The digital future of work faces different questions. The first question concerns the impact on



employment in terms of job loss and the consequential intensified risks of social unrest (Frey, Osborne 2013). The second question concerns the need to shape and prepare the workforce for the new jobs of tomorrow, also avoiding and preventing a probable “skills mismatch” (ILO 2010).

The literature distinguishes two trends referred to this point. The first trend is the upgrading, i.e. a general improvement of the skill content (Hirsch-Kreinsen et al., 2015, pp. 15 ff.). The upgrading means also that skill content will be increasingly characterized by knowledge. Consequently the worker 4.0 will probably be no more just a mechanical expert but a system operator. This allows him/her to address adequately production processes, to solve problems, to avoid the trap of the “ironies of automation” (Bainbridge 1983).

The second trend is the polarization between high- and low-skills qualifications. Many low-skills jobs could be performed by machines (Abel et al. 2014; Ittermann 2014, pp. 27-40; Hirsch-Kreinsen 2014). The polarization process threatens the middle-skills qualifications, particularly in the service sector. In fact, the technological innovation driven by digitization reduces the role of the today specialized workers (Collins, 2013, pp. 37 ff. Kinkel et al. 2008). That means that the middle-skill jobs are directly in competition with the new system, that ensures better performance and makes them obsolete. Moreover, this kind of qualifications are usually carried out by members of the middle class.

In this context, it is easy to understand why it is extremely important to equip people to stay ahead of technological change. Appropriate training and re-skilling programs are long-term investment. This is the reason why it has to be paid attention particularly on educational, training and re-skilling programs in favor of both of young and old workers. Two kinds of skills should be particularly encouraged in the digital future of work: a) the “scientific literacy” (PIACC and ALL, OECD) and b) the social skills. Improving the first means to implement the knowledge and the understanding of scientific concepts and processes, to develop the ability to engage with science-related issues (PISA 2015). The social skills are also important for the future of digital work. In spite of the advancements of Artificial Intelligence, computers are still very poor at simulating human interaction. Human interaction in the workplace involves production team, allows the adaptation and the flexibility to changing circumstances. It is the key factor of the human advantage over machines (Deming 2016).

The second problem to be taken into consideration is that – particularly in Europe – this cluster of radical and incremental innovations is likely to be realized with an army of gray-haired workers. It will be therefore necessary policies aimed at re-skilling, especially for older workers, saving at the same time their social skills, i. e. their ability to interact at the workplace. From this point of view, the permanent training will acquire an unprecedented role in the history of work.

Other measures will be added in the future, related e. g. to pension systems. In many European countries - especially those with “pay as you go” systems as in Italy - the retirement age increased at has been in many countries. In others, such as Germany, it will be in the coming years. There will be resistance and difficulties. The aim of this paper is to compare the active employment policies towards older workers, undertaken or planned in two countries, Italy and Germany, particularly involved in stimulation programs of the so-called “Industry 4.0.” Particular attention will be given to the recommendations of the European Union and OECD.

## 7.02

### Structure and dynamics of chronic unemployment in Denmark, Finland and Germany

Simo Aho<sup>1</sup>, Regina Konle-Seidl<sup>2</sup>, Thomas Rhein<sup>2</sup>, Thomas Rothe<sup>2</sup>, Iben Norup<sup>3</sup>

<sup>1</sup>University of Tampere, Tampere, Finland, <sup>2</sup>IAB, Nürnberg, Germany, <sup>3</sup>Aalborg universitet, Aalborg, Denmark

Widespread and persistent long-term and/or recurrent unemployment is a serious social problem as well as an expensive economic burden for the welfare state. It is a continuous concern of policy makers.

This paper starts with the observation that conventional statistics do not adequately reveal how widespread long-term exclusion from regular, genuinely market-based employment actually is. After the interruption of individual unemployment spells by e.g. participation in active labour market policy (ALMP) measures, short casual employment, or periods outside labour force because of illness, family reasons or education unemployment often continues, and the statistics do not grasp the actual length of the individual problem of being without a “real” job. Our concept of “*chronic unemployment*” (CU) assesses the share of people with weak links to the open labour market, although belonging to the labour force.

We compare three countries: Denmark, Finland and Germany. This allows comparison of the incidence and dynamics of CU against the background of varying labour market institutions like the social security system, ALMP, and employment protection legislation.

Our main questions are:

1. Is “chronic unemployment” a common feature of post-industrial labour markets and advanced welfare states, or are there clear differences in scope and dynamics of “chronic unemployment” across the countries under scrutiny? If so, how can they be explained?
2. Can activation/ALMP affect the dynamics (inflow, duration and outflow) and prevalence of CU or is ALMP rather a means to adjust into structural unemployment?

Our study is based on extensive and rich longitudinal register data sets, including detailed information on individual labour market histories, allowing long follow up periods of individuals. The data is fairly well comparable between the three countries.

The first comparative empirical results are presented at the conference.

## 7.03

### Intergenerational relationships in the labour market

Vanessa Beck, Glynne Williams

University of Leicester, Leicester, UK

Although intergenerational relationships have been discussed as a concern, e.g. in relation to intergenerational conflict or transfers, these issues are less likely to be linked to employment

and the labour market as a whole. This is despite the fact that, depending on sector and occupation, employment is an arena where intergenerational relationships tend to be common. Rather than blaming the baby boomer generation for youth unemployment, for example, there is evidence to suggest that higher employment of older workers tends to coincide with lower youth unemployment.

This paper addresses three issues. First, based, among others, on the literature on age-diverse workplaces, it critiques the way in which the term 'generations' is utilised to imply associations and characteristics with particular age groups. Second, it discusses the limited and rather unhelpful literature on intergenerational relations in the labour market which is often based on the 'lump of labour' approach or fallacy. Thirdly and finally, it draws on qualitative data from a comparative European project in which examples of intergenerational bargaining were explored. The main argument is that rather than attempting to implement special schemes and approaches, it is more important to consider the everyday reality and quality of working life where workers of different generations meet and collaborate.

#### 7.04

##### **The minimum wage effect of presidential “May” decrees on salaries in Russian universities**

Anna Elkina

*Volgograd State University, Volgograd, Russia*

In May 2012 there were a series of decrees issued by the President of the Russian Federation aimed at increasing public sector salaries by 2018. Decree 597 mandated that government facilitate the increase of real average salaries by 1.4-1.5 times and the increase of average salaries for university teachers, so that they would reach 200% of the average salary in their respective region. In 2012 these targets seemed achievable from 2001 to 2012, when the average annual increase of real wages in Russia was 11% in all sectors and 14% in the educational sector.

However, from 2013 Russian economy began to underperform relative to the 2000s, which renders these goals very difficult to reach. However, as the presidential decree has not been countermanded, it is incumbent on government and the higher education sector to continue to work towards its implementation.

The aims determined by the “May” Decrees could have familiar consequences on the public sector to those of a rising minimum wage on the economy as a whole. The issue of determining the correct level for a minimum wage is one of the most contested in economics. Proponents of a higher minimum wage level state that it increases incomes and so boosts economic growth, while opponents argue that increases in the minimum wage increase unemployment, either overall or for certain specific groups.

As for the higher education sector in Russia generally, salaries need to be increased, but it is still unclear if universities have the resources and potential to make that happen, and if the end justifies the means.

Therefore, the following research questions will be addressed:

- Is there a tendency for the salaries of university teachers to rise, and will any rises be sufficient to meet the presidential decree targets by 2018?

- Are there reductions correlated to salary changes?

To answer the above stated questions:

- a database of regionally (82 regions) aggregated indicators of public universities was formed, including such indicators as the amount of money spent on salaries for university teaching staff, the number of university teachers, the number of students, and overall university spending classified by sources as well as some broader indicators such as the regional average salary in all sectors, the gross regional product, and others.

- a relative increase in every indicator in every region in 2014 and 2015 was calculated.

- the Pearson's correlation coefficients between a relative increase in university teachers' salaries and relative increases in the above mentioned indicators were also calculated.

In 2014 there was a relative increase in both nominal and real salaries of university teachers almost in all regions of Russia. However, there was just nominal increase in 2015. Increase in average salaries for all sector was tiny, so the university teachers' salary managed to rise from 132 (2013) to 144% (2015) of the average salary in the respective region. Though regional average salaries and regional university teachers' average salaries are highly correlated (0.93), their relative increases in 2014 and 2015 did not correlate at all (-0.01). So, there were hardly significant regional labour market factors that could determine increase in teachers' salaries.

In 2014 the increase in amount of money from the federal government slightly correlated (0.22) to a relative increase in university teachers' salary; however, in 2015 there was a cut of financing from the federal government, so the correlation coefficient was negative and insignificant meaning that university had to find other ways to raise teachers' salaries.

The number of university teachers was reduced on average by 7 (2014) and 12 (2015)%. The reduction was partly due to a decrease in number of students; however, in 2015 the rate of decrease in number of university teachers was higher than the rate of decrease in the number of students. The correlation between a relative increase in university teachers' salaries and a relative increase in number of teachers rose from -0.19 to -0.33. Moreover, university teachers from the youngest and the least paid group of Assistants and Senior Lecturers were 2-3 times more likely to be fired in 2014 and 2015 compared to better paid Associate and Full Professors.

Both in 2014 and 2015 there was a considerable rise in university fees that exceeded the consumer price index. Amount of money provided by households increased in 2014 and slightly decreased in 2015 much less than the number of students.

By 2018 university teachers' salaries in Russia are to due to reach the aims stated in the Presidential Decree, because it is the year of the next President election. At the same time there is not currently enough money to finance the rise in salaries in prevailing conditions of an economic slowdown. Thus, the behaviour of universities resembles the behaviour of firms when they are forced to increase minimum wage – they cut the teaching staff (mostly young) and increase fees.

## 8. LEADERSHIP, WORK AND INNOVATION

### 8.01

#### **The effect of transformational leadership on employees during organizational change – An empirical analysis**

Stefanie Faupel, Stefan Süß

*Heinrich Heine University, Düsseldorf, Germany*

Due to developments such as digitization, globalization and demographic change organizations have to undertake continuous changes in order to stay competitive. Hence, organizations initiate processes of change such as adapting (new) strategies, adjusting structures, or implementing new or more flexible forms of employment. Many organizational changes have in common, however, that defined objectives are not reached. While there are multiple reasons for the low success rates of organizational change efforts, scholars largely agree that involved actors are crucial in affecting the results of organizational changes (Oreg, Vakola, & Armenakis, 2011). In particular, employee support has been found to be central for the success of different types of organizational changes. Ultimately, it is employees' knowledge, their attitudes and their behavior that determine the progress of a change effort.

Transformational leadership has been found to affect employees' reactions to organizational changes. For example, transformational leaders positively affect employees' attitudes towards change. Thus, transformational leaders also have an important impact on the success of a change initiative by influencing employees' reactions to it. Although researchers know about the positive motivational influence of transformational leadership during organizational change there is a need to understand the mechanisms underlying the relationship between transformational leadership and employees' reactions to change (Kark & Van Dijk, 2007). Transformational leadership usually does not serve as full explanation of relationships – rather mediating (and moderating) variables explain effects. However, little is known about how transformational leadership shapes employees' reactions to organizational change. An investigation of this question is relevant for three reasons.

First, in line with the social information processing theory the organizational context in which employees are embedded influences their attitudes and behavior (Salancik & Pfeffer, 1978). Thus, it is relevant to explore how transformational leaders as part of the organizational context affect employees' reactions during organizational change (Chou, 2015).

Second, under normal working conditions, work engagement has already been shown to function as mediator between transformational leadership and employee behavior. However, there are also investigations that reveal inconsistent and sometimes contradictory findings. Furthermore, the link between transformational leadership, work engagement, and behavior has not been tested in a change context, yet. This comparatively scarce knowledge is surprising because work engagement can especially be fostered in work environments with high demands such as in change processes. In addition, work engagement is contagious and may therefore be of great importance during change efforts (Van den Heuvel, Demerouti, Bakker, & Schaufeli, 2010).

Third, one of the preconditions for showing supportive behavior during organizational change is that employees expect a benefit of the change – also called valence (Oreg et al., 2011).

Transformational leaders are able to communicate benefits of an organizational change. First evidence that valence can serve as underlying variable explaining relationships already exists. Nevertheless, research is expandable in this regard. Although transformational leadership and valence have been associated with change supportive employee behavior (Chou, 2015), the mechanism explaining the increase of valence through transformational leadership and thus evoking change supportive employee behavior has not been tested so far.

Against this background, the aim of the study is to analyze the relationship between transformational leadership and change supportive employee behavior mediated by work engagement and valence.

Survey data was collected between August and December 2016. A second survey wave is planned. Participants were employees involved in a change process in their organizations. The final sample of the first survey wave consists of 319 employees of whom 50.8 per cent are women. Data collection was not restricted to one specific type of organizational change. However, the type of organizational change was measured. Participants' age varied between 19-29 (33.2%), 30-39 (23.5%), 40-49 (22.9%), 50-59 (19.1%) and over 60 (1.3%). Established scales were used for data collection of independent, dependent and control variables. Structural equation modeling is used for analysis. First viewing of results suggests that work engagement and valence are important aspects that help explain effects of transformational leadership on employees' behavioral support during organizational change.

### 8.02

#### **The multiple dimensions of leadership in the digital business transformation**

Riitta-Liisa Larjovuori, Laura Bordi, Sanna Nuutinen, Kirsi Heikkilä-Tammi

*University of Tampere, Tampere, Finland*

#### **Objective**

Leadership is in a crucial role in renewing and developing businesses and organisations. During recent years, digital business transformation has gained attention as a new kind of leadership challenge. The transformation in organisations' value-creation and operational logics, that the digitalisation entails, can also be considered as an organisational innovation. However, the research focusing on the role and manifestation of leadership in the context of digitalisation is considered to be in its infancy. It has been recognized in the previous research, that successful digitalisation requires strategic leadership; e.g. setting a clear vision and communicating it, developing digital skills and involving every member in the discussion on the organisation's digital future. Moreover, supportive and empowering first-line management has been considered important in organization change processes. A notion can be made that the connections between the multiple dimensions and roles of leadership and management is an area that requires additional research.

Previous work on leadership has differentiated e.g. between levels of individual, dyadic, group and organisational level in leadership behavior, as well as created a hierarchical taxonomy of leadership behavior (Yukl 2002). We assume that it would be useful to examine the dimensions of leadership in the context of digital transformation in organisations. Drawing from the before-



mentioned previous research, the objective of the proposed presentation is to analyse the multiple dimensions of leadership required and demonstrated in digital business transformation in the empirical qualitative data. The purpose is also to examine the relationship between the recognized dimensions of leadership; e.g. strategic level leadership, development-oriented and human resource-centered leadership and immediate supervision addressed to individuals and teams.

#### **Data**

The research data consists of 48 semi-structured interviews representing various business areas (e.g. top management, marketing, service development, IT and human resources). The managers interviewed represent eight Finnish organisations, including two public sector organisations and six private companies. All organisations operate in the service sector and consider digital business and digital service development as their key development areas. The data was collected as part of the Tekes-funded research project Usco – Using Digital Co-Creation for Business Development. The interviews were conducted in 2016 by researchers from the University of Tampere and Laurea University of Applied Sciences.

The main theme of the interviews was the phenomenon of digitalisation and what it means in practice in each organisation. Moreover, well-being at work, leadership, organizational culture, service development, open innovation and co-creational practices were examined in terms of how they are related to digital business transformation in each organisation.

#### **Methodology**

We propose a research approach in which we utilise qualitative content analysis of the interview data in order to recognize, how the informants address leadership in relation to the digital business transformation. The data is analysed in order to recognize how the leadership is manifested in digital business transformation, e.g. what kind of leadership behavior, style and focus is considered to promote digitalisation. As a result of the content analysis, a theoretical framework is outlined and reflected to the existing models and previous research findings.

#### **Key findings and conclusions**

The existing leadership theories and models of e.g. servant and empowering leadership as well as the emerging research on the strategic leadership of digitalisation already provide useful elements in understanding and developing leadership skills and strategies. We assume that in order to clarify the role and the functions of leadership in the organisations' digital transformation, an integrative multi-level examination would be useful from both research and managerial perspectives. We see that this kind of framework development is a timely and useful effort. The anticipated further research opportunities include testing the created framework with quantitative methods in order to validate it and test it in different organisational and industrial settings.

#### **8.03**

#### **Efforts and rewards mediate the positive relationship between leader-member exchange and work engagement**

Jussi Tanskanen

*University of Vaasa, Vaasa, Finland*

Good leadership and relationship with one's supervisor are important factors regarding employee's work related well-being and motivation. Leader-member exchange (LMX) theory concentrates on the unique dyadic relationships between leader and followers and LMX influences to the work attitudes and behaviours of the followers. Consistent research evidence links high quality LMX relationships to the range of positive employee outcomes, but the studies about mechanisms explaining the connections have remained scarce. Effort-reward imbalance (ERI) model states that work stress will emerge in a situation where employees do not gain rewards to compensate the efforts they are putting in work. This study however do not focus on the stress but on the positive side of work related well-being by examining work engagement, which is most often defined as an active and positive work-related state characterized by vigor, dedication and absorption.

This study arguments that employees in high quality LMX relationships receive more resources, rewards and support from supervisor to overcome the efforts and demands of the job, which will lead to enhanced work engagement. Thus, based on leader-member exchange theory and effort-reward imbalance model this study examines whether the employees' perceptions of efforts and rewards mediate the connection between leader-member exchange (LMX) and three dimensions of work engagement (vigor, dedication and absorption).

A Finnish sample (M=1701) collected from multiple service sector organizations between 2011 and 2012 was analyzed utilizing multilevel structural equation modelling (MSEM). The results revealed that high quality LMX relationships were connected with experiences of lower efforts and higher rewards, which in turn partially mediated the positive relationship between LMX and work engagement. Rewards had positive connections with vigor, dedication and absorption while efforts had negative relationship with vigor and positive connection with dedication and absorption. There was no significant interaction effect between efforts and rewards on work engagement.

The study contributes to the literature by showing that leadership and good relations with supervisor can improve the effort-reward imbalance by decreasing the efforts and generating the rewards. Rewards partially mediated the positive relationship between LMX and work engagement. Efforts had a negative effect on vigor, but efforts had also a bright side because they enhanced employee dedication and absorption.

## 8.04

**Diverse and Innovative Compensation Policy Strengthens Leadership and Creates Well-Being in Work Places**

Riitta Forsten-Astikainen, Pia Heilmann

*Lappeenranta University of Technology, Lappeenranta, Finland*

Many fields in the SME sector suffer from a lack of skilled labor. There are several reasons for that: the industry does not attract young people, employee turnover is high, the image in many industries is old fashioned or the sector is so called low-wage sector. In order to be competitive the company must provide something that would strengthen the individual's willingness to engage with it (Kahn, 1990, 1992). One tool to prevent that development is to use new kind of compensation policy that is based on the employee's authentic needs and commitment to company's values, vision and strategy (Buckingham & Coffman, 1999). Kauhanen (2015) presents different compensation models: base pay, piece work pay, performance-related pay, options, fringe benefits, career and social benefits. We argue, that there is a need for more tailored compensation practices in SMEs.

Compensation is not only money. Employee compensation and incentives includes all forms of pay or rewards going to employees and arising from their employment (Dessler, 2017; Torrington et al. 2011). Actions for increasing physical and mental well-being in work have recently increased. We interviewed twenty CEOs and managers in six companies for this paper.

The aim of the study is to analyze and describe the new kind of innovative compensation tools and ways how those effect on employees' daily performance and attitudes in their work place. The engagement through the firm's compensation practices will be utilized by the done research. The research questions related to compensation and engagement are: 1) what are the innovative forms of compensation in your company and 2) what kind of compensation portfolio is used?

We found a number of examples of innovative compensation models: expanded occupational health service with physical therapy, free massages during work hours, free tools and equipment for promotion of physical wellbeing, and physical activities that are available during the day. Positive and negative feedback boards in workplaces, free fruits and vegetables and small loans from employer to employees seemed to be the most popular ways to compensate and commit employees. Feedback from customers through the "Greetings from our customers" board caused even positive competition to receive the "good and customer oriented" employee status and created the positive atmosphere in workplace. *"It surprised me that they even started to compete with each other for whose input receives today the customers' thanks!"* (CEO, service sector).

Small employee loans are used in several big companies as employee benefits but the practice occurs only in few SMEs. Companies with good financial standing have noticed the loans as a good compensation tool, especially if a company has troubles to get a skilled labor. In fact, the loans are even lifelines in companies employing immigrants. It is often impossible for them to get loans from banks. Work can be mobile, for example, in cleaning branch or nursing service where the employee needs a driving license and a car. However, it is not very cost-effective for a company to own cars. So, the company can finance employee's costs in purchasing an own car. The car can then be used also in work. *"Our company would not have opportunities to grow*

*and recruit new labor if we do not offer them possibility for a loan."*(CEO, service sector).

Also trust was top-rated: monitoring of working hours was based on individual's conscience without supervision. *"We trust to our employees. We don't monitor the work times. The employee uses his/her own conscience and excel, that is enough."* /Service manager, ICT sector).

It is important where the CEO's and managers work spaces are located. Especially if the CEO's room was situated near the employees' ones and was along the route, the employees did not feel that the CEO was distant but intermediary and dependable. This phenomenon has effect to organization's culture, openness and trust. *"My previous room was far away from this space, on the second floor. I got feedback that even though I'm at workplace so I do not have attend because I cannot be seen. Thus, I organized my location; now everyone can see me all the time and they are happy!"* (CEO, service sector).

Based on the study the innovative compensation exist in manager's mind, imagination and attitudes. Agile compensation practices can be used in finding new ways to implement company-specific compensation templates which are innovative and anchored to business strategic objectives. The compensation is a very powerful tool among HR practices. However, the compensation practices and models must be actively manage too. The companies, which used new kinds of compensation models, used also the portfolio that included a very varied forms of compensation. Several discussion with managers confirmed the propositions that diverse compensation tools generate job satisfaction, commitment and wellbeing in work place.

## 8.05

**Promoting adoption of digital innovations in social and welfare services by culture of experimentation**

Heli Talja, Marja Harjumaa, Jaakko Lähteenmäki, Johanna Leväsluoto

*VTT Technical Research Centre of Finland Ltd., Espoo, Finland*

Due to the demographic development, i.e. fast aging of the Finnish population in the coming decades, ensuring equal availability of basic services throughout the sparsely populated country and citizens' increased expectations make it mandatory to find new solutions that improve cost-efficiency of the services without compromising quality. One central goal in the elderly care is to decrease institutional care, which leads to increasing need for homecare services. From the service personnel's perspective, it means changes in working environment: autonomous work is being conducted in home-environments, which are not designed for effective care work, and there are only few possibilities for teamwork. This has consequences on employee safety and nurses' health and wellbeing at the workplace. The potential of digital tools in solving these problems is still widely unexploited.

In the project "Culture of experimentation in the changing social and welfare sector - digital innovations into active use", we aimed at outlining a three-level model for supporting the transformation of social and welfare services by active adaptation of new digital tools. The project was conducted as part of the implementation of the Finnish Government Plan for Analysis, Assessment and Research for 2015 ([www.vn.fi/teas](http://www.vn.fi/teas)). Our model covers the perspectives of the national level, individual citizens and - as a central part - the organizations providing and developing services and digital tools for them.

For refining the model and understanding its interdependencies, we collected data by interviewing people from all the three levels (in total 25 interviews with experts and citizens, chosen to provide a multi-perspective view on our research topic). We applied content analysis to clarify how the current state of experimentation is in developing the Finnish social and welfare services and to identify features supporting and hindering it.

Our findings show that the conception of experimentation is quite vague. For example, interviewees from different organizations considered various kinds of innovation activities as experiments, ranging from small changes in service process to randomized controlled trials. Based on our data, the perceived characteristics of culture of experimentation can be grouped into three categories:

- 1) impact: aiming at permanent changes,
- 2) innovativeness: taking risks and trying out something really new and
- 3) agility: performing small-size experiments with low administration.

We identified several enablers of culture of experimentation, such as future national infrastructures for social and welfare services, adequate maturity of the technology, collaboration within organizations, collaboration between public and third sector organizations and private companies, management's positive attitude toward experiments, perceived benefits by the personnel and scaling experiments inside an organisation. However, our data also revealed several barriers, such as elder citizens' inadequate ability to utilize digital tools, fear of mistakes in procurement processes, incompatibility of technologies, desire to develop own solutions everywhere, instead of using already existing solutions, negative experiences from earlier experiments, lack of managerial support, and lack of resources to conduct the experiments properly.

As main results, we defined principles and practical recommendations for promoting productive culture of experimentation. The principles represent dynamic dimensions that require balancing between seemingly contradictory goals. Impact assessments shall comprise both economical aspects and added value from the citizen's perspective, existing knowledge and experience must be fully exploited while looking for innovativeness and the free agile experimentation should be enacted within collectively agreed limits and rules.

Promoting culture of experimentation requires contribution from all three levels. From the national level, appropriate legislation, guidance and national infrastructure for provision of digital social and welfare services are expected. The national level should not restrict experiments, but in contrast support them and disseminate information on successful and unsuccessful cases. Organizations are responsible for creating and evaluating new ideas within the limits of their strategic choices, conducting the experiments and making decisions to adopt or reject digital innovations. They also should openly distribute information on their innovations, practices and experience from the development processes. Citizens' role is to actively participate in experiments by producing new ideas, testing and using new digital innovations and giving feedback on the perceived added value (e.g. user experience, usefulness or effectiveness) of the service.

Of vital importance in developing social and welfare services is that the necessary technological and organizational innovations are being developed together. This requires open-minded collaboration across many boundaries. All the three levels of our models shall be engaged in the action. People from different levels of organizational hierarchies and different educational

backgrounds need to work together. Our data contains interesting examples on how this kind of dialogue can be facilitated by creating special work roles or designated organizations for this purpose.

We see adoption of culture of experimentation as a big mindset transformation: it requires rejecting the familiar planning culture and hierarchical management model and stepping into systemic thinking. This for its part calls for new kind of agency and leadership at all the three levels of our model.

## 8.06

### What Does HR Really Do? A Social Influence Perspective on the Everyday Work of HR Managers

Jennie Sumelius<sup>1</sup>, Hertta Vuorenmaa<sup>2</sup>, Adam Smale<sup>1</sup>

<sup>1</sup>University of Vaasa, Vaasa, Finland, <sup>2</sup>Aalto University School of Business, Helsinki, Finland

The role and agency of HRM 'practitioners', including both individual actors and HR departments as collective actors, have thus far been largely absent from the HRM-performance literature (Hope-Hailey et al., 2005; Wright & McMahan, 2011). Instead, the main body of work in this area has been dedicated to understanding the different roles and activities the HR function is expected to play, incorporated into various HR role typologies (e.g. Storey, 1992; Caldwell, 2003; Ulrich et al., 2008). Whilst typologies provide us with a broad understanding of HR work domains, they are not particularly fine-grained and tend to downplay the 'realities' (Welch & Welch, 2012) and contradictions (Galang & Osman, 2016) that HR departments and professionals face, for example role tensions (Sheehan et al., 2014) and competing stakeholder interests (O'Brien & Linehan, 2014). We thus currently know much more about the espoused roles of the HR department as a collective actor than the everyday practices that HR professionals engage in 'on the ground' as individual actors when enacting their roles (Truss et al., 2002; Francis & Keegan, 2006; Rupidara & McGraw, 2011). What do they really spend their working time on? How do they get things done? And why do they do things the way they do?

A central issue influencing the work of HR in the organization is that while they are typically responsible for the design of HRM practices and processes, the same cannot be said of implementation. The quality of implementation and its effect on organizational and employee outcomes generally rest on top and line management (Purcell & Hutchinson, 2007; Sikora & Ferris, 2014; Shipton et al., 2016). However, HR typically has no position-based authority over line managers, meaning that HR professionals, in order to ensure high-quality HRM implementation, must therefore influence managers at different levels – how they think, act and make decisions about people issues (Trullen et al., 2016). This is not a simple task, and puts HR in a difficult position where it has to find ways to exert influence without authority. The situation is further complicated by HR's generally low status in organizations. Indeed, HR is a function that tends to provoke criticism, resentment, and unpopularity (Sparrow, Hird & Cooper, 2015). These tensions thus raise interesting questions related to what kinds of social influence tactics HR professionals use (Ferris et al., 2002, 2007; Galang & Ferris, 1997), and how various personal, relational, and contextual factors enhance and inhibit the effectiveness of HR professionals' attempts at social influence over managers (e.g. Aldrich et al., 2015).



In light of the above, we argue that there is a need to enhance our knowledge about the kinds of activities individual HR actors engage in, why, and with what consequences. One can argue that this is increasingly important since the ongoing changes in the nature of work, and economic pressures, place people and the way they are managed in the spotlight. We examine what HR actors actually do during their daily work, with a particular focus on the kind of activities they engage in. We examine these activities from three different perspectives: time (i.e. on which kinds of activities individual HR practitioners spend their time), assigned importance (i.e. which people, resources and activities HR actors prioritize in their everyday work), and conduits (i.e. through which means HR actors seek to exert influence).

Our qualitative data set includes 60 qualitative interviews conducted amongst a cross-section of managers and professionals as well as the HR manager in a medium-sized Finnish company in the IT sector. The interviews are complemented by participant observation in weekly HR team meetings, two corporate HR people days and one induction day for new employees.

The main intended contribution of the paper is to shed light on the interplay between role enactment/agency and other individual, relational and contextual factors, and how these factors have an impact on the organizational influence of the HR function and the individual HR professionals. By providing a more fine-grained understanding of the everyday work and role enactment of the HR professionals, we thus offer a glimpse of the missing part of the HR puzzle. Pairing qualitative interviews with ethnographic elements also enables us to shed light on the details of the case organization that would otherwise remain unrevealed. Whilst this is no “true tale” of what goes on in the everyday life of HR, we argue that *‘no understanding of a world is valid without representation of those members’ voices’* (Agar, 1996: 27), and that this kind of approach serves as an entry point into the everyday reality of the case organization and to the everyday working life of the HR actors operating within it.

## 8.07

### Leading Production and Innovation

Simon Elvnäs<sup>1</sup>, Annika Engström<sup>2</sup>, Ned Carter<sup>3</sup>

<sup>1</sup>Royal Institute of Technology, Stockholm, Sweden, <sup>2</sup>Jönköping University, Jönköping, Sweden,

<sup>3</sup>Swedish Association of Local Authorities and Regions, Stockholm, Sweden

#### Introduction

Both production and innovation require leadership and studies of leadership conclude that leadership has a crucial impact upon motivation and work performance among subordinated co-workers. While studies propose that leaders should attend to, encourage, reflect and coach others, there is a gap between the conceptual description of leadership and the knowledge concerning the details of the actual performance. Studies of leaders self-awareness have shown, since the beginning of the previous century, that leaders are not aware of the details of how to carry out their daily activities in order to get desired impact and neither are they innately capable of perceiving and evaluating their own or others performance at work. Recent studies also show that leaders are event driven and unable to plan, reflect and structure their work due to lack of time. We may ask questions about leadership and we may describe it in several ways but we may still not know so much what leaders actually do and what effects it has and this may also include our perception of leadership towards increased innovation.

#### Objectives

Our aim is to describe leadership, work and innovation from two perspectives, both a behavior observational perspective on how leaders perform leadership and a theoretical framework based on ambidexterity -the complex balance between production (exploitation) and innovation (exploration). The intention is to examine leadership as it occurs in both production and innovation in order to determine more specifically what behaviors are involved in these contexts. The results can be used to assist leaders in acting in a manner that can improve both production and innovation.

#### Methods

Repeated observations were made of supervisors carrying out their daily tasks in occupational settings. Each observational session was recorded on video and each recording was coded and categorized off-site to clearly show the frequency and appearance of significant supervisory behavior. Coded material was aggregated into diagrams to show levels of performed supervisory behavior in specific production or innovation situations. The material was analyzed with the theoretical framework from ambidexterity to see how and in which way the leaders changed their performance due to the specific behavior of the subordinate and if it was possible to identify change in relation to production or innovation contexts.

#### Results

An established scientific method for observing and categorizing supervisory behavior was used to analyze the video recordings. In this study, we aimed to apply this method to clarify how leadership must be specifically altered to have an enhanced effect on production and innovation. Using this taxonomy for analyzing supervisor behavior, it has been repeatedly demonstrated that effective supervisory behavior contains series of cycles with Monitoring-Own performance- Feedback and Instructions. The cycles have been shown to be critical and fundamental supervisory behavior in order to stimulate motivation and performance among employees. An additional two behaviors were shown to be especially crucial, Monitoring and Work Related invited, to increase participation in order to invite subordinates in reasoning and trouble shooting. In the present study, we were unable to note an increased number of these crucial supervisory behaviors in contexts where leaders desired to increase innovation among the subordinate co-workers.

#### Conclusion

The results confirm the findings that leaders do not behave in a manner that would be more likely to assist them in attaining their intended goals of influencing subordinate behaviour. The study demonstrates that it is possible to identify the occurrence of crucial supervisory behaviour in dynamic, real-life settings. The results can then serve as a basis for specific descriptions and training for supervisors so that their own performance is consistent with their goals for both production and innovation. If leaders are to improve production and innovation in our work places without a deeper understanding of how and what to change in their performance at a detailed behavioural level, they will risk spending more time with even less desired output. Training tomorrow's leaders in handling the processes involved in leading production and innovation will require profound knowledge and thoroughness in describing to leaders what to do, when to do it, how and how often in addition to an understanding of why their own performance influences employee motivation and performance.

In order to stimulate and enhance innovation in work places and among subordinate co-workers

leaders are seen to be essential. What leaders are obliged to do can specifically be described from the results of behavioural studies towards increased motivation and performance among subordinated co-workers but is more likely to be left aside. While generating new perceptions and directions for leadership one always asks for more clear and specific instructions for leaders what to actually do to achieve the desired effect. Innovation might be yet another conceptual description for leaders to achieve without providing them with clear and specific descriptions on how to change their performance in order to get the desired effect. Once more we ask leaders to do more and get less done.

## 8.08

### The use of nonverbal communication to enhance the composition of teams in the workplace

Ülli Kukumägi

*Estonian Business School, Tallinn, Estonia*

**Introduction.** The composition of best performance teams is a crucial question for every manager and organization. Whenever we discuss about managing or organizational behavior, human behavior appears to be the main risk factor. Indeed, human behavior impacts the task achievement and is constantly influenced by the various factors that surround the individual.

The less disturbing external factors are, the better human brain can focus. Indeed, the reception of negative impulses makes our brain focus on potential danger and minimizes our attention to incidental factors, including tasks. If our brain is disturbed, our focus is diffused and the focus on task achievement is limited. People surrounding us might be part of these disturbing factors. Therefore, it is expected that composing teams of members who have positive (or at least neutral) emotions towards each other will enhance teams' achievement.

**Objectives.** Emotions commonly occur when we sense that something which seriously affects our welfare, for better or worse, is happening or about to happen (Ekman *et al.* 2003). Different studies explain how negative emotions impact human behavior. According to (Rozin *et al.* 1999), contempt, anger and disgust are the three main "other-critical" moral emotions, a cluster of related but distinguishable emotional reactions to the moral violations of others. Contemptuousness goes hand in hand with low agreeableness, narcissism, perfectionism, etc. Domineering is expressed normally in case of contempt. Domineering people try to exert and control others or a conversation, situation, etc., reducing by so co-operation in the team. Disgust is a primal response to harmful things and is a strong automatic reaction which marks the boundaries of culture and boundaries of the self. Disgust protects humans from disease and parasites, but affects almost every aspect of human relations, from personal relations to politics. A study made by Matsumoto demonstrated that there is a connection between anger, contempt and disgust and the hostility toward opponent groups (Matsumoto *et al.* 2014). These three emotions seem to significantly impact cooperation and set limits to relations. Anger makes us protect ourselves by fighting while disgust makes us avoid and dehumanize those whom we disgust. With contempt, occurs belittling, scolding, unfair criticism, etc.

It is commonly assumed that, beyond the quantity and correctness of the task activities, the success of team work depends on how well team members collaborate or interact. If team

members lack the sense of togetherness and belonging, then intensive collaboration seems unlikely. In teams, cooperation is particularly important as it captures differences in the extent to which individuals prefer to act as members of a group (Jackson *et al.* 2006). There are good reasons to expect positive relationships between task and innovation since both stimulate interpersonal interaction, communication and cooperation within the team (Van der Vegt *et al.* 1999). But when there is less desire to interact between team members, problems occur and impact negatively teams' achievements.

To understand the desire to interact, we need to consider the emotions of the team members. This paper aims to show that body language, as a tool which reflects human emotions, can be used to compose such optimal teams.

**Methods.** In this paper, we inquire which of the negative emotions have the strongest impact on team achievement. For the purpose, we designed an experiment he used methodology is the quasi-experimental design - quantitative research method with semi-structured questionnaire. We formed two experimental groups, each composed of 5 pairs of individuals. Each pair was formed by a body language expert according to their non-verbal communication signs. We obtained combinations of pairs who fit best and others who do not fit. We asked each pair to achieve a simple task which is to solve a nine-piece puzzle picture. We measured the time required to achieve this task by each pair. Also, each individual was asked, through a semi-structured questionnaire, to reveal how he felt about others.

**Results.** Preliminary results with the different groups show that if members of the team fit well or have at least neutral emotions towards each other, the time they spent to achieve tasks was considerably shorter than the time spent by the teams whose members have negative emotions towards each other. This seems to confirm that body language offers an effective method to compose optimal teams that effectively achieve tasks.

**Conclusion.** As nonverbal signs describe autonomic physical changes in the body which occur as emotion arises, these nonverbal signals help us to detect what an individual feel within a context or about other people in context. Composing teams of individuals who naturally fit with each other, gives for organizations possibilities to reduce conflicts, disagreements, unwillingness for cooperation, etc., on the workplace and enhances the effectiveness of teams. Managers with aptitude to recognize body language signals acquire the ability to compose teams of members who fit better together.

## 8.09

### Working towards new practices: how to manage cooperative interorganizational relationship in occupational health care?

Anna-Aurora Kork<sup>1</sup>, Inka Koskela<sup>2,1</sup>, Merja Turpeinen<sup>2</sup>

<sup>1</sup>University of Tampere, Tampere, Finland, <sup>2</sup>Finnish Institute of Occupational Health, Helsinki, Finland

#### Introduction

The article examines developmental process of interorganizational relationship in the context of occupational health care. The partnership between service provider and the client organization

aims to ensure the quality and productivity of working life. In promoting employees' health and well-being, occupational health practice highly relies on collaboration between different stakeholders.

The content and orientation of Finnish occupational health care has faced many institutional changes in recent years. Firstly, previous risk-orientation is moved towards customized processual services adjusted according to the specific needs of the workplace. Secondly, the discussion on promoting health and working capacity has been enriched with the idea of strategic management of well-being. This means all the aspects of employee well-being that enhance organizational performance including management and human resource practices as well as workplace health and safety support functions. (Aura et al. 2010).

Lately, close collaboration within the formal and informal networks of individuals and institutions have become more essential (Halonen et al. 2017). Cooperative relationship between workplace and occupational health care actors is seen as a prerequisite for the strategic management of well-being. At its best, collaboration may create new resources for the organizational well-being and thus improve its performance.

However, developing a partnership presumes trust, transparency, shared vision and a commitment to the common goals (Vlaar et al. 2007). Yet, once created it takes effort to maintain it, since up to 70 per cent of alliances tend to fail (Kauser & Shaw 2004). Implementation of novel co-creative practices in a way that the desired effects will be achieved is challenging (Turpeinen et al. 2016).

#### Objectives

The aim of the study is to understand partnership as a value co-creation in the context of human resource management and promotion of well-being at work. In this study, we analyze the process of co-creation between the employer and occupational health service provider and how this relationship unfolds over time.

Literature on interorganizational relationships is extensive. Most of it is focused on structures, success factors, transaction costs or interorganizational strategies (cf. Zajac & Olsen 1993; Ring & Van de Ven 1994; Barringer & Harrison 2000) instead of examining the processes and management of interorganizational relationship.

Instead of focusing on development outcomes as such, we see partnership as dynamic and continually reconstituted process (Weick, 1999; Langley & Tsoukas 2010 ). There are several conceptions and parallel concepts of a partnership such as strategic alliances, joint ventures, networks or consortia that all fall under the umbrella term of 'interorganizational relationships' (see Barringer & Harrison 2000). Here, the notion of partnership refers to cooperative development work that aims to add strategic value by enhancing work well-being. It is thus an interorganizational relationship in which the joint know-how is deliberately distributed.

#### Methods

Methodologically, the study relies on action research method (cf. Hart & Bond 1995, Wadsworth 1998). The empirical context is rooted in a development project aimed to facilitate a joint venture in which two organizations (and two of authors as researchers) searched for the ways to create cooperative practices in promoting employees' well-being at work.

The data comprises interviews, evaluation documents, audio recordings of meetings and

participatory observations. With the longitudinal and real-time data, we have an opportunity to study interaction between partners at different points in time. To gain understanding how the change is generated within its organizational context we ask:

How the cooperative interorganizational relationship is constituted over time and what kind of tensions are related to the management of co-creative practices?

#### Results and conclusion

By answering the research question above, we explore the possibilities and constraints of value co-creation in promoting quality and productivity of working life. In doing so, the study makes an important contribution to process organization studies by elaborating management of interorganizational relationships in practice.

The results are outlined in three tensions characterizing the management of the partnership

1. exploitation of the existing institutional norms, roles and routines of occupational health vs. exploration of totally new concepts, roles and practices
2. know-how in processual management of the occupational health services (operational logic) vs. collective decision making and dialogue in managing the partnership (co-creation logic)
3. managing mixed roles: symmetrical positions in collaboration vs. asymmetrical positions in client-service provider relationship

Partnership in promoting strategic well-being requires willingness and courage to change as well as ability to identify organizational needs and managerial shortcomings. At its best, co-creative practices may function as a source to questioning the existing practices and developing new ways to provide occupational health care. From the value creation perspective, we emphasize the organizational learning processes, where the key factor is organizational capability to recognize the value of shared knowledge and adopt it in operational setting (Barringer & Harrison 2000).

#### 8.10

##### Productivity and competitive strength through joy of working and well-being

Sirpa Syvänen<sup>1</sup>, Kati Tikkamäki<sup>1</sup>, Kaija Loppela<sup>2</sup>

<sup>1</sup>University of Tampere, Tampere, Finland, <sup>2</sup>Seinäjoen University of Applied Sciences, Seinäjoki, Finland

#### Introduction

How to promote small and medium-size enterprises' productivity, quality of working life and competitive strength? There are many ways to do this but effective tools are at least cooperativeness and dialog and leadership based on these principles. The paper deals with the European Social Found (ESF)-project: Productivity and competitive strength through joy of working and well-being. The focus, aims and methods of the project are described, and also some results of the questionnaire and development work related to the leadership and development practices.



### Aims and participants

The project aims at supporting and promoting the participating micro, small and medium-size enterprises' productivity, quality of working life and the resulting economy, cost-effectiveness, competitive strength and effectiveness. The indirect purpose is keeping of work places, lengthening of careers and strengthening skills and competence, and sustainable working life. A long-term aim is to develop the cooperative development model further for enterprises and public organizations in other fields.

The project aims at solving how to establish long-term collaboration and commitment between the staff and management, staff wellbeing, and digital and web-based productivity-related development structures in busy SMEs. The purpose of the project is also to find keys both to productivity and to quality of working life in order promote and enable growth and improve employment possibilities in the enterprises.

The project is national and it is implemented in three Finnish regions: Tampere Region, Northern Savo, and South Ostrobothnia. The participating enterprises (n=12) are from different sectors: social and health care, construction, industry and manufacturing.

### Methods and results

The organizational development and renewal is based on the actual need of the participated enterprises. The project focuses on development of work and work practices, services, well-being, leadership and ways of learning. The project has a collaborative, dialogic and research-assisted nature. The participatory and dialogic development takes place locally (learning in the enterprise), regionally (learning from one another) and nationally (learning network). The approach increases and enables employees' impact and participation possibilities in enterprise development. Participation as such increases wellbeing, motivation, and commitment to the enterprise and its development. Due to the research-assisted nature, it is possible for the enterprises, regions and development and learning network to establish and discuss factors and contents which affect both productivity and quality of working life according to studies and project assessments.

First in each organization was carried out a questionnaire and the results were utilized as a starting point for the development. Results from the questionnaires made earlier in the enterprises were also utilized, if these existed. The questionnaire (n=229) made for all enterprises consisted of approximately 150 variables dealing with e.g. the content of work, work processes and practices, leadership, and possibilities for development, collaboration and communication.

Here are presented the results related to leadership and development. Based on the results of the questionnaire the employees dealt with the leadership more critically than the leaders themselves. Employees experienced that they could be heard and supported better and appreciated more. The satisfaction with the development was also quite low. Only 43% of the respondents were satisfied with the innovation and renewal taking place in daily work. The unused potential was related e.g. to the rewarding systems, encouragement and utilization of ideas and initiations. The results of the questionnaire challenged the participating enterprises to invest in developing dialogic leadership and development processes. There have been done development related to content and culture of work and work processes in the case organizations and the development work will be continued further.

### Conclusions

When aiming to promote productivity, quality of working life and competitive strength it is important to learn about dialog, collaboration and participatory interaction. In this project the participating enterprises are supported to adopt dialogic and collaborative development principles and structures, and make simultaneous development of quality of working life and productivity as a part of everyday life and management culture. Due to the development structure (development taking place locally, regionally and nationally) enterprises are supported in this process by many professionals from different angels. The aim is that enterprises recognize and learn the benefits and positive impacts of investing in dialogic leadership and genuine dialogic interaction as well as collaborative organizational structures and decision making processes. These are the main keys in promoting productivity via well-being and joy of work.

### 8.11

#### **A new employee engaging visioning method finds the best common future images and the steps to get there**

Piritta Fors

*FFRC, UTU, Turku, Finland*

One of the future images of 2050 work is peer-to-peer work in the digital meaning society. "Peer-to-peer is an encouraging model for a post-work or post-capitalistic society" and "peer-to-peer production can be defined as a distributed network of free participation of equal partners". Many of the jobs done today by humans are replaced by machines already in the near future. The scarce resource that remains in immaterial production is human creativity, which is utilized best in an environment of free information and self-organization.

Robotization and applications of artificial intelligence are increasingly being implemented in the organizations. The drastic change in work life will effect nearly everybody in every field. To thrive in the midst of the technological and economic changes, new visions for the futures are urgently needed in organizations.

The overall aim of this research was to discuss the importance of engaging the employees in visioning. Visioning can be defined as "mental process in which images of the desired future (goals, objectives, outcomes) are made intensely real and compelling to act as motivators for the present action". In the traditional hierarchical organizations visioning has been worked out by the management and given to the employees only to put in practice. However, as many organizations are becoming less hierarchical and more equal in leadership, more transparency, open communication, clarity in responsibilities, creativity, emotional safety and employee possibility to influence are needed. There is research evidence to show that clarity about the goals of organization correlates positively with the degree of employee engagement.

One of the key areas where employee engagement is vital is in the future visioning and strategic goals setting. If there is no employee commitment, changes such as digitalization can stay hollow and ineffective if people are silently resisting them. Employee engaging allows people to get their opinions heard and get involved and motivated to work for the common good. Employee engaging visioning creates the future image by the people for the people and for the common good. Employees work together finding their preferred future and the action steps how

to get there.

The objective of this research was to create and test an employee engaged visioning process and its effects. The process has elements from futures research methods and management coaching practices. The case study was conducted in a small family-owned plastic good manufacturer. The company was established in 1936 and now has 38 employees including two generations of the owning family members. The organization faces major challenges and pressure to change due to globalization, digitalization, environmental concerns against the use of plastic and high cost of the Finnish labor, among other things.

The process had 4 meetings. The first one was for the researcher to get to know the management, the company and its problems. The second and third meetings were half a day coaching sessions with the management and an employee representative. The focus was in the futures thinking and the current problems and the best possible future vision in 20 years time. The management and the researcher built a questionnaire that was sent to all the employees of the company. There were different kind of questions. In the open questions they were asked to write about their opinion about current problems in their work and the entire organization. Based on the previous coaching sessions and the answers in the questionnaires, the visioning workshop for all the employees was created. All the staff, regardless of their position in the company, were randomly assigned into groups to create the best possible future image and the steps to get there. From the output the key findings best-practices manuals were written.

All the participants answered the research questionnaire evaluating the workshop. Management was further interviewed with the semi-structured questions. Both the management and the employees found the employee engaging visioning method effective and useful creating a common vision of the future for the company. The process empowered the employees. It brought

many hidden problems to open discussion. It was easy to find action steps to solve these problems in the groups together. The tested method gave inspiration, new common near and long term future visions with practical steps how to get there - and hope to the employees and the management that "the positive future is possible to create". The process showed that engaging the employee in visioning can motivate and build trust and hope beside bringing great new ideas, solution and practical steps. Employees together bring the vision into life and to create it happen.

## 8.12

### **Between conforming to norms and considering fit: Is there a role for leadership in the adoption and adaption of innovative management practices?**

Christian Wittrock

*Oslo and Akershus University College of Applied Sciences, Oslo, Norway*

The field of management is conspicuously prone to a constant flow of suggestions for innovative, supposedly new, ideas and concepts on how to best manage (Abrahamson 1996). While the measureable economic effect at a population level is generally questionable for such innovations (Staw and Epstein 2000), the appetite seems endless, and never dwindling (Gill and Whittle 1993). However, research suggests that seeking to implement such concepts may reduce employee's identification with the organization, and cause outright resistance (Knight

and Haslam 2010). This in turn leads to reduced health and motivation among employees (van Dick and Haslam 2012).

Explanations for managers' appetite for management innovations generally come in two forms. One emphasizes the growing information flow about the merits of an innovation, and portrays managers as scanning their environments for optimal choices, seeking to always enhance the economic performance of their organization by implementing innovations. This perspective is dubbed "rational accounts," and is largely based on economic theory and the rational actor model (Ansari, Fiss and Zajac 2010). The competing perspective is based on sociological theory, often drawing on neo-institutionalism, and enjoys a variety of names – e.g. "contagion" (Strang and Macy 2001), "fads and fashion" (Abrahamson 1991) and "social accounts" (Ansari, Fiss and Zajac 2010). This perspective conceives of managers' adoption process as driven by pressures towards social conformity. I.e. once a certain innovation has become popular, organizations imitate leading and well known reference-group organizations in order to appear legitimate, while the technical efficiency becomes largely irrelevant (Tolbert and Zucker 1983). Parsimonious models have been developed, hypothesizing about adoption and adaption decisions by organizations based on technical, cultural, and political fit (Ansari, Fiss and Zajac 2010). Yet, regardless of perspective, both accounts tend to conceive of managers as dopes eager to comply with the latest fad (Heusinkveld, Sturdy and Werr 2011).

The current literature on the diffusion of management innovations has little concern for managers as active agents, and few papers address the issue of how to deal with management innovations (Clark 2004). In addition, the current literature makes two important simplifications: First, the adopting or adapting organization and its preferences are usually portrayed as univariate. Second, while the diffusing innovation is hypothesized to change in accordance with circumstances (Ansari, Fiss and Zajac 2010), or to be translated or re-theorized by actors in the system (Czarniawska and Joerges 1996; Strang and Meyer 1993), no attempts have hitherto been made to clarify the nature of the nature of the diffusing innovation. I address these shortcomings in two steps. First, I develop a phenomenologically informed framework for the understanding of management innovations that sees them as multivariate. I then use a social identity paradigm to hypothesize about the reception of an innovation at various levels in the organization, taking both the rhetoric nature of management innovations and the claimed content into account.

Drawing on research seeking to measure the depth of implementation of management innovations, I suggest describing the content in terms of overall philosophies, principles, tool, and techniques. This allows not only for hypothesizing about technical, cultural, and political fit, but also about how *parts* of the innovation may exhibit such a fit. To this, I add advocacy rhetoric, as a driver for identification or dissociation. Rhetoric matters, because it largely determines the innovations image and positions the innovation in a discursive field saturated with interests, ideas, opinions and so on. Hence, possible adherents take cues from the rhetoric (Abrahamson and Fairchild 1999; Clark and Greatbatch 2004).

Building on a social identity paradigm, Albert and Whetten (1985) have suggested that organizations can be seen as having an identity, and that alignment of the understanding of this identity between employees and customers will have import on the success of the organization. In continuation of this view, I suggest that successful implementation of a given management innovation depends on alignment between the concept and the members of the organization at all levels. As management innovations are developed as an answer to societal challenges (Heusinkveld 2014), they become means of identification and serve purposes of self-categorization at a psycho-social level. Potential adopters and adherents signal their compliance

with - or rejection of - dominant public discourses, their perception of dominant issues in the workplace, and their interests, through their stance. Therefore, in-groups and out-groups are established based on being for or against management innovations. Any organization will have several groups with each their stance in relation to the concept, as organizational identification has multiple dimensions and foci van Dick et al. (2004). Groups consider the advocating rhetoric, the components of the innovation, and determine their stance. While the management field will likely continue to innovate, the paper thus suggests that managers should consider the adoption and adaption of management fashions along these two dimensions, and the likely stance of important groups in the organization.

## 9. LEGAL ASPECTS OF WORK AND EMPLOYMENT

### 9.01

#### **At the Mercy of the Stars: A legal analysis of the rating and review system's pivotal role in conceptualizing the sharing economy as a source of work**

Gail Maunula

*University of Turku, Turku, Finland*

#### Introduction

Increasingly, sharing economy business models are becoming a way to create, replace or augment work and income from dwindling traditional sources. While many factors and unanswered legal questions, ranging from market access requirements, to taxation ambiguities, to labor law protections, impact how we conceptualize and utilize this environment as a source of work, consumers and service providers (workers) continue to display interest in the need and desire to work and seek services within the growing number of sharing economy platforms that have become a thriving connection point to facilitate these transactions.

To transform this marketplace environment into a work environment platforms must arrange their interface to convert certain aspects of the traditional work environment into a language that members of their particular digitized community can understand and use to make informed choices. In the sharing economy, this is accomplished using the rating and review system. Participants in the sharing economy have grown accustomed to the rating and review system that frames their experience and exchange from start to finish. This reputational indicator, typically illustrated by a series of stars, and sometimes accompanied by a short text description, is a way to combat the information asymmetry between users and service providers in these interactions. Additionally, the ratings and reviews greatly contribute to the environment of trust necessary to drive these transactions and allow the platforms to exist. Thus, the system becomes an important platform function that allows service providers to conceptualize the sharing economy as a source of work by enabling them to build the necessary reputational value to be deemed trustworthy.

For as much as the rating and review system is a necessary component to foster trust and

reputation, it is riddled with inherent flaws, including gaps in data privacy and protection that jeopardize the fragile worker reputation. In an effort to maintain the system's reliability, and depending on the service model, platforms make the technical choice to allow varying levels of account access, the ability to challenge and correct false or disparaging comments and the ability to deactivate versus delete the account. [1]

Platforms will soon have to contend with changing regulation via the EU's new General Data Protection Regulation (GDPR).[2] The GDPR (enforcement date 25 May 2018) places requirements on platforms to allow for greater access to personal data, data portability, the right to rectification of inaccurate information and restriction of processing and the right to be forgotten. Adherence to these new regulatory demands mean changes to the structure of the rating and review system that could greatly alter the trust environment the platforms work to create.

Due to the deep connection the success of the platform has with the ability to create a robust trust environment, the changes to the rating and review system raise important concerns about platform viability. Successful platforms are not only a necessity for the sharing economy worker, but they are also recognized by the European Commission (EC) for the important role they play in our "economic and social life".[3]

A struggle between two very important rights emerges. On one side, the rating and review system raises serious data protection and privacy concerns for workers. On the other side, the system is the main component of the trust environment the platform must maintain to survive, and can therefore impact the platform's ability to enjoy its fundamental right to conduct business.

The freedom to conduct business is granted to legal persons (companies) and is designed to "promote entrepreneurship and innovation, reduce unemployment and spur entrepreneurship". The EC strongly promotes the "proper balance between the freedom to conduct business and data protection". This is not only reflected in guidance and communication, but the CJEU has ruled that the freedom to conduct business trumps the obligation to retain data. On a national level, Belgian courts balanced limitations in favor of a business, so long as the exchange of data was secure.

#### Research Aims and Objectives

This research continues to wait out the important labor law debates about employment and independent contractor status of those working through sharing economy platforms by clarifying the balance of other protections that impact the ability to conceptualize this environment as a source of work. The legal analysis within sheds new light and importance on the rating and review system by recognizing it as the fulcrum that balances two important rights - the right to data privacy and protection and the freedom to conduct business - that greatly impact the growth of the sharing economy. The research juxtaposes these two rights for the purpose of establishing, growing and protecting the sharing economy as a meaningful source of work and income.

The research acknowledges that a robust rating and review system protects the integrity of the delicate trust environment, which is the driving force behind a platform's viability. Also acknowledged are the important demands data privacy and protection regulation place on a platform and the eagerness and necessity to use such platforms as a source of work.

The following objectives work to achieve the aims of this research:



- Outline the necessity to build, maintain and nurture a positive digital reputation
- Identify the inherent flaws in the rating and review system and how they impact the growing desire to use the sharing economy as a source of work and income
- Examine these ratings and review systems against the backdrop of protections granted under the EU's new General Data Protection Regulation
- Emphasize the impact this delicate balance of rights has on the future of work in the sharing and broader platform economy.

#### Methodology

Socio-legal methodology frames the societal importance of the sharing economy and the impact of reputation in the digital realm. Law and economic methodology is used to assess the impact of existing rights and upcoming regulation upon the decisions made by platforms as they configure their ratings and review systems.

#### Conclusions (preliminary)

This research reveals that today's worker will continue to look to platform business models to bridge the issues of decreasing wages and employment. This growth continues despite unanswered questions about market access and employment status.

Depending on the platform service model, adhering to data protection measures outlined in the GDPR, weakens the trust environment to a great extent. The viability of these platforms requires a delicate balance that may affect the freedom to conduct business they should enjoy, and which supports the economic advancement of society.

## 9.02

### The Company specific Personnel and Training Plans as an Instrument to ensure Employment Security

Jari Murto

*University of Helsinki, Helsinki, Finland*

Earlier unemployment was considered perhaps more individual position than today. Nowadays human resource management pay attention to adequate occupational skills of the company's personnel. Skilled and competent personnel is essential success factor in business. This affects how employment security and unemployment is seen. Legislator has developed a legal instrument to improve companies' competitiveness and employee's employment security. This is personnel and training plan.

According to Act on Co-operation within Undertakings (16 §) the undertaking shall annually prepare a personnel and training plan in the co-operation negotiations in order to maintain and improve the occupational skills of its employees. In preparing the personnel and training plan, foreseeable changes in the operation of the undertaking likely to be relevant to the occupational skills of the personnel shall be taken into account.

The central aim of the personnel and training plan is to maintain and to improve the occupational

skills of employees from the point of employment security. Therefore, the plan shall include 1) general principles aiming to maintain the working ability of employees who are at risk of disability or aged and to improve the access to labour market of employees at risk of unemployment and 2) an assessment of the occupational skills of the entire personnel, changes taking place in occupational skills requirements and an annual plan based on this assessment for each personnel group or for employee groups categorized by some other appropriate criterion.

The purpose of preparing, implementing and updating the personnel and training plan is to sustain employment before unemployment is reality. Similarly, from the employers point of view the goal is to ensure that personal's occupational skills are appropriate and adequate.

There are three types of "sanctions" to ensure that personnel and training plan is prepared and implemented. Firstly, employer has an obligation to prepare the *personnel and training plan* as a document. To fulfil this duty there is possibility to impose a conditional fine. (64 §). Secondly, plan shall also update annually. In updating process attention should be paid to the implementation of the plan. Internal supervision is a tool for ensuring employer carries out the material content of the plan. Thirdly, employer can make tax deduction if employer has arranged re-education based on the personnel and training plan.

The paper has two purposes: 1) to examine personnel and training plans as an instrument to ensure employment security and 2) to examine tax deduction as an economic incentive and legal instrument in labor law.

## 9.03

### Finland and Right to Industrial Action – Towards Union Monopoly?

Johannes Lamminen

*University of Turku, Turku, Finland*

The Finnish Constitution implicitly protects the Right to Industrial Action as part of Freedom of Association guaranteed in Sec. 13(2). Finland is also bound to several international Conventions protecting the Right to Industrial Action or Right to Strike. The main restrictions of industrial actions are laid down in Collective Agreements Act, with its peace obligation, and in Act on Mediation in Labour Disputes, with its procedural requirements, such as the 14 days' notice period.

At a national level the workers participating on industrial actions are granted protection against dismissal and discrimination based on statutory law and preliminary works. For a long time, it was unclear how strong this protection is and which kind of situations it covers. Does it also protect groups of workers commencing an action without any decisions made by the union to call for an action and if so, to what extent? What it means for the workers that the action is to be considered to have been commenced as part of *trade unionism* and which kind of association involvement needs to take place for it to be like that?

The cases of the Finnish Supreme Court KKO 2010:93 and KKO 2016:12 clarified the situation in many ways. Both cases were about a bonus payment that was denied of the workers because of their participation on a strike that was declared illegal and against the peace obligation by the Labour Court. However, in the first case the Supreme Court declared that it had been a

discriminatory measure to deny the bonus payments of the workers because of their participation in an illegal industrial action, but in the latter case the Supreme Court declared that such a measure had been an admissible measure. Main difference between the cases were that in the first case the industrial action was considered to have been commenced as part of trade unionism when in the latter case the action was considered to have been outside of trade unionism. In the latter case, according to the ruling of the Labour Court, the association was not actively involved and had only neglected its surveillance obligation.

These cases of the Supreme Court clarified the legal state concerning the protection of workers participating in industrial actions quite dramatically. It seems that, from the workers' perspective, the Supreme Court does not consider the action to be illegal when workers participate in an action which includes contributing factors by an association. Negative measures directed against such workers are against Freedom of Association of the workers.

In Finland, many of so called *protest strikes* commenced during the validity period of a collective agreement do not include active association involvement. In such cases of the Labour Court the association is only considered to have neglected its surveillance obligation. These types of actions are still considered to be industrial actions based on the definition of an industrial action established by legal literature and by the practice of the Labour Court. Is it still cohesive and reasonable interpretation to consider, for example, protest strikes without union contribution to be industrial actions at all if these actions are not granted protection as industrial actions? How about actions commenced by a group of workers outside the validity period of a collective agreement or by a group of totally unorganized workers?

In Sweden and Germany, it is the unions that have monopoly in industrial action situations. Workers commencing an action without union involvement are not protected against negative measures of their employer. Is Finland heading towards union monopoly?

My broader research objective concerns the clarification of the contents and restrictions of Right to Industrial Action. The protection granted for the participating workers is one aspect of it. In my research I will utilize mainly judicial, sociological, theoretical and comparative methods. The research seeks to answer, what are the contents of Right to Industrial Action, how it is protected and how it can be restricted. Additionally, with comparative methods the research seeks answer how the laws and legal doctrine in Finland concerning industrial actions could or should be developed.

## 10. MIGRATION, WORK AND ENTREPRENEURSHIP

### 10.01

#### Labour Market Integration of Refugees

Martin Dietz, Holger Bähr

*Institute for Employment Research (IAB), Nuremberg, Germany*

The political situation in Africa and especially in the Middle East led to a dramatic increase of migration because of political or religious persecution. A large proportion of persons arriving in the European Union applied for asylum in Germany. The Federal Office for Migration and Refugees counted more than 1.1 million first applications for asylum in 2015 and 2016.

The increase in immigration entails several challenges for politics and administration. Aside from rather logistical problems of housing or the provision of things of daily use it induces important questions of social inclusion. One precondition for inclusion is a high labour market participation of those people granted asylum.

During the past years, Germany was facing an extremely positive employment record. The German labour market can also be characterised by a strong demand for skilled workers which may even be intensified by the ongoing forth industrial revolution. Thus, it is not only the question whether the German labour market possesses the absorbing power with respect to quantities but also whether there is a matching of skills demand and supply with respect to the asylum seekers.

Labour market integration of refugees has become a major task for the German welfare state. We analyse the organisational structure of employment agencies and their actions by focusing on the perspective of the street-worker level giving direct support to asylum seekers. We conducted qualitative surveys in selected employment agencies and job centres where we performed semi-standardised oral interviews in the years 2014, 2015 and 2016. Our aim is to identify promising strategies and major barriers for labour market integration of refugees in Germany.

As many refugees suffer from traumatising experiences the process of job placement is complex and takes place under specific conditions. It turns out that insufficient language skills are the major barrier to find a job followed by a lack of formal qualifications and difficulties to adapt to the new cultural environment. Because refugees often do not possess any formal skills certificates, it is even difficult to find out what competences they hold. A systematic approach to analyse competences is therefore a precondition for an adequate matching process. Finally, it is important to notice that placement officers operate within an area of conflict between a fast integration in a low skilled job and a time-consuming strategy investing in human capital. The latter would increase the probability of a more sustainable integration in an economic environment of rapid technological change. But in the short run it puts a burden on the public budget.

## 10.02

**Overqualification, job characteristics and well-being among persons of foreign origin**

Liisa Larja, Jasmin Luukko

*Statistics Finland, Helsinki, Finland*

The objective of the paper is to assess the labour market position of highly educated persons of foreign origin and connection of overqualification to different job characteristics and personal well-being.

We use data from Survey on work and well-being among persons of foreign origin (UTH14-study). UTH14-study is a sample survey with 3 262 respondents (response rate 66 %). representative of population of foreign origin residing in Finland in 2014.

This is the only data set that includes comprehensive education data of the Finnish population of foreign origin. Hence, this is the first time, that labour market position and overqualification rate of persons of foreign origin in Finland can be properly studied. The data includes two measures of overqualification: subjective assessment and technical classification. Well-being is analyzed with measures of quality of life, mental health, work ability, and support at work.

We present demographic details on overqualification rate among different sub-groups of the population. After that, we analyze the connection of overqualification to various dimensions of well-being.

## 10.03

**Perception of qualifications of migrant workers: the effect of individual characteristics of managers**

Ali D Farashah, Tomas Blomquist

*Umeå School of Business and Economics, Umeå University, Umeå, Sweden*

**Introduction** The issue of migrants within Europe has been under extensive discussion. It is increasingly recognized that migrants, as workforce and citizens, play an essential role in creating economic and societal outcomes. Economists and different social scientists including psychologists, HR specialists and sociologists have studied the migrants and their career success mainly through two perspectives: (a) the characteristics of migrants including their human capital (education and professional background), social capital ethnicity and gender; and (b) immigration policy and institutional framework such as supportive policies, systematic and individual discriminations, recognition of credentials and training opportunities available to migrants. As a gap, research taking an organizational perspective is at the initial stage. The lack of research on migrants from an organizational/managerial view leads to an inability to create a more inclusive and supportive system to allow migrants integrate into the job market successfully. Managers at the organizations and official at the government are influential on the decisions regarding employment and employment policies. Beside the human capital of the migrants, the managerial/official preferences and perceptions regarding migrants can affect the

employment prospect of the migrants through processes of recruitment process, formulating organizational strategy or establishing national and regional policies and regulations.

**Objective** This study attempts to find out the most important criteria for employment of migrants from managers and government officials perspective. We analyze the factors that influence managers' perception of the qualifying criteria. The knowledge raised from such study will assist migrants to develop and improve desired qualification and lets policy makers to take into account organizational concerns in policymaking.

**Method** The study uses European Social Survey data incorporating responses from 2828 managers in 20 countries. Managers include 77 legislator/senior government officials, 275 managing directors/chief executives and 2828 middle/functional managers. Paired t-test and structural equation modeling (SEM) are used for quantitative analyses of data.

**Results** Managers have evaluated the importance of qualifying criteria for migrants in six areas: ability to speak country's language, having good educational qualifications, having needed work skills, commitment to the way of life in the country, being white and having Christian background. The commitment to the way of life in the country is the most important criteria (Mean= 7.31 out of 10) followed by the work skills (Mean=6.62), educational background (Mean=6.32) and language capabilities (Mean=6.29) occupy respectively next places in the ranking. The ethnical and religious background are unimportant but ethnicity is significantly less important than religious background. Then, structural equation modeling (SEM) is used to evaluate the effects of characteristics of manager on the evaluation of the qualifying criteria, attitude towards migrants and perception of anti-discrimination law at work. Characteristics of the manager include: 1) individual values (self-transcendence and conservation); 2) exposure to migration (being foreign-born, having contact with migrants); 3) exposure to discrimination 4) attitude towards multiculturalism and 5) demographics (gender, age, education). Attitude towards migration plays a mediation role between values and importance of qualifying criteria. Managers with higher level of self-transcendence and lower level of conservation have more positive attitude towards migrants and demand lower levels of qualifications from migrants.

**Conclusion** Manager or legislator assess the commitment to be integrated into the host society and adjusting the lifestyle is even more important than skills and educational background of the workers. It might be concluded that social capital and acculturation is more important than human capital of migrants. Our analysis shows that attitude towards migration plays a mediation role between values and importance of qualifying criteria. Managers with higher level of self-transcendence and lower level of conservation have more positive attitude towards migrants and demand lower levels of qualifications from migrants.



## 10.04

**Public policy measures and the needs for social capital formation of immigrant business start-ups**Satu Aaltonen*University of Turku, Turku, Finland*

Finland today offers an intriguing arena for immigrant entrepreneurship policy studies as being a society far removed from the traditional context of the old colonial states, big metropolises or multicultural regions (Aliaga-Isla & Rialp 2013) with only recently developed policy measures targeted at immigrant start-ups. Significant immigration is a relatively recent phenomenon in Finland with the total stock of first and second generation immigrants tripling from 113 000 in the year 2000 to 340 000 in 2015. The number of self-employed entrepreneurs with an immigrant background has more than tripled over the past decade, increasing the representation of immigrant entrepreneurs among the whole entrepreneur group in Finland (Statistics Finland 2016).

Challenges faced by the immigrants in the Finnish labour market have increased the lure and lucrativeness of self-employment as an option for earning one's living both in the eyes of the state and the immigrants themselves. From the public policy perspective, this has been seen profitable not only on the individual level but also on the societal level. Decrease in unemployment saves governmental expenditures in the short run, whereas in the long run immigrants' entrepreneurship brings new resources, ideas, and economic activity to the market, which benefits the whole economy (Rath & Swagerman 2011). Creating a context sensitive understanding of the factors enabling and smoothening the start-up process of immigrant run businesses in Finland is therefore much called for.

Networks and social capital stemming from them have been proven beneficial for immigrant business owners' success. In the literature two distinct forms of social capital have been identified: bonding and bridging social capital (Putnam 2000, Li 2004, Oliviera 2007, Ram et al. 2008, Light and Dana 2013). This study in progress aims to explore (1) *what kind of contacts and networks are regarded valuable by immigrant business-owners for their start-up process?*, and (2) *what needs do they fulfill?* The paper concentrates solely on contacts creating and needs fulfilled by social capital. The framework of bonding and bridging social capital will be used as a tool for analyzing those contacts. Based on that information the paper discusses *the implications of the findings on the Finnish entrepreneurship policy measures*.

The main research material of the study consists of the interviews of 64 first generation immigrant business-owners and nine public business service experts. The business-owners were asked to share the story of their business start-up and the first years of their business, where the topics of skills and resources needed, the business services used, as well as relevant networks and contacts came up. The next step will be narrowing down the cases used based on their ability to reveal different aspects of the role of contacts and networks in the business start-up process. The interviews of business service experts will be used to shed light on the range of the policy measures targeted on immigrants.

In the analysis, contacts that were perceived relevant to the start-up process will be pointed out and their relationship to social capital formation and success of start-up process will be analysed. The method used will be the qualitative content analysis (Eriksson & Kovalainen

2016). The paper aims to study the phenomenon from the mixed-embeddedness (Kloosterman et al. 1999) perspective, which specifies the results in the Finnish context.

## 10.05

**Attitudes and Ideologies of the European Union towards Labor Migration and Integration in Official EU Immigration Documents**Mira Tupala*University of Turku, Turku, Finland*

The immigration flows to Europe have been increasing over the past years due to the refugee crisis, and this has made it necessary for the EU member states to consider how to integrate immigrants and give them access to the labor market. Faced with the reality of the EU having to accommodate large numbers of immigrants, it is important to consider the EU's attitudes and ideologies towards immigration in order to study how equipped the EU is to handle the situation and what kind of a message the EU is sending to migrants in its immigration discourses. This is what my doctoral dissertation project (ongoing) investigates from a linguistic point of view (critical discourse analysis, systemic functional linguistics). The study is interdisciplinary as it connects linguistic research with policy issues and sociology: it examines how attitudes/ideologies are reflected in official discourses that are supposed to be 'neutral' and what this reveals about how immigration is perceived and how it affects the treatment of immigrants in the EU and labor market. In my presentation, I focus on two important aspects dealt with in my dissertation: labor migration and integration.

The main goal of the EU's migration policy is to advance Europe's socio-economic development; migration directives serve the common interests of the member states by attracting skilled workforce and increasing the working-age population. The EU is invested in recruiting highly qualified workers, but some of its economies are also dependent on seasonal workers coming from outside the EU's borders. Finding jobs for migrants with varying skill sets is a challenge for the member states, and it might lead to discrimination if highly-skilled workers, who are better equipped to meet today's challenges, get precedence over low-skilled ones. The aim of my research is to uncover the stances of EU institutions towards immigration and to examine what the EU is signaling to different groups of immigrants (e.g. highly qualified/seasonal/irregular). I study the attitudes and values associated with immigrants; then, I study them in their wider ideological contexts and finally examine how the EU legitimizes its positive or negative views on immigration.

The data consists of 56 immigration texts (209,000 words) published between 1999 and 2015. The corpus incorporates documents issued by the European Commission, European Parliament, Council of the European Union, European Council, and European Economic and Social Committee. The documents are official statements, communications, opinions, and directives and include viewpoints from various stages of the decision-making process; the texts have been collected from the official websites of the five abovementioned institutions. The corpus was annotated using a computer program developed for the purpose of linguistic annotation of texts, called the UAM CorpusTool.

The main theoretical framework is *critical discourse analysis*, which studies the ways in which

dominance and social power abuse are produced and resisted in discourses and is interested in large scale societal problems, such as the discrimination encountered by migrants in the labor market. More precisely, I adopt the *socio-cognitive interface* (social control, positive self-presentation/negative other-presentation) to discourse that provides the methods for making connections between discourse and society through *cognition*, that is, the shared beliefs, *values*, and *ideologies* of groups and institutions.

The methodology is drawn from *systemic functional linguistics* (SFL) which connects a grammatical function with its communicative purpose and takes into account the social context in which language is used. Within SFL, the *appraisal framework* was chosen as the main analytic tool. Appraisal is concerned with the language of evaluation: it studies how speakers/writers describe something as good or bad and how they convey their stances towards different phenomena. Appraisal analysis is conducted both quantitatively (to study the patterns of different types of evaluations) and qualitatively (to analyze exact wordings in context). Appraisal is combined with the socio-cognitive model to study ideologies, and the results of the appraisal analysis are discussed using *legitimation strategies* (authorization, moral evaluation, rationalization, and mythopoesis). Legitimation gives insight into how the EU institutions justify their immigration attitudes. This also ties in with sociology and especially Max Weber's concept of *social closure* which is used here to study the inclusion and exclusion of immigrants from the labor market.

As this dissertation project is ongoing, the results are not yet conclusive and, thus, I can only make some cautious remarks; however, as I have finished the first round of analysis, some preliminary tendencies have already surfaced. The EU uses evaluative language to describe the usefulness of immigrants to the member states as an answer to the demographic decline and labor shortages. I am working on the analysis and will gain more concrete results during the spring and will be able to present them at the conference. This linguistic approach to EU migration documents in itself is a novel venture that will give new information on the EU institutions' agendas and motives when planning migration policies.

## 10.06

### Why is it difficult to get employed for women with foreign origin in Finland?

Hanna Sutela, Liisa Larja

*Statistics Finland, Helsinki, Finland*

In Finland, the employment rate of the population with foreign origin aged 20 to 64 years was about 10 per cent lower in comparison to the population with Finnish origin in 2014. The difference mainly stems from the different employment situations of women: while the employment rate of men with foreign origin was about at the same level as that of the men with Finnish origin, the gap in employment rates of women was almost 20 percentage points. Consequently, the gender employment gap among the population with foreign origin widened up to 14 percentage points, while among those with Finnish origin, the gender employment gap was practically non-existent in 2014. In fact, it is the exceptionally high female employment rate in Finland which makes the employment gap between Finnish and migrant women so striking.

Among women with foreign origin, low employment is associated with (early) parenthood, low

education, weak language skills in Finnish/Swedish (the two main languages of the country), lack of previous work experience as well as short residence in the country. Interestingly, these factors seem to impact the employment of women in particular, not that of men.

However, the employment situation of women of foreign origin gradually improves the longer they have lived in the country. For instance, the employment rate of childless women who have lived in Finland for more than 10 years was nearly as high as their counterparts of Finnish origin in 2014.

The findings help to identify the groups of immigrant women who are at the most urgent need of language training and vocational – or even basic – education in order to be able to make their way in to the Finnish labour market. Efforts put in the promotion of the educational opportunities of these women make an input in their children's future too: the educational background of the parents strongly associates with the NEET-rate or the rate of early school leavers no matter whether the youngsters are with foreign or with Finnish origin.

The findings are based on the Survey of Work and Well-being among the population of foreign origin in Finland in 2014, conducted by Statistics Finland. Some 4,000 persons residing permanently in Finland in 2014 were interviewed in face-to-face interviews using 12 different languages and material translated to nearly 30 different languages.

## 10.07

### Labour market inclusion/exclusion of EU migrants in Finland - Debunking the language barrier argument

Janka Szombati

*University of Turku, Turku, Finland*

This paper's starting points are two basic assumptions: (1) the majority of EU migrants are residing in Finland because of emotive reasons eg. a (Finnish) partner, family in Finland etc. (2) work is understood as a central social institution which part of all modern societies and the most important element integrating people into society. Occupational status and employment is also understood here as integral parts of one's identity and a proxy for social status. Access to employment on the national labour market and the acquisition on gainful employment are key determinants of integration outcomes and one of the major factors shaping migratory experiences. The chances and challenges of finding a job for migrants residing in Finland are influenced by complex and intersected set of factors ranging from nationality, ethnicity, educational level to age, gender and social status. The main point that I wish to investigate here through a linguistic anthropology approach is the 'language barrier' argument- namely that the overriding prerequisite for labour market accession for foreigners lays in possessing adequate Finnish language skills.

Based on data gathered from a survey conducted about labour market acquisition for EU migrants in Finland and the data gathered from semi-structured, in-depth interviews I wish to present how the 'language barrier' argument is used as a tool for exclusion at the Finnish labour market and what are the coping mechanisms employed by EU migrants residing in Finland when seeking employment in the country. For this purposes linguistic anthropology is used because it helps to shed light on the intricate position that language and its speakers take up, where

speakers are viewed as social actors who share a common language that is 'both a resource for and a product of social interaction' and that speech communities are 'simultaneously real and imaginary entities whose boundaries are constantly being reshaped and negotiated' (Duranti, 1997). Language knowledge is much more than actual language competence and performance, language is communication in the broadest sense of the term, it is culture, a set of systems that create, reinforce and shape belonging, identity and differentiation. It is these interactions and intersections that I analyse through deconstructing the 'language barrier' argument.

## 10.08

### **Finnish engineer's trajectory along the mobility continuum: from international student to professional migrant and the development of intercultural competence**

Tiina Räisänen

*University of Jyväskylä, Finland, Finland*

The ongoing changes in society and various globalization processes shape individuals' work practices. For example, work requires people to travel over vast geographical distances, communicate with cultural 'others' located in different time zones, relocate to different regions or countries, engage in global assignments and conduct business in virtual teams and other online settings. That is to say, work is closely intertwined with *mobility* and *migration*. *Highly skilled migration* is a large component of global migration (Vertovec 2002; Iredale 2001). Highly skilled professionals require special skills in order to operate in global working life, which is increasingly multilingual, heterogeneous and hybrid (e.g. Zhu Hua 2014). In particular, in the age of transnational and multinational business cooperation professionals increasingly need to use English as a business lingua franca (BELF, Louhiala-Salminen, Charles & Kankaanranta 2005) and navigate between discourses and ways of speaking in order to get their job done (e.g. Angouri & Miglbauer 2013; Räisänen 2013). When people use English as a lingua franca, they often have different cultural values and norms but often lack knowledge of, and specific training, to deal with, cultural, linguistic and religious diversity (Ladegaard & Jenks 2016).

Thus, work in such transnational and intercultural workspaces poses various kinds of communicative challenges: individuals require different kinds of communicative and professional expertise and intercultural competence (see also Gunnarsson 2009: 250–251). How do professionals develop skills in order to function in intercultural communication? This presentation focuses the development of intercultural competence over time by following a Finnish engineer's trajectory from being a student to being a highly skilled professional migrant. Student mobility is a central part of transnational migrant systems (Vertovec 2002) and a context for learning intercultural skills needed in working life. Intercultural competence is seen to encompass various skills: affective (attitudes), behavioral (skills) and cognitive (knowledge or awareness) (Spencer-Oatey & Franklin 2009). For example, it is regarded as important to be able to see relationships between different cultures, to mediate between cultures, and to possess critical analytical understanding of (own and others') cultures (Byram 1997, 2000). Moreover, interactional and interpersonal communication skills are considered relevant: for example, contextual awareness, interpersonal attentiveness, social information gathering, social attuning, emotion regulation, and stylistic flexibility (Spencer-Oatey and Franklin 2009) and appropriate participant roles, both linguistically and non-linguistically (Rine & Hall 2011). In the workplace context, it is of interest to investigate how workers make cultural identities,

differences and similarities relevant (or irrelevant) discursively in interactions (Piller 2011: 3; Zhu Hua 2015). Hence, cultural identity, differences and similarities are not taken as a priori categories in the analysis, but as emergent in talk. In this regard, one needs to look at language choices and competencies and the construction of inclusive and shared local cultures (e.g. Piller 2012; Holliday 2013 as cited in Lahti 2015: 21).

This paper presents a longitudinal ethnographic study in which a group of Finnish engineers has been followed for over 13 years. The participant at focus has been investigated since his studies and internship period abroad until employment in a leading position in a multinational company overseas. This presentation investigates how the participant's intercultural competence develops in different spaces of migration (student and work mobility) and over time. The theoretical framework draws on an ethnographically formulated sociolinguistics of globalization, which engages in the analysis of social structures, of processes of (in)equalities and (a)symmetries (Blommaert 2010: 3), and the socioconstructionist paradigm within applied linguistics, in which being intercultural is seen as socially constructed (e.g. Higgins 2007; Zhu Hua 2014). Two types of data are analyzed in this presentation. First, interviews conducted at different stages of the project are studied in terms of emerging discourses related to intercultural issues, culture, and language proficiency. For example, the analysis shows how the individual discursively portrays similarities and differences between people and different cultures (see also Lahti 2015: 50). Second, the analysis of selected instances of workplace interactions utilizes interactional sociolinguistics (Gumperz 1999) which considers both verbal and non-verbal resources available to speakers in negotiating meaning. In interactions, topical talk related to cultural expertise and practice, address terms and linguistic expertise are investigated as part of 'doing interculturality' (Zhu Hua 2015: 79).

This presentation shows how migration affects the development of intercultural competence. In particular, the findings reveal how intercultural competence in the context of work is a complex set of skills, including raising awareness of differences and similarities, cultural expertise and shared organization culture. The findings also show how intercultural competence is interrelated with work tasks and responsibilities, professional identity and language competence.

## 10.09

### **Poster Presentation: Contrasting Exploitation and Undeclared Work of Migrants in the Era of Digitalisation: The Italian Perspective**

William Chiaromonte

*University of Florence, Florence, Italy*

In recent years, Italian Labour Law is facing a deep process of change: the organization of work is becoming more flexible, and technology and digitalization are quickly changing structures, boundaries, and goals of Labour Law. In particular, contemporary forms of work increasingly include features originating from the digital platforms, from the shared economy and from the gig economy. Those changes in forms of work are consequently causing modifications of legal regulations: the main Italian example is the Labour Law reform of 2015-2016 (the so-called *Jobs Act*).

Nevertheless, also in the era of digitalization and platform economy the intensification of



precarious employment, exploitation of workers and undeclared work is still a dramatic phenomenon, especially for migrant workers.

The undeclared work of migrants and the gangmaster system (the so-called “*caporalato*”) are so pervasive in Italy, especially in the agricultural sector, even in presence of specific laws to eradicate them. In particular, the Italian agricultural sector is characterized by the employment of a multitude of migrants that, following the exploitation route traced by the seasonality of crops along Italy and Europe, work and live in inhuman conditions, under the control of those who illegally hire them.

We are in presence of a complex, elusive and multi-offensive phenomenon, in which numerous are the factors involved, especially legislative factors. For this reason, first of all the paper will focus on the general legal framework relating to the status of migrant workers and, in particular, on the Italian regulation on labour migration; this legal framework is, paradoxically, as we'll show, one of the main causes of undeclared work.

Secondly, the paper will analyse the existing legal enforcement measures implemented in order to respond to the exploitation of migrant workers (mainly the Italian transposition of directive 2009/52/EC, providing for minimum standards on sanctions and measures against employers of illegally staying third-country nationals, and the new penal crime of illegal gangmaster trade and exploitation of work, introduced in 2016), which, by empirical evidence, are not so effective.

## 11. OPEN STREAM

### 11.01

#### Worker Experiences in the Gig Economy

Laurie Michaels

*The Ohio State University, Columbus, OH, USA*

The gig economy has been all but impossible to ignore in recent years. From on-demand dog walkers to doctors, the gig economy is now a ubiquitous segment of the American economy. It has recently been found that approximately 10 million workers participated in the gig economy over a three-year period, and that workers often participate in this novel employment sector during periods of job loss or as a means of supplementing other forms of income. Further, many traditional firms are “gig-ifying” their workforce by increasing their reliance on on-demand workers while cutting back on traditional employees. This study investigates the experiences of workers in the gig economy. The gig economy represents a novel but growing segment of the American economy, and workers' experiences in this new employment sector are vastly understudied. This is a cross-sectional, comparative study based on qualitative, interview data. The study involves interviewing workers employed in the on-demand ridesharing industry and the on-demand housekeeping industry. Analysis includes both within-industry and between-industry variation in workers' experiences. The research design also allows for gender analysis. The

on-demand ridesharing industry is comprised of a largely male workforce, while the on-demand housekeeping industry is comprised of a mostly female workforce. The comparative study design is therefore able to account for how experiences of on-demand work vary based on both gender and industry dynamics. The gender demographics of the respective on-demand industries will allow for an analysis of how gender scripts are deployed and how gender is “performed” in the gig economy. In addition to thinking of on-demand gig work as precarious work, understanding the pathways which lead workers into the gig economy are explored in this work. Workers' reliance on on-demand gig work has increased parallel to structural changes in the economy, such as the decreased value of minimum wage and shifts in the distribution of earnings. Further, increased periods of unemployment, underemployment, and income stagnation have driven a growing number of workers into this novel employment sector as a means of supplementing income. The gig economy is a new segment of the economic landscape, and this research builds new theories, identifies key processes, and explains the insights and experiences of on-demand workers in the gig economy. Increasing our understanding of how workers experience this growing employment sector will shed new light on what is now an indispensable component of the American economy.

### 11.02

#### Crowd work as a niche-innovation...and a disruptor of the employment relationship-based regime? An analysis based on the multi-level perspective

Tuomo Alasoini

*Tekes, Helsinki, Finland*

The sharing economy, the collaborative economy, the platform economy, the on-demand economy and the gig economy are concepts that many writers have used in recent years in trying to describe the ongoing paradigmatic change in the logic of business and the economy, which has given rise to new ways of producing services and commissioning and performing work tasks via online platforms. Practical examples of the new, yet still underdeveloped business and economic paradigm can be already found in many industries. To date, the spread of the new paradigm, its economic significance and its social impact have been difficult targets for academic studies because of its diversity and conceptual slipperiness.

This paper focuses on one aspect of the new phenomenon, crowd work. Crowd work refers to an employment form that uses an online platform to enable organizations or individuals to access an indefinite and unknown group of other organizations or individuals to solve specific problems or to provide specific services or products in exchange for payment. Micro work is a sub-category of crowd work. This concept refers to fragmented work tasks distributed and performed via the platform, the implementation of which typically corresponds to a single person and which typically do not require high skills and competences. Crowdsourcing is used here as an umbrella concept, which also includes commissioning and performing of tasks and projects which do not include payment or other kinds of material reward. For example, many companies collect ideas for free from their customers for the development of their products and services. The concept of crowdsourcing includes also non-profit, volunteer-based work such as editing material for Wikipedia sites.

This paper examines crowd work in relation to work that is performed in an employment

relationship, using the multi-level perspective (MLP) on socio-technical transitions as the main conceptual framework. The MLP is a middle range theory, which has been developed to analyse change dynamics of complex systems by combining evolutionary economics and constructivism. The MLP's best-known applications have so far focused on exploring transformative changes in infrastructure systems, but the framework could be applied to almost any type of complex social system. The MLP distinguishes three levels of heuristic, analytical concepts: niche-innovations, socio-technical regimes and socio-technical landscape. In conceptual terms, this paper examines tensions between a new emerging niche-innovation (crowd work) and the dominant socio-technical regime (work performed through employment contract) and potential alternative paths for describing the development of their mutual relationship.

The paper has three objectives.

First, it provides a general overview on the nature, spread and effects of a new phenomenon, crowd work, based on a literature review. Regarding this objective, the overview shows that though the share of adult population that works via online platforms regularly is still relatively small, the share of population that is potentially interested to acquire work via such platforms is considerably bigger. Crowd work has proved to be a very diverse phenomenon, which means that forming an in-depth view of its potential diffusion, significance and impact calls for differentiated analyses in the future.

The second objective is to present the MLP as a theoretical frame of reference, which can also be used for the analysis of a wide range of phenomena of the working life. The MLP has been developed and utilized so far almost exclusively in innovation studies and with a focus on sustainability transitions; the framework has not been previously applied in studies of the work organization, work environment, occupational safety and health or industrial relations. Regarding the second objective, the paper shows that the MLP can be used as a theoretical framework in the analysis of work-related phenomena of many kinds. Building new bridges between two previously distinctive discourses, research on crowd work on the one hand, and the MLP on the other hand, can be considered the main theoretical contribution of this paper.

The third objective, built on the two previous ones, is to provide, by making use of the MLP, alternative paths (reproduction, reconfiguration, transformation, substitution, de-alignment and re-alignment) for describing the development in the relationship between crowd work and work performed through employment contract and to assess the degree of possibility of those paths. Regarding this objective, the paper considers de-alignment and re-alignment as the most interesting path from the research point of view. It is also the path that opens up the most promising avenue for increasing people's opportunities for participating in the design of new emerging models of crowd work. Drawing policy implications based on the "path analysis" can be considered the main practical contribution of this paper.

### 11.03

#### **Open Access Case Study: How is the situation in VET Research in Germany? Questions and perspectives**

Bodo Rödel

*Federal Institute for Vocational Education and Training, Bonn, Germany*

To publish research results "open access" – meaning free of charge, without legal restrictions and easy to acquire – is a well-known publishing strategy in STM (Science, Technology and Medicine). Even if there are still a lot of open questions about open access in general - concerning for example the quality of published papers and the funding of open access articles or books - there are various examples for open access to boost scientific research by making research results easily available. Articles published open access are more absorbed by the scientific community than closed access published articles in the traditional system.

Compared to the situation in STM the situation in VET research, for example in Germany, is quite different. Germany has set high standards for vocational training in the dual system. Therefore, VET research is crucial in order to advise politics, employers and employees. Surprisingly open access has a doubtful reputation in Germany's VET research system nevertheless.

The paper starts with a general overview of the situation of open access publishing in Germany. Close attention is paid to the topics of funding, quality and copyright. In contrast, the particular situation of open access publishing in German VET research is described. The findings are derived from a small qualitative analysis (interviews with researchers) and a quantitative analysis of important repositories in economic science, social science and education science. Open Access Repository may act as an indicator for an open access culture in a scientific domain. The paper will illustrate the research results. Based on these results the paper will highlight some conclusions and provide an outlook on future projects to strengthen open access in Germany's VET research culture. Structural and political constraints are taken into consideration as well as knowledge society itself. Against this background economic growth does not depend on industrial manufacturing but on competent "knowledge-workers". Access to information is therefore a key issue.

Following the input-orientated part, there should be time for a "workshop/interactive" section. Based on some key questions concerning the publishing culture in other countries (depending on the participants), the development of open access in VET research could be discussed with other researchers who are interested in an exchange. The discussion could be integrated into further research on open access in German VET compared to other countries. Therefore an elaborated research project is planned for the period from 2018 to 2020. Later on, the discussion results may be published on the project's website as part of an open science research approach.

## 11.04

**Traditional Craftwork, Time and Space: The Object as an Intercultural and Intertemporal Unifying Factor**Liubov Vetoshkina*University of Helsinki, Helsinki, Finland*

The recent waves of traditional craft revival can have a variety of explanations. Desire to consume unique things and define oneself in the consumer society is one explanation. Another way to address the revival of certain crafts is the critical stance of crafts to other types of labor: craftwork is understood as true, un-alienated form of dignified production. This perception mystifies craft and turns it into a-historical and non-cultural quality of human skill.

Crafts are usually defined by their objects (Risatti, 2009). The object of craft activity is often analyzed through its practical physical function, which diminishes cultural and historical features of craft objects.

This work aims at going beyond these general interpretations and putting traditional craft activities into historical and cultural perspective by conceptualizing the role of craft object as intercultural and intertemporal unifying factor. The aim is achieved by applying the framework of cultural-historical activity theory (Leontiev, 1978; Engeström, 2014), which studies concrete object-oriented, collective and culturally mediated human activity. The object of activity is conceptualized as carrier of motives; objects drive and define activities.

The following research question has guided the study: what is the role of object in the revival and sustaining of crafts? The empirical example is the traditional craft of wooden boat building. The analysis builds upon the ethnographic data collected during the field visits to three wooden shipyards in Finland, Russia, and India. Bringing together three culturally and historically different sites by means of multi-sited ethnography emphasized the relationships between the local and the global trends in revival and sustaining of traditional crafts. The objects of craft inherently contain the contradiction between the "old" and the "new": the challenge between justifying craftwork by history, yet making it meaningful in the modern world. In the light of analysis wooden boats as objects of activity appear as being capable of driving and expanding activities across time and space.

## 11.05

**What is the Recipe of Success at Work? – Employee Perceptions of Meaningful Work from Nokia Telecom Company**Salla Karima, Satu Uusiauhti*University of Lapland, Rovaniemi, Finland***Introduction**

Success at work as a phenomenon provides an attractive perspective to observe today's work. Success as a concept itself has a positive echo and as it is a subjective experience. It can be

associated with different things, such as an employee's feelings, results, competences, and achievements, but it also reflects to companies' and organizations' success. The current global business environment, characterized by rapid changes and uncertainty, brings new requirements to individuals and organizations to understand different factors behind success. These factors are relevant and meaningful for a company's competitiveness and employee's engagement. Companies share an interest to recruit top talents in a global marketplace and therefore it is important to understand how employees are experiencing work success.

The foregoing changes and the perspective of looking success at work leads to a question what success at work really is and how talented employees describe their success. These questions were studied in this research to understand the phenomenon of work success in Nokia.

The aim of this study was to find out what it requires to be capable to succeed at work. In addition to this main target, the purpose of this study was to understand what might be the possible obstacles and personal factors hindering employee's success. This study concentrated on employees who have been selected in the High Potential and International Graduate Trainee –programs in Nokia. These employees represented talents in a particular organization in Nokia. The research questions were: (1) How do the employees selected in the High Potential and IGTP -programs describe the prerequisites and development as an employee leading to success at work? and (2) How do the employees selected in the "High Potential" and IGTP -programs describe obstacles and personal factors hindering an employee's success at work?

**Method and data collection**

This study was constructed by using a qualitative multimethod approach. The data were collected in two phases. In the first phase, participants (N=15) wrote written frame stories where the method of empathy-based stories (EMBS) was utilized. In the second phase, semi-structured theme interviews (SSI) for selected employees (N=6) were conducted. The data were analyzed by utilizing theory-driven content analysis. Parts of the theoretical concepts, such as work success and work motivation, were brought as such to the study from earlier studies and theories.

**Results and Conclusions**

Work success appeared as a multidimensional phenomenon where both, the employee and the workplace has a role. Success at work was transpired as a subjective work experience forming in a certain context. Results indicated that talented employees shared a similar view and reality on how success at work was experienced. Employees perceived the possibility where success factors were possible to occur. Positive attitudes and engagement factors such as willingness to learn, resilience, being curious and open-minded and stepping out of a comfort zone were seen as pre-requisites for success. Having the ability to lead own development and learning were seen essential, and the importance of communication skills were especially highlighted.

The findings of this study seem to support earlier research results about the connection between success and happiness. It could be concluded that success is linked with happiness and things for which an individual can affect. Having people in their right places doing the work they enjoy sets the bases for work engagement and motivation.

It is crucial for organizations to understand factors connected to positive work engagement. This study strengthened the understanding that engaged employees are proactive and motivated to continuously look for new challenges. In addition, this study revealed that, to some extent, the power of leadership was under-estimated. Consequently further research plan was created



to find out how leaders in Nokia are interpreting Nokia's leadership framework, which is the guiding frame to support leaders in their decision-making in the context of hiring, recruitment, and people management, and how they are experiencing it as a part of their leadership. In addition, the purpose is to understand how leaders are developing their leadership and how they perceive the leadership framework provided in Nokia as part of their work.

## 11.06

### **From Industry Work to Entrepreneurship: Labour Market Changes, Mobility and Migration in the rural Swedish North**

Johanna Overud, Erika Sörensson, Elin Kvist

*Umeå Universitet, Umeå, Sweden*

In this paper, we analyze labor market transitions in rural Swedish north, from a gender and mobility perspective. Since the 1970's, the Swedish north has experienced considerable outmigration of women, related to a strong urbanization process. More women, than men, have left rural areas to work, study and live in urban areas. During the past two decades, however, there has been a considerable immigration of women from other countries, especially from Thailand. These foreign- born women are settling for a life with men who have remained in rural communities. This changes occur simultaneously with other transformation processes in the national and local labor market, from the transition from agricultural to manufacturing during the 60<sup>th</sup> and 70<sup>th</sup> to today's transition from manufacturing to service sector. During the studied period, we are also seeing a significant shift in the governments regional political ambitions in relation to labor markets, from a high degree of state control in the 70<sup>th</sup> to today's growing confidence in the market and entrepreneurship. Previous research has emphasized the importance of analyzing the Swedish labor market in terms of class, gender and ethnicity. Few studies, however, have incorporated a rural perspective on these issues. Rural areas in the Nordic countries share a common problem trying to maintain labor market participation for both women and men. Thus, labor markets in these regions are often characterized by a skewed gender balance and offer few job opportunities, especially for women. There is a need to study the labor market in these rural areas using both an intersectional and a mobility perspective, as issues of gender, ethnicity and class in Nordic rurality's are increasingly formed between local conditions and global pressures. After joining the EU Sweden has adopted a new regional policy that have had substantial consequences for rural regions in terms of a change in policy direction over time, a reversal from the 1960's and 1970s localization policy, which was a government distribution policy from the top-down, to the regional growth policy, developed after the mid the 1990s, directed bottom-up. Today the creation of jobs is based on a growing confidence in the market as a guiding principle. In various programs women's entrepreneurship is highlighted as leading to more gender equality in business and regional development. Policy has increasingly come to focus on stimulating the growth of new enterprises. The most frequently cited reasons for launching specific programs for women's entrepreneurship are that entrepreneurship creates growth, reduces unemployment and alienation, and that business opportunities, due to the public sector transformation, often lies within women's traditional areas such as service, nursing. By way of two examples from rural Swedish North we apply a temporal as well as a spatial approach to labor market participation: firstly, the localization of women's textile industry jobs to rural Swedish North in the 1970's, and secondly the more recent migrant female population in the form of Thai women. In the first example, we apply a historical perspective on the active

labor market strategies, the "localization policy", of the 1960's and 1970's. In the 1970's, state policy initiatives encouraged, through economic incentives, a main Swedish textile company to establish plants at three different locations in rural Swedish North. Hence, women's labor market was supported by the strong and active hand of the state. We illustrate this and the effects for women with the localization of the clothing company to three northern municipalities. In the second example, we study how persons who are part of the process of globalization of labour and capital, the largest national group of foreign born people residing in northern rural areas, Thai women, struggle to earn their livings in the rural areas of Swedish North today. We want to emphasize that spatial as well as temporal context matters to women's participation on the labor market. We will in this paper argue that in understanding the labor markets in rural North it is essential to take mobility and gender into consideration. We will show that taken together the analysis of political power and individual conduct in the northern periphery points in some aspects to the creation of neoliberal life in the rural – the forming of flexible, (im)mobile entrepreneurial citizens.

## 11.07

### **Involuntary employment and working conditions**

Lieze Sohler, Elsy Verhofstadt, Luc Van Ootegem

*Ghent University, Ghent, Belgium*

*Context* Encouraging longer working careers has become one of the most important means of addressing the financial challenges to the pension systems. Working longer would certainly benefit older workers financially. However, little attention has been paid to non-monetary effects of working at senior age (50 years or more) such as the effect on the individual's overall well-being. In a previous study we investigated the effect of working at senior age on the level of overall well-being and found that, on average, senior workers do not significantly differ from retirees concerning their life satisfaction level. We then introduced the concept *involuntary employment* as the worker's perception of being forced to continue working. Freedom of choice plays an important role in how people evaluate their lives. In this way, the study identified a significant group of workers ('involuntary workers') who experience a significantly lower level of well-being when continuing to work. After retiring, this group continues to be less satisfied with their lives than those who were voluntarily employed. The use of a fixed effects estimation approach shows that differences in personality traits between these two groups of workers cannot explain this difference. These findings show that the worker's perceived freedom of choice in the decision to continue working is a determining factor of the individual well-being of seniors and should be considered in the debate about longer working careers.

*Objective* This paper examines the factors that drive the transition from voluntary to involuntary employment (and the reverse). In Europe, most of the senior workers are (partly) restricted in the possibility to retire earlier as governments are restricting early retirement possibilities and as most of the workers need a labor income to live on. What triggers a senior worker to perceive his or her employment as an involuntary decision? This study investigates the role of working conditions as an important trigger effect. Support of management is also included in the definition of working conditions.

*Method* This study uses microdata from the Survey of Health, Ageing and Retirement in Europe

(SHARE). To identify the drivers of involuntary employment, a fixed effects logistic regression (FELR) is used. This estimation method controls for all unobserved (time-invariant) individual characteristics. In this way, differences in personality traits between the group of workers have no influence on the estimations. The FELR only takes the variation over time into account so that only senior workers are included who made the transition from voluntary to involuntary employment (and the reverse) during the observation period 2004-2013 (N=2673). Involuntary employment is not per se the end phase of the senior worker's career. A fifth of the involuntary workers had retired by the next observation but a fourth of them made the transition from involuntary to voluntary employment.

**Results** Preliminary results show a clear impact of working conditions on the odds of being involuntary employed. Especially, time pressure in performing tasks, freedom in performing tasks, recognition for work and support in difficult situations play a significant role in the transition from voluntary to involuntary employment and the reverse. In order to get more detailed understanding of the results, we performed a survey that asks 318 senior workers about the principal reasons to continue working. While involuntary workers report more constraints in retirement possibilities or in income as principal reasons, voluntary workers stress more frequently the agreeableness of employment. If the working conditions are agreeable, the senior worker values employment positively and perceives the constraints in the possibility of early retirement less as involuntary. Involuntary workers on the other hand report more frequently limitations with working conditions and value employment negatively.

**Conclusion** If we want to include well-being considerations in the debate about longer working careers, we need to understand better the significant group of workers who perceive their employment as an involuntary decision. If there is a better understanding, policy can try to prevent the loss in well-being by preventing involuntary employment. This study stresses the importance of working conditions as a trigger to perceive the decision to continue working as voluntary.

## 11.08

### Digital Storytelling as Meaning-Making of Work

Satu Hakanurmi

*University of Turku, Turku, Finland*

#### Introduction

Stories give our lives structure, coherence and meaning. To a large extent, we *are* the stories about our lives and ourselves. The story is not merely a description of life and self: it *constitutes* the life and the story (Biesta et al., 2011, 50-51.) Narrative is of crucial importance in understanding the complexities of human meaning-making. (Polkinghorne 1998, 1). In organizations business stories have usually been oral narratives (Orr, 2006). This study provides new insights into organizational storytelling, narrative learning and meaning-making of work at work.

#### Objectives

This research interrogates the meaning making-process during the DS, what the participants felt and learnt and how the social aspect influenced the individuals. Research provides results

to questions 1) What kind of meaning-making took place during the story-circle? 2) How were the narratives when they were presented to others? 3) Were stories told from the perspective of past, present or future?

#### Context and methodology

The theoretical position of the research is rooted in narrative and socio-cultural theory. A case study approach was used to capture the complexities of the storytelling in an organizational context. The DS project was organized at the end of a 2½-year organizational staff development project. The aim of the project was to improve customer services, interpersonal and management skills. The company chose a representative sample of storytellers, including men and women, different age groups and positions, such as managers, staff working in customer services, support services, web & call services, contact persons, business services and insurance sales. The workshop started with a 1½ hour story-circle comprising seven storytellers, two HR employees and two facilitators. I was one of the facilitators. Storytellers were instructed to tell a story about a learning experience during the staff development project. Each story was discussed for 12 minutes. After this the stories were produced during February-March 2014 and the premiere took place in April, during the annual celebration of the preliminary report. At this event 300 employees watched the eight stories which lasted 25 minutes altogether.

The story circle of 11 people and seven interviews performed after the screening were audiotaped and transcribed. The story-circle discussions include a total of 448 comments, laughing or a short "hmm". I analyzed comments according their function, whether they facilitated or inhibited the direction of the discussion (Iiskala et al. 2010).

#### Results

Individual experience of storytelling. Common to the discursive spaces was the experience that the story was based on storytellers' own voice. This is a big narrative of our time; a narrative of the individual over the social and at odds with the idea that our minds are outside our bodies, but in the world (Brockmeier, 2015, 232). It is a social construct to see life in Western culture mainly through individuals; we live, experience and learn as individuals:

The possibility to tell stories with the voice-over and visuals was considered to be more favourable than written stories. Without the visuals the storytellers thought an important and powerful aspect would have been missing. An emotional learning environment gave an opportunity to reflect on one's own work and identity.

Discussion around stories was partly future-oriented even though the stories told dealt with past experiences. A sense of coherence was represented when past, present and future were reflected on, as mixed.

#### Social co-authoring of stories

During the story-circle the narratives were at different stages and the quality of social co-authoring varied. Storytellers presented three types of narratives during the story-circle: *closed narratives*, *open narratives* and *antenarratives*. The antenarratives and open narratives had more changes, slowing and stops compared to the closed narratives. In open narratives there was more space for co-authoring when meaning-making was done collaboratively.

#### Discussion

The data of this research comprised transcribed discussions, but it is obvious that co-authoring is more than just spoken words. Laughing together, for instance, meant conforming to the

narrative, belonging together as a group and sharing similar values. Analysis of video data would highlight further nuances of interactions and co-authoring. The nature of meaning-making in, for example, online interaction, which plays a crucial role in modern working life, is a subject for further research.

In order to be innovative organisations need to find new ways to support employees in identity work and meaning making. Today's business models and management systems need a postmodern management paradigm which includes the recognition of the relevance of people's experiences and emotions in influencing the quality and performance of organizations (Schiuma, 2011, 9). If we extend the educational culture from individualistic and cognitive practices to embrace socio-cultural and embodied practices storytelling should have a place in the education of adults in their working life. It is not a question of individually produced stories but rather of co-authoritative reflections and narratives. In collective process of professional development and meaning-making narratives and storytelling have a role.

## 11.09

### **From corporatism to social media unionism? Formal and informal trade union activism for promoting equal pay**

Milja Saari<sup>1</sup>, Paula Koskinen Sandberg<sup>2</sup>

<sup>1</sup>*University of Helsinki, Helsinki, Finland*, <sup>2</sup>*Hanken School of Economics, Helsinki, Finland*

Our paper contributes to academic discussions on the future of trade unions as social movements and how equal pay can be promoted in the current era of neo-liberalism and right-wing politics. The paper examines the case of the reconfiguring Finnish tripartite (trade unions, employers' organizations and the government) corporatism and how demands for equal pay are put forward both inside and outside trade unions. Recently Finnish trade unions have been forced to make historically bad collective agreements that cut salaries especially in the female dominated public sector. In 2016, the gender pay gap has widened for the first time in recorded history. Traditional tripartite corporatism seem to be bad for women which now seek new forms of mobilization for better pay. We provide a new analytical understanding of social media as an emerging form for putting forward wage earners' rights by introducing the concept of "*social media unionism (SoMe-unionism)*". The case we analyse is a Finnish Facebook-based campaign which was organized by grass-root nurses outside unions and mobilization occurred in social media. Over 22000 people signed the petition in the internet. The petition is an example of a new form of social movement unionism which we theorize in this paper. SoMe-unionism reflects the growing dissatisfaction towards the traditional channels of policy making in trade unions and in corporatist cooperation. Our paper examines both formal/ informal and traditional/emerging forms of trade unionism in promoting equal pay. We analyse what does the rise of social media unionism signal about the current state of the corporatist system and its capabilities for raising salaries in female dominated health care sector and does the SoMe-unionism complement or dismantle traditional trade unionism. We also ask whether gender perspective is incorporated in the discourses of undervaluation of work done in health care sector or not. The data used are key actor interviews both in nurses' trade unions and social media activists and social media discussions and texts. Our theoretical framework is multi-disciplinary and draws from political and organizational science and gender studies.

## 11.10

### **The sharedness of communication competence in working life teams**

Tessa Horila

*University of Jyväskylä, Jyväskylä, Finland*

#### **Introduction and aim**

Working in teams is a very common form of work in Finland. A significant number of people work in one or several teams over the course of their careers.

In my doctoral dissertation (estimated to be finished by the end of 2017), I examine the construction, negotiation and maintenance of communication competence in working life teams. Communication competence is most commonly defined as the knowledge, motivation, and skills that enable effective and appropriate communication. While competence has been studied extensively, research has mostly focused on dyadic interaction or public speaking and less on groups and teams.

Previous research on group communication competence has four distinct features. First, research has focused on the skills dimension of competence. Second, research has mostly been situational, focusing on group discussions or decision-making situations. Third, the theoretical definition for communication competence has been derived from research focusing on dyads. Fourth, competence has mostly been approached as an individual trait or state.

In my research I pose that these standpoints are not enough to understand communication competence in teams. Authentic teams do not operate in the simplified settings of zero-history, laboratory groups with straightforward tasks. Furthermore, the behavioral dimension of competence is merely one aspect of the construct. Additionally, it has been suggested that competence may also exist and develop at multiple levels besides the individual. The aim of my dissertation is to theorize and examine communication competence in working life teams with authentic goals, relationships and trajectories. In my presentation I will introduce my key findings, especially as they relate to the needs of working life.

#### **Methods**

My dissertation consists of four research articles. The first one is theoretical, in which I examine the current state and shortcomings of team communication competence research and propose new directions for research. The remaining three articles are empirical. In them I employ qualitative methods to examine shared and differing understandings related to team communication competence (article 2), forms and functions of dramatizations in team decision making (article 3), as well as understandings of development and change of leadership competence in teams (article 4). My data set consists of interview data gathered from four different teams as well as observational data from one team.

#### **Results**

In my first article, I propose a new concept of shared communication competence, defined as competence that is (1) located both at the individual as well as the group (and possibly organizational) level, (2) constructed and negotiated in communication processes as well as (3) changing and developing over time. Thus I propose approaching competence not only as individual skills evident in a given group communication situation, but instead as constantly evolving and changing in communication processes and through internal and external changes in teams.



Results of the second article show how in a team, both shared and differing understandings of competence may exist. The studied team displayed differences both in what they regarded as competent communication as well as how they saw the competence levels of their team. Interpersonal relationships and contexts seem to factor in to what is seen as competent or expected of others.

Results of the third article show natural team decision making as laden with fantasies and dramatizations about the team, its competence, resources, and context. Dramatizations may have a big role in how decisions are made and what their outcomes are. This is an important finding, as decision making is one of the key small group competence areas studied, usually approached from a rational, functional perspective.

Initial results of the fourth article show how team leadership communication transforms through changes in competence levels, interpersonal relationships, changing positions and leadership needs of team members. Changes in organizational and societal ideals and norms related to leadership also influence leadership competencies needed in teams.

### Conclusion

The results of my doctoral dissertation have implications to both research and development of working life teams.

First, the successes and failures of communication should not only be attributed to individual members. Instead, it is important to look in to the meanings that team members attribute to competent communication and whether they share the same constructions or criteria related to competence. Thus, metacommunication about competence is encouraged, to enable team members to form shared understandings of competence and support the entire team's competence.

It is also important to pay attention to the dimension of time. Competence is neither a static nor a linearly developing concept. Teams and team members may develop their competence, but competency levels may also diminish or even deteriorate when facing challenges or needs for adaptation. Furthermore, the temporally changing societal or organizational ideals of communication competence are an important, yet understudied area.

11.11

### Successful (virtual) teams in working life

Mitra Raappana

*University of Jyväskylä, Jyväskylä, Finland*

This paper is based on my yet unfinished communication dissertation thesis (will be completed during 2017), which includes four articles about virtual teams in working life. The aim of this assembling paper is to present findings and conclusions about virtual teams' successful and effective communication in the context of contemporary working life and its demands.

The use of teamwork became a popular phenomenon several decades ago; however, in digitalized contemporary working life, *virtual teams* have become increasingly ubiquitous. Moreover, it has been claimed that all working life teams are at least partially virtual. Also virtual teams can differ in their technology usage, communication habits and methods (either face-

to-face or via telephone, chat, email, or a web conferencing tool). Whether labeled virtual or not, working life teams strive for successful performance and interaction. In fact, often teams are seen as platforms for synergy, efficacy, and productiveness. Furthermore, success is one of the most examined research topics in the field of team communication, which nowadays includes virtual teams. However, the constantly changing context of working life challenges the comprehensive understanding of the effective communication processes of (virtual) teams. Manifold organizational environments, technological leaps and extended working possibilities - as well as conceptual, methodological, and theoretical features - makes the phenomena complex to outline and examine.

Furthermore, research studies are neither uniform in their usage of the concept of team efficacy nor in the operationalization and measurement of it. Team efficacy can be defined as a combination of the capacity of a team to complete a task, their general effectiveness, and their self-described potency. The widest definition acknowledges all three perspectives. It is also unclear if virtuality is particularly connected to teams' efficacy, which, in working life, is mostly evaluated by outcomes. In this paper, I use the concept *virtual team efficacy* (VTE) to refer to virtual teams' communication processes in which the tasks are occurring, being recognized, and being accomplished.

In previous studies on virtual teams, the data have usually been collected from either or both university students and in laboratory settings. Team members' self-assessments are probably the most frequently used research method. This paper collates four articles, including one systematic literature review and three empirical research reports. The empirical studies are based on natural data from Finnish contemporary working life. The material consists of two separate data sets that were collected during 2011–2014, including one interview data from team members (n = 11) and another observable video and audio data from virtual meetings (9 meetings from 3 teams). Altogether four qualitative analysis methods are used in those articles: 1. classification, 2. typification, 3. content analysis and 4. thematic content analysis. Each analysis is done data-driven but the findings are of course proportioned to previous research. The theoretical background stems from describing the changing Finnish working life, efficacy theories of small groups and virtual teams, structuration perspectives and most common evaluating models.

According to the findings of the articles, communication in teams is essential to teams' efficacy processes. The ways that teams are conceptualized vary, and teams can have different meanings to both team members and organizations. For example, one team member may consider teamwork merely as a work organizing method whereas another values shared team experience. Teams can fulfill several tasks in their meetings, from information sharing to generating new ideas or sharing social support. Furthermore, they can actualize their performance in many ways, such as in meeting habits, ways and frequencies to communicate, leading culture etc. Despite the differentiated processes in team communication, teams in working life seem to be—above all—goal-oriented. However, it seems that the way a team achieves its goals and produces its tasks are much more complex than previously thought. Highly interesting findings of this study include that the way a team evaluates and develops its communication are characteristics of the team, and even though a team's ability to evaluate and develop its communication seems to be crucial to its efficacy processes, it is a factor on which they rarely focus. These partly preliminary findings don't confirm the idea often presented in earlier research, that virtuality would actually be a crucial factor in teams' efficacy processes.

Moreover, it appears that, to understand (virtual) teams' efficacy processes more profoundly, we should consider new dimensions for comparing and contrasting different teams. As earlier team

literature focuses on ideals and taxonomic structures of team processes, this study emphasizes a new way of thinking: we should underlie the understanding of team processes and develop our ability to both comprehend and evaluate them while the team is performing instead of after the performance. We should also understand that every team does have the possibility to perform effectively, but success is not a self-evident character to a team.

## 11.12

### Poster Presentation: Understanding the information behavior of entrepreneurs

Xiaoxi Yang

*Huazhong Normal University, Wuhan, China*

Nowadays, the government has paid increasing attention to the entrepreneurs and tried to offer more services to support their business, especially after the economic recession in the past a couple of years. Entrepreneur's innovation and entrepreneurship activities need various information support which is also closely related to the success of business. In the literature a large amount of research has worked on the information behavior and information service in different fields. But there is a lack of research on the information behavior and information services among the entrepreneurs. Entrepreneurs have special information need which is different from the general uses' information need. Understanding the entrepreneurs' information behavior is vital for information service providers to offer what the entrepreneurs needs. This paper will address the research gap by setting up a research framework to understand the entrepreneurs' information behavior.

This paper will analyze the entrepreneurs' information behavior from four dimensions, including information need, information searching, information interaction and information absorption, and the motivations beyond the different information behaviors. First, this paper discusses the entrepreneurs' information behavior, including information need, information searching, information interaction and information absorption among different entrepreneurs, such as the business type of entrepreneurs, the background of entrepreneurs, and finance condition. This paper will discuss entrepreneurs' information needs from the following points, including the content, quality and form of information which entrepreneurs demand. The paper will discuss entrepreneurs' information searching behavior from the points of information sources for the entrepreneurs, the characteristics of entrepreneurs' information search and the entrepreneurs' information search mode. The paper will discuss entrepreneurs' information interaction behavior from the points of various entrepreneurs' information interaction pattern and their characteristics. The paper will discuss entrepreneur's information absorption behavior by analyzing the pattern and characteristics of entrepreneurs' information absorption behavior, and the information absorption process. After the discussion on the different information behavior of entrepreneurs, the paper will further explore the factors influence their different behaviors. In the end of this paper, it will build a model to understand the entrepreneurs' different information behavior based on the pattern and characteristics of different entrepreneurs' information behavior and the motivators for different behaviors and take the different type of entrepreneurs into consideration in the model.

This is a research in program paper. We plan to collect qualitative data via interviews to understand different information behaviors among entrepreneurs with the help from the

information specialist association 'Tietoasiantuntijat'. We will collect quantitative data via survey questionnaire to examine the factors influencing the entrepreneurs' different information behaviors. The potential sample will be the customers of startup organizations in Finland, and the customers who have experience in entrepreneurship in Finland.

This research will contribute to theories. It will show the features of entrepreneurs' information need and behavior and enrich the theories of information behavior. The study will also contribute to practice of information service. The organizations and staff of information service could supply better service for the users.

The same like other research, this research will be with its limitations. The paper classifies the entrepreneurs by the experience of business and finance condition. There can be more variables included in the categorization of entrepreneurs in order to deeply understand entrepreneurs' information need and information behavior. In the future, further research can be conducted to analyze the different information behavior of entrepreneurs from different industry. Of course, the research context of entrepreneurs in this paper also limits the generalization of the research findings about information need and information behaviors in the other fields.

## 11.13

### Communication in hospital management group meetings: organizing the organization

Tomi Laapotti

*University of Jyväskylä, Jyväskylä, Finland*

My presentation will be based on the findings and conclusions of my article-based dissertation (will be completed 2017) focusing on formal meetings. The study focuses particularly on hospital management group meetings, and aims to understand the importance of these meetings for the hospital by analyzing the social interaction at these meetings. My study treats meetings as substantial organizational practices, where the organization is made visible and organized in interaction. Therefore, meetings produce the organization more than vice versa. The data was gathered from a large public hospital in Finland: the data consists of ten video recordings of management group meetings from two different organizational levels, and interviews of seven management group members. The theoretical background is built upon the tradition of structuration studies on small groups, bona fide group perspective, and the communicative constitution of organization (CCO) perspective.

The first article of the dissertation describes the use of message functions during the meetings. The inductive analysis resulted in six categories of functions: information sharing, information processing, information assessment, operational coordination, procedural messages and humor. One-sided information sharing was the most dominant function of meeting interaction. In the second article, I analyzed both the interaction network structures of the meetings, and the participants' perceptions of the significance of their meetings. Most of the meeting discussions were dyadic between the chair and one member at a time, not between members. Organizational structures were clearly visible in the interaction networks. The goals of the information sharing during meetings were described as informative (i.e. "getting the bigger picture"), not instrumental. Surprisingly, participants found it challenging to describe any concrete added value that the meetings contributed to their management work, even though they found the meetings important

and meaningful for themselves.

The discourse analytical third article of the dissertation focuses on how the participants make sense of and give meanings to the hospital organization in their meetings and on the importance of these sensemaking activities for the participants and for the organization. There is a tension between the agencies of the participants and the agency of the hospital organization. The organization's non-human agency is mediated through the meeting agenda and particularly through the minutes of the highest level management group of the hospital. Meetings are regular, formal, and distinguished "guiding lights" in the process of organizing, which serve both the goals of the participants and the "organization". Therefore, the hospital organization is formally constituted through communication during the meetings. The fourth article focuses on the functions of problem-solving talk during the meetings and uses thematic analysis to explore these functions from the observation data. The main functions were to perform the meeting (e.g. information sharing without discussion), to enhance problem-solving, relational maintenance, and to use a problem as an instrument. It is clear, that problem-solving talk is about much more than just solving the problems.

Management group meetings are first and foremost about information sharing. For the meeting participants, information seems to be something that is sent and received, not something that is constructed in interaction. Furthermore, it seems the task originally designed for these meetings is performed outside of the meeting situations and therefore the role of the meetings has changed from what is written in the administrative rules of the hospital. The deeper significance of meetings is in the sense of belonging, identification, and participation in the process through which the organization is organized. These studies demonstrate that the CCO perspective is a fruitful lens for analyzing formal meeting interactions. These meetings are special arenas where the communicative constitution of the organization takes place. The practical implications of the findings will be discussed.

#### 11.14

##### **What type of creative R&D employees perceive advantages of flexible working time?**

Marko Virkebau, Aaro Hazak, Kadri Männasoo

*Tallinn University of Technology, Harjumaa, Estonia*

The impact of flexible working options on work outcome has remained a controversial topic, and the research focus has become increasingly focused on the individual characteristics that determine the existence and extent of these effects. Our study is based on data from our original repeated survey of Estonian creative R&D employees on a sample of 153 individuals from eleven entities. We first try to understand why creative R&D employees prefer to use flexible working time options, and find that for different employees there are two distinct streams of reasons – expected positive effects on work outcome, and positive impact on individual wellbeing, including family-related affairs. We employ probit and multivariate probit regression models to investigate what type of creative R&D employees perceive which positive effects of flexible working time. We find that younger and more educated professionals recognise more of the positive effects that time flexibility has on work outcome. The larger family the employee has, the less effect flexible working time however appears to have on the quality of work. Limited sleep hours and weaker health condition lead to higher perceived positive effects of flexible

working time on the quality of work. Age is a significant determinant of the perceived impact of time flexibility on individual wellbeing benefits. As expected, the larger the family, the more benefit from time flexibility on individual wellbeing is recognised.

#### 11.15

##### **The Mass migration of Apprentices from Vocational Skill Acquisition Centre to Commercial Motor-cycle Business in Nigeria: Implications**

Emmanuel Abiodun Fayankinnu

*Adekunle Ajasin University, Ondo State, Nigeria*

This study examined factors fostering mass migration of apprentices from vocational skill acquisition centre into commercial motor-cycle business in Nigeria; and its implication on work.

The study adopted a qualitative design. Focus Group Discussion (FGD) and in-depth interview (IDI) constituted methods for data collection. Six FGDs were conducted with apprentices in the welding profession while thirty IDIs were held with skilled Welders (craft masters). The participants for both FGDs and IDIs were selected purposively. Data collected were sorted, transcribed and reported verbatim using content analysis.

Findings showed that push-factors such as erratic power supply, low monetary return, lengthy years of training as apprentice, uncertainty of access to capital for commencement of own business after training, and the exposure to hazards in welding work fostered mass migration of apprentices from vocational skill acquisition centre into commercial motor-cycle business in Nigeria. On the other hand, Pull factors include; the lucrative nature of commercial motor-cycle business, few days of training to acquire riding skill before start, substantial influence from peer groups, and the latter day fame associated with riding a commercial motor-cycle. The study also indicated a significant loss of apprentices to commercial motor-cycle business, resulting into low operational capacity of the apprentices; induced high cost of services for consumers, and a gradual demise of the apprenticeship pattern of skills acquisition. In contrast, the migration of apprentices from vocational skill acquisition centre to commercial motor-cycle business engendered a relative population explosion, increased competition for on a daily basis, a high rate of commercial motor-cycle accidents leading to grievous injuries and even deaths, economic and social costs of treating and caring for victims of commercial motor-cycle accidents.

The study concluded that the future for apprentice learning vocational skill in acquisition centre in Nigeria is bleak; hence, the need for a general re-orientation about apprenticeship scheme starting from the family. The need to encourage apprentices, through workshops and seminars at the local level, would be a welcome idea. Government should resuscitate vocational centres with a view to providing adequate training for apprentices as well as an enabling environment to start their individual businesses after completing the apprenticeship scheme. Finally, Government should place heavier sanctions, especially fines, or suspension of riding license after scoring up fixed maximum points for the violation of regulations



## 11.16

**The consequences of sharing economy and platforms on occupational safety and health**Pauli Forma*Keva, Helsinki, Finland*

**Objectives:** The object of the study is to clarify the effects of "sharing economy" and "platform economy" on occupational safety and health. The argument is that these megatrends challenge the present ways to guarantee safety and health for workers. Our modern solution for occupational safety and health has been the welfare state. In this context, the government, the employers and the employees have had their own rights and responsibilities. However, the sharing economy and the platforms (such like Uber, Airbnb, TaskRabbit etc.) as an essential part of it, challenge present ways to guarantee safety and health to the workers.

**Methods:** Literature concerning the sharing economy and platform economy are reviewed and effects of these on occupational safety and health are clarified. Level of awareness concerning the risks caused by sharing economy and platforms in the field of occupational safety and health is discussed. Further steps which are needed are identified.

**Results:** There seem to be many reasons why risks for occupational safety and health are rising in the context of sharing economy and platforms. First, there are many changes related to work. Second, platforms are not employers with their responsibilities. Third, employees lack collective power. Fourth, governments lack resources (tax base) and power (platforms are global) to guarantee health and safety. Of course, we have to remember that new technology may also help us to provide safety and health.

**Conclusion:** The system which provides security and safety for the citizens is always connected to changes in economic and social context. Now, the balance of needs for safety and health and means to guarantee them is changing. In order to provide safety and health, we have to renew our strategies to provide them. It is evident that we should consider incentives for the platforms to introduce innovations in the field of safety and health. In addition, since the platforms are global, international co-operation is needed.

## 11.17

**Morningness-eveningness pay gap in creative R&D jobs**Aaro Hazak<sup>1</sup>, Kadri Männasoo<sup>1</sup>, Markku Partinen<sup>2,4</sup>

<sup>1</sup>Tallinn University of Technology, Tallinn, Estonia, <sup>2</sup>Helsinki Sleep Clinic, Helsinki, Finland, <sup>3</sup>Vitalmed Research Center, Helsinki, Finland, <sup>4</sup>University of Helsinki, Helsinki, Finland

People differ from one another in their daily sleep and wake regimes. Various social norms, regulations and other institutional factors imply on the behaviour and equality of treatment of individuals with different morningness-eveningness patterns. We provide some insight on the existence of morningness-eveningness pay gap. We present fully observed recursive structural equation estimates as well as ordered probit regression estimates of the drivers of salary levels, based on data from our original repeated survey of Estonian creative R&D employees on a

sample of 149 individuals from eleven entities. Employees of evening type appear to have a lower probability of getting higher levels of salary, compared to employees with no distinct morningness-eveningness profile. Simultaneously, we find support to a strong gender pay gap, with female employees having an average 13-15% lower probability of earning the higher levels of salary. Age is another strong determinant of the salary level.

JEL codes: O32, M50, D02, D63, J70

## 11.19

**Sector of employment and wellbeing at work - an international comparison**Pauli Forma*Keva, Helsinki, Finland*

**Objectives:** The roles of the different sectors of employment (public and private) vary in different countries. Recently, e.g. globalization, ageing of population and technological change have created economic pressures on public economies. Budgets have been cut, responsibilities of the public sector are under reconsideration and public sector service production has been outsourced. Thus, the division of responsibilities between sectors of employment have changed in many countries. However, the wider international picture concerning well-being at work in employment sectors is unclear. The aim of this study is to investigate well-being at work among public and private sector employees in different countries.

**Methods:** The study utilizes data from International Social Survey Programme (ISSP). Countries included to the analysis are Australia, Austria, Denmark, Finland, France, Norway, Sweden, Switzerland, United States, Germany and United States. The countries represent different types of division of responsibilities between sectors of employment. Countries are also different when it comes to their occupational safety and health systems. Descriptive methods and multivariate techniques are utilized in the statistical analyses.

**Results:** Well-being of the employees varies between different countries. Moderate differences were found when it comes to wellbeing at work among public sector employees in the different countries. In some countries, a gap between employment sectors was found. The gap between sectors of employment was not systematic in a wider international perspective.

**Conclusion:** It seems that sector of employment divides not dramatically the labour-force when it comes to well-being at work. Individual-level variables like education and age are more important than the employment sector. Currently, when public sectors and also occupational safety and health systems are adjusted in many countries, it is important to analyse also the well-being of the employees in the international perspective.

## 11.20

**A Conceptual Model for Articulating Goals, Reflecting Work Episodes and Evaluating Outcomes for Knowledge Work Performance**Jukka Heikkilä, [Markku I. Nurminen](#)*University of Turku, Turku, Finland*

We build a conceptual model of goal oriented technology supported knowledge work by combining our decades long accumulated studies on knowledge workers' ways of coping in problematic change and breakdown situations with the relatively recent studies on the inner work-life. Our model starts from articulating of tasks' external goals in parallel with professional's inner formulation of performing in a role. These are related to a work episode, which consists of the articulated, planned and the actual actions for performance, including improvisation. The work episode is then evaluated for external goal achievement and reflected for adapting professional role actions for various circumstances. We give grounds to the model by building upon Schön's reflective practitioner (1983), Watson's identities (2008) and Amabile and Kramer's goal articulation for knowledge work (2007). We illustrate our model with a real-life example.

The need for articulating, reflecting and evaluating outcomes for inner self stems from the dominant representation of work from the viewpoint of an external observer, or designer. Also in knowledge work studies, empiricist ontology and epistemology dominate: we tend to ignore all aspects of reality that cannot be (objectively) observed. For example, representations of IT-supported business processes are not that distinct from the Tayloristic era work design: a good process is repeated in a same manner for each customer, following the same sequence, controlled with interfaces and outcomes. Yet, *"The things which you must do or you have failed, represents the solid core of the work. Even if you do all that is asked of you, you have not succeeded."* as stated by Handy (1990). There is always an empty space that you are expected to fill with your own initiative and activities, beyond the perception of an external observer. There is also a stream of research paying attention to how people build their identity (Watson, 2008), leverage their intrinsic motivation (Berg et al., 2013), and long for guidance (Amabile & Kramer, 2007) to feel happy and improve their performance in modern work places.

One way to be more initiative taking is to give the actor more autonomy, to have greater influence to one's own work situation. However, teamwork calls for interpersonal relations and communication (Watson 2008, p.134) to create and maintain the sense of professionalism and organizational goals. There is a number of novel management approaches taking advantage of autonomous initiative taking. They are claimed to suit for knowledge work by emphasizing reflection-in-action with peers, e.g. job crafting (Berg et al., 2013), or holacracy (Robertson, 2015). This increased autonomy needs management by governance – by creating understanding of and commitment to the corporate objectives and values (Robertson, 2015).

But as Amabile and Kramer suggest in their extensive study of three years, with 238 recruited knowledge workers, from 26 teams in seven companies, who completed 12000 diaries: *"... the single most important differentiator was a sense of being able to make progress in their work. Achieving a goal, accomplishing a task, or solving a problem often evoked great pleasure and sometimes elation."* (Amabile and Kraemer, p. 81), where as bad days were, logically, characterized with setbacks from the goal achievement (ibid.).

In addition to external goal setting, performing tasks with autonomy emphasizes the inner work

life (Amabile & Kramer, 2007). People do not step out from their lives when they enter to the work place and take their work roles. They continue being holistic human beings with emotions (happiness, fear, pride) and motivations (what to do, whether to do it, how to do it). Their identity is being built as a combination of internal self-identities and discursive social-identities, which are shaping the professional work identities (Watson, 2008). In our thinking this professional work identity is an outcome of repeated work episodes in performing tasks at workplace, eventually growing to a work role that bears the responsibility of performing goal oriented tasks.

The above reasoning calls for a combination of the inner task articulation and evaluation of tasks in interaction with inner and outer work lives. Such inner-outer dualism is especially useful in analysing work accomplished by means of IT since it makes the purpose (inner) of the work visible for the actor. According to our experience, in digitalized and networked knowledge work, objectives alone remain easily too abstract and esoteric, and do not match with people's conception of good motivation and performance at work. Our conceptual model can be used to enhance and structure work episodes by articulating the goals and professional role for desired performance in practice. Reflection upon the actual performance in work episodes helps improving professional work role and avoiding role and task ambiguity in the changing work life (Väänänen & Turtiainen, 2014).

## 11.21

**Identifying factors for building trust in global academic partnerships and their challenges in organization of work**Seugnet Blignaut<sup>1</sup>, Saara Hiltunen<sup>2</sup>, Tapio Salakoski<sup>3</sup>, Taina Savolainen<sup>2</sup>, Jarkko Suhonen<sup>2</sup>, [Erkki Sutinen<sup>3</sup>](#)*North-West University, South Africa<sup>1</sup>, University of Eastern Finland, Finland<sup>2</sup>, University of Turku, Finland<sup>3</sup>***Introduction and Objectives**

The expectations from and funding for universities to work globally are increasing. However, there is a severe lack of research-based knowledge on how to set up functional global academic partnerships. This is particularly harmful for pioneering academic teams which consist of global forerunners in a given academic, trans-disciplinary challenge, whether in R&D, education, or both. Building a pioneering global academic partnership requires learning from similar partnerships outside the academic realm. Thus, our viewpoint to the task is that of trust: the work-in-progress paper sets a scheme for research that will identify factors to guide the design process towards trust-based global academic partnerships.

Trust is seen as a potential unifying intellectual resource in partnership relationships. Trust belongs to intangible assets and relational intellectual capital. The aim of the paper is to provide knowledge and increase understanding of trust formation in multi-partner academic research and other partnerships from (multi)cultural perspective. The process of trust building is studied from the early (initial) stage of building relationships and network for research-related projects involving different actors. While studies of partnership's trust development have been published lately in inter-organizational context (Cook & Schilke, 2013; Sloan & Oliver, 2013), the topic of academic and research (project)-related studies are rare. The paper focuses on trust formation

and cross-cultural issues (Fulmer & Gelfand, 2012) and challenges in partnership relationships that have been scarcely examined empirically so far.

The research question is how trust develops within and between multiple academic partners, and how to design functional academic partnerships according to these findings.

Studying the process of the development and building of relationships within academic work context is essential for advancement of innovative initiatives and trust-based partnerships in international collaborating and competing academic environments and their needs to develop trust across cultures and understanding customer value in order to strengthen international innovative project concepts. New opportunities for partnerships development internationally may appear when reciprocal trust and trustworthiness have been recognized and pursued.

### Methods

Methodologically, our research is two-fold: on one hand, we *identify* and *analyse* the factors for trust-building in global academic partnerships, and on the other hand, *design* approaches for establishing these kinds of partnerships.

To *identify* and *analyse* factors for global academic partnerships, the researchers will perform a qualitative retrospective analysis of collated longitudinal data from two, very different successful cases, namely an online doctoral program and a double degree MSc program. Both have been based on mutual trust for achieving pioneering results. The impdet.org online doctoral program in educational technology and ICT4D has been running since 2005 and is critically dependent on an intense, global academic partnership. Universities of Turku and Fudan have been giving a double degree MEng program in Information Technology since 2010.

The qualitative dataset will comprise inter alia project evaluation documents, interviews with participants, and the tracking of participants' career paths to identify and list contributing success factors. Auto ethnography method is used among others as well as written material (narratives). The integrated dataset will be analyzed with Atlas.ti, a computer-assisted qualitative data analysis system, in order to extract the contributing factors while simultaneously capturing the richness of individual instances. The qualitative data will then be quantized to establish trends of successful global academic partnerships by means of cluster analysis.

To *design* guidelines for building trust-based global academic partnerships, we propose an action design research (ADR) based approach. We will introduce an ADR-inspired method for proactively guaranteeing the viability of the partnership that we call sustainability analysis. Sustainability analysis identifies critical events for the four pillars of sustainability: resourcing, collaboration, environment, and ethics.

### Action plan

We have presented a work-in-progress scheme that can be used for identifying, designing, and further developing global academic partnerships. While we will continue our research according to the scheme, we will conclude with three topics for future research, beyond the scope of the scheme.

First, we need to explore the *efficiency* in setting up academic partnerships. Currently, academics share a widely recognized frustration in the time wasted for designing partnerships for R&D or educational collaboration that will not get funding. The problem, and thus frustration, is particularly severe in humanities where the competition-funding ratio seems to be highest. In

case we can derive measures for the efficiency of a planned academic partnership, ahead of the proposal writing efforts, we will save significant resources and reduce the level of frustration caused by unsuccessful proposals.

Secondly, identifying successful global academic partnerships and designing the ways that they can collaborate even more effectively is a challenge that cannot be solved by only measuring or analysing the success factors of a given case. Interestingly and somewhat paradoxically with the previous paragraph, humanities might turn up as a critical asset, in the form of digital, or computational humanities. The trans-disciplinary approach of computational humanities can be tuned to identifying latent, or hibernating, networks of individuals, teams, or groups that would, when gathered together as an academic partnership, have unprecedented means to solve a given critical challenge.

Thirdly, the contemporary era of increasing global migration, observed locally as restlessness and conflicts, and of emerging nationalism have recently caused unforeseen obstacles for key academic characteristics: mobility and nomadism. Recent episodes indicate that the ideal of global academic partnerships needs to give way to academic patriotism or protectionism. This is a challenge that requires not only insightful academic analyses, but a concrete intervention.

## 12. ORGANISATIONS AS PLATFORMS OF WORK IN THE DIGITAL FUTURE

### 12.01

#### Transformed Boundaries at Work. Coping with Cyberbullying Behaviours on Facebook.

Rebecka Cowen Forssell

*Malmö University, Malmö, Sweden*

#### Introduction

With Facebook being used by more than half of the Swedish population, Social Network Sites have become a part of everyday life. Although Facebook are primarily used for private purposes (Findahl, 2013), 18 % of the Swedish employees who are members of Facebook include work relations in their social network (Findahl, 2012). By mixing relationships from both private and work-related spheres, Facebook contributes to the diminishing borders between work and non-work. Contrary to face-to-face meeting that often are self-monitored in relation to the specific context, interaction on Facebook mix different relations and contexts (i.e. friends, family co-workers, acquaintances, off- and online relations) into one platform (Marwick & boyd 2010). This phenomenon arising with participation on Social Network Sites is referred to as *context collapse* and emphasises the tension this can bring between groups and individuals (ibid).

In connection to the use of Social Network Sites, one topic that has attracted attention lately is the growing awareness of cyberbullying behaviour. Cyberbullying behaviour is here defined as situations when individuals perceive themselves to be subjects of online aggressive, rude and harassing behaviour in their professional practice. In some crucial ways, cyberbullying differs



from face-to-face bullying. Firstly, the geographic distance between the communicating parts make the perpetrator unaware of the physical reactions of the target. Not seeing facial and bodily responses is suggested to decrease feelings of empathy. Thus, faceless communication online may have a disinhibiting effect on the users. Secondly, electronic devices allow new geographies for work. When bullying behaviour is conducted via digital devices the target can be reached at other places than the workplace, such as the home, traditionally seen as a “safe haven” by targets of bullying. Moreover, by communicating via digital devices the targeted individual can be reached at other times than during work hours. Contrary to bullying that is fixed to the workplace, cyberbullying may continue or even start firstly when the workday is over. The capacity of targeting an individual 24/7 have made cyberbullying to be described as a non-stop bullying that encompasses a high intensity that leaves the targeted individual with little room for resilience.

### Objectives

While cyberbullying among children and adolescents is a well-investigated phenomenon, little research concerns cyberbullying among adults in working life. While interaction on Facebook has become a part of the everyday life for many adults, there is a need to understand how tension can arise on these sites and how it may affect relations at work. The aim of this study is to understand how work related cyberbullying behaviour can arise on Facebook, how it can be expressed and how it can evolve over time. Central for the study is also to understand what coping strategies the targeted individual perceive is at hand when trying to cope with cyberbullying behaviour.

### Methods

This study has been designed as a netnographic case study. Netnography is a qualitative research methodology designed to study cultures and communities online. In this study a multi-method approach has been applied that involves two steps; 1) observations of communication on Facebook around a specific post that triggered cyberbullying behaviour and involved individuals from the targets private and work-related spheres, 2) a qualitative in-depth interview with the targeted individual.

### Results and conclusions

Empirical data for the study was collected between Nov. 2016 – Jan. 2017 and will be analysed spring 2017. As the presented study is ongoing work there are no results and conclusions to be presented at the time of this abstract submission. By increasing the knowledge and understanding of the phenomenon of cyberbullying behavior the results of the study may be used as support and help for performing precautionary work in organisations.

## 12.02

### Agile working methods in digital service creation

Liinamaaria Hakola

*JAMK University of Applied Sciences, Jyväskylä, Finland*

Complex and turbulent market environments have challenged traditional management practices in many organizations. The new ways of work, increasing use of technology and digitalization are changing organizational culture also in traditional companies. Agile innovation methods have been recognized as a way to deal with complex market environments. Agile methods are

considered to be especially suitable when the problem to be solved is complex and solutions are initially unknown. It emphasizes the role of motivated individuals and working prototypes, the ability to be responsive to change and customer collaboration. (Rigby, Sutherland & Takeuchi, 2016)

The case company in this paper is a large organization with several hundreds of employees. There is one team in that organization that has started using agile working methods. This case describes this team with agile work methods in a large organization. The purpose of this paper is to explore how the team members see the agile ways of working and reflect on them. This paper explores some observations on how the digital age has changed the work community and how self-managed and agile ways of working change workplaces.

Case study was chosen to be the research method because somewhat new phenomena under rare circumstances is explored. The aim is to provide a rich description of the case and to advance theoretical understanding of this phenomenon.

This case discusses the potential of agile innovation methods and self-managed ways of working to enhance digital customer value. The characteristics of self-managed team, and the functionality and features of agile ways of working are illustrated. Also the significance of agile working methods in value creation of digital services in otherwise more traditional company are discussed. The findings and experiences are reflected with the existing knowledge on complexity and empowerment theory.

## 12.03

### Implementation of Sustainable e-HRM: The Interaction between HRM, Technology and Organizational Stakeholders

Anna Bos-Nehles, Hannah Methorst, Tanya Bondarouk

*University of Twente, Enschede, The Netherlands*

Information and communication technology (ICT) lays at the core of most contemporary work processes and has led to major transformations in the way HRM is practiced. Due to the ongoing digitization, new innovative HR software systems and activities (applications) have been developed. Combining them with technological information and web-based technologies, these applications are known to us as electronic-HRM (e-HRM) (Strohmeier, 2012). Thus, by linking HRM with modern technologies, organizational rules, regulations and business strategies, companies hope to gain a competitive advantage through the implementation of e-HRM applications (Srivastava, 2010; Vashishth, 2014).

Based on Klein und Sorra (1996), we define implementation as the process of gaining targeted organizational members' appropriate and committed use of the e-HRM application. We view implementation as an ongoing multilevel phenomenon, since individuals, groups, organizational units and even the organization as a whole, have to interact with each other to perform e-HRM activities (Strohmeier, 2007). The implementation of e-HRM, however, does not always lead to expected results (Bondarouk & Brewster, 2016a) since “there is often a discrepancy between the promised benefits and its realized outcome” (Parry & Strohmeier, 2014, p. 125). Despite assumptions of a positive impact (Bondarouk et al., 2009a), if not implemented properly, success of e-HRM applications will be at risk.

Taking into account that e-HRM implementation is an ongoing multilevel phenomenon (Strohmeier, 2007) that links HRM, modern ICTs and organizational rules and regulations, various stakeholders are responsible for the implementation of sustainable e-HRM. Following existing definitions of sustainable HRM (Ehnert et al. 2014), we define it as applying ICT to support and network relevant actors in their shared performing of HRM that is directed towards simultaneously supporting the economic, ecological and social performance of an organization.

It might be the technology used that is not sophisticated enough, it might be HRM-users not being knowledgeable about the usage of the technology, or not being motivated to support its implementation, or it might be the organization failing to support the cultural fit and the leadership towards e-HRM usage. Thus, there are different stakeholder groups that together are responsible for the implementation of sustainable e-HRM: HRM, technology and organizational stakeholders. We see a mutual continuous interaction between HRM, technology and organization, in which all three in some way affect or react to each other. Since traditional management literature has confined itself to studying only one part of the interplay between e-HRM applications, Orlikowski & Scott (2008) stress the essence of exploring and understanding the social, material forms and spaces, to find out how they are bound up with the organizational structure they are part of. The concept of 'sociomateriality' provides a theoretical framework to study social and material dimensions that influence the implementation of sustainable e-HRM applications (Scott & Orlikowski, 2008) and helps us to answer the central research question, being: What are the needs of e-HRM stakeholders regarding HRM, technology, and organizational support to implement sustainable e-HRM?

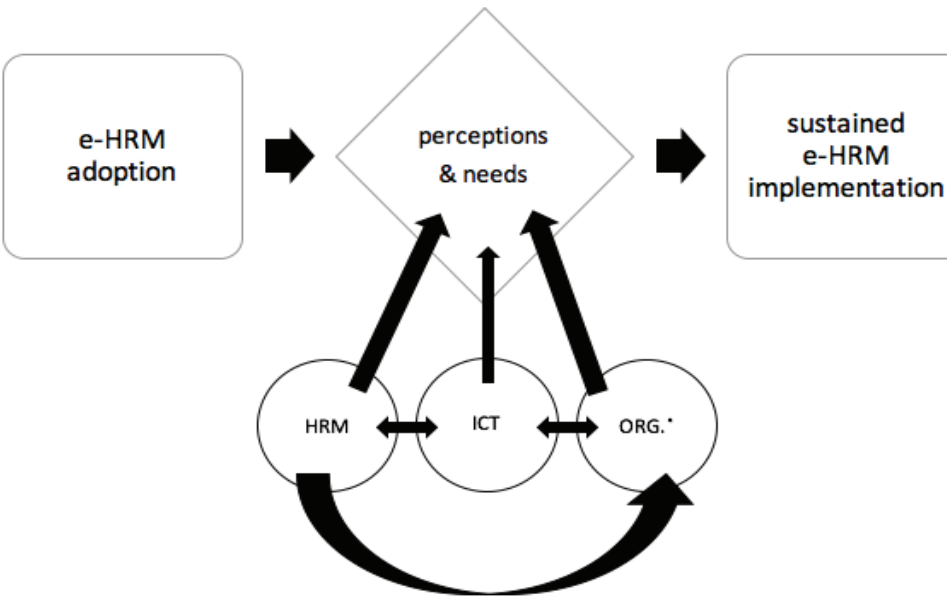


Figure 1 Conceptual model: Interdependent relationships within sustainable e-HRM implementation (ORG. = Organization)

Based on a single case study in a Dutch service organization we aim to develop an in-depth understanding on what HRM stakeholders' perceptions are when using an e-HRM application and what they think is needed to improve and sustain the implementation. The case company has recently introduced an e-HRM application: iOS-embedded personnel management applications. We used multiple methods, such as semi-structured in-depth interviews and

document analysis. For the interviews, 14 e-HRM stakeholders were selected based on their direct interaction with the e-HRM application and their experience with HRM, technology and the organization.

Table 1: Selected key e-HRM stakeholders based on three pillars

| Pillar                    | Amount | Function                            | Description of responsibilities                                                                                                                                    |
|---------------------------|--------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HRM stakeholders          | 1      | HR director                         | Developing rules and regulations and setting goals prior to the introduction of the e-HRM application.                                                             |
|                           | 1      | Administration                      | Were responsible for certain tasks prior the e-HRM app introduction. The work load shifted from administration to line managers because of the e-HRM applications. |
| Organization stakeholders | 3      | Unit manager                        | Is always the authorizing party to decisions made by/requests of the line manager.                                                                                 |
|                           | 6      | Line manager                        | Has direct interaction with the e-HRM application.                                                                                                                 |
| Technology stakeholders   | 1      | Information manager                 | Is directly involved with the technical development of the e-HRM application apps.                                                                                 |
|                           | 2      | Coordinator regional administration | Point of contact for line managers concerning questions about the e-HRM application usage.                                                                         |
| Total                     | 14     |                                     |                                                                                                                                                                    |

The first results of the exploratory study show that the e-HRM application is not sustainable yet. Our analysis has shown that the main reason for this is an absence of interactions between the different stakeholders, not even between stakeholders within the same group. For the implementation of sustainable e-HRM, we suggest it has to integrate horizontal and vertical communications between the different stakeholder groups and layers of the organization. This study provides theoretical and practical implications of the needs of e-HRM stakeholders to implement e-HRM applications sustainably.

12.04

Distributed work practices: technology as a non-human actor in a virtual network

Rebecca Taylor, David Baxter, Lisa Harris

University of Southampton, Southampton, UK

Introduction and objectives

Distributed working practices have increased significantly in the past 15 years with teleworking

and remote working used in varying degrees across virtually every sector. These practices have been made possible by sweeping technological developments that provide a digital and often web based framework for linking geographically dispersed workers. These developments include corporate file stores, video conference systems, social media and online chat, and a range of other cloud-based productivity and collaboration tools. In addition firms can use web based platforms to coordinate outsourcing to freelance workers and professionals who are likely to be remotely located.

Studies of distributed teams have taken place for over a decade spanning various disciplines particularly information technology systems and business and management (see for example Hinds and Keisler 2002 and contributors; Hinds and Mcgrath 2006; Oshri and Van Fenema 2008; Robert and Dennis 2008; Singh 2008) These provide insights into some of the processes and challenges of distributed working. However, the pace of technological change and the increasing maturity of organizational approaches to managing distributed working mean practices continue to evolve and to raise new questions. In particular distributed work throws a spotlight on the shifting interface between communication technologies and knowledge integration. Science and Technology Studies and the Sociology of Organisations provide useful conceptual reference points for exploring these interfaces. Actor-Network Theory seeks to understand how non-human as well as human actors create and stabilise networks of relations (Latour, 1992). The concept of a non-human “actant” provides a tool for understanding how the interests and assumptions inscribed within information technologies influence how networks are formed and maintained. It illuminates contemporary technical/material realities in which ‘pre-packaged systems and global standards are routinely transplanted between very different use contexts, people and technologies as members of actor-networks’ (Allen 2004 p171). Here we draw on ANT to explore how communication technology tools are invested and used strategically to facilitate knowledge integration in distributed teams.

#### Methodology

We conducted exploratory interviews with 16 workers in a range of settings whose work is distributed to some extent. Our sample was drawn from the LinkedIn Scrum Practitioners group, selected as an active community primarily involved in the management of software development, with a significant history of discussion about remote working practices. Our post on the LinkedIn group asked for anyone involved in remote work to get in touch. Some who contacted us worked on projects that are shared across two offices in different UK cities. In the most extreme cases, participants coordinated projects with a globally distributed freelance workforce. The interviews explored among other things, the mechanisms and organisation of remote working, distributed team relationships, communication mechanisms and trust. Interviews lasted around an hour and were recorded and transcribed verbatim. Transcripts were imported in Nvivo 11 and coded to broad thematic and conceptual nodes.

#### Findings and discussion

The case of one participant, Rico (pseudonym), managing a globally distributed team of developers, provides some insights into the strategies employed to maintain the network and the multifaceted role of communication technology tools in the process of delivering the product. Rico’s company develop software tools for the retail industry and whilst he is based in South America his developers come from multiple global locations including Russia, Eastern Europe and China creating time zone, language and cultural challenges. The project has been running for 2 years and he has not met any developers in person. In addition to the various software development tools used by the team Rico uses project management tools such as Redmine and Trello and communication technologies that include Slack, Google Hangouts and Skype. These

form layers of technological infrastructure and it is in the interfaces between the technologies and the team that communication takes place and knowledge is integrated and coordinated. These technologies are invested with various functions and roles and thus become actants in the network. Rico’s narrative articulates how the technologies are utilized strategically to ensure particular types of communication between members. For example when using Hangouts or Slack, Rico clarifies with the team in advance if the format will be voice or video so as not to create awkwardness by revealing private contexts especially for new members: ‘... you need to take care of having the trust of this member before sharing the video’. The interface between the technologies also requires strategic management to ensure effective communication. In one meeting Rico explains ‘we were doing voice on Hangout but at the same time, we were on another site which was the retrospective tool so they were following real time tickets that we were sharing.’ Rico’s case further demonstrates how temporal, linguistic and cultural challenges to communication and knowledge integration are navigated in distributed teams using particular configurations of technological infrastructure. It raises important questions for how we understand work in the digital future.

#### 12.05

#### Police Officers Encountering their Competence to Connect on Social Media

Bertil Rolandsson

*Gothenburg University, Dept. for Sociology and Work Science, Gothenburg, Sweden*

Officials increasingly use social media as digital platforms to scale up and facilitate their engagement with communication at work. At the same time, these platforms demand competence to manage for instance misinformation, public critique or mobilization of distrust. The purpose of this paper is to improve our understanding of how the police justify themselves as competent to connect with citizens by using social media. That is, the paper explores how police value their own competence to establish and manage digital relations to citizens and local communities as part of their professional practice. In focus are the Swedish police - a context in which different organizational reforms since 1990th have repeatedly stressed the importance of improving police work capable to connect with locals. However, it is only during the last seven years that digital platforms like Twitter, Facebook and Instagram have been introduced by the police as means for doing so. To examine what social media platforms means to officers engaging in local policing, the analysis draw on valuation studies as well as concepts from network analysis. The study investigates different interpretative schemes guiding how officers identify what type of ties with local actors that they can justify as manageable. The empirical material comprises 23 semi-structured interviews with officers working in both big cities and middle sized cities. To extend the variation among the respondents, it may also be pointed out that the empirical material comprises officers that are engaged in preventative policing, in intervening police activities, as well as in investigative police work. In order to put these interviews into context, the researcher has eventually also examined the social media accounts that these respondents use. The analysis has taken in consideration both their strategies and the content of communication that recur in updates that they have published on their social media platforms. The study identifies three different ties important to the emerging interpretative schemes and the way officers justify themselves as competent to connect with local communities via social media: general ties, significant ties, and ties of solidarity. General ties are constitutive to different types of mass-communication, significant ties support organizational justification, whereas ties of solidarity



strengthen the recognition of specific officers. Findings imply that officers manage different types of relational strain that may emerge on these digital platforms by engaging more in setting up general-ties and conducting mass-communication. Further implications of these findings are discussed in the paper.

## 12.06

### Continuity of organizational identity through the passage of time

Juha Laurila, [Anni Paalumäki](#)

*Turku School of Economics, Turku, Finland*

Every successful company is expected to have clear answers to questions like “Who are we?”, “Why do we exist?”, or, “What makes our company distinctive and different from others?”. These are fundamental issues covered with the concept of organizational identity, i.e., what are the collectively shared, central and enduring characteristics of an organization, and how does it stand out in relation to its peers (Albert & Whetten, 1985; Whetten, 2006). More recently, research has increasingly focused on the nature of organizational identity as something not only inherently enduring but also susceptible to change (Gioia, Schultz, & Corley, 2000; Carlsen, 2006). Regardless of whether the sources of change in organizational identity are external (e.g., Gioia & Chittipeddi, 1991; Tripsas, 2009) or internal (e.g., Ravasi & Schultz, 2006), current research seeks to call attention to the processes through which organizational identity undergoes change while still retaining some of its previous characteristics in some form. While research currently aims to focus more on the processes that mediate shifts between different sets of identity characteristics, more importantly, it centers on the construction of organizational identity as a continuous process (Carlsen, 2006; Gioia & Patvardhan, 2012; Pratt, 2012; Schultz & Hernes, 2013). In this study, we contribute to previous research on organizational identity change by addressing how actors combine social and temporal comparisons in constructing distinctiveness during the different phases of organizational evolution.

Previous works in the organizational identity literature have already acknowledged that the construction of organizational identity involves both social and temporal comparisons (Gioia et al., 2000; Corley & Gioia, 2004). However, few studies examine how the different evolutionary phases that an organization undergoes materialize through their use and mutual balance. Most empirical studies on how different types of organizational change influence organizational identity have examined short time frames, which partly explains this research gap. For example, the longitudinal studies that have been conducted show how the processes through which individual and organizational levels of identity are constructed interact (Fiol, 2002), how external forces (e.g., media coverage) influence identity construction over time (Kjaergaard, Morsing, & Ravasi, 2011) and how the past and the future are constructed in different ways depending on the present situation (Schultz & Hernes, 2013). The present study continues to strengthen this body of research by addressing how social and temporal comparisons are intertwined over time in general and how the forms of socio-temporal comparisons change during an organization's different evolutionary phases in particular.

To address this issue we use material from a longitudinal field study of SOL Cleaning Services (henceforth SOL), which separated from a diversified Lindström Corporation in 1991. SOL is an especially relevant entity for this research because, despite its significant growth and

diversification since 1991, the company has been able to maintain many of its observable identity characteristics. How and to what extent such maintenance occurs is an important and often neglected issue in the extant literature (cf. Gioia et al., 2000; Anteby & Molnar, 2012). The case of SOL offers an exceptional opportunity to examine the evolution of organizational identity because we have collected data on the company for over two decades by various means. Our empirical material consists in totality of: a) interviews (67 semi-structured interviews with 59 informants during 1993–2013), b) documentary data and media coverage (internal memos, annual reports, personnel magazines, TV programs, articles in press and academic studies of SOL, altogether 2500 pages of written documentation, covering years 1991–2013), and c) field observations (a two-week non-participative observation period, participation to several formal and informal company events (mainly during 1993 – 2005).

Our analysis is based on three periods of SOL evolution named as phases of separation, prominence and diversification, all of which offer different platforms for organizational identity formation. We show how the changing constellation of actors involved in identity construction, and the gradual accumulation of experiences as an independent organization both compels SOL representatives to formulate new constructions of identity and offers new resources for this purpose. As an outcome of these phase-specific forms of socio-temporal comparisons, SOL representatives were able to craft and maintain distinctiveness under the changing conditions. This means, that although the degree of distinctiveness may vary, the flexible use of socio-temporal comparisons enables distinctiveness to prevail in different conditions.

Our revelatory case study concentrated on a particular spin-off, SOL. However, we believe that the forms of socio-temporal comparisons identified in our empirical analysis are transferable to several other settings and that these comparisons can help others assess how members of different types of organizations reconstruct their organizational identities over time.

## 12.07

### Algorithms as a platform for work

Markus Philipp Zimmer, Anne-Marie Tuikka, Abayomi Baiyere, [Marko Niemimaa](#)

*Turku School of Economics, University of Turku, Turku, Finland*

Being the foundation of numerous services used by people daily, algorithms have become an omnipresent part of our lives. Facebook uses algorithms to provide its users with individually tailored news feeds and advertisement. Based on its algorithm, Trip Advisor computes users' reviews of accommodations and landmarks to promote the highest-ranked travel options on its website. By this, Trip Advisor influences its users' future travel plans and eventually, their buying decisions. Google's success is based on its algorithm known as page rank. Its function is to rank websites for Google's search engine and thus, it plays a vital role in the provided search results. The values and choices by which the page rank algorithm ranks websites were certainly not the result of any democratic process neither are the choices it makes open. Yet, it has a significant impact on users' search results and by this, on the information users find. Besides these examples, in which algorithms feed on user provided data to render a service, algorithms increasingly enter the domain of work as *platforms for work*.

Companies like Uber and Foodora are typical examples of algorithms as *platform for work*.

Algorithms are the essence of the platform offered by these companies as their main product through which people who are in need of a certain service connect with people rendering this service. While the company may not consider the people rendering the service as employees, they are essential for the existence of the company. Without them the company could not offer these services and the algorithm would not hold any value. Since they typically do not possess the status of an employee legally, we consider them as workers.

We have selected Foodora as our case company for this study. Foodora offers restaurants missing a delivery service to deliver the restaurant's food to its customers. The idea behind Foodora's business model is in employing people who use their own bicycles and smartphones to deliver the food ordered by a restaurant's customer. Yet, workers do not have fixed work hours but decide themselves when they are available for delivering food. This means, workers simply use the Foodora app on their smartphone and set themselves as available to receive and accept orders to then pick up the food from the restaurant and deliver it to the customer. In this setup, Foodora's contribution is the algorithm which processes all orders placed by customers and subsequently, after computing and incorporating all the conditions assigned to an order, the algorithm picks the delivery person best-suited for an order placed and sets a time goal until when the delivery should be completed.

However, we know very little and understand less of how Foodora's algorithm processes "all the conditions" of orders or how it picks the "best-suited" delivery person. Not to mention the number of questions regarding the interdependencies and the interplay of the algorithm as a platform for work and Foodora's workers working on this platform. For example, can delivery persons make sure that they are preferably picked? How do workers experience working on a platform constituted by an algorithm? Moreover, what are the social implications of such work environments and what happens, if more orders are placed than the amount of available delivery persons can handle or a delivery person becomes ill?

Therefore, we propose that the purpose of this study is to understand the use of algorithms as a platform for work for optimising workers work performance. Another objective is to study the workers' experiences while working on such a platform. Our research questions are:

- How companies use algorithms as a platform for work to optimize workers' performance?
- How workers experience work based on an algorithm as a platform for work?

To conduct this study, we have adopted an embedded case study research approach. We have opted for a qualitative research method involving the use of data collected from interviews, observations and an online ethnographic study of Foodora. The interviews were designed as semi-structured interviews with the workers of Foodora. The online ethnography component of the study would involve identifying Foodora specific fora and going through forum discussions and blogs related to our study. We intend to conduct the interview study in Finland to gain detailed context of the operations of Foodora's algorithm and its implication on its workers, while the online ethnography study is aimed at both triangulating our findings and broadening our understanding of the studied phenomena.

Our anticipated contribution lies in uncovering the essence of algorithms as a *platform for work* and unveiling the different implications this holds for our conceptualization of work. Additionally, we expect to contribute to the knowledge base with respect to the social and ethical implications that unfold in the context of algorithms as a *platform for work*, particularly for workers.

## 12.08

### **The dialectics of a conflicted employment relation - separate narrative sense makings behind the legal and administrative relationship in airline industry**

Maija Vähämäki

*University of Turku/School of Economics, Turku, Finland*

This paper investigates the reflexive practice of employer-employee relationship in a context of work conflict ending up in a strike. The case portrayed here bases on narratives collected directly after the event, seeing through different lenses of people involved in the strike or in its negotiations. The case illustrates how contrasting versions of the same event reflect a complex employer-employee relationship and the dialectic construction of it. This ethnographic account also illustrates the multidisciplinary field of conflict research and some of its challenges.

The dialectic employment practice in this paper refers to the organizational dialectics between management and employees: rational planning, operational and material management of service work and the responses of the employees in their aesthetic delivery of work. In their everyday working practices the parts are in dialectic relationship to each other through their actions and talk according to their roles in the organization. Chiefly, an employer develops work organizing practices and the employees' response to these expectations by following the rules and duties given to them.

Disturbances in this relationship are expensive for both the company and employees. Despite of that, work conflicts have almost disappeared from the research topics of Management and Organization Studies (MOS). The complexity of the phenomenon of conflict has generated a multi-disciplinary base of concepts and epistemologies. In order to get a holistic picture of a conflict situation the investigation requires a long-term follow-up and multilevel understanding of the people, actions and their relations. Additionally, the national legal and normative context as well as global business frame every case of industrial action and even the smaller employment conflicts.

Several studies in Management and Human Relations discipline have explored how to produce an efficient work environment and what influences to productive work and work relationship. Still, the studies of work conflict in management and organization sciences have remained a side path grasping mainly the structural and material organizing of work and employment. High Performance Work Practices have been the topical arena around which the debate has been active, primarily in normative tone, in order to find the best practices for efficiency and in avoiding troubles in employment. The resistance literature has recently tried to create new spaces for converging studies of work conflicts and related topics. Even if the conflict research has been more popular in psychology and social psychology these studies remain, however mainly person centric and rarely touch the organizational practices apart from some notable studies.

After presenting shortly the diverse discourses and epistemologies available for a conflict researcher, this paper focuses on the reflexive dialectics among different stakeholders of an organization producing an employment practice, specific to each organization. It is an ongoing, reflective, reflexive and recursive process and thus, self-producing by every encounter between employer and employee. Unfortunately, for the normative managerial plans, the process has a memory and emotions, too. It gathers experiences influencing the trust between the parts. This

makes the process both sticky and variable by nature.

This empirical research is a case study of work conflict in airline industry. The research material is collected directly after the resolution of the strike and consist of 19 interviews with representatives of both the employer and employees. The case is specific as strike since the most part of participating employees worked for one company and thus the case cannot be compared directly with the more typical strikes where the members of one union work for several employers. Instead, this case concentrates on the construction of employment relationship culture and praxis within one company. By analysing the sense making narratives from the people involved in this strike, I try to reach understanding of what remains hidden behind the official reasons and procedures of work conflict and contract administration.

The setting of this study brings to the forefront the multi-story process of a strike constructed in its socio-historical context. From those narratives and my notes and feelings during the conversations, I have identified their personal feelings, emotions, and attitudes as well as group norms and shared understandings of the group in which the speaker identifies him/herself. Additionally, facts and realistic descriptions, as well as glimpses of the firm's past history and of the changing identity of cabin crew, intermingled throughout the story, helped me to get into the world of this strike and the parties of the war – who have to continue working together for the company until the next discrepancy. This specific strike was also in the headlines of the media, similarly as the strikes in airline industry has been in other countries. The illustration of this case sheds light to the Achilles heel of today's working life in the struggle between efficiency and well-being and dignity at work.

## 13. OVERWORK AND ITS EFFECTS

### 13.01

#### Working conditions, working time and work-family conflicts

Greet Vermeylen

*Eurofound, Dublin, Ireland*

#### Introduction

This paper will look at working conditions of working men and women, including those with care responsibilities, in Europe. It will consider the associations between working conditions, and particularly working hours, such as long working hours, and working time arrangements, including atypical working hours, being on call or doing work in one's private time, as well as predictability, working time flexibility, being able to work from home and being able to take time off during office hours on work-family conflicts such as keep on worrying about the job, being too tired to do some of the household jobs that need to be done after work and the feeling of not having enough for your family life because of one's work. It will furthermore look at association with other aspects of work, such as physical and psychosocial risks, related to work intensity and work environment on work-family conflicts. Lastly it will also look at family composition and

working time preferences. It will consider differences between men and women with children, between workers in different occupations and sectors as well as between countries.

#### Methods

The paper is based on secondary analysis of the data of the 6<sup>th</sup> European Working Conditions Survey, a European-wide survey of workers in 35 countries.

#### Results and conclusion

The impact from work to private life is higher than from private life to work. This is related to the fact that many workers already have made some adjustments in their choice for work according to their private needs. The associations with working conditions, and particular with working time arrangements but also with physical and psychosocial workers will be explored to understand better the interference from work into private life and work-family conflicts.

### 13.02

#### How relative income affects work hour preferences

Benjamin Schalembier, Brent Bleys, Luc Van Ootegem, Elsy Verhofstadt

*Ghent University, Ghent, Belgium*

Over the past century, the length of the average workweek in developed countries has gradually declined. Automatization, among other factors, has allowed people to work fewer hours for the same output. However, despite ever increasing productivity, this decline in working time has stopped since the last quarter of the previous century. Instead of using productivity gains to work fewer hours, most people prefer to work more hours to attain a higher standard of living. This implies that people ascribe little relative value to additional spare time. Yet, people feel increasingly pressed for spare time and time at work inevitably comes at the expense of family, hobbies or household responsibilities. Given these considerations, one could expect that at least some people would prefer to work fewer hours. Research shows that a discrepancy between the hours people actually work and how much hours they would prefer to work is common. This gap, usually referred to as a work hour mismatch, has been found to negatively impact life satisfaction, job satisfaction, psychological wellbeing, physical health and productivity at work.

In this paper we examine how income determines work hour preferences by looking at the work hour mismatch. In addition to personal and overall household income, this study analyzes how self-assessed relative income affects work hour preferences. We differentiate between over- and underemployment and theorize that these are determined by very different factors. It is hypothesized that people want to work less when they have a higher income and that they want to work more hours when they have a low income or feel relatively deprived.

The data used in this study was collected in 2015 and 2016 in Flanders, the largest of three Belgian regions, as part of the annual LEVO survey. LEVO is a research project in which data about the living circumstances of Flemish citizens and their views on a variety of topics, e.g. work hours, is collected. In this paper, we focus on the working people of the Flemish population and therefore only retain respondents who are currently employed. The final sample consists of 1435 respondents aged between 18 and 65. Work hours were measured by asking respondents:



“How many hours, on average, do you work per week?”. In our sample, we find that those who are currently working, do so for 39,82 hours per week on average. The work hour mismatch was estimated with the question: “Indicate how many hours you would like to work more or less per week than you do now, taking into account the impact on your income”. We find that 29,68% of the respondents in our sample experience a mismatch. 9,87% wants to work more hours, while 19,81% indicates that they would prefer to work fewer hours.

We perform multinomial logit regressions, in which we look at how those who prefer their current work hours differ from those who want to work more hours and from those who want to work fewer hours. As is expected, those who currently work more/fewer hours are more likely to want to reduce/increase their work hours. Also, those who experience a good work life balance are less likely to want to change their work hours. The role of income in wanting to decrease working hours is dubious. Those with a lower personal income are less likely to prefer to work fewer hours. On the other hand, neither overall household income nor relative income plays a significant role in wanting to decrease work hours. Looking at preferences for more work hours, we find that those with lower household incomes are not necessarily inclined to work more hours. When personal income and relative income are estimated separately, both have a significant negative effect on the desire to work more hours, signaling that those who earn less than others, or think they earn less than others, often prefer to work more hours. The significant effect of personal income, however, disappears when relative income is taken into account. Our results thus suggest that the desire for more work hours is mostly driven by self-perceived relative income, rather than actual income.

We found that there are clear differences between those who want to work more hours and those who want to work fewer hours. While the desire to work fewer hours is instigated mostly by a bad work-life balance, those who want to work more hours seem guided more by the perception of their own income, rather than their actual income. Our results illustrate the important role of positional considerations in determining the number of optimal work hours. Economists predicted that the average working time would keep decreasing as productivity increases. Our findings provide an explanation for why the decrease in work hours has stopped.

### 13.03

#### Hidden overtime hours in Finland

Pauli Sumanen

*Huhtiniemi Engineering, Tampere, Finland*

It is a commonly known fact that some employees have too much to do and some have nothing to do. One reason to heavy work load of some employees is suspected to be too loose regulations. Finnish government has established a working group to create a new Working Time Act. The deadline is June 2017. Current Working Time Act is from the year 1996. Earlier than that we had separate Working Time Acts for each sector and directors, managers and foremen were left out of them. In Finland near 40 % of work force belongs to those groups. Working Time Act 1996 says that those groups are now mainly included, but they can have fixed monthly pay for overtime working and their working time does not need to be followed and documented.

The Work Court of Law told in its judgement (TT 1998-8) that an employer is allowed to pay

salaries and wages differently than is said in Trade Union contracts if the total pay is better than in those contracts. That means in practice that the employer can pay fixed salary, which includes pay for overtime working too. In Finland we have more than one third of employees who are bosses or foremen or do foreman work. For them a working contract can be in private sector a so called total pay contract. It has been estimated that 10 % of work force has such.

This leads to the existing situation where we have no reliable statistics of how much work is really done. The Work Force statistics asks from employees: “How many hours did you do last week?”. But time use researchers around the world tell that this method is not reliable. People can remember reliably only what has happened today and yesterday, not earlier than yesterday. The error margin can be 10 %. Time Use Survey is said to be the only reliable survey method for time consuming. Results from the Finnish Time Use Survey indicate that approximately 15% of male employees and 5% of female employees work more than 50 hours per week. The official salary statistics says that paid overtime hours are about 1, 5 % of the annual working hours. Time Use Survey reveals that men do about 12, 3 % of their annual working hours as overtime hours, women about 5, 9 % respectively. The annual working hours of full-time working male employees are 17-20% higher than of female employees in a normal economic situation.

Trade unions in Finland say that the existing Working Time Act is unclear and there are too many unpaid overtime hours. The Trade Union for academic employees (AKAVA) tells on its internet pages that paid overtime is more common than unpaid overtime. We can estimate then that paid overtime is 1,5 % and unpaid overtime is 1 % of all working hours. The missing overtime hours (7 %) are paid so that fixed salary includes them.

My ongoing study examines those employees who work normally more than 50 hours per week. The main questions are: Why do people work more than 50 hours per week and which kind of effects does it have? I present some preliminary results from my study.

### 13.04

#### Overconnected or disconnected in the digital age? Ideal Types of relationship to email overuse amongst a population of health at work practitioners

Vincent Grosjean

*INRS, Vandoeuvre, France*

The digital age give to us the opportunity to mix smoothly working times and private issues. Widespread technologies like Smartphones allow us to remain connected to family and friends even during C.E.O.meeting. We can check mail or be interrupted with work issues in our bedroom or during family gatherings. This give the illusion that we are never disconnected to work, and never disconnected to family and friends. But is it true ? To answer to this apparently simple question, we need to know what is it to be connected and what is it to be not connected to work. This question is present in France where the government as established a right to disconnection that should lead to negotiations between unions and company in 2017.

We will consider here that two points of view could be proposed. The first is technologically driven; the second focuses on cognitive aspects. In the technologically driven perspective, people (usually companies) will consider that being connected is a question related to both to the possibility to receive and deal with professional issues arriving through the technology,

and to the actual use of this possibility. So if workers have the opportunity to check their mail at home during the weekend and if they make use of this possibility, this perspective will consider that the disconnection is not effective for them. So the measure is relatively easy : is the connection possible ? Are there some mail seen and answered ?

The second perspective will consider that the entry point should be the cognitive activity of the worker. Starting from this point of view, the question of connection disconnection existed before the large dissemination of email and smartphone. Are you connected to your child and spouse while you discuss with he/she when you arrive at home, or is your brain and attention capacity focused on work issue even when the baby is smiling at you or when your spouse ask a trivial question ?

We have design a short enquiry questionnaire for health at work professionals who are concerned with the issue of hyper-connection and disconnection both for themselves and for the workers they have in charge. Starting with an open question ("what does it mean for you to be "in control" of the flow of information arriving to you through digital media") we progressively leave the technological perspective on connection/disconnection to discuss the cognitive dimension. We end the exchange with open question related to the perspective they use or could use while discussing the issues with managers and white collar workers.

The purpose was twofold. The first is to see how receptive they are to (and how aware of) the interest of a shift from a technically centered perspective to a cognitive one. The second is to build with them a common strategy to handle this topic with managers.

The enquiry has as target 75 medical practitioners sharing a population of about 40 000 managers or white colars workers. The enquiry will be realised with at least half of the practitioners in March 2017. At the time of the writing of this submission, only the pre-tests have been realized. The aggregating method to synthetize the qualitative results while be based on Weber notion of ideal types as we consider it leads to an interesting communication media to train professionals in a second time of the global intervention research with the medical staff and managers/white colars population.

We are aware that the methodology used could be seen as a bias: we induce interrogations amongst the practitioners oriented toward questioning the possibility of cognitive disconnection issues. This method could (and will) destabilize their pre-existing of the practitionners, especially for those who consider that the only relevant issue is the technological disconnection. Two counterarguments challenge this critic. The first is practical : the first tests of the method underline that this perturbation of the representation is of great value in their knowledge acquisition process regarding this health issue of disconnection. The second is ethical: we consider that mental representations on this topic are in the actual world nearly non existing and emerging, in the sense of Varella and then very unstable both at the psychological and at the sociological level. So they are very flexible and it is both ethically and scientifically a good opportunity for us to have an impact on those mental representations in the core population of health at work practitioners.

Up to know, we must admit that we have no results to present to the abstract reviewers. But we are very confident that we will have very interesting results to present in Turku,

## 14. PRECARIOUS EMPLOYMENT AND DIGITAL WORLD

### 14.01

#### The impact of temporary work on subsequent earnings in the long run

Merja Kauhanen<sup>1</sup>, Jouko Nätti<sup>2</sup>, Satu Ojala<sup>2</sup>

<sup>1</sup>*Labour Institute for Economic Research, Helsinki, Finland*, <sup>2</sup>*School of Social Sciences and Humanities, University of Tampere, Tampere, Finland*

**Introduction:** The growth of temporary work has increasingly raised interest in the economic and social consequences of temporary work arrangements. One essential question in this context is related to the impact of temporary work on the individuals' subsequent labour market outcomes. A number of previous studies have focused on investigating whether temporary work acts as a stepping stone to regular work. However, to much lesser extent the focus in the empirical work has been on the long-term labour market outcomes of temporary work arrangements such as the impact of temporary work on longer term income and earnings.

**Objective:** The aim of this paper is threefold: (i) to provide new evidence on the impact of temporary work on individuals' subsequent earnings in the long run, (ii) investigate whether these outcomes differ by the type or motive of temporary work, and (iii) to study how have the impacts changed across time.

**Data and methods:** The analysis utilises Quality of Work Life Surveys (QWLS) from the years 1990, 1997, 2003 and 2008 combined with register follow-up data from the period 1987-2011. As longer-term earnings outcome measures we use e.g. log of the individual's annual earnings after four and eight years and the sum of annual earnings after four and eight years. The impact of temporary work on these outcomes is studied by using propensity score matching techniques.

**Results:** The preliminary results suggest that temporary work has impact on longer-term earnings. We find lower annual earnings and sum of annual earnings compared to the situation where the individual would have been in a permanent job in the base year. However, there are differences in the size and the significance of the impact in different subperiods.

**Conclusions:** Consequences of temporary work also show in the longer-term earnings. Our results suggest that the impact was larger in the 1990s compared to the 2000s.

### 14.02

#### Temporary agency work and labour market transitions

Jouko Nätti<sup>1</sup>, Satu Ojala<sup>1</sup>, Merja Kauhanen<sup>2</sup>

<sup>1</sup>*University of Tampere, Tampere, Finland*, <sup>2</sup>*Labour Institute for Economic Research, Helsinki, Finland*

**Introduction:** New forms of employment have constituted a central element in recent debate

on the future of employment relations. Temporary agency work is one of these new types of employment and has been growing in Europe over the last two decades, although in Finland the proportion of temporary agency worker is still low. Work for a temporary employment agency involves a triangular employment relationship between an employee who is paid by the employment agency but performs work for and under the supervision of a user enterprise. The growth of temporary agency employment has raised interest in the economic and social consequences of temporary agency work. Labour market outcomes of temporary agency employment have usually been looked from the view of 'stepping-stone'/'bridge employment'/'integration' hypotheses as opposed to 'trap' hypotheses. These are used to assess whether temporary employment is a way of entering standard employment (bridge), or whether it is associated with exclusion from the labour market and unemployment (trap).

**Objective:** The aim of the paper is to examine to what extent temporary agency work acts as a stepping stone (into a permanent job) or a dead end for a labour market career (into unemployment) in the Finnish labour market.

**Methods:** The data used is based on the Finnish Labour Force Panel Surveys 2008-2013. The present study was restricted to 15-64 -year-old temporary agency employees (n=1,528). Respondents participated five times in LFS during a 15-month period. Temporary agency work is defined as respondent's subjective classification if they have a contract with a temporary employment agency. Analysis methods include transition tables and Cox regression analysis.

**Results:** Temporary agency work is characterised high mobility during the follow-up period. Between the first and last (fifth) wave, one quarter of temporary agency workers stayed in the same situation, one third moved to a permanent work, every seventh moved to a temporary work, seven percentage moved to unemployment and the rest outside the labour market. Cox regression analysis indicate that transition risk (HR) to permanent work is highest among the well-educated. Transition risk (HR) to unemployment is highest among the low-educated, non-nationals and in the Eastern and Northern Finland.

**Conclusions:** Temporary agency work can act as a bridge to permanent employment among the well-educated and as a trap to unemployment among the low-educated and non-nationals.

## 14.03

### Temporarily employees' mobility on the labour market

Tommy Isidorsson, Kristina Håkansson

*University of Gothenburg, Göteborg, Sweden*

Employers has increased their use of temporary employment contracts. In the Swedish labour market the proportion of temporary contracts has increased strongly during the last couple of decades, primarily during the 1990s, from a level of approximately 10 % at the beginning of the decade to approximately 16 % in 1999. Since then the share of temporary contracts has levelled out and is now 16.5%. Temporary employment is often designated as an atypical form of employment. However, for young people, this is a rather typical form of employment; more than half of workers aged between 15 and 24 are temporary employees. One important societal issue, then, is how temporary and insecure this working situation is and what happens after being employed on a temporary contract. In the political debate, the trade unions emphasise

the insecure conditions of this form of employment, while the employers advocate it as a good way for the employee to get access the labour market – thus temporary employment then being seen as a stepping stone towards a permanent job.

It is important to note that employees on temporary contracts are used for different purposes, for example probation, substitute leave replacement, project work and on-call work. Previous research has shown that the possibility to transfer from a temporary contract to a permanent one differ dependent on what purpose they are used for. However, we lack knowledge on career patterns for temporarily employed. This knowledge is crucial for deepening the understanding of under what conditions temporary employment is a stepping stone to a secure labour market position and under what conditions a temporary employment imply long-term insecurity.

Departing from employers' motive for using temporary employment staff, several different careers patterns for the temps could be distinguished. From a human capital theory an employment is to be seen as an investment, accordingly there is a motive for the employer to screen the employee. This could be done via a temporary employment contract. A screening should then be followed by an open ended contract at the same employer. Another motive for using temporary employments is to achieve flexibility. For the employees, this kind of use would probably imply periods of temporary employments periods at one or several different employers due to the employers' need, and in case of low demand, periods of unemployment for the employee. Further, a third career pattern implying several temporary employments contracts with different employers but without periods of unemployment is possible.

This article aims to investigate the consequences different forms of temporary employment. To what extent does a temporary employment function as a stepping stone to permanent employment? And to what extent does a temporary employment imply an unsecure labour market situation? Can we discern different career paths for different forms of temporary employment, where some are more successful in achieving permanent employment? How could different outcomes be explained?

This study is based on data from the Labour Force Survey (LFS) for the period 1992-2010, in which each volume consists of 2-year panels. We follow the temporarily employed during 8 points in time for an analysis of their career path.

## 14.04

### Precarity and Working Poor in Finland

Mikko Jakonen

*University of Jyväskylä, Jyväskylä, Finland*

Sociological research and debate concerning the precarity of work and living conditions in Europe has been going on ever since 1970s. However, the real turn in social scientific research of precarity started in the beginning of the new millennium among with the European wide precariat movement. During the past fifteen years the amount of research on precarity has risen rapidly.

Despite the variety of research approaches, most of the precarity scholars agree that precarization is connected to increasing poverty in the low wage sector. Researchers are also



rather unanimous concerning the policy development of blaming unemployed people for their situation, which is seen as a part of the workfare discourse and policies. Connected to this, in recent years the research on precarity has acceded to the sociology of poverty. One central question is how much the number of working poor will raise in Europe in future and how this affects to quality of work and life.

This paper first reviews the existing research on the working poor and connects it to precarity research. Secondly, the paper analyzes a wide qualitative data of the narratives of the working poor in Finland. This unique data consist of 171 anonymous narratives was collected in 2015. It tells a detailed story of the everyday life, level of income, relation to the social security system, precarious jobs, and mental depression and complicated bodily felt experiences of the working poor in Finland.

#### 14.05

##### **Why drive for Uber? Implications for self-employed work in sharing economy**

Anne-Marie Tuikka, Abayomi Baiyere

*University of Turku, Turku, Finland*

Sharing economy has grown significantly during recent years. Sharing economy includes companies as well as other types of organizations, which help people to distribute their resources with each other. Some of these organizations operate without profit where as others are profitable. Some companies employ a business model which is based on connecting two parties with each other. One party requires a service/resource and another party offers it. These companies rarely take responsibility for the service/resource which is distributed besides connecting the parties. They therefore define themselves as platform companies. This has led to new economy types such as platform or gig economy. While we acknowledge the suitability of these terms for describing this type of economy, we have adopted the term sharing economy in this abstract.

Sharing economy affects the people who need to use services and resources as part of their work. Thus, it may affect the ways of working. In this extended abstract, we focus on people who earn their income by offering their services/resources through companies which operate the platforms for sharing economy. We study their reasons for and experience from conducting such self-employed work. We conduct an interpretive research on this topic, we concentrate on people who do self-employed work by driving for Uber. Our research questions are:

- Why have people decided to start driving for Uber?
- What factors motivate people to continue driving for Uber?
- What factors demotivate people to drive for Uber?

We have chosen Uber as our case company, because it has been used extensively in prior studies and has grown rapidly to symbolize sharing economy. The main idea of Uber is to connect people, who need a lift, with people, who are able to offer the lift. Those who need the lift pay its fee to Uber. Part of the fee is kept by Uber and another part of it is transferred to the person offering the lift. Uber defines people offering the lifts as individual contractors. We have decided to refer to them as drivers or as Uber drivers.

Empirical data was collected through 23 semi-structured interviews in two American cities (Boston and San Diego) and in one Finnish city (Helsinki). The participants for the interviews were selected among Uber drivers. They were found by the first author, when he ordered lift through Uber. While he was taking the lift he simultaneously interviewed the driver if the driver was willing to participate in the study. Each participant's anonymity was assured by not recording their name.

From the study we found that participants have different motives to start driving for Uber. One major reason is to get extra income, another one is the lack of full time job and the third one is the difficulty to find a job with flexible working hours.

Earning an income is a key reason why drivers are motivated to continue driving for Uber. The income earned by driving for Uber depends on how much they drive and on the rate customers paying for the lift in that area. Drivers' share of this rate remains the same, which explains the decline in drivers' motivation when Uber decrease its rates in order to attract more passengers. Uber also offers location specific incentives, which can significantly increase driver's income, if they for example, drive enough to earn the incentive. However, Uber can decide to retrieve these incentives or change their terms at any time, which affects drivers' earning expectations and demotivates them.

Another important reason to continue driving for Uber is the liberty to decide on their working hours and the volume of work. This possibility is closely related to their self-employed status. Thus, they are often content that they are individual contractors for Uber instead of workers of Uber. However, Uber has the power to end their contract with any driver, when the driver's average customer rating goes below a specified figure (4.5 stars in US).

Several reasons could be outlined for why people decide to drive for Uber but we have highlighted the defining reasons identified from the study. Some of these reasons are - source of income, promotional incentives, self-employment, and work-time liberty. In addition, there are also issues which make driving for Uber undesirable or dissatisfactory. These we identify as the demotivating factors. These are declining rates, withdrawn incentives, account deactivation, and increasing work time requirement. We draw from these findings to abstract social push-pull and economic push-pull mechanisms as two thematic drivers underlying the motivations and demotivations for engaging as a resource provider in a sharing economy. The pull mechanisms represents the motivations and the push mechanism represents the demotivations.

## 15. RECONCEPTUALISING WORK

### 15.01

#### Time to upgrade? Reconceptualising professional identity in 'older' digital professionals

Christine Brown<sup>1</sup>, Katrina Pritchard<sup>2</sup>

<sup>1</sup>Birkbeck, University of London, London, UK, <sup>2</sup>University of Swansea, Swansea, Wales, UK

This research explores the impact of wider social discourses of age and digital life in professional identities of 'older' workers in the digital sector (aged 40 and over). Drawing on accounts found in digital news and from participant interviews, this research explores the construction of professional identities of 'older' workers in the digital sector (Prensky, 2001). We examine how discourses linking age and technology are embedded in their identity work, and the construction of direct associations between ageing, career precariousness and professional obsolescence (Fevre, 2007). We reflect on the potential for marginalisation, discrimination and 'othering' (Riach, 2007) of a significant demographic and profession. The digital sector, a sub sector of the wider IT sector supports and delivers the digital economy is worth £118 billion to the UK economy (Digital Economy Economic Estimates, 2016) and employs over 1.4 million workers.

It has been suggested that the discursive representation of older workers leads to specific occupational and organisational challenges (Ainsworth and Hardy, 2007) while relatedly negative attitudes towards older workers' ability to learn and adapt has been highlighted as a cause for concern (Maurer et.al. 2008). This is pertinent given the acknowledged need for continuous professional development and upskilling within the technology sector (Fu, 2011). Our research explores this context drawing on discursive accounts of identity work (Brown, 2006); age at work (Ainsworth & Hardy, 2007); career boundaries (Arthur & Rousseau, 1996) and the protean career (Hall, 2002) to address the following research questions:

- In what ways is age discursively positioned as a determining factor of digital capability?
- To what extent are such constructions implicated in the identity work of older digital workers?

We use discourse analysis (Taylor, 2013) across 30 interviews and online news articles which discuss age and digital life collected over a two-year period.

We review the ways in which understandings of digital work are associated with age in ways which have become essentialized and naturalised within the media. Understandings of age are increasingly technologized, not least through the wider social construction of 'generation' (Foster, 2013) such as in the example below:

"This generation (those under 30) are not just digital natives, they're mobile natives...fluent in the currencies of the modern digital economy."

[Evening Standard, 3 January 2016]

We repeatedly uncover linguistic references drawn from wider discourses of technological

change which serve to dehumanise the very groups they describe and address. Wider discourses describing desirable workplace attitudes and behaviours demand 'agility', suggesting skills are 'upgraded' to enable individuals to become "change ready enterprises" thus "optimizing the workforce" for organisations.

[Huffington Post, 2<sup>nd</sup> September 2016]

Drawing parallels between age and digital in this way constructs a digital divide where 'older' becomes increasingly associated with value depreciation, obsolescence and loss of capability.

Our research illustrates the recursive nature of language between wider texts and participant accounts in the following ways:

- talent is persistently associated with youth and 'potentiality' (Taylor, et.al. 2010);
- there is a persistent pressure for participants to 'upgrade' their skills;
- participants recognise the wider social constructions at play and their limiting factors, however they adopt and discursively perform the very constructions that are self-limiting.

Through our analysis we argue that such discourses create tensions as participants 'struggle for self' (Baumeister, 1986) in a world where they fear being "web 1.0 professionals in a web 2.0 world" (extract from participant interview). Our research reveals that despite stating strong affiliations, interest and identifications with changing technology, participants identify the depreciating value of their professional capital (Bourdieu, 1983) with the ageing process. This leads them to question their identities in the context of what others may perceive to be a diminishing career. Our findings offer insights into notions of career boundaries and provides opportunities to debate established frameworks of career precarity as predominantly situated within low-skilled work (Standing, 2011)

This study contributes to wider research into the ways contemporary discourses construct and influence identity work set against future challenges of increasing technologization of our working lives, age-diverse workplaces and industries and the growth of the digital sector. This builds on current scholarly work which explores the emergent ways language can fuel professional insecurities (Collinson, 2003) through enabling or denying group and individual agency, distorting perceptions of talent which may impact career sustainability and the career lifecycle. As knowledge and skills to develop and operate new systems and processes continue apace, recognising our own prejudices, divisions and solidarities may avoid further "discourse(s) of fatalism" (p.1617, Pritchard and Whiting, 2014). We hope this research provides a fresh perspective on the role of discourse in professional life and the challenges faced within an under-researched professional group.

## 15.02

**New meanings of work: Men and women opting out of mainstream career models to adopt alternative solutions for work**Ingrid Biese*Hanken School of Economics, Helsinki, Finland*

Ever since New York Times columnist coined the expression 'opt-out revolution' in 2003, women opting out of successful careers has been a highly debated topic in the media as well as in academic research. However, the debate has focused mainly on women who leave to become stay-at-home mothers, while wider societal aspects have largely been ignored. Research has shown that mainstream career models no longer correlate with how many contemporary individuals want to live and work, which suggests that opting out is not only a gendered phenomenon, but also a contemporary one. The globalized electronic economy has contributed to creating a culture, where individuals struggle to adjust to new experiences of the self as long-term focus has been replaced by short-termism, and where individual flexibility and adaptability are crucial in order to survive the ever-tougher corporate climate and workplace conditions. As the focus has shifted from knowledge and experience to having potential and an ability to adjust to change and to survive in a flexible, ambiguous environment, individuals are typically left with feelings of insecurity and ambiguity, making it difficult for them to creating coherent narratives of their life and work. The main objective of this paper is to explore contemporary meanings of work and the alternative solutions individuals create to better accommodate their wants, needs, and lifestyle choices. The definition of opting out is broadened to include leaving mainstream notions of career to adopt new lifestyles, where individuals can live and work on their own terms. This paper thus argues that opting out is not only about women who become stay-at-home mothers, it also encompasses women without children and men with and without children. Using a free association-narrative approach and in-depth interviewing, this paper studies the narratives of 30 US and Finnish men and women and their decisions to leave high-powered careers to adopt new solutions for work where they can better combine work with different areas of life. The narratives provide an insight into the identity work done throughout the opting out process, and the method makes it possible to explore contradictions, as well as the unsaid, in order to gain a greater understanding of the reasons behind decisions to opt out. The purpose is to explore and gain an understanding of why these men and women decided to leave, how they organize their lives and work instead, and the effect this has is on their identity and wellbeing. After opting out they did not necessarily work less, they created solutions where they had more flexibility and control over when, where and how they worked, transcending the dualism between work and private life. This provided a sense of coherence and authenticity, which had a positive effect on wellbeing. Although opting out is a highly personal and individual choice for the men and women in this study, their actions may also have societal connotations. As more men and women opt out of their successful careers in order to create alternative ways of working, organizations and corporations will be pushed to create working environments and career models that better suit the wants and needs of contemporary individuals.

## 15.03

**The future worker: an emerging account?**Stephanie Taylor*The Open University, Milton Keynes, UK*

This paper explores the new and future worker figure invoked in recent accounts in the UK press of the gig economy and 'the precarious phenomenon' (Guardian 15/11/16), including accounts informed by policy-linked research and reports. Following publicity concerning the circumstances of 'self employed' Uber drivers, Sports Direct staff and others, such discussions increasingly acknowledge the changes to work and employment, including those linked to digital working, and the problems faced by many contemporary workers.

This paper will consider, first, how far the accounts take up issues which for a much longer period academics have noted in relation to worker experience in the late 20<sup>th</sup> and early 21<sup>st</sup> centuries (e.g. Sennett 1998), including in calls for policy-related research (Dynamics of Virtual Work 2016), for example, on 'psycho-social risks'; managing working hours; how 'new forms of work' can offer 'sustainable careers' and 'enable physical and psychological health' long-term, and possible 'support and protection (that) can be offered to self-employed entrepreneurs'. Second, the paper will explore the new and future worker figure invoked in these accounts, considering possible limits to the characterisations, for example, in terms of age, gender and ethnicity. The third point to be considered will be how far the accounts imply a 'new normal' of working life comparable to the 'normative model of work' which (Huws 2013) associated with mid-20<sup>th</sup> century manufacturing work in the UK.

Taking a broadly discursive and psychosocial approach (Taylor 2015), the paper will consider possible omissions or limits in the emerging narratives of new working lives, and their implications for understandings of future workers, and action to address their difficulties.

## 15.04

**Talking about routines**Tuire Palonen<sup>1</sup>, Els Boshuizen<sup>1,2</sup>, Erno Lehtinen<sup>1</sup>*<sup>1</sup>University of Turku, Turku, Finland, <sup>2</sup>Open University of the Netherlands, The Netherlands, The Netherlands*

## Introduction

Routines have a connotation of carelessness and mindlessness which can be associated with weak working habits. On the one hand routines can be seen as capabilities ("what" or "why", e.g., deliberation, alternative selection, or modification), on the other hand as practice ("how", e.g., production or implementation). Consequently, workers' skills, organizations' procedures, and technology are intimately intertwined in routines. Organizational routines are repetitive patterns of interdependent action performed by multiple actors and embedded through explicit or tacit knowledge dimensions to the environment (Parmigiani & Howard-Grenville, 2011, Pentland et al 2012). In addition there is an individual's contribution as routine user. In all, routines are a mix of



stability and continuous change and heavily embedded in their context (Salvato & Rerup, 2010).

The dimensions of learning processes' "mindfulness" have been discussed in the context of professional development. Learning processes can be seen to vary from more mindful or attentive to less mindful. The former approach emphasizes control processes while in the latter the acts performed are expected to be more automatic. Thus, in some research traditions routines are expected to operate with little agent influence, whereas in the practice paradigms individuals' intentions, motivation and agency matter. Unclear and immediate decision making has sometimes been discussed in the terms of intuition (Harteis & Billett, 2013). The practice perspective, in contrast, assumes that individuals do not just act as usual, without thinking, but make decisions and select their action plan from a repertoire of actions. Eraut (1994, 2004) has pointed out that the cognitive processes associated with the tasks also differ. Reading the situation in speedy tasks requires instant recognition, instant response and routinized unreflective action. Actions that occur at a somewhat slower pace may still require rapid interpretation and rapid decisions, but can be monitored by reflection and hence altered in the process.

Expertise study paradigm, where focus has often been at individual level, has emphasized the mastery of a well-organized body of usable knowledge that a participant can utilize to selectively focus on the critical aspects of a complex problem, and thereby reach an exceptionally high level of performance (Chi, 2006; Ericsson, 2006). Even there individuals' knowledge is assumed to be embodied in social practices of expert communities and networks. Accordingly, sustained development of expertise is represented in evolving practices that significantly transform the participants' cognitive systems being a matter of a long-standing, effortful and deliberate process of socialization and absorbing practices of an expert culture (Hakkarainen et al, 2004). Organizational routines are seen normatively correct and a "right" way of doing. Personal practices are asked when organizational routine do not fit well in situation.

Individuals' expertise then is a synthesis of a particular knowledge base and the cognitive processes and internal integrative processes of the practitioner, building on interpersonal relationships with other professionals and affected by different kinds of external influences. Knowledge practices sometime just support routine learning (transmission), but at their creative edge also take place in dynamic and fluid settings designed for the furtherance of innovation and knowledge, rather than relying only on mundane habits or repetitive routines.

Individuals contribute to action with a particular understanding and motivation and their interactions and professional hierarchy shapes the adoption, change, or persistence of the routines (Billett, 2008). In addition to individual professionals, artifacts, rules and standard procedures, or material entities such as computers and physical spaces, have also shown to cue routine performance. When routines are embedded in software, it can facilitate control, coordination as well as collaboration. On the other hand, the "behavior" embedded in software, easily becomes invisible, tacit and unquestioned, i.e., hard to change and difficult-to-talk.

#### Objectives

The aim of the theoretical work is to examine how routines evolve, diffuse and affect outcomes at expert work? Why and when are professionals willing to change or re-generate their routines?

#### Methods

The study is at its first phase based on literature review. Empirical data will be collected at next steps.

#### Results

Theoretical perspective is structured in terms of **Conventions** (i.e., routines) and the factors that are presupposed to have influence on them: **Capability** (skills, shared knowing, epistemological beliefs, state of the art), **Context** (domain typical features, controlling mechanisms, standards) and **Colleagues** (professionals' personal networks and community members, participation in collegial activities).

#### Conclusions

The dimensions of learning processes' "mindfulness" have been discussed in the context of professional development. Learning processes can be seen to vary from more mindful or attentive to less mindful. The former approach emphasizes control processes while in the latter the acts performed are expected to be more automatic. Thus, in some research traditions routines are expected to operate with little agent influence, whereas in the practice paradigms individuals' intentions, motivation and agency matter.

#### 15.05

#### Reconceptualising the Spaces of Work

Gillian Symon<sup>1</sup>, Rebecca Whiting<sup>2</sup>

<sup>1</sup>Royal Holloway University of London, Egham, UK, <sup>2</sup>Birkbeck University of London, London, UK

For some time, mobile technologies have been recognised as transforming spaces and places of work, in particular allowing work to take place on the move (e.g. Hislop and Axtell, 2015) and while at home (e.g. Towers et al, 2006). In the first place, laptops and smartphones mean we can work even before we arrive or after we have left work, although this requires some accommodation to the space provided by the worker as it is often cramped, intermittently connected and interrupted (Hislop and Axtell, 2015). In the second place, researchers have examined the experience of teleworkers, however this concentrates on the psychological experience for the teleworker and pays less attention to the use of space as it has been transformed by digital technologies (Richardson and McKenna, 2014). Halford (2005) has proposed the concept of 'hybrid spaces' to draw attention to employees' need to coordinate work and relationships across different work spaces (mainly home and work office). More recently, work extension research has largely concentrated on working patterns and well-being rather than the specific use of space (Derks et al, 2015). Our research seeks to deepen and develop our understanding of the spaces of work in the digital age in two main ways:

- drawing on theoretical constructs of space to analyse space use in a more conceptual manner;
- providing more detailed visual consideration of space use in an age of multiple devices and apps, illustrating how workspaces may be being re-conceptualised in the 21st century;

In the first case, although teleworking and other research may refer to multiple uses, colonisation or contestation of space, there is rarely an underlying theorisation or conceptualisation of space driving this analysis (Beyes and Stayaert, 2011). Wapshott and Mallett (2011) draw attention to this in their analysis of homeworking, for which they utilise LeFebvre's (1991) tripartite theoretical framework to move 'beyond a simplistic 'Euclidean' conception of space as an empty container and towards appreciating the social implications of a fluid, multi-faceted spatial

construct'. LeFebvre urges us to analyse not only how space may be (physically) perceived but also how it is originally designed and how it is interpreted by those who use it. Other theorisations of space that may be useful to re-conceptualising digital workspaces are 'hybrid' spaces (Halford, 2005), as described above, and 'liminal' spaces, defined as 'the boundary of two dominant spaces that is not fully part of either' (Dale and Burrell, 2008). At a more meta-analytical level, sociomateriality (Orlikowski and Scott, 2008) urges us to adopt an analytical lens that recognises that "humans enact social agency through a materiality which simultaneously shapes the nature of that social agency." (Dale, 2005). For example, Symon and Pritchard (2015) have demonstrated how smartphone use in specific work contexts constructs particular identities for organizational employees.

In our research we asked research participants to keep week-long video diaries that captured their use of digital technologies to accomplish work and leisure activities; coupled with follow-up interviews which allowed us to interpret and embed the videos into participants' wider work/life narratives. Video diaries have grown in popularity over recent years but are less common to explore work and organizational issues (Christianson, 2017). A major exception to this are ethnomethodological video studies (Heath et al, 2010) which seek to capture the fine movements and conversational exchanges which construct work interactions on a minute-by-minute basis, usually in a specific formal work setting. Our videos allowed us to view specific participant-directed formal and informal moments of technology use across a variety of spaces and times. This has enabled us to identify a broader range of spaces for contemporary digital work and also to note how those spaces are enacted in real time and interpreted in accompanying commentaries and later reflection. For example, from our data we identify the 'bed' space of early morning work, interpreted as a planning space by participants, whose digital interactions in this space are shaped by the material features of the technology (particularly mobility and flexibility) to construct a period of preparation and reflection for the day to come. We also note spaces of contemporaneous work and family time which may extend the idea of 'hybrid' space to encompass a space existing in two interpretive places at the same time. Additionally, we both go 'inside' the technology to analyse the digital space as an intermeshing of human and material agencies in the creation of 'liminal' spaces, seemingly suspended in time, and 'outside' the technology to add depth to the analysis by considering specific anti-technology spaces.

In our presentation, we will draw on our very rich dataset to provide illustration and analytical interpretation of contemporary digital 'work' spaces across a range of contexts that demonstrates how workers are re-drawing the physical structures of their work-life boundaries which also reshapes social and psychological boundaries.

## 15.06

### **Give it all – Boundary blurring on Twitter and running marathons - Boundariless Twitter use in the context of a Swedish governmental agency**

Steffi Siegert<sup>1</sup>, Maria Mårtensson Hansson<sup>2</sup>, Mikael Holmgren Caicedo<sup>2</sup>

<sup>1</sup>NEOMA BUSINESS SCHOOL, Rouen, France, <sup>2</sup>Stockholm Business School, Stockholm, Sweden

All kinds of new technologies have challenged people's boundaries between work and private life throughout the last 35 years. Social media is no exception. Its ubiquitous nature is rather

exacerbating the struggle. Two factors contribute to a renegotiation of people's boundaries in particular. Firstly, the boundaries between the organisation and the outside become increasingly more permeable. Changing economic circumstances have fundamentally altered how people are supposed to feel about their paid employment. Increasing economic pressure and the not so subtle expectations that one should be committed to and even love one's work, encourages people to give more of themselves to their employer. The expectations placed on the individual are increasing which is partly expressed in demands for greater availability and more commitment. This includes and is partly expressed in bringing more of one's identity to work, which helps to transcend the boundaries between the individual and the organisation. Secondly, social media is particularly conducive to renegotiation of boundaries because they are by nature a tool to create, shape, maintain and express one or multiple identities. With their specific affordances of visibility, persistence, association and editability, they do not just give room for a sophisticated expression of an individual's identity(ies) but they also allow organisations to profit from that expression through association. This potential tight coupling between the individual and the organisation can of course backfire as the case of Justine Sacco's Tweet gone wrong illustrates. In this particular example, Justine Sacco, former PR consultant, tweeted a racist Tweet (even though inadvertently) before getting on a plane to Africa and by the time she landed, she had lost her job over the Tweet. Overall though, organisations could gain significantly by encouraging/letting their employees use their personal channels for different aspects of work.

As with leaders that try to influence their employees in terms of healthy eating and exercise, a leader's influence goes beyond the occasional pep talk and employee of the month medal. The practices of leaders can influence their followers' behaviour and social media might just be another outlet for this influence.

For the present study we followed the Twitter behaviour of a director general of a Swedish governmental agency for a period of 10 months (March 2016 to January 2017) and complemented our observation with multiple interviews as well as documents and guiding principles on social media presence for public sector employees. Studying a governmental agency is particularly interesting because the public sector is supposed to exhibit a certain set of values. Secondly, the public sector is guided in all matters pertaining to the digitalisation of services by the work of a state commission. In this work it is clearly outlined that public organisations have to be very careful in showing who is communicating – the organisation or the private person. In the present study, particular interest is paid to how a director general uses different identity facets to foster the agenda of the organisation and how far the affordances of social media enable or constrain such pursuits.

The results show that the association between the director general's tweets and the agency has multiple consequences. Firstly, the organisation gains a "personal side" through the director general's sharing of personal aspects of life alongside promoting the organisation's activities. Especially for organisations with image problems, a potential increase in trust and likability may be a beneficial side effect of the close association with their employees on social media. The organisation is no longer just associated with rules regarding its public function but also with a leader who e.g. watches popular programs on television. Watching and commenting on popular matters humanizes the organisation and thus enriches the public image of a bureaucratic institution with rules and regulations by associating humour, weaknesses and opinions about trivial interests among other things. Secondly, the general director sets a standard of what might be expected from other employees or other leaders. This moves us away from the idea of a good leader being someone who is good at their job to someone who gives everything for their job and their organisation. We can see parallels to passionate, healthy leaders trying to influence their employees in terms of eating and exercise. Finally, leaders as role models

are not restricted to eating, exercising and exhibiting (im)moral behaviour anymore but also to people's practices on social media. Social media has moreover the potential to increase the reach of the neo-liberal panopticon beyond the local to the global, insofar as it affords visibility, and in extension intensifies of control and scrutiny. It is not anymore executed just by one's employer but now the whole world can judge and criticise. Through social media, the public eye becomes thus simultaneously a wider marketing target but also an intensified and controlling panopticon. In the case of governmental agencies this involves not only employees but also the media, citizens and corporations.

## 15.07

### **From Total Quality Management to Lean: Re-conceptualizing the nature of good work**

Christian Wittrock

*Oslo and Akershus University College of Applied Sciences, Oslo, Norway*

This paper considers the language side of dominant conceptualizations of what constitutes "good" work, focusing on the reconceptualizations leading to the prominence of first "Total Quality Management," (TQM) and later "lean management" or "lean production." These concepts both claim to define excellence in terms of organizing and working principles across industries and countries, and they have dominated debates and efforts in the private and the public sector alike. While the concepts have similarities, they also differ in terms of what actions they afford in the workplace; affordances that may, or may not materialise into concrete initiative for changing organizational practices (Zbaracki 1998). However, the shift from a dominant interest in TQM to a dominant interest in lean may serve as the mirror image of ideas governing the logics of workplaces.

The 1960s to roughly 1990s were dominated by discourses promoting the enhancement of quality across organization as their main goal (Abrahamson and Fairchild 1999; Giroux and Taylor 2002; Strang and Kim 2005). The quality craze extended to global initiatives to measure and benchmark the quality of products and services delivered, viewing quality and the resulting customer satisfaction as the main parameter enhancing economic growth in industrialised countries (Anderson, Fornell and Rust 1997; ESCI 1998; Kanji 1998). The European Union actively supported such measures, and a model for business excellence – the EFQM model – was developed on these grounds (Eklof and Westlund 2002). The excellence model highlighted the relation between customer satisfaction on the one hand, and employee satisfaction on the other hand, with the understanding that a high rate of both lead to superior economic performance (Eskildsen, Westlund and Kristensen 2003). The central promise of the quality movement was that a focus on enhancing quality leads to superior economic performance and cost reductions (Crosby 1979; Deming 1982b; Ishikawa and Lu 1985; Juran, Seder and Gryna 1962). This promise speaks to the troubling issue that occasioned the rise of the quality movement, namely the loss of American jobs and market shares to Japanese manufacturers (David and Strang 2006; Deming 1982a). While TQM was conceptualised as the solution to loss of jobs and market shares, it was simultaneously positioned as the way of organising work in the future, using its philosophy, principles, tools, and techniques as a yardstick. In short, good work was seen as organized according to the TQM concept.

Business Process Reengineering (BPR) superseded the TQM wave, only to be replaced by

lean as the leading concept, which deals with the process side of organization (Jung 2006; Kieser 1997; Thawesaengskulthai and Tannock 2008). While BPR has a Western origin, TQM shares a clear Japanese influence with lean. Recently, Janoski and Lepadatu (2014) made the argument that lean has replaced Taylorism as the dominant production model worldwide. As with TQM, lean is positioned as the "weapon" to keep jobs within the country borders, and avoid outsourcing to lower pay countries (Womack, Jones and Roos 1990). Lean plays on the contrast to unwanted fat, hence the answer to lean times has become the lean concept – i.e. to become slender and agile. Unsurprisingly, lean reverses the logic from the quality movement. Cost savings no longer results from a focus on quality; the opposite is the case. Quality is the result of a relentless focus on the reduction of fat – i.e. stock - in the production process (Womack and Jones 1996). "Lowering the water" in terms of stock makes visible any issues in the production process, and allows for resolving problems. Therefore, high quality results from cost cutting and attention to a smooth running production system. Hence, lean lends rhetorical power to voices promoting cost cutting (Benders and Van Bijsterveld 2000). As a result, lean should appeal to managers to a higher extent than the technically and statistically oriented TQM concept (Strang 2010).

Using bibliometric data and detailed content analysis through coding of the seminal writings on TQM and lean respectively, the full paper details the conceptual differences between TQM and lean. I discuss what organizational practices may be afforded by each concept, drawing on ethnomethodology inspired theories of language, as well as models from cognitive linguistics (Fauconnier and Turner 2002; Geeraerts 2006; Sperber and Wilson 1998). We know that management concepts such as TQM and lean are open to interpretation (Benders and Van Veen 2001; Giroux 2006; Heusinkveld, Benders and Hillebrand 2013; Kieser 1997), and that concepts are typically implemented according to local translations and reinterpretations (Czarniawska and Joerges 1996; Lillrank 1995; Strang and Meyer 1993). The central point of the paper is that the local reinterpretation and extensions are neither arbitrary nor unrestricted; they are subject to rhetoric, affording certain actions and thoughts, while restricting others.

## 15.08

### **Old factories, new stakhanovites: labour routines of cultural workers in Moscow art-centres**

Margarita Kuleva

*National Research University Higher School of Economics, St Petersburg, Russia*

The paper focuses on daily work routines of managers in Moscow contemporary art centers. A number of studies was devoted to creative workers: artists, designers, IT-specialists, journalists (Menger 1999; Littleton, Taylor 2012; Mcrobbie 2011, 2013; Forkert 2010; Gill, Pratt 2008; Gill 2011 etc), they showed high level of risk and inequality, precariousness and exclusions behind the bohemian charm, earlier advertised by creative industries ideology. However, previous research has been largely focused on self-employed and contract professionals, and still almost ignores the perspective of full-time cultural workers (in case of visual art: art-managers, institutional curators, workers of museum/gallery archives, pr-support and so on) despite they have many common features with other creatives (self-exploitation, blurring of work and leisure activities, low pay) and some unique characteristics as the increase in personal responsibility and self-identification with the organization. The Russian case is a special interest, because young



contemporary art market in transition from Soviet cultural monopoly to market economy has not yet formed standards of cultural production. In this sense, creative work organization is an issue of negotiations and experiments, an ideological battlefield where both neo-liberal creative entrepreneurialism and Soviet heroization of work (and celebration for the new Stakhanovite) can be met. Therefore my research questions are: What is the working routine in the post-Soviet cultural centers? Could post-socialism be more luckily framework for having «good» creative job than advanced capitalism? If we see Stakhanovite work as an opportunity to get access to exclusive benefits (Shlapentokh 1988), what reward do the new shock workers get? As a case study, I chose new Moscow art-centers opened in the refurbished Soviet factories in 2000s (10 organizations were included in this research). I conducted 25 in-depth interviews with cultural workers employed full-time and 20 observation in the offices and exhibition areas of the art-centres.

## 16. ROBOTS AND THE FUTURE OF WORK

### 16.02

#### Finnish care workers' attitudes towards robots: Comparison to a population sample

Tuuli Turja, Lina Van Aerschot, Tuomo Särkikoski

*University of Tampere, Tampere, Finland*

Ageing of the population, increasing care needs, and probable shortage of care workers are seen to constitute major societal challenges in the near future in many Western societies. New technologies and novel generations of service and care robots are expected to bring solutions to these challenges. Yet, using robots for care and related services brings up essential social and ethical questions. In order to successfully introduce robots to care work these technologies need be proved, accepted and found useful. Moreover, applying robotics in varying and unstructured environments and work organizations for tasks that have traditionally been human-centered may induce profound changes in care ideology and practices.

This study examines how extensive experience care workers have with robots and compare their attitudes towards robots to the general population, using both Eurobarometer data for Finland (n = 969) and survey data of Finnish nurses and physiotherapists (n = 4000). The care worker data includes samples collected among the members of two Finnish trade unions. The members who were randomly sampled from the unions' registers received a link to a questionnaire that was filled online. Ordinary least squares (OLS) regression models were used to assess the relationship between robot acceptance and experiences with robots while controlling the respondents' age, gender, employment status and managerial experience. The regression models were conducted separately for the population and for the care workers.

The results show that, compared to the population in general, care professionals have less experience with robots and more negative attitudes towards them. Experience correlates consistently with attitudes towards robots. In the population sample, young men who had personal experience with robots at work, found robots most often acceptable. In a similar vein,

older nurses and physiotherapists who had personal experience with robots at home, were the most approving to the idea of robots assisting them at work. There were also differences found among the care professionals. Managerial status had a positive association with more extensive experience with robots and also with robot acceptance.

Robots are more often used among people in general than by care workers because robots have, for decades, been vastly introduced to different industries, whereas service robots have only started to make their way to wider use in the past few years. Yet, to gain better understanding about the motives behind the more negative attitudes among the care workers, we need to consider the organizational and ethical aspects of care work and apprehend the ways in which the quality of care work is seen to be essentially tied to human contacts and encounters.

### 16.03

#### Robot as a workmate? Care workers' and students' experiences of the implementation of 'Zora' robot in elderly care

Satu Pekkarinen, Helinä Melkas, Lea Hennala

*Lappeenranta University of Technology, LUT Lahti, Lahti, Finland*

#### Introduction

The interest of using various digital technologies, including service robots, is increasing in elderly care. Technological solutions aim to cope with the challenge of growing imbalance between the amount of caregivers and care receivers. Technology use in work is often a major change, but when planned carefully, it may provide a welcome addition and support at work. Attitudes towards robotics in elderly care are often twofold: there are both opportunities and threats. They are related, for instance, to quality of care, ethical issues as well as work division between human beings and robots.

#### Objectives

The aim of this research is to study the implementation process of a service robot in elderly care services. We focus on questions of acceptance and impacts of the robot use on care work from the point of view of care workers as well as of students of nursing and physiotherapy as future professionals.

#### Methods

The data were collected in a field study in elderly care services in the city of Lahti (in two round-the-clock serviced care homes and a geriatric hospital) in December 2015 – April 2016, when the service robot 'Zora' was introduced to these organizations. The robot was mainly used for activity and recreation, but also for support in rehabilitation that improves and maintains social and cognitive abilities in addition to physical abilities. The data were collected during 27 sessions through ethnographic observation. In addition, focus group interviews of the care personnel (34 people) and the students of nursing and physiotherapy (6 people) were also conducted. The data were analyzed with the methods of qualitative content analysis.

#### Results

According to the findings, the implementation of the robot has many kinds of impacts on the care personnel and care work. Part of the employees had a personal or professional interest in 'novelties' in care work that enable provision of better services and improve work ethics. Some of them were willing to act as 'main operators' of the robot in the work communities and even used their free time to get acquainted with the robot. The robot was perceived as a useful tool for providing wellbeing and activity to customers as well as new perspectives and contents to one's work.

On the other hand, for other employees, the robot in the work environment implied meanings of risk, even danger, and led to withdrawal and bypassing the whole issue. Some employees felt that the robot is just waste of money and causes additional work when work is already so busy. Moreover, there were concerns related to time use and commitment of the whole work community, and pottering about using robot versus 'true' care work. The care workers brought up also ethical concerns. Some felt the 'childish' robot as degrading towards the elderly, but positive reactions and interest of the elderly customers later affected the attitudes of the care personnel in a positive way.

The students of nursing and physiotherapy who technically steered the robot, being responsible for planning the robot's exercises and activities and for the robot being interactive, considered the task very interesting. However, they mentioned that technology has not played a great role in their education and curricula. They were interested in the opportunities related to technology but still mentioned that they were surprised about the customers' emotional attachment and positive reactions towards the robot. In their view, the robot is not just a technical device but supported the interaction between the customers and the students due to its human-like character. On the other hand, the students acted as 'interpreters' between the robot and the elderly people. The students highlighted the importance of having some information about the participating customers beforehand in order to achieve impact in rehabilitation and avoid unnecessary risks.

#### Conclusion

The attitudes towards robotics in care work are twofold: both enthusiasm and fears exist. The 'place' of the robotics – a rather novel issue – in the field of care is still in many ways undefined. After the first steps of robot use, there is potential for true rehabilitative work and activities with the help of the robot, if its use is well planned. Implementation of robots in elderly care requires rethinking of the services and work practices. Implementation of robots is an issue of the whole work community. Orientation is of vital importance to highlight and deal with essential issues increasingly skillfully in these processes. Societal discourse on robots in care work, based on practical experiences, is also needed.

#### 16.04

##### **A systematic literature review about social acceptance of robots in different occupational fields**

Nina Savela, Tuuli Turja, Atte Oksanen

*University of Tampere, Tampere, Finland*

New generation robots are developed, not only for industrial work, but also to service sector, and it is important to study if robots are accepted in these new work tasks. The aim of this

systematic literature review was to examine how the social acceptance of robots in different occupational fields has been studied and what kind of attitudes the studies have discovered regarding robots as workers.

The data were collected during October 2016 from four bibliographic databases: Scopus, Web of Science, PsycINFO (ProQuest) and Social Sciences Premium Collection (ProQuest). Preliminary search results included 339 research articles from which 39 were selected to the final research through inclusion criteria. The articles from countries worldwide have been published in 2007–2016 and majority of them includes quantitative analysis. 69 percent concerns work at health and social services. In addition to health and social services the social acceptance of robot workers has been researched in the fields of surveillance and military, education, culture and communication, business, administration, agriculture, and industry.

Based on a content analysis robots are in general considered as appropriate in different occupations. Positive experiences are reported particularly by the elderly about assistive robots and by health care staff applying telepresence robots in nursing. The criticism is directed to decreasing human contact and unnecessary deployment of new technology. In some cases, robots were considered as having more recreational value over human workers, even though the robots were not regarded essential per se.

The emphasis of the research on telemedicine and elderly care indicates current needs and trends towards using robots in these fields. Moreover, it is likely that telepresence robots are well represented in the research field because the technology already exists, contrary to autonomous service robots. The results indicating acceptance of robots in surveillance and military work support prior studies. However, the results regarding robots in health and social services present more positive attitudes than previous research. Many occupational fields still need more research to obtain more profound comprehension of the social acceptance of robots in different work tasks.

#### 16.05

##### **Adopting a logistics robot system in a central hospital - perspectives of different internal stakeholders**

Heli Talja, Inka Lappalainen, Marketta Niemelä

*VTT Technical Research Centre of Finland Ltd, Espoo, Finland*

Robotics as well as other new technologies provide opportunities for ensuring good quality public services for citizens, despite the financial and demographic challenges in Finland and other Western countries today. Implementation of robots in the social and welfare sector induces changes both at the individual and organizational levels as well as in the whole society. This kind of development calls for new innovations - both technological and organizational. The ROSE project "Robots and the Future of Welfare Services", funded by Academy of Finland Strategic Research Council, was launched in autumn 2015 to tackle these questions in a multidisciplinary way.

Our specific research interest is to clarify how adoption of robots will change care work and the ways it is organized and managed, and how these perspectives should be taken into account when such systems are acquired and taken into use. Very little scientific publications still exist

on this topic, and the fact that practical implementation of robots in the actual care work is still scarce makes studying the topic challenging. We aim at learning as much as possible from related cases. Here we present a case study of how a logistics robot system is being taken into use in a large Finnish hospital.

The final system comprises of eight similar autonomous mobile robots performing delivery and transportation tasks. The first two robots have been in use since October 2016. One robot transports instruments between an instrument maintenance unit and three operational units, including the surgery outpatient department. Another one transports items from the hospital's central storage to selected units. The transports to the surgery outpatient department started in January 2017. Three more robots will arrive this year and the last three in 2018. Possible functional extension areas are transport of laundry, waste, food and medicaments.

From the few recent studies concerning adoption of robotics in health care, we have learned that the expected benefits of the innovation are jeopardized if the purchased technology is not integrated into change in work practice in a purposeful manner (e.g. Mutlu & Forlizzi, 2008; Beane & Orlikowski, 2015). For a successful adoption of innovations it is of crucial importance that the relevant stakeholders are engaged in the process (e.g. Kallio 2015; Boman et al. 2014). These observations make the main focus of inquiry in our case study.

We have interviewed six persons working in different roles in the hospital: the logistics manager being responsible for the robot acquisition project; the head of the material department; a director of the support service unit; the head of instrument maintenance unit; the head nurse of surgery outpatient department; and a worker at central storage. Although the number of the interviewees is quite small our data helps getting a multiperspective picture on the case. We have also briefly observed the early adoption phase of the robots. Here we present our initial findings.

The acquisition process, which deals from the hospital's point of view with a "middle" size investment, seems to have been initiated quite spontaneously but conducted then in a very systematic manner. At this point most of the "children deceases" seem to be overcome.

Savings in personnel costs related to internal transports are expected which naturally evokes concerns. Otherwise the personnel's and public's reactions have been quite positive. The logistics robots should affect the actual care work in a rather limited way. As the robots enable 24/7 transportation the disturbances of internal transport traffic to the personnel has reduced. Some positive effects on the work flow have also been identified: e.g. more daily transports enable better availability of instruments. Interestingly, the perceptions of the two interviewed nurses differ markedly concerning their possibility to participate in the early phases of the implementation process. More engagement would have been desirable from the instrument maintenance unit's view point. This reflects the different activities of the respective units: reliability of the instrument transports is directly related to the core task of the instrument maintenance unit.

In the conference presentation, we will describe our findings in more detail. So far the results seem to support the existing studies on the importance of stakeholder involvement starting from the very early phases of innovation processes (e.g. Kallio 2015; Boman et al., 2014; Kivisaari et al. 2013). Our study narrows the identified research gap by adopting the systemic approach to the robotics in care work to increase understanding them as complex socio-technical systems and the related change dynamics among relevant stakeholders (cf. Mutlu & Forlizzi, 2008).

## 16.06

### Digitalization of the housing services for the elderly people: Case of Multi-Sensory Environment Co-Creation

Mirva Hyypiä<sup>1</sup>, Päivi Ahonen<sup>2</sup>

<sup>1</sup>Lappeenranta University of Technology, LUT Lahti, Lahti, Finland, <sup>2</sup>The Service Center Foundation of Lappeenranta, Lappeenranta, Finland

The digitalization discussion in the elderly care work is widespread, but still reasonably sporadic. Besides, the development approach is often instructive rather than interactive or participatory. The aim of this study is to define the opportunities and challenges in assimilating technological solutions of the housing services for the elderly people. A primary focus of the study is in the co-creation work of the multi-sensory environment (MSE), a physical place that is designed as a relaxing room. The central theme of the room is Finnish nature. The room can be staged to provide a multi-sensory experience or single sensory focus, by adapting the lighting, atmosphere, sounds, photos, scents and textures to the specific needs of the ageing person at the time of use. A mobile technology is integrated into the room by a "giant tablet" – 55" Android tablet. The main idea for the relaxing room is to create a comfortable environment where elderly people are able to relax and potentially the amount of their medication can be reduced to the minimum. The research questions are; how to integrate technology as smoothly as possible (perhaps invisibly) into the daily work practices of the elderly housing services? How can technology best be incorporated and how can these solutions be modified in order to meet different user needs of elderly people and care personnel? In addition, a critical perspective is directed towards the devices and applications themselves, in terms of their usability and life cycle in the co-creation work of the MSE.

The data of this study was gathered during a reflective development process of the MSE room for the Service Center Foundation of Lappeenranta. The co-creative development work is a part of a larger research project called Revolution of Service Economy – Human Being at the Core of Digitalization. The data was collected in various phases of the co-creative development process between January and December 2016. The data consists of multiple workshops among care personnel, seminars and benchmarking visits with collaborating companies. The development work is conducted together with technology providers, designers, the care personnel as well as researchers in Lappeenranta University of Technology. The analysis of the data was completed in co-operation with other researchers, and the results were reviewed by the director and care personnel from the case organization. Data inquiry was based on content analysis; for example, evaluating the appearance of mutual themes, adversarial feedback, experiences and suggestions for improvements.

User-centered understanding is highly important in co-creating the MSE room. The preliminary results of this study support co-creation among technology providers, designers, the care personnel and researchers. It is very challenging to conceptualize the specific needs of elderly people, especially due to the fact that ready-made technological solutions and devices are not available. In order to be successful, co-creative development work calls for know-how of connecting diverse expertise and working cultures. It is crucial that initial objectives of the development process are clear among all participants. Furthermore, the care personnel face extra challenges in their daily work while trying to adapt to the introduction of new technology in rather a limited time frame. Therefore, the Service Center Foundation of Lappeenranta is given considerable assistance from their technology provider and designer for the applications of the



tablet, for example screening suitable contents for the Senior YouTube channel. Co-creation of the MSE needs developing organizational and individual skills in a comprehensive manner; in addition to single solutions and “technology hype”, a multi-faceted and human-oriented vision and a very clear aim for using digitalization are essential.

## 16.07

### Human factors in robotizing Finnish industry: skills and motivation on the factory floor

Iina Aaltonen, Timo Kuula, Ilari Marstio

*VTT Technical Research Centre of Finland Ltd, Espoo, Finland*

#### Introduction

In the Finnish industry, there is a growing need to robotize factories and mechanical workshops to ensure competitiveness. We studied human factors issues which arise on the factory floors related to the adoption and use of robots in three Finnish industrial companies. The goal was to identify factors that would make future work with the robot systems more flexible and easy from the worker perspective. Although the initial hypothesis was that the user interfaces would be the key barriers to the wider adoption of robots in factories, it turned out that the scope of research had to be broadened from usability issues to other human factors such as ergonomics, skills and motivation.

#### Methods

We interviewed and observed workers and supervisors in three companies in Finland: a large-sized factory, a medium-sized logistics centre, and a small-sized mechanical workshop. The workers were either technicians, who were designated for robot maintenance, or operators working with robots. The topics included the core task of the workers and their motivation for work, collaboration, skills and education, robot programming and fault handling, and ergonomics and user interfaces.

#### Results

The work with robots can be roughly divided to three tasks: programming, operating and monitoring, and handling faults. The first and third tasks are typically left for the maintenance technicians, while the other workers have limited permissions and skills to handle them. Additionally, the products being manipulated by the robot are often processed further manually and transferred to the next robot cell by the workers.

Some of the manual processing could be done by robots, but in addition to the programming of suitable robots, it would require a slight push to get started and to change the current work practices. The workers of the mechanical workshop were given introductory material on lightweight robots designed to work side-by-side humans (e.g., ABB YuMi, ReThink Robotics Baxter) and asked to envisage their future work. The workers came up with several suggestions, such as having a one- or two-handed robot serving objects between two or more machines. While the amount of manual work, and therefore the workers' physical workload, would be decreased, the overall amount of work, as well as the worker safety, was thought to increase. In addition, the work was expected to be slightly more challenging and varied with the new robots.

In general, the interviewed employees in the three companies saw the challenging aspects of their work as positive motivating factors.

Some of the technicians commented a working experience of 1.5-2 years was sufficient to handle the robot systems well. However, if a worker is only occasionally involved with a certain robot, it is easy to forget the specifics, and therefore a work distribution where everybody does everything is not practical. In small companies, however, it may be the only alternative. The usability issues encountered with the user interfaces, such as the incongruence of the positioning of similar functions in the interfaces, or the lack of emphasising the relevant events, further decreases the workers' possibilities for fluent human-robot interaction. In some cases, the lack of Finnish and/or English language skills was a hindrance both in communicating with co-workers and in using the interfaces. Moreover, due to the large variety of robots and other machines, generic programming education offered by institutes or external trainers does not meet the workers' needs.

#### Conclusion

In the interviews, it turned out that some company representatives were slightly dissatisfied they needed specific technicians for handling the robot faults even with modern robot systems, which is partly due to the engineer-oriented instead of human-centred design of the interfaces. The current robotic development, however, is leading towards lightweight, collaborative robots working side-by-side humans, and the role of the traditional, unintuitive user interfaces is likely to be lessened. In this respect, the research on social robots and signalling of intention may become important also in the industrial context in the future.

## 16.08

### Acceptability and Needs of Seniors for Care Technologies in Finland and Japan: Who Should Give Care and with Which Technologies?

Marketta Niemelä<sup>1</sup>, Hiroyasu Miwa<sup>2</sup>, Mari Ylikauppila<sup>1</sup>, Kentaro Watanabe<sup>2</sup>

*<sup>1</sup>VTT Technical Research Centre of Finland Ltd, Tampere, Finland, <sup>2</sup>National Institute of Advanced Industrial Science and Technology (AIST), Tokyo, Japan*

Aging population has become a global issue. The sustainability of independent life of the elderly and elderly-care services has been questioned because of limited financial and social resources for the growing number of older people. Toward this situation, innovative solutions have been anticipated. Recently, ICT and robotic technologies, especially care robots, are gaining attentions as new solutions to support the elderly's living and care services. However, there are still barriers to accept care robots in living and care environments for the elderly, for instance, the lack of information and experience of care robots among care workers (Turja, 2016; Määttä, Watanabe & Miwa, 2016). Further research and development are being anticipated.

Our study focuses on the differences in acceptability to care technologies among countries. There are different life styles, cultural background, care policy and practices in each country, which would strongly affect the acceptability and needs in care technologies. Comparative studies to examine differences in technological acceptability and needs are still in the emerging phase. Specifically, we are investigating these differences between Finland and Japan. Although both countries are economically developed and rather stable social welfare systems, their care

policy, social system and general lifestyles are different from each other. By comparing each country's acceptability and needs to care technologies, meaningful insight for developing and implementing care technologies in a global context could be obtained.

Based on this assumption, we've been conducting a questionnaire survey on acceptability and needs toward care technologies in both countries. The target respondents are active seniors, who are considered as users of care technologies in the future. Web questionnaire has been used to receive responses, so that the respondents are limited in the internet users. The questionnaire to each group has 20 questions based on preliminary interviews with elderly people and care workers. These questions include such topics as their expectations and requirements for future care services, their lifestyles, general attitude toward technology, specific needs for care technologies and user data.

In our presentation, we will introduce the preliminary result about acceptance and needs for care technologies between Finnish and Japanese active seniors – the future receivers of care and users of care robots and other technologies. The definition of active seniors in this study is over 65 year old people who don't receive care yet and are not providing care to somebody else. The used samples are 115 in Finland and 219 in Japan, which were collected until 20 January 2017. The preliminary result shows that Finnish respondents are more willing to using care support technologies (e.g., walking support, washing and toiletry support, mobility and transfer support, medicine taking support, dementia preventing games) for both their independent living and care services for themselves than Japanese. Meanwhile, Finnish respondents are less willing to using social robots than Japanese.

Furthermore, in Finland elderly people seem to most likely receive care from a professional caregiver, whilst in Japan the expected caregiver is the spouse. Two thirds (67%) of the Finnish respondents expect advanced technologies such as robotics to become more necessary to themselves in the future, whilst about 53% of the Japanese respondents think the same. On the other hand, a bigger proportion (86%) of Japanese seniors see that the distribution of advanced technologies such as robotics is good or very good for the society, whilst 70% of the Finnish respondents agree. We will discuss these findings in the context of changing expectations and requirements for elderly care work and workers.

16.09

#### **Poster Presentation: To share a workplace with (robotic) technologies**

Milou Habraken, Tanya Bondarouk

*University of Twente, Enschede, The Netherlands*

This paper is dedicated to the movement Smart Industry. Although we know Smart Industry is labelled as the fourth industrial revolution and a general sense exists of what it implies, businesses at the same time indicate to be working 'smart' in different ways. Questions such as the extent to which interpretations differ, how 'firm smartness' can actually be assessed and consequently what the impact of Smart Industry is on the organization of work remain unanswered. Therefore this paper strives to explore the label Smart Industry and to obtain first insights into the impact of Smart Industry on the organization of work.

We employed an explorative qualitative design. We studied several documents about the

aspects connected to Smart Industry. Further, twenty-one interviews with business leaders from different industries in the Netherlands were conducted, each lasting on average an hour. We explicitly approached members of the Smart Industry Forum which is a Dutch Platform for knowledge development on Smart Industry. Members of this platform are seen as intermediaries between the expertise development within the platform and the members respective industry (e.g. agrifood, knowledge institutions, life science and health). The interviews were mostly conducted face-to-face but otherwise took place over the phone. In line with the goal of the study we conducted the interviews as open conversations and asked our respondents about how they viewed, defined, interpreted and/or which aspects they connected to Smart Industry. Additionally, respondents were triggered to provide examples in relation to given answers in case they did not do so themselves. Remaining questions depended on the responses that were given to the main question. The full analyses of the transcripts will be performed in an inductive way through open and axial coding.

What stands out so far is the fact that respondents use the term robots and/or robotization in connection with Smart Industry in a recurring manner. However, we observe that, based on the context in which this term is used, different meanings are assigned to it. One being a more automatization related interpretation, for example welding robots in the shipbuilding industry or 'robots' in the factories of the automotive industry. Another use of the term robot however is described by our respondents as a possibility for the "last mile delivery": driving robots might deliver a package to a customer through a hatch in the front door instead of "ringing the doorbell". Another viewpoint about the meaning of the term robot was related to software, for example a self-learning program assessing pictures of skin samples and detecting irregularities/dangerous skin situations. Finally, drones were termed under the heading of robots. Regarding the application of drones, respondents highlighted their use for inspection of different objects in various industries. For instance, in the agriculture sector drones are/could be used to fly over a farmers crop, in the chemical industry drones are/could be used to inspect storage containers for chemical products or in the aerospace industry drones are/could be applied to analyse the condition of the exterior of an airplane.

Despite the differences in meaning of the word robot, we think that these examples all seem to incorporate the popular scenario of shifting of traditional work tasks to "robots", however these are defined. But results also show the opportunities robots can provide, for instance, in multiple interviews the following example was given: the decision of a local automotive factory (VDL-Nedcar in Born) to introduce robots ultimately saved the plant from bankruptcy and created work for many people. The company has created a strong strategic factor market through competitive technological resources and gained advantage over its competitors.

Although robots were acknowledged as a crucial part of the Smart Industry movement, they should not be seen as a saviour of the success of this movement. Based on the first analysis of the empirical data, we argue that a configuration of three dimensions is necessary to earn credits given to Smart Industry: digitalisation, connectivity and new manufacturing technologies (robots, among other things). Next to the three dimensions, the analysis has also revealed several important contingencies that go hand-in-hand with Smart Industry. These include cyber security, education and fieldlabs (specific Smart Industry related projects consisting of multiple parties).

In conclusion, first, we argue that before analysing the impact of robotization on organization of work, we need to address multiple interpretations of the term that live in real life business: either it is software, drones, or automatization tools. Knowing multiple meanings given to "robots" will support the research in furthering assessment tools, and consequently – measuring an impact

of robotization on the organization of work in a more nuanced way. Secondly, our data show that robotization should not be considered in isolation, but investigated in conjunction with parallel developments of digitisation, connectivity and other new technologies, in order to see their reciprocal effects on the organization of work.

## 17. SKILLED EMPLOYEES – SUCCESSFUL LABOUR MARKET

### 17.01

#### Understanding the link between qualification and changes in occupational contents from 1979 to 2012

Michael Tiemann, Robert Helmrich

*Federal Institute for Vocational Education and Training, Bonn, Germany*

This paper contributes to current debates on polarisation and changing work by analysing what happened in the past when new technologies were implemented. The well-known polarisation thesis of Frey / Osborne (2013) is based on the assumption that routine work will be substituted by machines. The paper sheds light on the question whether this was the case in Germany in the past. In the polarisation thesis there is a strong link between education or qualification and labour market success: Persons with medium level qualifications are described as losers in the process of restructuring the economy towards an Industry 4.0.

Frey / Osborne (2013), drawing on Autor et al. (2003) state that computerisation potentially leads to job loss and negative income effects especially for medium level skilled employees. Since they want to make predictions about the future, it is important to understand the effects underlying this assumption. It can be shown that there is a direct link between high shares of routine contents of occupations and subsequent introduction of computerised machines in these occupations. But this does not answer the question whether people will have to change jobs, re-qualify or become unemployed.

Firms do at least have two options: Either they substitute workers by machines or they reorganise the work in a way that still makes use of employees skills. Also, new technologies can be implemented in different ways, substituting or supplementing tasks, according to employees skill levels (Ben Ner/Urtasun 2013).

Regarding occupational contents, the discussions always draw on expert ratings of occupational contents. This is a major drawback when we want to learn about what happens to employed persons on the labour market.

The data used here are the Qualification and Career Surveys of 1979 to 2012. They hold representative data of at least 20.000 respondents in core employment (10 hours paid work / week) on their subjective assessment of requirements, tasks, skills used, work and qualification career paths and more. The data are aggregated on the level of occupations to show how occupational contents changed over time and whether these changes were driven by technological change.

It is shown how occupational contents can be described with a theory-based model. Overall routine shares of work decline throughout the labor-force but do not always lead to the extinction of jobs. In some groups of occupations though this is the case (e.g. commercial backoffice occupations). Also, a positive relation of routine-dominated job activities and the introduction of technology can be shown. But the underlying assumption of the current debates polarisation (esp. with Frey/Osborne) of substitution of workers as the sole or most important effect of the introduction of new technology cannot be verified for the past. Instead, a number of alternative strategies become visible, which help fostering a more profound discussion about the future of work.

### 17.02

#### Net generation and the idea of a labour market in the digital age

Sheila Zimic, Carolina Klockmo, Anna Jakobsson Lund

*Association of Local Authorities Västernorrland County, Härnösand, Västernorrland, Sweden*

Since the end of 1990's young people have been categorized as a Net generation. This generation was said to be more digitally capable than any previous generation. The Net-geners were described to have grown to expect technological environments in everything they do, from entertainment to education. They were also expected to revolutionize the labour market by their uptake of digital technologies and by putting new demands on the employers. However, a highly technological society also puts demands on its citizens. Demands such as high digital skills and high education. To succeed in the digital society the citizen needs to fulfill the merits and characteristics said to be important in the digital age.

In the last decade in Sweden the discourse about work and labour market has been highly influenced by neoliberal ideas. The status and value of a citizen was equated with being 'employable'. Being employable was articulated as having strong self-confidence, taking own initiatives, being responsible, being able to work in a team, and being able to constantly learn new skills. Much of the same characteristics were assigned to the Net generation.

In this paper it is argued that the discourse about the Net generation was used to call upon certain changes in societal institutions in order to fulfill the ideas of how the market and the economy would prosper. It is clear that the young people themselves were not the ones who were in position to influence their categorization or that their voices were much considered in the shaping of the digital age.

The empirical exploration of the abovementioned thesis takes place in the context of municipal labour-promotive measures for young people. Sweden's Public Employment Agency, together with municipalities in Sweden, are obliged to take action to reduce youth unemployment. Practices and arenas directed to young people are common. One example are arenas where professionals from the Public Employment Agency, the municipality and Government Authority for Social Security, work together in order to help individuals with complex problems to 'get closer to an employment'. Seven young people, taking part in the activities of labour-promotive measures, were interviewed. Their stories are in focus with the aim to disclose what is expected of young people entering the labour market in the digital age, and which hindrances they voice in their particular situations.

In all seven cases the young individuals' share the story of lack of social support, financial



worries, tough experiences in life and poor mental health. As a consequence of all the above mentioned circumstances, several of the interviewees did not succeed to finish primary or secondary school. Evidently, the living conditions and chances for young people are not equal, yet discourses about young people are often simplified and unproblematized, both the optimistic and romanticized image of a young Net generation and the 'problem image' of youth unemployment. In these discourses concerning youth in the digital age, the labour market is articulated as if it something static.

The conclusion is that individual factors and characteristics cannot solely explain the outcomes of 'employability'. Employability is not just a position one chooses or not chooses. The voices of the interviewed individuals shed light on who is included and who is not included in the idea of a labour market in digital age.

### 17.03

#### Exploring the relationship between career development and social networking in social media

Anna Wallin<sup>1,2</sup>, Petri Nokelainen<sup>2</sup>

<sup>1</sup>University of Tampere, Tampere, Finland, <sup>2</sup>Tampere University of Technology, Tampere, Finland

#### Introduction

The working life is becoming increasingly networked, distributed, knowledge-intensive and technology-based. Organizations and workers are facing various challenges, such as keeping up with ongoing projects of distant employees, finding ways to share knowledge, getting to know colleagues personally as well as professionally and locating people with the right skills and expertise. As multidirectional career paths and boundaryless careers are becoming more usual, the workers are also expected to take more responsibility on their career management and professional development.

All of the above-mentioned changes make it necessary for workers to develop their professional networking skills and career management competencies. Professional networks provide access to information, social support and other resources that might be useful to accomplish current work and progress in one's career. It has been suggested that using personal contacts is becoming more important for career building and that an extended network of acquaintances ("weak ties") may be valuable to job seekers because they provide people with access to information and resources beyond those available in their own social circle. Traditionally professionals have networked with others for example in conferences, via e-mail and at the workplace. However, with the rapid adoption of different Web 2.0 collaborative applications (e.g. social bookmarking, social networking sites, blogs, wikis), people are increasingly communicating and connecting with each other online.

The rapid expansion of social media use is shifting the context within which professionals pursue their careers. Social media provides a platform for the professionals to find and exchange information, to manage their reputations and a space for building social capital and for learning new knowledge and skills. Also employers have recognized the possibilities that social media offers for recruitment and for screening potential candidates and applicants. Despite the potential impact social media has on trends in career management and development, there exists still

very little empirical research in this area.

#### Research objectives

We will explore how the use of social media is related to career development and career management. Our main focus is on the question of what potential, if any, does the use of social media provide for career development. We are interested in providing an insight into the changing landscape of social connections and social networking in order to understand:

*How is the use of different professional and non-professional social media services related to*

*(1) subjective and objective career success*

*(2) career engagement (i.e. the degree to which somebody is proactively developing his or her career as expressed by diverse career behaviors)*

#### Methods

The research uses an online survey that consists of questions related to social media use and existing measures that measure career success, career satisfaction and career engagement. In addition to questions related to career development, the survey also consists of a part that investigates the learning environment of the workplace. The sample consists of staff members in Finnish universities and universities of applied sciences.

#### Results

We are currently starting to collect the data and we are aiming to present the final results in the conference. Previous studies have shown that social media provides many features related to career building and professional networking, such as knowledge sharing, resume building, expert identification, idea generation and relationship building. In addition, recent studies have indicated that presence on professional social networking sites, such as LinkedIn, and the amount of activity there has a strong positive connection with career success. This strong association provides evidence that social capital and professional success are related and suggests that investment in social capital through social networking sites may influence professional success.

#### Conclusions

Professional learning and development has been studied for decades but there is a growing need to understand how the adoption of new technologies affects professional development. Although a number of studies have shown that social media have potential in supporting knowledge sharing, development of employability skills and social capital building, the study of social media use for professional networking and development is still in its infancy.

Our research will provide a new perspective and conceptualization on career development by widening the focus to consider the possible role of social media in it. The research aims to build awareness of the potential significance social media has for developing career management competencies, building professional networks and enhancing employability prospects.

## 17.04

**Skills for work – enhancing preparedness for change management and employability with a mid-career competence clinic**

Salla Toppinen-Tanner<sup>1</sup>, Jukka Vuori<sup>1</sup>, Marjo Wallin<sup>1</sup>, Niina Jallinoja<sup>2</sup>, Johanna Vuori<sup>2</sup>

<sup>1</sup>*Finnish Institute of Occupational Health, Helsinki, Finland*, <sup>2</sup>*Haaga-Helia University of Applied Sciences, Helsinki, Finland*

**Background.** Need for developing professional competencies throughout working career is widely acknowledged but there is lack of methods realizing the idea of life-long learning at mid-career and beyond. Employees are presumed to work longer, participate more and be more productive during their careers. At times of constant structural changes within organizations and boundaryless careers, workplaces can no longer provide employment security and this more unpredictable career environment needs to be complemented with enhanced employability of individual employees.

**The aim of this study** is to develop and to study the efficacy of an intervention 'mid-career competence clinic' which involves career management training for supporting skills development and employability among employees in their mid-career (aged 40 years or older). The study will be conducted in collaboration of the Finnish Institute of Occupational Health (FIOH) and the Haaga-Helia University of Applied Science (HH). **The intervention program** will be based on a 16-hour group intervention program previously developed at FIOH, aimed at enhancing career management preparedness (Towards Successful Seniority group method by Vuori et al. 2008). The method utilizes active learning, positive coaching and social learning principles and is implemented by two trained trainers. The program contents include e.g. future career goals, job search skills, managing changes, and social networking. The program consists of two half-day face-to-face training and web-based learning tasks.

**Study design.** A randomized controlled study with about 1000 participants will be conducted for former students aged 40+ from the student registers of HH (business and service jobs). Also register members of the Union of Professional Engineers will be used to recruit participants from another field of expertise. They will be contacted and provided with the opportunity to participate in the study by filling up and returning a web-based baseline questionnaire survey. The respondents will then be individually randomized pairwise into the experimental and the control group. The experimental group will get an invitation to a mid-career competence clinic. All of the participants will respond to a follow-up questionnaire survey after the intervention and the control group will receive individual feedback from his/her responses to the questionnaire survey.. The effects of the intervention will be investigated on preparedness for career changes, goals and motivation, perceived employability, job crafting, competencies, and work ability and work engagement.

**Expected outcomes.** An evidence-based group method will provide employees at mid-career a tool for developing their career management competencies and employability, and increase sustainable employability among employees. This kind of evidence-based training program could be used in universities of applied sciences or in other educational institutions as a program for developing mid-career competencies, or at workplaces as change security.

The intervention program and the study design, as well as, the preliminary results of the baseline study among first 597 participants will be presented at the Conference.

## 17.05

**Self-evaluation of market critical competences in business and engineering work during a training intervention**

Niina Jallinoja, Johanna Vuori

*Haaga-Helia University of Applied Sciences, Helsinki, Finland*

**Introduction**

The development of technology and globalization continue to cause major changes to the nature of work and skill requirements. While there is a wide agreement on the importance of all employees to learn new competences, it is less clear, what competences should be regarded as 'critical' in the market. The project 'Skills, Education and the Future of Work' has identified two major concerns: first, how the Finnish workforce can cope with the changes in skill requirements, and second, how ageing workers' competences can be recognized and updated. While the other streams in this project concentrate on younger age cohorts and special workforce groups, this paper focuses on competences of ageing business and engineering professionals working in different industries and jobs in Finland.

**Objectives**

The aim of this study is to obtain deeper understanding of how those business and engineering professionals, who are willing to develop their careers, have coped with the continuous need for competence development. We will discuss in the paper to be presented at the WORK 2017 Conference how ageing business and engineering professionals self-evaluate their competences before and after an intervention, and what competences they recognize as market critical in business and engineering work.

**Method**

The data for this paper was and will be collected in the research organized by the Finnish Institute of Occupational Health and Haaga-Helia University of Applied Sciences. Participants (40-65 years old) were recruited from the student register of Haaga-Helia and the member register of the Union of Professional Engineers. The study design includes a pre-survey (conducted in January 2017, N=571), mid-career competence clinics (to be organized in March-May 2017, participants approximately 280) and a post-survey (to be managed in June 2017). Pre-and post-online surveys include questions of respondent's recognition of market trends, self-assessment of competences and participation of training as well as organizational and individual factors. Among other learning assignments, the mid-career competence clinics (approximately 15 participants each) includes participants' reflection of their competences and identification of market critical competences. In addition, qualitative data based on assignments related to professional competences will be collected in the mid-career competence clinics.

**Expected outcomes**

The pre-survey of 571 respondents forms a baseline for this study. The survey respondents assessed both their professional and generic competences as 'fairly good'. Generic competences, such as, emotions management at work and ability to work in a multicultural workplace, were scored higher than professional competences, such as, ability to manage information security and ability for value-added conversation with different teams. Those of the respondents, who

had scored the impacts of globalization and digitalization in their work environment as high or very high, also tend to self-assess their professional competences respectively high. Those respondents, who had reported participation to training during past 12 months, also assessed their competences high. This baseline will be compared to the post-survey conducted after the mid-career competence clinic, informing how the interventions possibly influence on self-assessment of competences. Based on the qualitative data also participants' views of market critical competences in business and engineering work will be discussed.

## 17.06

### Cognitive styles and workplaces as learning environments

Heta Rintala<sup>1</sup>, Petri Nokelainen<sup>1</sup>, Laura Pylväs<sup>2</sup>

<sup>1</sup>Tampere University of Technology, Tampere, Finland, <sup>2</sup>University of Tampere, Tampere, Finland

#### Introduction

Educational policy in Finland aims at shifting vocational education and training from vocational schools to authentic workplaces. Previous research has shown that workplaces vary as learning environments, some providing expansive opportunities for developing expertise, while others restrict the possibilities of learning (Fuller & Unwin, 2003, 2004). Nevertheless, it should be acknowledged that besides this sociocultural perspective that connects learning to organizational conditions and practices (Ellström, 2011), the learner factors influence learning in the workplace (eg. Billett, 2001; Tynjälä, 2012). This study focuses on individual's cognitive style, which is a stable and preferred cognitive strategy of dealing with creativity and problem-solving and decision-making processes (Chan, 1996; Kirton, 1976, 1980). The Adaption-Innovation theory (Kirton, 1976, 1980) is premised on the idea that individuals can be placed on a continuum ranging from an extremely adaptive to an extremely innovative style. Cognitive style is distinguished from cognitive level (ability to successfully solve problems), and adaptive and innovative styles are both creative but in different ways (Chan, 1996). Both adaptors and innovators have their own characteristic strengths and weaknesses which are useful and harmful to organizations (Kirton, 1980). Adaptors create change by improving on the existing structure and they favour staying in groups by maintaining cohesion by following the accepted ways and solving problems in a disciplined and predictable manner. Contrarily, innovators break away from the existing framework and are associated with originality of ideas and less concern for efficiency and rule or group conformity. (Chan, 1996; Kirton, 1994.)

#### Objectives

The purpose of this paper is to contribute to an understanding of how individual's cognitive style relates to perceiving workplaces as learning environments. In this study, we examine (1) how apprentices locate on a continuum of cognitive style ranging from adaption to innovation and (2) how the KAI (Kirton Adaption-Innovation Inventory) scores relate to dimensions of WLE (Workplaces as Learning Environments).

#### Methods

A survey was distributed to vocational students in Finnish educational institutions. This paper focuses on a sub-sample consisting of 305 apprentices. Of the respondents, 233 (76.4%) were

women and 72 (23.6%) men, and they ranged in age from 16 to 64 years (M=40.4, SD=10.4). The quantitative data was gathered using self-report measures, which were administered on a single occasion. Participants completed the measures of cognitive style (KAI) and workplaces as learning environments (WLE).

#### Measures

WLE (James & Holmes, 2012) includes 22 items on a 5-point self-rating response scale (1=totally disagree; 5=totally agree). The survey addresses seven main areas related to expansive learning environments, which are: 1. Participation and understanding of the workplace; 2. Task performance; 3. Access to resources to help learning; 4. Judgement, decision-making, problem-solving and reflection; 5. Experience, task transition and career progression; 6. Status as a worker and a learner; and 7. Organisational development.

KAI (Kirton 1976, 1980) consists of 32 items and uses a 5-point self-rating response scale (1=totally disagree; 5=totally agree), offering a theoretical range of 32-160 and a theoretical mean of 96. Low scores indicate styles toward the adaptive end and high scores indicate styles toward the innovative end of the continuum. Different studies undertaken in different countries have yielded stable general population norms with an observed range of 45–146 normally distributed about a mean approximating 95 (Chan, 1996). Inventory includes following three factors: 1. Sufficiency v proliferation of originality (SO); 2. Efficiency (E); and 3. Rule/group conformity (R) (Bagozzi & Foxall, 1995; Kirton, 1994).

#### Data analysis

The survey data was analysed with non-parametric frequentistic (descriptive statistics, correlational analysis) and non-frequentistic methods (Bayesian classification modeling) due to discrete measurement level of variables.

#### Results

The mean KAI score for apprentices was 92.8 (range from 61 to 119, SD=9.880). Non-parametric correlations (Spearman rho) between WLE dimensions and apprentices' KAI scores were calculated. Results showed that adaptive apprentices found more learning resources in their workplaces [ $r(338)=-.248$ ,  $p<.001$ ]. Similarly, earlier research has suggested that innovative individuals may seek 'out of the box' solutions and be more detached from their surroundings (Chan, 2000). Results also showed that adaptive apprentices felt that they gained holistic work experience, had more opportunities to develop their work related skills, and were more aware of their career opportunities than innovative apprentices [ $r(338)=-.134$ ,  $p=.019$ ].

Correlations between WLE and KAI dimensions revealed that all WLE dimensions correlated statistically significantly positively with the first KAI dimension (Proliferation of Originality). This indicates that apprentices who self-assessed themselves to be able to produce original ideas, also felt that their working environment was more expansive than restrictive ( $r$  range from .367 - .463,  $p<.01$ ). Two other KAI dimensions (Efficiency and Rule/group conformity) had negative (in most cases statistically significant) correlations with all seven WLE dimensions. As the ratings of these two dimensions are reversed for the KAI score, finding suggests that expansive workplaces allow experimentation and paradigm breaking (instead of just calling for efficiency, precision, reliability and agreement with the group).



## 17.07

**Employee-Driven Innovation as Lifelong Learning**

Nina Amble, Oscar Amundsen, Marit Rismark, Solveig Waaler, Else Marie Johansen, Sigrun Stiklestad

*HiOA, Oslo and Akershus, Norway*

Vibrant societies and democracy requires active citizens. In our part of the world, in northern Europe, we have a high level of employment and a relatively high number of man-years per capita (Perspektivmeldingen 2013 Meld. St. 12 (2012-2013)). We live in work happy, egalitarian societies with a tradition of workplace learning and cooperation between research and enterprises about innovation (Gustavsen et al. 2010 Piketty 2013). That indicates how active citizens have access to a good education system as well as lifelong learning through participating in the work force (Bjørkeng 2013; Zarifis & Gravani 2014; OECD 2014).

In order to capture the differences in the lifelong knowledge production we distinguish between three forms of learning: Namely informal (uformell), non-formal (ikke-formell) and formal (formell) learning (Holmes Land & Lundin 2009; Eikeland ). In simplest way, we can imagine that informal learning applies to our daily work tasks and integrate into those. This is 'the everyday learning'. Non-formal learning refers to more organized training at the workplace (Rismark & Sølberg 2011; Amble 2014). Then formal learning happens in the educational system, the learning that gives credits (ECTS) and degrees.

In this article, the purpose is to theoretically, examine the boundaries and relationships between the three forms of learning. What characterizes the three forms in today's 'learning life' (Læringsliv). How can practical experiential learning be inter-twined with more theoretical classroom learning? What prevent or promote such learning in today's fellow citizens changeable life? And finally, how can we use this knowledge in educational programs where the workplace is the frame around the knowledge production?

In the paper we discussed the three forms of learning with basis in the research project *#Læringslivet (Learning life) as Symbiotic Learning System of Employee-driven Innovation in Municipal Care Work* (NFR's FINNUT program).

Employee-driven innovation (EDI)(Høyrop 2010; 2012; Amundsen et al. 2011) can be related to informal learning and collective organizational learning based on broad participation in development work at work (Herbst 1993; Eikeland 2012 a; Amundsen and Kongsvik 2016). In the current project, however, employees who participate in EDI also could take credit points in the formal school system (Eikeland c). This implies organized learning processes in the workplace, where what we know about good learning environment (Fuller & Unwin 2004) and teaching methods will be a success factors. The project is an action research project where we, researchers together with four work places will develop a handbook in Employee-Driven Innovation.

## 17.08

**Future work and skills in health and social care sector**

Timo Sinervo<sup>1</sup>, Vuokko Niiranen<sup>2</sup>, Sanna Laulainen<sup>2</sup>, Laura Hietapakka<sup>1</sup>, Joakim Zitting<sup>2</sup>

<sup>1</sup>THL National institute for health and welfare, Helsinki, Finland, <sup>2</sup>University of Eastern Finland, Kuopio, Finland

**Introduction**

Health and social care services have faced and will face large reforms in Finland. The overall aim is to increase efficiency of services as well as client-centeredness of services. Services have been organized under larger, regional administration, which is also a goal of the forthcoming health and social care reform. The development has begun and several areas have built their regional organizations. The aim of the reforms has been to comprise economic development by creating new, larger and stronger organizations as well as to build integrated services and service chains. One aim in the forthcoming reform is to increase customers' choice of provider from public producers to private providers. This aim may be contradictory to the aim of care integration as well as co-operation and integration at employee and management level. In earlier changes, the larger providers have organized services in new ways, combining services from primary and secondary care as well as from social services. The aim has been to segment clients and building suitable services for different segments. In system with multiple service providers competing with each other this is not possible and integration is based on care coordinators.

In our study we suppose that service integration, customer choice and digitalization will change work and competences needed in future health and social care work. In order to be more effective and client-centered also work methods and work cultures must change in addition to changes in organizations. The reform needs novel competences (e.g. change-oriented organizational citizenship of employees) and co-operation at the strategic level, too. Digitalization may also change work substantially. To be effective, digitalization means not only implementing new digital systems, but also changing work and service more thorough analysis. In this study we analyze the changes and competence needs in health centers and elderly care. In addition, we emphasize how change-oriented organizational citizenship is enabled. processes.

**Objectives**

The aim of our study is to analyze the major changes in health and social care work and the organizational solutions, differences in division of labour and care processes in participant organizations. Secondly, the aim is to analyze, what competences are needed at work and at different management levels in these changing organizations. After building the overall picture, we selected cases to

**Methods**

Our study is a part of a large Cope-project which aims to evaluate the competences needed in future health and social care. This paper is based on two interview data collections. The first data is collected from 17 health centers of four municipalities and three private providers. Altogether 100 managers, supervisors and employees (GP's and nurses) were interviewed in separate or pair interviews. The second data was collected from three large health and social care districts. One district has been in action for several years, one has just started and one is being planned. 20 top managers have been interviewed and during spring 2017 middle

managers and employees will be interviewed.

## Results

The first results from interviews of top managers show that the core competences of most professions are supposed to be valid also in future. However, there are several changes needed. The managers see that employees should understand and analyze clients' needs in more holistic way and to plan their services taking into account the whole service system (both health and social services). Frequently professionals concentrate on the point of view of their own profession. Secondly, services should be planned in more goal-oriented way. For example in home care for older clients rehabilitative thinking is needed. Thirdly, especially in municipal services better skills in customer service is needed. Client-centeredness and listening of clients' needs is needed. Fourthly, managers see that employees would need more active way to think development of their work. Fifthly, top level managers see that middle managers would need more strategic orientation. There are also several changes coming in division of labour. In many cases tasks of employees with higher education are moved to other professions and the role of those with higher education is like a consultant or expert.

In the data from health centers the development has come true in many ways. The role of nurses has risen and nurses have tasks which earlier were done by GPs. Secondly, in some health centers, new professions have come to health centers as more difficult patients with multimorbid conditions have segmented to certain teams. A team of health and social care professions is formed to take care of their needs.

## Conclusion

The first results of the study showed that the educational structure and contents are suitable for the future work. Still, there are several topics which should be emphasized better in vocational and higher education and especially in further training as work organization, methods and cultures are developed.

## 17.09

### **Sensitive, Networked Professional - Service Advisors as Agents between Citizens and Digitalized Services**

Eveliina Saari, [Sari Käpykangas](#), Mervi Hasu

*Finnish Institute of Occupational Health, Helsinki, Finland*

## Introduction

Hopes are currently high that digital platforms will help make social and health care services more paperless, efficient, citizen-oriented, and integrated. Previous research on the adoption of e-services has indicated that citizens' digital skills and readiness for digital communication play a crucial role in how the work of service providers are organized (Berger, Hertzum and Schreiber, 2016; Åkesson and Edvardsson, 2008; Breit and Salomon, 2015). From the perspective of service providers, digitalization will radically change their work tasks.

A new kind of professional is needed, one who can promote a kind of "self-service" among

citizens as regards using e-services. However, this professional should also strive to prevent exclusion from these services of those who have no competence or possibility to use digital interfaces, by providing them with face-to-face service.

Service advisors work as pioneers in social and health care districts to help citizens navigate between different services. Because of the ongoing digitalization of services, they have become the borderline personnel between ICT interfaces and citizens. However, when managers have nominated service advisors to help citizens in the complex service system, they have not been aware of what these jobs would entail. This study started from these premises.

## Objectives

The aim of the paper is to outline and understand what the work of a new professional, here the service advisor, will involve in this rapidly changing service system. As a concept, organizational authorship provides a theoretical framework for analysing professionals' experiences as a meaningful, reflexive and sustainable narration of their work (Gorli, Nicolini and Scaratti, 2015).

## Methods

Our case context is the South Karelia Social and Health Care District (Eksote), which has a population of 132 000 and is served by 4000 employees. Service advisors work in eight wellbeing centres, in which services are provided on the basis of the needs and age structure of the population of each service area. Eksote is increasing its e-services and building a new digital strategy paradigm. It is a national forerunner in organizing social and health care services in a novel way.

Data were gathered in three phases in 2016. First we interviewed five service advisors, two doctors, one nurse and one customer. In the service advisor interviews, we applied the 'instructions to the double' technique (Ivaldi, Scaratti and Nuti, 2015). The professionals were requested to imagine having a double, who would take their place at work the next day and their task was to advise this person on 'what to do' and 'what not to do'. The purpose was to help them reflect on their attitudes, routines, intentions, and emotions.

The second source of data was ethnographic observations in two wellbeing centres. The last phase was a feedback workshop for employees and managers on the everyday work of service advisors.

## Results

The analysis indicated that the agency and work orientation of service advisors depends on their relations with other professionals and customers. The most vulnerable groups of citizens, with multiple needs for various services, were sometimes only reached via home visits after a hint from a relative or neighbour. Service advisors developed sensitive communication strategies for such customers, for understanding their life circumstances as a whole. This communication seemed to be critical for understanding what kind of help they actually needed. Furthermore, in these cases, the service advisors acted as a negotiator between the customers and the service providers.

The service advisors' first task was to build a good trusting relationship with the medical doctors and nurses of the surrounding centre. Other professionals then started to use service advisors as a resource for clarifying the needs of customers or assisting them with using digital applications, for example, applying for welfare support. In some cases, service advisors even

reduced tensions between professionals.

However, helping customers use digital interfaces seemed to play a minor role in service advisors' jobs, whereas face-to-face service with the most vulnerable citizens took most of their time. This appeared to surprise the supervisors and managers, who were aiming to implement a digital strategy in social and health care. In the workshop, these two viewpoints collided.

#### Conclusion

Service advisors work in a complex system in which they have to sense citizens' needs, cross different service borders and handle the technological transition. They have to develop a sense of authorship of their own work in order to cope with these challenges. This means gaining the ability to reflect on a person's actions, and to play an active role in the daily production and transformation of work processes (Gorli and al., 2015).

We outlined three types of authorship from the data: 1) the sensitively interpreting, personalized, independent professional, who searches for help even on behalf of the customers, 2) the network professional, who collaborates smoothly across service sectors, and 3) the professional, who uses digital systems and also assists customers in their use.

#### 17.10

#### Stress due to health information systems (DigiStress) among Finnish and migrant physicians and nurses

Anna-Mari Aalto, Hannele Hyppönen, [Tarja Heponiemi](#)

*National Institute for health and Welfare, Helsinki, Finland*

#### Introduction

The Finnish health care is becoming an increasingly multicultural work environment. Health care professionals with migration origin may face challenges in adjusting to foreign health care culture. One particular challenge may be information systems in health care which have been found to burden native physicians (Vänskä et al 2010, Heponiemi 2012). The present study examines stress due to information systems in the work of migrant and native physicians and nurses in the Finnish health care and how these differences varied according to working sector and type of employment.

#### Methods:

The study is part of the *Competent Workforce for the Future (COPE)*, funded by the Strategic Research Council, project 303604) and *Information Systems and Stress in Health Care* (funded by the Finnish Work Environment Fund, project 116104) -projects. The data is based on a survey for physicians (natives: n=3646, 55% response rate; migrants: n=549, 43% response rate) and registered nurses (natives: n=1008, 46% response rate; migrants n=515, 45% response rate). The composite scale for stress experienced due to health information systems (DigiStress) included 2 items: how often had the respondents been distracted, worried, or stressed about a) constantly changing information systems and b) difficult to use, poorly functioning information systems (5-point response scale). The background information included age, gender, working

sector, full-time employment, permanent employment and supervisor position for all subgroups and specialization status for physicians. Additional information concerning the migrant respondents was country of origin and year of migrating to Finland. The results were analyzed by ANCOVA adjusted for background factors.

#### Results:

Native physicians ( $F=42.4$ ,  $p<0.001$ ) and nurses ( $F=59.4$ ,  $p<0.001$ ) reported higher DigiStress. When migrant respondents' country of origin was taken into account, Finnish nurses reported more DigiStress compared to nurses from all other countries except Estonia. Estonian nurses reported higher DigiStress compared to nurses coming from Russia, Asia and Africa ( $F=56.4$ ,  $p<0.001$ ).

When the length of the stay in Finland among the migrant respondents was included in the analysis, native Finnish nurses reported higher DigiStress than migrant nurses who had moved to Finland after 1990, but not when compared to those who had moved to Finland earlier. Migrant nurses who had moved to Finland before 1990 reported higher DigiStress than those migrated to Finland after 2000 ( $F=16.98$ ,  $p<0.001$ ). Similar pattern of differences appeared among migrant physicians ( $F=6.6$ ,  $p<0.001$ ).

Among nurses a significant interaction term was found between native/ migrant status and working sector ( $F=5.5$ ,  $p<0.001$ ). The differences between native Finns and migrant nurses in DigiStress were greatest in specialized care, followed by primary and elderly care, while no differences were observed in private sector. Among physicians significant interaction terms were found between native/ migrant status and having permanent employment ( $F=6.9$ ,  $p<0.01$ ) and native/ migrant status and being in supervisor position ( $F=7.1$ ,  $p<0.01$ ). The differences in DigiStress between native and migrant physicians were greater among physicians working on temporal contract and in non-leadership position.

#### Conclusions

Stress related to information systems in health care is higher among native professionals than their co-workers with migrant origin. Several potential interpretations for the results may apply. Digital skills may actually be more advanced among migrant professionals. According to the "healthy migrant" hypothesis postulates that persons who migrate are a selected group in terms of good health status. Migrated nurses and physicians may be a selected group also in terms of psychosocial resources to cope with new situations and technologies. Another explanation may be that migrant respondents use different assessment criteria in responding to stress-related questions. They may also have different expectations regarding the functioning of information systems based on their experiences in their country of origin. In the current study the assessments of stress due to health information systems differed most between native Finns and nurses coming from Africa, Asia and Russia where the information technologies used in health care may be less advanced. A third explanation may be that in health care units the adjustment of migrant workers is supported by organizing the work so that migrant workers have less responsibility on tasks that may be difficult for them, such as dealing with complex information systems. This interpretation is supported by the fact that native Finns reported more stress due to information systems compared to new arrivals but not when compared to those migrant professionals who have been in Finland longer. This could indicate successful integration processes in health care organization. However, a possible counter effect could be the burden among native professionals (Aalto et al 2014).



## 17.11

**Poster Presentation: Making professional competencies visible in post-experience programs. A Delphi study**

Tuire Palonen<sup>1</sup>, Tiina Anttila<sup>1</sup>, Timo Halttunen<sup>1</sup>, Susanna Mikonen<sup>2</sup>, Petri Nokelainen<sup>3</sup>

<sup>1</sup>*University of Turku, Turku, Finland*, <sup>2</sup>*University of Tampere, Tampere, Finland*, <sup>3</sup>*Tampere University of Technology, Tampere, Finland*

**Introduction**

Knowledge and skills developed in the workplace are seldom documented or officially recognized and in some respects validation of informal and non-formal learning is a stranger for educational institutes. There are many reasons for a growing interest by governments, professional bodies, employers and workers in lifelong and informal learning and how to recognize it for further use (Billett, 2010). From educational institutes' point of view, new evaluation tools and practices are needed for the assessment of a person's knowledge and skills, so that knowledge and skills, often achieved and developed in the workplace, can be documented and evaluated through a more or less structured process. In working-life organizations, knowledge and skills are often conceptualized and assessed in many different ways although seldom through planned or organized activities, various embedded organizational routines and workplace culture practices. Employees' knowledge and skills are, thus, assessed and evaluated first and foremost in order to be used in the activities inside the organization. Yet, they are not only "home-grown" skills of the organizations (Berglund & Andersson, 2012).

Informal learning is often unarticulated and tacit. Regardless of this, since relatively long period of time non-formal and informal learning has been transformed into more or less formal learning, although the procedures, attitudes, and expectations to do so have been diversified in educational systems. Higher education institutions do not often provide the learners with coherent and valid methods for assessing learning at work. However, for some education models learning at work provides possibilities for entry and progression. These professional development programs or professional qualifications can be described as post-experience programs, though as such the way how post experience programs integrated in the educational systems can vary.

Learning on, at and through work has been a corner stone for the new specialization education programs that started in Finland in 2015. Along them new type of education alongside degree studies and continuing education was created. The idea of the reform was to enhance expertise and promote longer working careers by linking education with working life and to examine practices reflectively using theoretical and conceptual tools. It was based on the needs of working life, as well as on the needs of experts in working life and those aspiring to become experts. The specialization education also builds on R&D competence and specific focus areas in higher education.

The post-experience specialization education in higher education is formulated in close collaboration between the higher education institutions and representatives of the work and business communities. At the moment several programs are about to begin. In addition, there are programs for various professional or expert groups that are based on earlier legislation (such as psychologists, social workers, or nurses). Thus, a new type of higher education sector has been grounded to combine works and higher educational institutes. At the same a need to create new kind of assessment system came up. Our study is focused on expert panel work to

collect background information for evaluation and assessment procedures.

**Method**

Delphi method was employed to collect data for the study. It is a structured communication method, developed as a systematic and interactive panel of experts, where after each survey round, an anonymous summary of the experts' forecasts from the previous round is provided. The selection of the panelists is an important part of Delphi procedure. The method guarantees anonymity of the participants until the completion of the final paper or research report.

Altogether 36 panelists participated in the study: planning officers of specializing courses (6), working-life representatives (11), participants of the programs (5), higher education policy experts (6), and researchers of workplace learning (8).

Interaction was facilitated through an electronic platform, eDelfoi (<https://edelfoi.fi/>). Two facilitators moderated the responses of the panel. Responses of the two-round surveys (10 questions at the first round and 7 questions for the second round) were analyzed. Here we focus on three themes of the panel: 1) expectations for learning at work, 2) possibilities to demonstrate learning and 3) evaluation procedures.

**Findings**

Based on results, the importance of learning at work gets more important due to rapid change, and properties that are too hard to imitate in educational institutes. This conclusion was coherent by experts. As regarding whether professional competences could be demonstrated at workplace without a remarkable contribution of educational institutes, opinions were more mixed. On the other hand this was seen as an inevitable trend but on the other hand demonstration as method was not well trusted. In all, professional competences learned at work were expected to be evaluated by representatives coming both from educational institutes and working life and based on continuous process evaluation.

## 18. SOURCES OF MEANING IN WORK

### 18.01

#### The value of work in a changing labour market: a review and research agenda

Wieteke Conen, Paul De Beer

*Amsterdam Institute for Advanced Labour Studies/ University of Amsterdam, Amsterdam, The Netherlands*

Over the past decades, major changes took place in the labour market in Western societies. Not only the nature of work transformed as a result of – amongst others – technological developments and globalisation, but also the size and structure of the labour market changed markedly under the influence of for instance the sharp increase in women's labour force participation and demographic changes (such as population ageing and immigration). Workers and employers coped with profound changes in the organisation of work (including a trend towards more flexibility and out-sourcing) and there was a shift within families with respect to the balance between work and family lives. Both media and experts have paid particular attention to questions on how various macro-level developments affect the *quantity of jobs*. However, all these transformations also have a severe impact on how individuals experience their work and the 'utility' individuals derive from their jobs (both in pecuniary and non-pecuniary terms).

This article provides an integrative literature review of empirical research on "the value of work" in Western societies since the 1990s, with "value of work" referring to concepts such as 'job satisfaction', 'satisfaction at work', 'quality of working life', as well as the importance of work to one's life. The aim of this review is to break new ground by (a) analysing whether and how the value of work differs between modern Western societies (including the relative importance between paid and unpaid work); (b) analysing whether and how the value of paid work has evolved over time (historical-comparative perspective); (c) establishing an overview of relevant predictors of the value of paid work and (d) summarizing results, identifying gaps in the literature and recommending new directions for future research on the value of work.

In principle, the value of work can be both about the value to an *individual* and to *society*. The value of work at the level of the individual addresses the question to what extent and how work adds to the happiness or well-being of an individual. Societal value refers to the extent to which work adds to the functioning and prosperity of society. In this article we focus on the value of work to an individual and address insights from relevant strands in sociology, economics, social-psychology and philosophy. Most scientific disciplines dealing with the value of work consist of both a positive and negative school.

In terms of methods, the starting point for the literature review is the compilation of published empirical studies that explore and explain the value of work. To create the sample, we started with an electronic database search for relevant studies that were published in the time period between 1990 and 2017. The electronic databases that were used to obtain the relevant literature were: ISI Web of Science, Scopus and Google scholar. Key words used included: 'satisfaction at work', 'job satisfaction', 'pay satisfaction', 'dissatisfaction', 'job quality', 'quality

of working life', 'happiness', 'well-being', 'work values' and 'job values'. We also searched academic journals manually, such as *Work and Occupations*; *Work, Employment and Society*; *Social Science Research*; *Annual Review of Sociology*; *The Sociological Quarterly*; *Social Forces*; *Human Relations*; *British Journal of Industrial Relations*; *Journal of Industrial Relations*; *Journal of Organizational Behavior*; *Human Resource Management*; *International Journal of Human Resource Management*; *Labour Economics*; *Journal of Behavioral and Experimental Economics*; *Journal of socio-economics*; *Small business economics*. Our search furthermore includes examination of references in empirical studies to other studies that may report on the value of work. The search will be completed in March 2017 and the review results into a research agenda on the value of work.

### 18.02

#### To work is to be? A sociological exploration of meaning in activities of work following the spiritualisation of the workplace.

Jennifer Robinson

*Lancaster University, Lancaster, Lancashire, UK*

This paper seeks to explore how workers make meaning out of their activities of work through application of organisational theory and sociological analysis of religion. Illustrated through the 'problem of work' as considered by Berger (1964), this paper considers developments evident in management styles since the 1960s that emphasise the 'production of subjects' (du Gay, 1996) through 'management of the [previously considered] intractable, irrational, intuitive and informal' (Peters & Waterman, 1982: 11). Captured under the rubric 'soft capitalism', defined to place emphasis on the 'culture, knowledge and creativity' (Ray & Sayer, 1999: 17) of the employee, soft capitalism represents a shift of management focus in the past fifty years from the activity and execution of work in relation to the economic advantage it represents to an activity symbolic of the subject. This is supported through the utilisation and encouragement of organisational culture, creativity, and self-expression as a means of 'enhanc[ing] personal commitment and motivation' (Heelas & Woodhead in Woodhead et al., 2001: 55), in order to facilitate and encourage the 'identif[ication] and unblocking [of] 'barriers' to success; seeking identity; working as a team or as a company; exercising responsibility or initiative' (Heelas, 2002: 81).

Seen 'from an organisational perspective [as] profitable to break with alienating bureaucratic structures and incorporate issues like self-understanding, identity and self-spirituality in corporate culture' (Aupers & Houtman, 2007: 217), the inclusion of spiritual and religious practices, techniques and practices within management styles captured under soft capitalism is evident in the emerging field of workplace spirituality, whereby contemporary employees are expected to encounter and construct meaning relevant to both their work and wider lives' (Ashmos & Duchon, 2000; Konz & Ryan, 1999). Established, encouraged and reinforced by management, consultants, and advisors (Heelas, 1996; Taylor, 1992), employees are encouraged to identify with 'the escutcheons of their institutional roles, experienced now not as self-estranging tyrannies but as freely chosen vehicles of self-realisation' (Berger et al., 1973: 89). That is, the incorporation and adoption of religious and spiritual practices, techniques and rhetoric are seen to foster, support and encourage the belief amongst employees that 'to work is to be', in which 'identity rather than labour becomes the site of indeterminacy' (Thompson & Smith, 2009: 921).

Work is encouraged by organisation to be meaningful to employees then through the promise of opportunities to explore, develop and cultivate their inward connection toward their activity of work, that 'impl[ies] a [naturally] deep relationship with the core of what it means to be a human being' (Tourish & Tourish, 2010: 210).

For many organisational scholars, contemporary management techniques and practices are considered morally benign (Willmott, 1993: 528), in that they 'mop up the sins of capitalism, and heal [the] fissures between work and life through a holistic approach to work' (Heelas & Woodhead, 2001: 58). As Case & Gosling comment however, 'the problems facing corporations with respect to workplace spirituality and solutions to them are circumscribed by extant thinking in relation to organisation science...[demonstrating that] what remains unquestioned...is the assumption that it is right and proper for organisations to seek to harness employee spirituality [that marks] a serious lack of reflexivity in the literature' (2010: 264). This is supported by sociologists of religion who consider soft capitalism indicative of an appropriation of contemporary religiosity and spirituality for organisational success defined through measurement of being through the performance of the activity of work (Heelas & Woodhead, 2001; Heelas 2008; Tourish & Tourish, 2010). What has emerged are 'distinctive and potent new philosoph[ies] and practice of management control' (Willmott, 1993: 524), that since the 1960s have played with conceptualisations of being and work in order to make work appeal to employees as the activity through which discovery and comprehension of one's inner potential is attainable. Organisations thus extend and legitimise managerial control of employees by 'managing [not just] what they think and feel, and...how they behave' (Willmott, 1993: 516), but what they believe, how they construct reality, and by consequence how they conceive autonomy, freedom and meaning of their self.

Drawing on in-depth interviews collected for doctoral research that seeks to develop understanding concerning the significance of subjective belief, values and desires expressed in the contemporary UK context in relation to meaning and purpose affirmed and confirmed through the character and nature of various activities of work, this paper illustrates how workers make meaning out of their activities of work in relation to their personal beliefs, values and desires. Concentrating discussion on contemporary Western organisations that seek to bring life back to work so as to encourage work to seem meaningful to being, this paper will explore how such practices, technique and rhetoric bring life to work according to organisational needs, aims and objectives that are not only counterproductive and paradoxical to employees, but potentially harmful to the human condition (Arendt, 1958).

### 18.03

#### **Importance of Meaning at Work: How Desire for Meaningful Work varies among employees and how it can affect work performance, work engagement and job satisfaction**

Jaakko Sahimaa<sup>1,2</sup>, Frank Martela<sup>1</sup>

<sup>1</sup>University of Helsinki, Helsinki, Finland, <sup>2</sup>Lappeenranta University of Technology, Lappeenranta, Finland

Meaningfulness and meaningful work are fundamental basic needs for human kind. Meaningful work has already connected to many important individual and organizational outcomes such as low absenteeism, high job satisfaction, better work engagement, more efficient individual performance, good career development and experience of individual fulfillment. It seems

indisputable that advancing meaningfulness of work turns out to be beneficial both for individuals and organizations.

However desire for meaningfulness at work hasn't been discussed so widely. It is very likely that desire for meaningfulness at work varies strongly among employees and thus affects also answers employees give concerning meaningful work and different individual and organizational outcomes.

This article has two main goals: to find connections between desire for meaningfulness and the actual measured levels of meaningfulness at work and to find connections between meaningful work and high value work, which is described as "a meaningful work at organizational level".

The aim is to do correlative research with some structure equation models too. Quantitative data for this research is collected during spring 2017 with a Finnish occupational health care firm and the analysis will be ready in July 2017. Key findings and conclusions are ready and available also in July 2017

## 19. SUSTAINABILITY AT WORK

### 19.01

#### **The Changing Fabric of Work Organization Practices in the Era of Digitalization**

Jan Löwstedt, Johan Klaassen

*Stockholm Business School, Stockholm, Sweden*

Digitalization challenge the constitution of work and work organization. New techniques have shown to be helpful reducing physical strain and injuries, but they also bring other ways of performing work that may have other consequences for the possibility of sustainable work systems. (Docherty et.al. 2002). Along with digitalization the prerequisites for organizing work has been affected by new management ideals, models and governance practices. Paradoxically work related health problems are accentuated (Arbetsmiljöverket 2016) although there is established knowledge from different disciplines about factors that constitute healthy work (Karasek&Theorell 1990, Siegrist 1996), the requirements for sustainable work organizations (Hatchuel 2002) and models for organizational design (Hackman&Oldham 1976, Grant 2007). Several explanations have been suggested for this mismatch between what we know about what is the requirements for a more sustainable work life and what is practiced in the daily life of organizations.

One such explanation is that work organization theory, characterized by conceptual inversion, environmentalism and petrified images of work (Barley&Kunda, 2001) has become obsolete due to digitalization, globalization etc. This call for a revival of detailed research on work and work organization has been answer by the organization research community by a focusing new organizational forms and new forms of work; temporary workers (Garsten 2007), experts (Barley&Kunda 2007; Furusten & Werr, 2012/2017), consultants (Clark 2013), professional



service firms (Empson et.al 2015), distributed work and transferred practices (Värlander, et. al 2016), team-work (Wagerman 2012) contracting and employability (Garsten, Lindvert & Thedvall 2011) and psychological aspects of boundaryless work (Alvin et. al 2006).

However, while information technology today is an integral aspect of organized activity, it has often been ignored or misunderstood in organization research by being more or less taken for granted or separated from the dynamic ways in which the social and the material is entangled in everyday work and life (Orlikowski, 2010). Information technology has become the infrastructure of organizations and the way work is organized (Leonardi 2011). Hence, there is a call for a new understanding of work and digitalization in new forms of organizing.

How is the organization of work and the constitution of work played out in the era of digitalization? In what ways has work tasks developed in the changing fabric of organization (Zammuto et al 2007)? There are indications that work tasks are changed and added on to existing work load because digital media makes it possible (Derks & Bakker 2013). Anyone with an email address connected to an administrative task at a University recognize that.

The aim of the research program is to explore the role of digitalization in contemporary society for the forming of work organization, and further what this mean for possibilities for transforming work organization to more sustainable modes. We will explore this by studying contrasting cases, where digitalization can be expected to be a natural and gradual updating of work organization, and where it can be expected to challenge how work is organized. Instead of studying new types of organizations in emerging industries, which is the most typical type of study in the literature on work organization, initial focus will here be given to the work organization of semi-professional groups like engineers, social workers, teachers etc. employed in traditional bureaucratic type of organizations. Based in Barley&Kunda's (2001) critique, the work organizations of these occupational groups and organizations is predominantly understood from petrified bureaucratic frame of references and therefor in particular need for theoretical development.

To capture the role of digitalization and changes in work organization, this research program has a research design combining ethnographic work studies and longitudinal case studies of the digitalization of and in organizations. The suggested interdisciplinary research design makes an in-depths understanding of digitally infused work organizations possible to be related to the interplay between technology and other transforming factors that affords or constrains the development of sustainable work organizations in Swedish work life of today.

The empirical research in the program is in its early stages. However, preliminary results will be presented from the study of a school introducing ICT tools for teachers to use as a means of enhancing collegial learning. The school organization in the study is an example of an early adoption of Google's *G Suite for Education* which is a bundle of free tools including; e-mail services, document sharing and real-time co-working as well as a digital classroom. The use of the ICT tool is changing the means of the work organization for the teachers and is expected to alter the prerequisites for collegial learning. Findings that will be related to earlier findings of digitalization of teachers' work showing the importance of organizational learning for change (Larsson, Löwstedt&Shani 2001). Our presentation will also report from recently presented research on social media use in contemporary work (Siegert 2016) becoming an integral player in the changing fabric of emerging work organizations.

## 19.02

### International frameworks on measuring decent work and quality of employment in support of sustainable development: Key differences and complementarities

Monica Castillo

*International Labour Office, Geneva, Switzerland*

Measuring the quality dimension of work and employment is today a key goal to support monitoring the well-being and progress of our societies. This reflects an awareness of the limitations of traditional labour market indicators to monitor a more comprehensive notion of progress in the world of work as well as a commitment to monitor the impact of globalization on work quality dimensions and the well-being of workers. Thus, for effective policy in the world of work it is no longer considered sufficient to measure the size of the labour force or even workers' wages and working time. Policymakers in countries at all levels of development, including developing countries, increasingly require statistical information regarding various aspects of the quality of employment and more broadly, decent work, in order to better understand the well-being of workers and their households.

To meet the increasing demand for such information, in recent years different international measurement frameworks have been established. In particular, the Decent Work Measurement Framework and the Framework on Measuring Quality of Employment have been developed, each with a unique set of dimensions and indicators. The two frameworks share many common elements but are also characterized by some important differences as regards worker scope, framework dimensions and types of indicators. The 2015 launch of the Sustainable Development Goal agenda and set of work-quality indicators offers a fresh opportunity to support countries that wish to measure and monitor decent work and quality of employment.

This research seeks to present the common features and key differences of the two frameworks, highlighting also the important ways in which the frameworks complement each other. The research also reflects on how the implementation of the Nineteenth International Conference of Labour Statisticians (ICLS) Resolution concerning statistics of work, employment and labour underutilization (adopted in October 2013) will affect the scope of the two frameworks and related measurement challenges. The study will provide general recommendations for data users on how to make the best use of the frameworks.

The research will compare the conceptual structures of the frameworks and types of indicators, and will present statistical data for a few selected indicators to highlight key issues including challenges for producing and interpreting the indicators. The statistical data used in the analysis derive from official sources, in particular household surveys and labour force surveys. The research will present key differences and similarities in the two frameworks and indicators, particularly regarding differences in concepts (decent work vs. quality of employment), framework principles and characteristics, sources of information, process and institutional support, types of indicators, measurement scope, dimensions (i.e. topic areas), and existence of a policy agenda behind the framework.

A key feature of both frameworks is that statistical concepts and classifications used are those endorsed in international statistical standards, particularly those adopted by the ICLS. One of the key results is that important complementarities exist between the two frameworks in terms of worker scope, topics and types of indicators, so that data producers and data users should be

encouraged to learn about both frameworks and draw from both as needed for specific research or policy needs in a country.

A key conclusion going forward is that additional research needs to be carried out on certain experimental or future types of indicators and also to develop new indicators to monitor decent work in unpaid forms of work such as work as unpaid apprentices, unpaid volunteers, own-use production of goods, etc. Moreover, strategic efforts and cooperation need to be carried out to ensure that capacity building efforts and technical assistance activities to support decent work or quality of employment-related of indicators in the SDG monitoring framework offer the possibility of sharing more broadly information on the Decent Work Measurement Framework and the Framework on Measuring Quality of Employment.

### 19.03

#### **Municipalities as Producers of Social Responsibility in Finland – A Case-Study about the HR-Responsibility and it's Relationship with HRM in three Municipal Organizations**

Paula Alatalo

*University of Lapland, Rovaniemi, Finland*

Ethics is becoming an integrative area of interest for both researchers and practitioners of human resource management (HRM) in Finland. Considering currently happening and historically significant regional and social- and welfare reform within the public sector, ethics is and will be even more emphasized in the future. This doctoral dissertation is focusing on the relationship between ethics and HRM that has been only a little empirically researched within the Finnish municipal context or at least the existing studies are mainly based on the traditional HRM and views of ethics. Not later than now, it is time to open up the understanding of ethics and the role of HRM also considering municipal organizations. The main focus has been settled to HR-responsibility. This study bases on the idea of social responsibility and HR-responsibility as a prerequisite for financial sustainability, which seems to be still exceptional approach considering applied ethical views within organizational studies.

The purpose of the study is to increase the understanding of HR-responsibility through opening up comprehensively the meanings that are given to it regarding the changing contexts of municipal organizations. HR-responsibility as a research phenomenon has been approached exceptionally from the ontological point of view. Such questions as “What is HR-responsibility?” and “Where does HR-responsibility begin?” have been central and form the origin in approaching the first goal of the study that is to describe, how is the HR-responsibility experienced to come true in relation to the ethical goals that have been pursued by the municipalities. The second goal is to open up, what sort of subjectivity levels (organizational, cultural, individual) are highlighted to be important. Finally, as a third goal of the study, it is described what things are experienced to be important from the fulfilment of HR-responsibility point of view, and how those things are experienced to have increased or decreased the HR-responsibility.

This study contributes theoretically on the research literature of strategic human resource management (STHRM) and organizational ethics. The finance-based views such as CSR (corporate social responsibility) are seen unsuitable to form the basic ground for the management of public organizations. Considering STHRM research literature, especially the critical view and

ethical views are reflected instead of the traditional view, which isn't applied because of it's strongly mechanistic, rational and resource-based character. Using structure-based traditional view often leads to the idea of defining only organizational level to be central or for example only HR-professionals to be responsible for the ethics. That leads very unilateral view to HR-responsibility and subjectivity levels that are experienced to be manifested. However, through critical view for HRM, both the origin of ethics and also subjectivity linked to it can be seen more multidimensional way, and the HR-responsibility is not necessarily straight defined to belong only to someone or to some level of an organization.

The empirical material is collected from three municipal organizations that are located in different part of Finland. The amount of employees varies between them from 3000 to 14 000. The contexts differ based on the changes that have happened in their operational environments and the operations (effects on human resources, e.g. lay-offs) have been conducted during the twentieth century. However, the study is not focusing on the concrete moments of operations and the experiences about the fulfilment of HR-responsibility in those moments, but including the organizations with different kind of backgrounds, it is possible to take into account of diversity of contexts and the realities that may affect on informants' lived experiences about HR-responsibility.

During the research process it has been conducted 27 semi-structured interviews which contents have been analysed. Informants consist of municipal mayors, managers of human resources, managers of social and welfare, politicians and trade union stewards. Totally nine office holders, nine politicians and nine trade union stewards have been interviewed. In addition, the document analysis has also been conducted regarding municipal strategies (including city strategies and HR-strategies), budget documents, financial statements and audit reports. All the documents have been analysed considering the parts linked to the management of human resources.

This doctoral dissertation gives a comprehensive view to societally significant phenomenon of HR-responsibility and increases the understanding of it regarding municipal organizations that are in the middle of continual societal change. The fundamental origin of municipal organizations have been taken into account, which gives possibilities to make non-traditional conclusions and suggestions about how HR-responsibility should be approached and how it could be increased. The traditional resource-based and corporate-focused views on HRM have been questioned which can be seen in treating human resources as experiencing subjects instead of rationally guided and productivity targeting objects.

### 19.04

#### **A multiple case study of sustainable HRM and its antecedents**

Maria Järleström<sup>1</sup>, Essi Saru<sup>2</sup>, Aino Pekkarinen<sup>1</sup>, Sinikka Vanhala<sup>3</sup>

<sup>1</sup>University of Vaasa, Vaasa, Finland, <sup>2</sup>University of Turku, Turku, Finland, <sup>3</sup>Aalto University, Helsinki, Finland

In recent years sustainability has become one of the mandates of business organizations and the concept is used in multiple different ways and meanings (Carroll 2015). Based on a general discussion of sustainability in organizations (e.g., Hörisch et al., 2014) the concepts of business ethics, green HRM, social responsibility, responsible leadership and the ethical

aspects of human resource management (HRM) have received increasing attention among scholars (Cooke and He, 2010; de Gama et al., 2012; Gond et al., 2011; Greenwood, 2013; Jackson and Seo, 2010; Morgeson et al., 2013; Renwick et al., 2008, 2013, 2016; Voegtlin et al., 2012; Waldman and Siegel, 2008). CSR, responsible leadership, ethics in HRM and sustainable HRM all build in different ways to organizations' social responsibility. Social responsibility means taking responsibility over people in organizations in addition to their economic and environmental responsibility. Our interest in this paper relies on sustainable HRM (Clarke, 2011; Ehnert, 2009a; Ehnert et al., 2014) which aims to connect corporate sustainability to HRM policies and practices and develop sustainable business organizations with sustainable HRM systems. In theoretical discussions sustainable HRM has been related to economic, social and environmental outcomes (Ehnert, 2009; Kramar, 2014). The following definition for sustainable HRM was recently presented by Ehnert et al. (2016, p. 3; Ehnert, 2009a):

...the adaption of HRM strategies and practices that enables the achievement of financial, social and ecological goals, with an impact inside and outside of the organization and over a long-term time horizon while controlling for unintended side effects and negative feedback.

As this definition highlights, the role of HRM in sustainability is wide covering both strategic and operational aspects in the long-term perspective. Based on data collected from Finnish top managers Järleström et al. (2016) identified four dimensions of sustainable HRM – justice and equality, transparent HR practices, profitability, and employee well-being – and corresponding broader responsibility areas –legal and ethical, managerial, economic, and social responsibility. Based on their findings, it seems that sustainable HRM brings people and respect for humanity back to the human resource management (see also Cleveland et al., 2015; Gond et al., 2011; Voegtlin et al., 2012) by linking the economic aspects of organizational performance to the softer employee centered outcomes of HRM. The role of HRM is to be the advocates of employees and consider them as stakeholders (Cleveland et al. 2015; Marchington 2015).

Besides the HRM system as a whole, a variety of HRM practices are related to sustainable HRM discussion, such as collaborative HR development, employee participation, open communication, work roles, and performance evaluation focused on building employee strengths and facilitating performance (Browning and Delahaye, 2011; Donnelly and Proctor-Thomson, 2011; Ehnert, 2009a; Guerci and Pedrini, 2014; Wells, 2011). The variety of HRM practices identified in these previous studies associated with sustainability reveals the context-specific nature of sustainability. In spite of an increase in sustainable HRM research in recent years, there is lack of empirical studies that focus on the antecedents of sustainable HRM. Therefore, our current study addresses this research gap.

In this qualitative multiple case study, our goal is to increase understanding of sustainable HRM and the elements of the organizational culture and climate that enable sustainable HRM practices and policies to emerge. Our preliminary research questions are:

1. What is sustainable HRM, and why is it important?
2. How do sustainable HRM practices and policies form in large organizations?

The study was conducted among three large Finnish companies from oil refinery, retail and meat production industries. The sample was chosen to include companies that have developed sustainability in their companies for several years. Data were collected through semi-structured theme interviews. Altogether 11 interviews were taken among top and middle management since they were expected to have a best knowledge of sustainable issues in their companies. Our results will shed light on the aspects that the organizations relate to sustainability in HRM as well as broaden our understanding of the practices that enable sustainable HRM policies

and practices to form in organizations. Our study contributes to sustainable HRM literature by focusing on its antecedents and elements that build sustainable HRM practices and policies rather than specific outcomes. In addition, our findings show the importance of organizational and national context in a discussion of sustainable HRM.

## 20. TOWARDS INTERDISCIPLINARY THEORISING OF WORK IN THE PLATFORM ECONOMY

### 20.02

#### The Digital Workplace: Entwining Geography and Organisation Studies in theorisations of the platform economy

Adam Badger

*Royal Holloway, University of London, London, UK*

This paper addresses the fertile ground between human geography and organisation studies in light of contemporary advances in the digital workplace. The platform economy represents a mode of work that is distinct from more traditional notions of capitalist labour which is in turn altering working life for many. Through the integration of digital sociomaterialities and labour geographies this paper will look to unpack how the simultaneously local, global and individual manifestations of work play out through the labouring bodies of the platform economy.

Thematically, this will be used to investigate questions of surveillance, display and (de)territorialisation in conjunction with empirical evidence from platform work undertaken by the researcher. Observation is still a key tool of surveillance, however units of data have become its primary currency with customers, employers, and employees generating vast quantities to be processed algorithmically. As a direct result, practices of display to both human and non-human audiences take on heightened importance if employees are to 'play' the platform successfully and work regularly for financial reward. Finally, with the platform acting as an ecosystem accessible from an array of devices across the globe, questions of (de)territorialisation become pertinent in ways not associated to traditional work. With the workplace of the platform economy being - in many cases - the platform itself, key questions of *where* this work is taking place as highly territorialised on the platform, yet deterritorialised in physical space must be answered.

Findings from the early stages ethnographic work on Amazon's *Mechanical Turk* platform will be used as a lens through which to view these questions and address the importance of taking interdisciplinary approaches to multi-faceted online labour platforms. Amazon Mechanical Turk describes itself as "a market place for work" giving "businesses and developers access to an on-demand, scalable workforce" that is available "24 x 7" ([www.mturk.com](http://www.mturk.com), 2017). This means that 'requesters' are able to post 'jobs' that workers complete in exchange for a reward without any direct lasting obligations between parties – Essentially being hired and fired on a job-by-job basis. Power imbalances are thus created as workers are surveilled to develop indexes of their reliability, whilst payment remains at the requester's discretion. Empirical evidence and analysis will be developed in two critical ways. Firstly, to shed light on how the platform operates



for workers who are situated at the forefront of rapidly changing economies and societies of work. Secondly, focus will shift onto how this manifests in the work practice of employees on the platform.

Although a small amount of academic attention has been focused on the work that takes place on this platform, there has been nothing that explicitly brings together geographical and organisational approaches with ethnographic field experience to theorise the day-to-day labour practice of a Mechanical Turk worker. Despite not often being in discussion with one another, both of these disciplines have a shared philosophy of understanding the intricacies of human practice in a range of settings. This paper will not only fill the gap, but also suggest the importance of a continued relationship between the disciplines for the theorisation of digital work practices and places moving into the future.

## 20.03

### Crisis and Contradiction in the 'Work Society'

Steven Vallas

*Northeastern University, Boston, USA*

The decline of the “standard” work arrangement has attracted much scholarly attention in recent years. Much of the attention has focused on the broad structural processes that have exposed workers to precarious forms of employment – a structural bent that, while important, has tended to obscure how cultural and ideological influences have affected responses to the rise of precarious work. In this paper I draw on the work of Ulrich Beck to argue that a crisis of the ‘work society’ has emerged in recent years, the contours of which cannot be understood unless we acknowledge the cultural emphasis that capitalism has historically placed on paid employment as a condition of inclusion within civil society. The erosion of the standard work arrangement, unfolding in this cultural context, has created a broad disarticulation between our society’s economic structures and its cultural meanings, giving rise to institutional stress and contradiction that is evident in the polity today. Drawing on Hirschman’s classic work, I identify three types of response to the crisis of work: Loyalty to market norms (as exhibited in the rise of the “entrepreneurial self”); exit from paid employment (as in the growing ranks of those who have dropped out of the labor force entirely); and voice (most apparent in support for authoritarian political movements). Each of these types exhibits important variations, and I speculate on the sources of variation internal to each. The paper closes by suggesting future lines of research that might identify more viable responses to the crisis of the work society.

## 20.04

### Work – a blurring or tenaciously agile concept?

Seppo Poutanen

*University of Turku, Turku, Finland*

“My pleasure is other people’s leisure” (Spud in the film “Trainspotting” from 1996)

The quote above comes from a scene where Spud, a hopeless substance abuser, is asked about his willingness to take a job at some holiday resort by authorities who decide his entitlement to welfare benefits. Spud needs the benefits but he does not want any job, and so his tricky task is both to convince his audience of his tremendous work motivation and to make sure that the authorities cannot see it reasonable to let him loose on innocent holidaymakers. With a little help from amphetamine, Spud succeeds marvellously.

Spud’s aphoristic key statement can awake some familiar “memes” about work (“this is such fun it’s a sin to get paid for it!” etc.), but it may also contain seeds of new insights into what “work” is becoming to mean in certain familiar contexts of our 21st century. The digitalised omnipresence of social media, for example, has already led to a situation where numerous professionals (e.g. academics, physicians) make a significant part of their work happen in such media. For academics especially, the strong duty imposed on them to make “impact” on society has importantly translated into their continuous and often relentlessly positive presence/activity in linkedin, twitter etc. And when a researcher seamlessly connects manifestly research-related tweets with tweets about nice pursuits at his summer cottage, for example, relationships between producers and recipients of pleasure, leisure and work have apparently become much more complicated than in the unrealised case of amphetamine-fuelled Spud entertaining holidayers for money.

In my presentation I take up a couple of relatively concrete and detailed examples as basis for future-oriented reflections on the highlighted concepts, as well as the potential relevance of the concept of (human) identity in the related and ever-changing phenomena, among other things.

## 21. TRANSFORMATION OF PUBLIC SECTOR WORK

### 21.01

#### The digitalized home-worker - Public sector backstage service employees’ profiles and anticipated futures in digitalized full-time work at home

Mervi Hasu<sup>1</sup>, Sari Käpykangas<sup>2</sup>, Eveliina Saari<sup>3</sup>

<sup>1</sup>*Finnish Institute of Occupational Health, Helsinki, Finland*, <sup>2</sup>*Finnish Institute of Occupational Health, Helsinki, Finland*, <sup>3</sup>*Finnish Institute of Occupational Health, Helsinki, Finland*

#### Introduction

The digital era is radically changing work contexts in the services sector. The digital transition is changing not only the client experience; it is also profoundly influencing how frontline and backstage *service work* is organized (Ostrom and al. 2015). In Finland, the government has adopted digitalization strategies in social and health care and local government reforms: service processes and work are being optimized with the help of digital tools. (Ministry of Social Affairs and Health, 2016).

Digitalization has enabled the organization of administrative work into centralized service centres,

and furthered the delegation of simple tasks to automated systems and digital platforms, often replacing human work (Armtz and al., 2016). The effects of this development vary in different occupations and employee groups; more so, it seems, at task level than at entire job level (ibid.). The effects of digitalization at work are also gendered (Pearson and Elson, 2015). The recently intensified digitalization of administrative work in services has reduced office work such as that of clerks, receptionists, assistants, etc., which is mostly done by women.

Distributed flexible working arrangements, such as mobile work/telework/telecommuting in changing locations or at home – a well-known development of digitalization – has grown rapidly in Finland, especially among upper white-collar employees with expert and managerial positions (Pyöriä, 2011). Telework among lower-level employees has been less frequent (ibid.). Full-time telework at home among salaried lower-level, low-wage employees has been particularly rare. Little is known about how such work is experienced from the everyday-life perspective, and how full-time work at home may be combined with other economic activities such as entrepreneurship, or with formal or informal care.

### Objectives

The aim of the paper is to outline and understand the *situations and emerging trajectories* of lower-level public sector employees who are affected, or will increasingly be affected, by digital transformation. Our interest is to investigate the everyday motives and ways of coupling or de-coupling the different parts of life in full-time work at home – formal and informal work, paid and unpaid work, salaried and entrepreneurial work, etc. This explorative paper is inspired by the research on everyday life in home economics (Bech-Jørgensen, 1991; Korvela, 2014) and feminist economic theory (Pearson and Elson, 2015).

### Methods

Our case context is the largest public specialized medical care organization in Finland; more specifically, one of its sub-units, which is responsible for various internal support services, such as the word processing of medical records. Recently, after the manual dictation process, which used several hundreds of typists located in hospital clinics (decentralized process), was replaced by a more digitalized and integrated process (a centralized ‘typing factory’, which also enabled working full-time from home), the number of typists has considerably decreased. The work process is now digitalized and highly standardized, operates around the clock, and is organized into shifts.

A total of 140 of the unit’s 300 typists have “escaped from the typing factory” and now work full-time at home. Most of these are women. All employees have a permanent employment contract with the hospital. However, a fully automated work process, which will eventually end typists’ work, is inevitably on its way.

Data were gathered in 2016. Seven full-time home-worker typists aged between 30 and 60 were interviewed in their homes. The ethnographic, thematic interviews lasted approximately 1.5 hours and focused on the everyday aspects of typists’ situation as ‘digitalized home-workers’.

### Results

Four different *profiles of digitalized home-workers* emerged: (1) the Adjustor of a transient phase with informal care responsibilities, (2) the Lone concentrator, safeguarded by routine, (3) the Independent hobby enthusiast, needing as flexible a job as possible, and (4) the Wage earner

–a super-performer entrepreneur, investing everything into holidays.

‘Escaping from the typing factory’ to full-time home work had resolved some important life issues for the typists. It had enabled them to pursue an important need or motive outside salaried work, and provided resources and energy to spend more time with family and friends and/or take care of elderly parents. Moreover, the workers felt that their overall wellbeing had improved, and that their work performance and quality were good or even better than before. Most workers did not feel socially excluded.

However, our analysis indicated that all the profiles faced *different risks and opportunities* as regards the next phase of digitalization in their work. If their current work ended, the individual workers would be in very different situations, and equipped very differently to build their careers in the transitional labour market.

### Conclusion

Even though digitalization provides new opportunities for low-wage public sector employees to work full-time at home, therefore helping them better adjust their work to their life situation, working at home may also potentially be a risk for some of them. Digitalized working at home, together with heavy informal care responsibilities, may create a *bubble* that prevents workers from observing the weak signals of change at work and preparing for new opportunities with co-workers and labour unions.

Steady employment in the same task throughout one’s career is no longer possible in the public sector. Currently, at the edge of full automation, single employers do not typically invest in the future competences and trajectories of their workers ‘in advance’. Employment trajectories need to be discovered individually, and unfortunately, not all employees can be winners in this game.

## 21.02

### Organizing (out) a gender perspective – The everyday challenges of developing new logics in public authorities in neoliberal times.

Gunilla Olofsdotter, Malin Bolin, Angelika Sjöstedt Landen

*Mid Sweden University, Sundsvall, Sweden*

The standard for what should be considered a good work environment needs to be analyzed and discussed as part of wider social contexts (de los Reyes, Gonzales & Thörnqvist, 2015). The changes that characterize today’s work is often described in terms of increased flexibility, efficiency and globalization, which also creates new forms of exploitation of the workforce across intersections of gender, ethnicity and class. In turn, the management and organization of work environment policy and its institutionalization and implementation also need to be attentive to such changes. This paper examines the organizational conditions for developing methods for investigating work environments with a gender perspective. We have examined what officials at the Swedish Work Environment Agency (SWEA) perceived as organizational barriers and opportunities for developing inspection activities with a gender perspective. We were also interested in how the initiative of a gender perspective in inspection activities became weaved into other organizational structures and changes at SWEA. How did organizational concepts such as Lean and NPM affect opportunities to develop methodologies with a gender perspective

in inspection activities?

The paper builds on qualitative data collected in 2016 during three full days of workshops with inspection staff and staff working with work environment regulations as well as department managers at headquarters and two branch offices. The results shows the need for an organization of inspection activities that takes care of the knowledge from other projects and longstanding work with a gender perspective. There seemed to be a continuous organizational forgetting of gender knowledge. This was linked to a number of uncertainties concerning the basic functions of the organization's structure, goals, responsibilities, job sharing, communication and control, as well as differences about how the key concepts will be defined as; ability, quality and efficiency. This is a discrepancy that can be understood as the difference between a traditional bureaucratic authority and a more flexible organization, where elements of both co-exist in a non-supportive manner. It also emerged a conflict in business performance between bureaucratic detail /rule management and professional execution of inspections based on staff competence and ability, which is expressed as a lack of trust in the organization. This hindered learning and critique of gender patterns in its own operations.

The SWEA was part of overarching societal logics that business performance increasingly tend to marginalize social considerations in public authorities and other publicly funded organizations, which among other things has the effect that a gender perspective aiming for equality and justice needs to be justified with arguments that are in line with the logic prevailing for the monetary cost (Wittbom 2009). This put the inspectors in difficult situations, both ethically and emotionally. Meanwhile, we can also see that the "professional judgment" can never be considered "neutral" but themselves impregnated by the ideas of such gender.

## 21.03

### What is public about archaeological information work?

Isto Huvila

*Uppsala University, Uppsala, Sweden*

In spite of its seeming ephemerality, the development-led branch of archaeology that in the most of the countries in the developed world preceeds any major land development projects, is a significant enterprise with wide societal and economic implications to the society from infrastructural development to tourism, education and cultural industries. The sheer magnitude of the enterprise to preserve our shared cultural record and to increase our knowledge about the human past is far from being marginal. In this context there is a considerable stake how this project is managed and what are the outcomes of archaeological information work i.e. the work of producing new archaeological knowledge. The shift towards new models of managing and deploying development-led archaeology have changed archaeological field research, information production and heritage management throughout the world in an accelerating pace during the last few decades. The organisation of development-led archaeology differs from one country to another, from public driven (e.g. in Norway and Denmark) to hybrid and semi-regulated (e.g. France, Sweden, Finland), and primarily market-based (e.g. the UK, Ireland) approaches. Simultaneously, the rapid development of digital infrastructures and tools for archaeological work have changed radically the premises and realities of archaeological work from field practices to museums, archaeological heritage management, public archaeology and

scholarly research.

The aim of this paper is to investigate the contemporary transformation of public work in the changing socio-technical-regulatory environment and the implications of these changes to the public-ness of the work, its informational outcomes and their perceived quality. Development-led archaeology provides an illustrative showcase of the repercussions of social, technical and regulatory changes in the framework of work to its results and the premises of how the public interest (i.e. stake) in a particular branch of work and the information and knowledge it produces are renegotiated in the process. The work builds on the findings of a four-year research project on archaeological information work in the digital society in Sweden. Using international comparisons, the analysis shows how different models of organising and regulating archaeological work and its quality and different interpretations of technologies and their meanings have implications to *how* archaeological information work and information *are* public, and how the idea of public interest in archaeological information is enacted in the different models of organising the development-led archaeology. Finally, using archaeology as an example, the paper discusses the wider implications of the similar transformations of public information work.

## 21.04

### Relational agency in the development of public service networks

Laura Seppänen<sup>1</sup>, Hanna Toiviainen<sup>2</sup>

*<sup>1</sup>Finnish Institute of Occupational Health, Helsinki, Finland, <sup>2</sup>University of Tampere, Tampere, Finland*

### Introduction

Networking and inter-organizational collaboration are growing trends in working life (Boltanski & Chiapello, 2005; Head 2008) with which organizations and institutions attempt to manage cost-effectiveness, uncertainty, flexibility and dynamism. The public sector is no exception of these trends (Lecy et al., 2014). From the point of employees, network collaboration increases complexity of work and brings new challenges to cross boundaries and to cope with new people and organizational cultures. But networks also have benefits for employees, such as social support and building of new capacities and resources.

Servitization and a global shift to knowledge economies are dramatically altering not only the nature of work, but also theories and methodologies of work design. Grant and Parker (2009) depict two emerging viewpoints on work design: relational and proactive perspectives. Relational perspectives focus on how jobs, roles and tasks are more socially embedded than before, based on increased interdependence and interactions with coworkers and service users. Relational perspective informs us about the quality of work in service networks. Proactive perspectives, in turn, capture the growing importance of employees taking initiative to anticipate and create changes in how work is performed, based on increases in uncertainty and dynamism.

### Objectives

This presentation will focus on the notion of *relational agency* (A. Edwards, 2017) of professionals in public service networks. Relational agency, or relational work, captures the capacity to



recognize, respect and work with the professional motives and thus with what matters in the professional practice of “outside” collaborators when working on shared complex problems. Crucially it involves the joint interpretation of the problem as well as the joint response. Relational agency includes both emerging viewpoints on work design, the relational and the proactive perspectives (Grant & Parker, 2009).

The aim of the presentation is to highlight the emergence of, and need for relational agency in public service networks. Seeing relational agency as a site of struggle, development and learning, we pose the questions: how do new tools and means of collaboration shape possibilities for mobilising relational agency on joint problems in service networks? How does relational agency contribute to instrumental genesis and better tools for collaborating on complex problems? Collaboration in a service network, we argue, needs its own tools in order to function well. Our interest is in how professionals, through relational agency, contribute to maintenance, development or renewal of network tools such as concepts, meeting scripts, documents, annual clocks, action cards and virtual systems. Instrumental genesis refers to how people contribute to the development and use of an artefact, to constructing their instruments and how they are used to complete their action (Béguin & Rabardel, 2000). Developed and implemented in the networks, these tools assumedly tell us something essential about the developmental phases and learning potential of the service networks. Emergence and shaping of tools is a window into the study of service network transformations.

## Methods

Based on our recent empirical research in service networks, we qualitatively examine data from discussions of network meetings where professionals from multiple organizations discuss about their shared clients, and evaluate and design their collaboration in the light of provided services. The service networks addressed cover social welfare (services for divorce families), criminal actions (supervised probationary freedom) and public transportation (rail traffic control) where also third and private sectors are often involved.

## Results and conclusion

We have found that emergence and use of some less collaborative tools describe efforts to create and strengthen relational agency and work, whereas creation of more advanced tools for collaboration clearly benefits from the relational resources accumulated in the service networks. Perhaps surprisingly, codified or even institutionalized network scripts (that is, common guidelines for action) may support relational work. Strong sectorial professional concepts, in turn, may restrain cross-functional relational agency to evolve. Moreover, professionals' relational agency can prompt renewal of digital systems' interfaces or reveal ruptures or gaps in the service network and give birth to new shared narratives supporting networking. Digital systems and platforms are important in the evolution of network tools. More than technical solutions only, digitalization is functional and operational rethinking of public services with intensive use of process-related information (Pekkarinen et al., 2016). Above all, our investigation of relational agency in service networks highlights the meaning and importance of employees' proactive possibilities in influencing public sector transformations.

## 21.05

### Enacting co-creative frameworks in elderly care work

Tiina Tuominen<sup>1</sup>, Mervi Hasu<sup>2</sup>, Lars Fuglsang<sup>3</sup>

<sup>1</sup>Aalto University, Espoo, Finland, <sup>2</sup>Finnish Institute of Occupational Health, Helsinki, Finland, <sup>3</sup>Roskilde University, Roskilde, Denmark

#### Introduction

Work contexts are radically changing in the public services sector. The digital transition, combined with organizational and managerial reforms, is changing not only the client experience; it is also profoundly influencing how frontline service workers and users build their relationship in practice.

Today, issues like co-creation, co-production, co-design, co-construction and co-innovation are brought to the fore (Osborne et al 2016). A new stream of literature is emerging within the field of public management, paying attention to a possible shift towards what is called new public governance (NPG) (Osborne 2006; 2010). Within NPG there is a search for more relational models of service delivery and development. The literature is inspired by service marketing and management literature (Normann 1991; Grönroos 2007), and the service-dominant logic approach in marketing (Vargo and Lush 2016), which emphasise the role of the user as value co-creator. However, whereas previous literature has generally addressed new frameworks like NPG at the macro-level (Bode 2006; Dahl 2009), we find very little research that focuses the practical implication of this approach on service relationships (Fotaki 2011). We have yet to see studies that investigate how frameworks like NPG are performed and challenged in practice.

#### Objectives

This paper analyses how care work in public services is changing alongside the *introduction of new co-creational frameworks and practices*. These new frameworks intend to transform unidirectional, professional relationship between employees and users into relationships where value is co-created with users/clients and where the intention is to *together* improve their life, loss of agency and other threats to their well-being.

Co-creation is not a given or fixed framework, but always relational, performed and contested depending on context and what actors want to accomplish. Thus, these new frameworks are likely to be adopted differently in different contexts, depending on the interacting actors and their structural and cultural contexts. A variety of different local co-creative frameworks and practices are likely to emerge.

Our question is, what kinds of local frameworks and practices of co-creation emerge in care organisations and why? We study this question by analysing interviews of organisational members in four organisations where co-creative frameworks are introduced in Finland and Denmark.

#### Methods

We use a qualitative multiple-case study approach to study co-creative frameworks in different local contexts. This method provides insights into the studied actors' contexts while allowing drawing some general conclusions (Stake, 2005). We selected 4 organisations in which formal

interventions have been carried out to introduce new co-creative frameworks and practices. We distinguish these frameworks based on a) the breadth and b) the intensity of co-creation. The chosen cases represent different national and institutional context and types of services: Two cases derive from Finnish cities and two cases from Danish cities. The cases include 24-hour care in elderly care homes, day club services, and services for the elderly citizens within their residential area. Our primary data comprises of 6-10 interviews of care workers in each case. In addition, we use observations and interviews with the elderly people to better understand the context and the nature of relationships in each case.

Theoretically, the analysis is inspired by relational theories, which suggest that the relationship between the worker and person cared for should not be viewed as unidirectional agent-patient relationship, where one actor is an active agent whereas the other is a patient (Burkitt, 2015; Reader, 2007). Thus, the capacity of the actors to align one's thought and actions with those of others is important in order to identify and respond to upcoming needs and problems (Edwards, 2005). Despite the usefulness of the relational theories, to date they are underutilised in the studies of healthcare services in general, and elderly service in particular. Furthermore, previous research shows how relationships have long been downplayed in these services, due to prevailing frameworks, such as new public management.

## Results

Our tentative empirical insights suggest that the co-creative frameworks introduced in each case evolved into several alternative local framings of co-creation. Some of these local framings intensified the meaning of co-creation in the relations between the workers and users, whereas others diminished it. These local framings were influenced by contextual factors, such as the availability of other resources, beliefs and relationships between actors supporting co-creation.

The study will contribute to the knowledge about how relational approaches, such as co-creative frameworks, are enacted, contested and changed in elderly care organisations. It provides knowledge about enablers, problems and modes of co-creation in elderly services, and can be used to anticipate how co-creative frameworks can be introduced to organisations in which more traditional beliefs about user relationships exist, and how these frameworks are related to the pre-existing frameworks. The study emphasises the relational and performed nature of co-creative frameworks and highlights the importance of what the interacting actors want to accomplish: whereas the intentions are usually good, co-creation may face its limits when introduced to contexts where actors are not genuinely equal in their capacities (e.g. Fotaki 2011).

## 21.06

**Trade union strategies for professional development at the work place. A study of ideas about representative employee participation conveyed by trade unions in the public sector of Norway.**

Arnhild Bie-Drivdal

*Oslo and Akershus University College of Applied Sciences, Oslo, Norway*

The Nordic model is known as a distinct way of organizing society and cooperating in the labor market. In parts of the private sector in Norway, the model is widely recognized to contribute to

innovation and productivity through tripartite cooperation at the national level and cooperation/ social dialogue involving the partners at the workplace. High union density and strong trade unions characterize the public sector in Norway, for both professionals and general employees. Further, it is frequently stated that development and innovation is needed to keep public sector strong. Against this background it may seem as a paradox that the role of trade unions, and especially their elected representatives at the workplace, are not more strongly associated with change and professional development in the public sector.

The paper will explore the policies (and strategies) of trade unions in the public sector in Norway, especially related to the role of workplace elected representatives in renewal and development of public services. The cases subject to closer examination will be the Norwegian Medical Association, the Union of Education Norway and the Norwegian Union of Municipal and General Employees, representing the medical profession, the teaching profession, and a variety of public sector workers, respectively.

The research project is situated within the social sciences and the methodological approach is qualitative document analysis, more specifically ideational analysis (inspired by discourse analysis). My approach rests on a social constructivist research tradition, highlighting the importance of language and based on the premise that ideas shape actions. The ideational analysis will take as a point of departure an analytical framework developed from secondary sources on trade unions and professional organizations. The analytical framework consists of four dimensions that will guide the reading of the texts and contribute to a structuring of the analysis. This implies an interaction between deductive and inductive approaches in the interpretation of the texts. In particular, I will pay attention to; ideas about the roles of elected representatives at the workplace; the relationship between direct and representative influence for workers; the justifications for workers' involvement; the attitudes towards professional development; and the weighting of development versus protection in the unions' policies. The paper is part of my effort to develop and test a methodological and analytical framework that will be part of my doctoral thesis.

The data material will be the unions' key policy documents and more internally oriented documents related to the organizations' training of their elected representatives. These documents may be supplemented by public statements made by the union leaders and the basic agreements regulating the relationship between employers and employees in the relevant sectors of the labor market.

The approach rests on the assumption that influence through elected representatives of trade unions (social dialogue) is one means by which professional groups, and workers in the public sector in general, may exert influence and contribute to renew and change public services, both on national and local levels. The objective of the study is to describe and analyze central ideas conveyed by the trade unions in this respect, and thereby establish more knowledge about trade unions for professionals in the public sector in Norway and their policies/strategies towards renewal of public services, in terms of both quality and effectiveness.

This is work in progress, however, preliminary findings indicate that the three unions differ both on the degree to which they convey the elected representatives as resources for development at the workplace and on the degree to which they emphasize the unions' role in professional development. In further analysis, I will consider the extent to which the unions highlight professional skills and renewal as part of their strategies for influence.

Based on the findings my aim is to draw conclusions related to the trade unions' policies and

strategies towards social dialogue as a means to develop the quality of public services and the professional terms of public sector work. The findings in this study will be included in my doctoral thesis on trade unions in the public sector in Norway and their conceptualization of elected representatives, professional influence and renewal in the public sector.

## 22. WORK AND FAMILY

### 22.01

#### **The moral dilemmas faced by lone mothers who work non-standard hours: A temporal analysis of 'good' motherhood**

Sanna Moilanen<sup>1</sup>, Vanessa May<sup>2</sup>, Eija Sevón<sup>1</sup>, Marja-Leena Laakso<sup>1</sup>

<sup>1</sup>*University of Jyväskylä, Jyväskylä, Finland*, <sup>2</sup>*University of Manchester, Manchester, UK*

This work-in-progress paper explores the accounts of Finnish lone mothers concerning their decision to work non-standard hours. We argue that, because lone mothers' work during non-standard hours, for example during evenings, nights, and weekends, deviates from normative expectations attached to motherhood and family time, their work can be seen to violate against the moral foundations of 'good' motherhood (Hays, 1996, p. 7–8; Liamputtong, 2006; May, 2008). This is because these mothers' non-standard working hours mean that they also contravene general norms in industrialised societies regarding 'family time', according to which weekdays are for working, while evenings and weekends are seen predominantly as family time and night time as time for sleep (Adam, 1995; Hareven, 1993; Zerubavel, 1985). Our paper shows that deviation from these normative expectations attached to motherhood and family time leads to moral dilemmas for lone mothers working non-standard hours, who then must reflect on and offer accounts of their decision to work during such hours.

By drawing on data from qualitative interviews conducted with 16 Finnish lone mothers, this paper explores the accounts that these lone mothers give for why they work during non-standard hours whilst reflecting the impact of their working hours on child wellbeing. The particular focus is on how temporality frames how these women view 'good' motherhood and the moral dilemmas they face as lone mothers working non-standard hours. The data are subjected to qualitative analysis, using Scott and Lyman's (1968) concept of 'accounts'. Both lone motherhood (see May 2008) and maternal non-standard working hours (Li et al., 2014) are generally viewed as potential risk factors for child wellbeing. As the most important requirement for a 'good' mother is to ensure child wellbeing, the need for lone mothers to justify their decision to work during non-standard hours is particularly pressing. Through accounts, lone mothers can aim to get approval for their actions and cast their behavior in a socially favorable light in relation to the moral expectations of motherhood and family time (Juhila, 2012; Scott & Lyman, 1986).

Initial findings of the paper indicate that the lone mothers in this study face two temporal moral dilemmas in relation to their work. First, although in Finland, mothers' employment has generally been considered socially acceptable, the presence of young children in the family alters this attitudinal atmosphere considerably (Hakovirta, 2009, p. 106–109). It seems that mothers of

young children should, according to the general view, take care of their children at home. This thus poses the first moral dilemma faced by working lone mothers, namely whether they are leaving their child in the care of other people 'too early'. The second moral dilemma is related to the hours they work, and the particular impact this might have on child wellbeing. In Finland, especially mothers of young children work during non-standard hours (Miettinen & Rotkirch, 2012, p. 47), which has aroused some public debate in light of recent findings according to which work outside standard office hours can have a negative impact on child wellbeing and family life in general (see Li et al., 2014).

We explore these issues from a temporal perspective. Close family relationships are founded on joint family time, which requires synchronisation of daily rhythms (Southerton, 2011). Regular routines and daily rhythms as well as family time spent together have also been found to support the wellbeing of young children (e.g., Strazdins, Clements, Korda, Broom, & D'Souza, 2006). Working non-standard hours in particular make it difficult for the lone mothers in this study to synchronise their daily rhythms with those of their children. They expressed experiencing time-based conflict when juggling work and family responsibilities, something that several studies have also found among both coupled and lone mothers working non-standard hours (e.g., Kinnunen, Malinen, & Laitinen, 2009; Murtorinne-Lahtinen, Moilanen, Tammelin, Rönkä, & Laakso, 2016; Tammelin, Malinen, Rönkä, & Verhoef, 2015). One aspect of this is reduced joint mother–child time, which in turn contravenes with perceptions of a 'good' mother as one who is physically and mentally present for her children (Savikurki, Komulainen, & Korhonen, 2016). Thus, time and temporality comprise an important dimension of the construction of 'good' motherhood.

The present study will enhance our understanding of the experiences of Finnish lone mothers and their views on the relationship between maternal non-standard working hours and child wellbeing through the lens of temporality. This study adds to the growing body of research focusing on the time in relation to motherhood by highlighting the social nature of time, and how social norms around time and 'good' motherhood intertwine. Furthermore, instead of solely approaching the relationship of maternal work schedules and child wellbeing from a negative viewpoint, the present study acknowledges the differing situations and resources of individual lone-mother families and aims to highlight also the positive aspects related to lone mothers' non-standard working hours.

### 22.02

#### **Part-time work in the light of work-family reconciliation**

Katalin Oborni

*Corvinus University of Budapest, Budapest, Hungary*

Part-time work in Hungary is still not a widespread form of employment practice. Nevertheless, when it is applied, it is primarily understood as a tool for reconciliation of paid work and family responsibilities mainly in the period of re-employment upon maternity leave. Therefore, the majority of part-time workers are women with dependent children, who usually take up part-time arrangement to manage their dual role of being a working mother. Based on an organizational ethnography research conducted in 2016, I examine how professional women experience and carry out their part-time work arrangement in a large company with the special



focus on how they negotiate the relationship between work and family life. The researched company is a Hungarian subsidiary of an international financial institute, where part-time work is offered for mothers with young children as an organizational support for better work-life balance and as such it is also a part of their program for women employees' reintegration after giving birth. Overall, the results show that part-time work may allow women with dependent children to combine paid work and family responsibilities, however being employed in part time doesn't reduce alleviate time pressure or provide flexible working hours with a greater sense of control over their work schedule and time. The data reveals, that similarly to full-time employers women working in part-time face the same expectations of organizational culture, such as the requirements of long working hours, being constantly available and always ready for challenges. In this kind of organizational environment, part-time worker women regularly work from home in the evenings and experience significant time pressure and constant exhaustion. The traditional view of gender roles neither helps to ease the conflicts of work and family. In general, it is also evident for the women, both part time and full-time employees, that women are the primary caretakers of children in the family, especially when they are young. Thus, although part-time work is considered as a tool for reconciling work and family in the organizational discourse, it rather function as an informal negotiation that allows women a justified absenteeism from workplace during the noon period of the day. I conclude that the reduced hours of part-time work first of all contribute to women's opportunities to adapt to the high time pressure organizational culture in the intensified period of re-employment upon maternity leave. As a side effect, part-time can help work-life balance, but the reduced working hours doesn't improve it per se.

## 22.03

### Work and family as an issue of discussion in clinical supervision in Finland

Heli Inkinen

*Åbo Akademi University, Turku, Finland*

Is it possible to speak about work and family issues in the clinical supervision process in Finland? Several training materials (see Keskiluopa 2015; Keskinen et al. 2005) for the education of the clinical supervisors seem to guide the supervisors into the direction that the focus of supervision should quite strictly be at work issues only. However, the majority of the supervision clients in Finland are women and come from social and health sectors and from the Evangelical Lutheran Church of Finland. According to Rikala (2013), female workforce is often extremely "burdened" and would need all possible support, what is. Despite structural changes in the work conditions, clinical supervision would be an important tool.

In addition to studying training materials, I utilised *crowdsourcing* and asked in 2016 in three closed social media groups from both supervisors and clients, whether it is possible to speak about challenging work and family combination and other life issues during supervision sessions. One of these social media groups was formed by female pastors in the Evangelical Lutheran Church of Finland and the other two groups contained clinical supervisors and members of the Supervisors' Association of Finland (STOry). I have analysed this *oral history* (see Fingerroos et al.) kind of material with the method of content analysis. In addition to these materials, I have utilised parts of my wider research about Gender and Coaching/Clinical Supervision and my own experience as a supervisor to research Work and Family as an issue of discussion in clinical supervision.

My question for the female pastors' group concerned the issue of how to combine work – often without working hours – and family. I also inquired their opinion as to whether it should be possible to speak about these matters in the clinical supervision. These questions resulted in 23 answers or comments from 16 female pastors. According to their responses, they were married, single, divorced or in a relationship, and with or without children. I organised the answers according to the contents into four groups: 1. Success and development stories, 2. Failure and survival stories, 3. Family expectations and work community, 4. Clinical supervision.

The supervisors' group provided 36 answers or comments from 22 supervisors (17 women and 5 men). I asked them whether it is possible to speak about work and family issues in their supervision sessions. According to the contents, I organised the answers into five groups: 1. Open policy, 2. Connection to the work, 3. Distinction between therapy and supervision, 4. Strict policy (only work issues), 5. Own experiences as a supervision client.

The praxis shows that a majority of the supervisors allow issues like work and family combination and other life in the supervision process. It also seems that the largest client group, women, can speak about family and other issues and not only about work during the supervision processes.

The doctoral theses conducted by Aija Koivu (2013) and Maj-Lis Kärkkäinen (2013) show that the hard shift work of the health care sector, where women constitute a majority of the workforce, leads now and then to sick leaves and burn outs. To prevent them, it would be useful that the clinical supervisors could actively express that there is a possibility to openly discuss the challenges of how to combine work and family and other life. While training supervisors, these issues should be included into the study programme. It could also be possible to develop family centred and open clinical supervision.

Suomala (2014) pointed out in her research that the unofficial atmosphere is not always in favour of a woman and family friendly work place. The laws have enabled different kind of leaves and part time working possibilities for parents of small children. However, the managers or colleagues can express their negative attitudes towards parents trying to use them. Gender sensitive supervising processes could encourage work places to be more woman and family friendly.

## 22.04

### Partners' perspectives to international work: work-family concerns

Mireka Harju, Kati Saarenpää

*University of Vaasa, Vaasa, Finland*

Purpose of this paper is to explore how international work effects family life among international business travelers (IBTs) and expatriates. More specifically this paper aims to examine the individual experiences of partners.

Today's high communication technology does not replace the need of expatriation and international business travel. Globalization requires global presence and therefore global workers and international work is not exceptional anymore. Also increasing number of people live and work, or take business trips, beyond of the borders of their home countries.

It is known, that traditional expatriate assignments pose challenges on families. Similarly previous studies indicate that work including frequent travel abroad has an influence on the private life of travellers. Although research interest has increased, there is still relatively little academic research exploring the consequences of international work on the family members. Partners' roles on successful expatriation have been studied but there is still relatively little research that analyses the partners' own experiences. As well, the effects of international business travel have mostly been studied from traveler's point of view and the partners' experiences have been overlooked.

Studying the partners and family matters is important since family is known to be one of the major reasons for expatriate assignment failures. Therefore, firms could pay more attention to their international workers' possibilities to balance their work and family-life. Existing literature tends to problematize family matters but for example, expatriate assignments might not be accepted if the family is not willing to relocate to host country. Sometimes families decide to accept international work even though the partner is not fully satisfied with the coming changes.

In fact, common factor to international workers (both expatriates and travelers) is that their partners are in significant role in running their daily life, especially if the couple has children. The family life might change significantly after accepting work that demands traveling or an international assignment. Therefore, the partners need to cope with the new challenges and stress factors that might come out from the new life situation. This particular study aims to give voice to the partners of international staff and compare the experiences of two different types of partners; partners' of IBTs and expatriates.

The data consists of two separate parts among partners of Finnish international workers. Data about travelers was collected through semi-structured interviews carried out with ten female partners. Expatriate data consists of written responses of twelve partners.

## 22.05

### **Exploring the spaces between home and work: The mediating role of digital technologies in experiences of contemporary voluntary work.**

Katharine Venter

*University of Leicester, Leicester, UK*

#### Introduction

The UK non-profit and voluntary sector has traditionally been seen as providing innovative, low cost ways of delivering public services (Davies, 2011). In the current neo-liberal environment the non-profit and voluntary sector has become increasingly important for the delivery of public services, often delivered under contract and secured through competitive contracting processes as traditional grants become less common (Cunningham et al., 2013). Within an environment of 'austerity' and a concomitant concern for accountability in the spending of public money the survival of many non-profit organisations' survival depends on their effective response to the priorities of statutory funders. The demands and opportunities afforded by technological progress alongside 'professionalising' pressures from funders have created particular challenges

for organisations and a shortage of IT skills has been widely identified across the sector. Although not yet widely studied, initial evidence suggests that many non-profit and voluntary organisations have been able to utilise digital technologies effectively to build community (e.g. Zhou & Pan, 2016) mobilize action (e.g. Ilten, 2015), facilitate fundraising activities (e.g. Saxton & Wang, 2014) and disseminate information (eg. Svensson et al., 2015). Despite evidence of organisations beginning to utilise social media platforms to disseminate information and attract followers, Svensson et al. (2015) suggest that there is little evidence of these technologies being used for communication *between* stakeholder groups but rather that these activities tend to be one way traffic initiated by the organisation. Outside of a small number of studies of mobilization in social movements and digitally enabled activism (e.g. Ilten, 2015) little is known about the experiences of those at the receiving end of these interactions. This paper seeks to address this gap by examining the ways in which advances in digital technologies have impacted on the form, nature and experience of volunteers in non-profit organizations in the UK.

#### Objectives

While paid employment in the non-profit and voluntary sector is better researched, volunteer experiences remain relatively invisible despite the fact that 29% of the UK's working age population volunteer regularly (NCVO, 2014). The project on which this paper is based has two broad objectives. The first objective is to contextualize experiences of volunteering by exploring interconnections between voluntary work, paid work and home, family and leisure lives. Secondly the research seeks to explore the impact of organizational factors (such as funding arrangements and organizational size) on these experiences. The objective of the current paper is to focus specifically on the ways in which volunteering occupies the spaces between the domains of paid work and the home and to explore the role played by digital technologies in shaping these experiences.

#### Methods

The research project comprises 'compressed ethnographies' in six case study organisations operating in the health and social care subsector of the UK non-profit and voluntary sector. Organisations were purposively selected to incorporate a range funding arrangements and sizes. Data gathered includes extensive observational data (audio, visual and written), documentary organisational data and interviews with both paid staff and volunteers in one-to-one and focus group interviews. The data collected was analysed using NVivo 10.

#### Results and conclusions

Based on early findings the paper argues that volunteering relates to paid employment and home lives in two broad ways. Firstly, volunteering operated as a proxy for paid employment for some groups of volunteers and for others supports a variety of transitional processes into, out of and through paid employment. As such volunteering provides a mechanism through which work identities might be maintained, created or enhanced. Secondly volunteering offers a means of maintaining and extending intensely personal caring identities. Digital technologies play a variety of roles in each of these areas serving to inform the intersections between paid employment and home life making an important contribution to contemporary experiences of voluntary 'careers'

## 22.06

**Mobile technology: good or bad for work-family relations?**Mia Tammelin*University of Jyväskylä, Jyväskylä, Finland*

Technological innovations and particularly mobile technology, have many and complex implications for social life. It changes the nature and meaning of tasks and results in new cultural practices. Much research has been done to see how workers can use personal communication devices to better manage the relationship between their work and family life – yet the implications call for further research.

This study addresses two closely related topics: first, the possibility of employed parents to occupy different social domains concurrently through mobile technology, and second the experiences of work-family relations as a consequence of this. Besides a research review, this chapter uses qualitative data (collected in 2016, n=45) on working parents that is used to find out the effects of mobile technology on work-family relations. The method of the analysis is a problem-driven content analysis. This method is derived from a research question and the systematic reading of the available text.

Based on the initial findings the study shows that mobile technology causes time fragmentation, as individuals may have a somewhat continuous presence on various social domains. The essence is that working parents are continuously 'on call' for family – and for work – matters. All in all, the boundaries between work and family life have become increasingly permeable. Furthermore this study seeks answers to the question what constitutes differences to the experiences of employed parents. It is anticipated that people differ – not everyone is capable of keeping up with the possibilities and demands of being constantly on-line. It is anticipated that these differences are due to gender (women responsible by technology assisted micro-coordination of family routines) and socio-economic status (knowledge workers, with autonomous work more likely to experience permeable work-family relations).

To conclude the study argues that overall mobile technology creates a paradox for employed parents: mobile phones enable better coordination and lower their anxiety over family routines, yet the use of mobile technology increases the need for multitasking and escalates the emotional burden of managing these various roles. Therefore it is debatable whether ICT-facilitated communication enhances work-family relations, and there is need for further research on what the digitalization of work means for work-family relations.

**23. WORKPLACE CHANGE DUE TO THE DIGITALISATION OF WORK TOOLS**

## 23.01

**Gamification of Building Management and Service work**Jari Multisilta, Arttu Perttula, Pauliina Tuomi*Tampere University of Technology, Pori, Finland*

The aim of presentation is to study how gamification could be used to develop the jobs on facility management services, such as building maintenance and service personnel and janitors.

Deterding, Dixon, Khaled and Nacke (2011) defined “gamification” as the use of game design elements in non-game contexts. Gamification can also be understood as the process of making activities more game-like (Werbach, 2014). In addition, gamification can be a process of enhancing a service with affordances for gameful experiences in order to support user's overall value creation (Huotari & Hamari, 2012).

In this research, the aim of gamification is to increase the motivation of the worker and at the same time increase the productivity of the work. Better motivation is supposed to lead better results and more enjoyable work. Hamari et al. (2014) found that gamification works. The output increases and people enjoy their work, but the gamified experience is very personal.

The work the building management and service people (such as janitors) do can be described invisible in such sense that when everything works, the workers usually do not get positive feedback from the users of the building. The work goes unnoticed or is not formally recognized. It only becomes visible upon breakdown, the floors are dirty, the temperature is too hot or too cold, lights are out. (Graham & Thrift, 2007). In this study, we claim that gamification can make otherwise invisible work visible, by providing positive feedback to the worker.

Our working environments are full of rich data. There are sensors almost everywhere. Buildings, production processes and machines are all producing so called big data. This data could be used as a basis for producing gamified elements in many workplaces.

The research is implemented as a case study of two organizations working in building management and service area. Utrecht Work Engagement Scale (UWES) will be used to measure the engagement of the target group at both organizations in before and after the intervention. The researcher will participate to the normal workday for each case organization and observe their work. In addition, the data sources available from the Enterprise Resource Planning System (ERP) will be examined. The aim is to identify, which data from building management systems could be used as a basis for a gamified work process. The workers are invited to brainstorming sessions, where gamification examples are presented and meaningful gamification elements are planned. After the brainstorming sessions, two interventions are implemented, and data from the interventions are collected by interviewing the participants. There will be 10 participants in both interventions. The interventions will be done in fall 2017. The results from the UWES, observations, ERP and brainstorming sessions will be presented at the conference.

As a result, we try to explain does gamification work. Based on existing literature, there are



several explanations why it could work. For example, one of the major reasons could be the fact that in a gamified job the worker gets reasonable goals and continuous feedback on how she is progressing towards the goal, just like in a game. In addition, the goal is something that the worker can set herself.

It is not obvious what are the gamification elements we could use in a particular job. Each job is different and there is a huge difference working in an office or in a factory, for example. More research and experiments are needed to find out gamified solutions to industry.

## 23.02

### **A model of organizational routines' microfoundational dynamics – a digital revolution in ice hockey statistics**

Lauri-Matti Palmunen, [Arto Ryömä](#)

*Turku School of Economics at the University of Turku, Turku, Finland*

The routine aspect of work has emerged as a key construct in many subfields of management and organization studies. Fields such as strategic management (Felin & Foss, 2005), international management (Haleblian et al., 2009) and organization theory (Salvato & Rerup, 2011) have gained new insights by utilizing the routine construct. Despite these advances in multiple fields, the literature on routines is still riddled with ambiguities (Abell, Felin & Foss, 2008; Becker, 2004; Becker, 2008; Felin & Foss, 2009). Arguably, the ambiguity between action and potential action, the ambiguity between individual and collective level, and the ambiguity between stability and change are the most significant hindrances that deter the theoretical development of the routine concept (Becker, 2008). Recently, studying the micro-level origins of routines has been proposed as a robust candidate for answering the obstacles related to the theoretical development of the routine concept (Abell et. al., 2008; Felin & Foss, 2005; Felin & Foss, 2009; Gavetti, 2005).

The need for studies on microfoundations of routines stems from the idea that many subfields of organization theory have begun at some aggregate analytical level  $N$  at time  $t$  ( $Nt$ ) in their early stages of development and thus implicitly assumed that micro-level ( $N-1t-1$ ) phenomena have relatively uniform effects on aggregate level phenomena, for example uniformity among workforces in population ecology and culturally doped employees in institutional theory (Felin, Foss, Heimeriks & Madsen, 2012, 6–7). Consequently, by unpacking routines in microfoundational terms we will gain an understanding of routines' different constituent components.

Possibly the most comprehensive attempt to map the constituent components of routines has been Journal of Management Studies' special issue 'Micro-Origins of Organizational Routines and Capabilities' (2012). Based on several recent theoretical and empirical studies that have devoted explicit attention to the micro-level origins of routines (Becker and Lazaric, 2003; Becker, Lazaric, Nelson & Winter, 2005; D'Addiero, 2009; Gavetti, 2005; Salvato, Sciascia & Alberti, 2009; Rerup & Feldman, 2011; Feldman & Pentland, 2003; Pentland & Feldman 2008; Teece, 2007) the editors of the special issue propose three constituent components of routines as a starting point for the microfoundational research agenda: 1) individuals, 2) processes and interactions, and 3) structure and design. Further, the editors conclude that the research agenda should focus on interactions between these three constituent components.

The purpose of our study is to construct a model of organizational routines' microfoundational

dynamics. This model combines the constituent components – individuals, processes and interactions, structure and design – of organizational routines (Felin et al., 2012) with the major dynamics – variation and selective retention – that shape organizational routines (Pentland, Feldman, Becker & Liu 2012). As a part of the model, we examine the role of automatic human behavior in the workers who carry out their parts in organizational routine. As a result of this study, we discuss the model of organizational routines' microfoundational dynamics in relation to the most significant ambiguities: individual versus collective level, action versus potential action, and stability versus change.

Our findings are based on a combination of quantitative and qualitative approaches on the data collected from the top professional ice hockey league in Finland. This league has recently invested in such digital technologies as a smart puck and wearable transmitters, which have significantly transformed the way in which game statistics can be generated. From a theoretical perspective these advanced game statistics represent structures, which will contain less variance than traditional statistics or rankings. Alongside with quantitative data, namely the advanced statistics, we interview and observe professional ice hockey coaches and players to make sense of how they experience the developmental steps in the digitalization and the resultant changes in their work routines. Consequently, we hypothesize that this more detailed information will change the work of coaches and players. Team sport provides us a particularly transparent research context to observe these probable changes in routinized work.

Our study contributes the debate between studies in which routines are seen as actions (eg. Pentland, Haerem & Hillison, 2010; Salvato & Rerup, 2011) and studies in which routines are seen as potential actions (eg. Birnholtz, Cohen & Hoch, 2007; Hodgson, 2008; Knudsen, 2008) by illustrating how these two previously incompatible viewpoints can be combined in one model, which attempts to estimate the path dependency inside the routine with probabilities. Specifically, this idea – originally presented by Pentland et. al. (2012) – is applied to incorporate the path dependency between routine performances by demonstrating how different structures retain different amounts of the endogenous variance in routine. Second, we contribute the stability versus change discussion (Becker, 2004; Cohen, Burkhart, Dosi, Egidio, Marengo, Warglien & Winter 1996.) by examining how both human and non-human actors affect variation and selective retention in the iterations of the routine (cf. Pentland et. al., 2012; Turner & Fern, 2012).

## 23.03

### **Poster Presentation: The introduction of IT in the Brazilian banking sector and the impacts on process and work conditions**

[Aparecida Iguti<sup>1</sup>](#), Ines Monteiro<sup>2</sup>

<sup>1</sup>*Faculty of Medical Sciences - University of Campinas, Campinas - São Paulo State, Brazil,*

<sup>2</sup>*Faculty of Nursing - University of Campinas, Campinas - São Paulo State, Brazil*

This study aims to provide an overview of literature dealing with question of how digital technologies impact the work process and the work conditions. It is focused on the changes of employment and tasks related to the introduction of informational technologies in Brazilian banks, based on published studies in Brazilian databases. Financial sector is one of the most important in the tertiary sector of the Brazilian economy, in terms of GDP and in number of jobs, as well as the diffusion of new technologies and forms of work organization. Five biggest banks

had large profits (almost 10 billion dollars in the very first semester of 2016), in spite of economic crisis. The banking sector has the highest percentage of investments in informational technology (18%) of the Brazilian industries and between 2007 and 2014 there was an increase in IT investment of 79% (about 7 billion dollars were invested in the year 2014). The new technologies allow the integration of the network systems and the use of digital channels as home banking, cell phones and tablets. The customer can do on-line services reducing customers' presence in agencies, changing the activities and tasks of bank workers; in addition 24 hours connections allow no-stop transactions. These technologies are used to keep high levels of competitiveness and the cost reduction. It is estimated that the transaction in the self-service (ATM) costs five times less than the traditional and with internet banking, twenty times lower. In 1989 the banking sector had 824 thousand direct employees and in 1996, it was reduced to 497 thousand, a very big job cuts never replaced, although between 2002 and 2010 the political and economic situation changed with improvement of the economic level and the bank sector had created new jobs. The average productivity of banks shows individual increase in workload: while in 2000 there were an average of 159 clients per worker and 49,000 transactions per year were carried out and in 2010 there were 291 clients per worker with 113,000 transactions per capita. There was a change in the profile of banking activities, and many functions of intermediation and operationalization were off, changing to business, strengthening the role of 'salesman' of the numerous (new) products of the 'financial supermarket'. The new technologies allowed to speed up and simplify the processes and also to concentrate several functions in one skilled worker, that before were carried out by a workers team in specialized areas. These technologies enhanced the trend towards 'multi-functionality' and increased labor productivity. In addition, data processing and technical support for local networks, as well as credit card processing operations are outsourced. Workloads have increased through pressure, commitment and workers must focus on 'business' turning banks into business with specialized activities. Some studies showed the acceleration of the pace of work, increase of common mental disorders, occupational diseases and reported health problems. Traditionally, bank workers have suffered from musculoskeletal disorders but there has been a significant increase of mental disorders complaints. In conclusion the introduction of new technologies has had a great impact on the workforce, on the workers profile and on the process and working conditions.

## 23.04

### Work tools in job advertisements

Betül Güntürk-Kuhl

*Federal Institute for Vocational Education and Training (BIBB), Bonn, Germany*

We search for developments in qualification requirements, skills or occupational profiles by the analysis of job advertisements. Our dataset contains all raw texts of job ads, which have been registered at the job pool of the Federal Employment Agency since 2011. In total, it contains nearly 400,000 ads for every year, of which approximately a fourth are apprenticeship positions. So we have a broad database with nearly two and a half million advertisements for extensive research to yield useful insight on the structure and changes in aggregate labor demand by occupations and also changes in the relevance of specific qualifications or competences.

To analyze the change of professional activities and the penetration of digital devices and tools we designed a classification of work tools, which is by the nature of the method under

constant evaluation. Broadly speaking, work tools are devices used by a person or a machine to perform a task. According to our definition we also count immaterial tools like standards, legal standards or books of references. In our taxonomy, which is empirically developed by mining the data of the ads, there are 8 Top categories for a classification of work tools namely "Tools/Devices", "Machines", "Diagnostic tools", "Computers", "Office/Communication aids", "Software" or "Vehicles", "Other ancillary equipment", and 63 subcategories. The aim was to get a concise distinction and an easy assignment of the identified work tools to their categories. The advantage of this taxonomy is its applicability to different data sources.

We used methods of information extraction with the aid of rule-based machine learning. In this procedure specific expressions or sentences are sorted by the software into specified categories. This procedure is constructed to first classify the raw text into four blocks: a) Self-definition of the company, b) Definition of the task, c) Definition of the required competences of the potential applicant, d) Other, as for example: contact information.

### Contribution to the session

In the session, I will present our workflow and the results of the analyses of the advertisements. For the study of work tools and their changes in occupations we developed a further tool for their extraction, to see which tools are named in advertisements. I explain the classification and information extraction method. In order to identify work tools in the data the computer was given a context in which it should search. To teach the application to define what work tools are or not, it requires training data for the decisions. After framing models, in which contexts working tools are to find the computer gives us a list of potential tools, which are found in block 3 (competences of the applicant) or in block 2 (definition of the task). After that we have to confirm to the computer, if this term is a work tool or not. Based on the training data a model is formed and the application is able to extract new tools, which are not tagged and the computer can learn and self-optimize its search.

Additionally, we can describe the degree of digitalization and the distribution in our taxonomy. We can show in which industries, regions and occupations (digitalized) work tools can be found and which differences are between different sizes of companies or qualifications. I would like to present significant outcomes and if there are already developments over the years from 2011 till 2016.

### Temporary Structure

- Present the workflow of the job ad analysis
  - o Classification scheme
  - o Information extraction
  - o Analysis with use of Taxonomy
- Findings:
  - o Distributions of (digitalized) work tools
    - Industry
    - Occupations
    - Qualification
    - Time
    - Size of enterprise
    - Region

Outlook: A quite similar procedure is provided for the extraction of competences and tasks, because we are also interested in the change of qualification requirements through digitalization and a change in work tools.

<sup>1</sup> The Federal Employment Agency is the largest provider of labor market services in Germany. It has a network of more than 700 agencies and branch offices nationwide. Its most important tasks are job and training placement, career counseling and providing social benefits.

## 23.05

### Taxonomy of working tools based on deeply parsed job advertisement

Philipp Martin, Ralf Dorau

*Federal Institute for vocational education and training, Bonn, Germany*

#### Project and goals

The idea of digitalization is not new. The rapid development in software, robotic and artificial intelligence will cause the possibility of automatization of work processes and will lead to their implementation in the next decades. This change applies all the more the necessity of scientific observation. The intention of our project is to make these processes of changing the labour market and the daily work routine visible and measurable. Our approach is based on work tools which are used at a work place or rather are asked for in job advertisements. Work tools were defined as needed devices which are used by a person or a machine to get work done.

The database consists of job advertisements which are registered by the Federal Employment Agency. This source provides approximately 400.000 job advertisements per year, which makes about 2.4 million from 2011 to 2016.

We aim is to discover the changing demand for special work tools by occupation, branches and regions etc. over time. We take a closer look at this automation process and will scientifically accompany this trend.

#### The taxonomy based on deeply parsed job advertisement

A long process of deep analysis of job advertisements with use of Text Mining Methods was needed to identify the huge amount of single work tools (>10.000). An interactive process of training and evaluating the the extraction algorithm was deployed to get the work tool information out of the text. The algorithm was started with a set of basic criteria how to identify working tools. On this base the algorithm offered a set of potential work tools and we had to make the decision, whether each of it is a work tool or not. In this way we optimized the success rate of the computer program. After the identification of work tools we set up a category system to classify the items. This taxonomy is a methodic instrument to make the huge amount of work tools manageable. We need the taxonomy to make analysis feasible for the data. According to the concept of Troll (2002) we generated a new taxonomy based on our empirical findings. So there are eight main categories with one additional level of differentiation. Namely they are "Tools/Devices", "Machines", "Diagnostic tools", "Computers", "Office/Communication aids", "Software" or "Vehicles", "Other ancillary equipment", and 63 subcategories. The category "Computer" was divided into "Computer" and "Software", because the field of application has grown over the

last years. The previous category "Computers" is not sufficient and exhaustive anymore. After setting up the taxonomy we taught the algorithm to assign the work tools correctly.

#### Contribution to the session

With this quantity of data we had to identify the work tools automatically. But before the assignment could be done automatically we had to fill the categories manually. The phase of developing and filling the category system was time-consuming and involved a lot of work. This workflow about the automation and training processes of the used algorithm I'll describe in more detail.

Exemplary I will present which work tools are located in which category and how they're distributed within a category. In some cases the content of different categories is very close to similar categories e.g. "construction machinery" and "construction vehicles". A construction crane is located in "construction machinery" if it's stationary and located in "construction vehicles" if it's mobile. I also will give a look on concrete terms that dominate groups on the one hand and that are less important on the other hand. Additionally I will explain the way we solved problems of clear distinction between the categories.

The Taxonomy in combination with the algorithm is a new kind of empirical based analyzing tool. Certainly the analytical tool is very versatile. The presentation will point out the most important steps of the development, so that interested scientists can use our procedure for their own research projects.

## 23.06

### ERP-systems shaping the work, organization and well-being at work – framework for the analysis

Seppo Tuomivaara, Arja Ala-Laurinaho, Mervi Hasu, Pia Perttula

*Finnish Institute of Occupational Health, Helsinki, Finland*

The digitalized, computer-based technology enable new, innovative ways of organizing work, lay grounds for new kind of services and products, and boost the effectiveness of production processes. However, there is a need for more practical understanding and methods of the implementation of new systems and reinvention the use of the old ones, to gain the potential innovativeness of digitalization.

In this research project we aim to investigate the actual digitalized work processes in networks, and analyse and evaluate changes in work and its organization when using new, second generation ERP (Enterprise Resource Planning) systems. By ERP we mean different kind of IT-systems that both managers, employees and other actors (e.g. suppliers) use to plan, control and manage processes and work.

The knowledge of the practical changes of work, e.g. consequences of digitalization for work practices and division of work, is needed to understand what kind of possibilities ERP offers for innovative and sustainable work organization. The main target here is to find out how work action and use of the ERP system as well as the system itself can be developed interrelated



to each other. The research will be conducted in the forestry and accounting branches during 2017-19.

In this presentation, we introduce the analysis framework of the study. We focus on the concept of reinvention, with which we mean continuous and interactive development of the work and the ICT systems in the post-adaptive phase. In reinvention the use of the system is changing to pursue new goals. Work itself is understood as an activity system, highlighting the relationships of the different elements of dynamically changing work. The human being as an actor in the intentional, object oriented work activity is a starting point, and the interactive development is analyzed via employee driven innovation frame. The consequences are also reflected from the aspects of well-being at work (meaningfulness, workload) and occupational safety (resilience, risks). In the presentation, we discuss the operationalization of these frames and measures, and give examples of their application.

### 23.07

#### **Creating the future Swiss bank clerk by introducing tablet computers in VET – a misleading promise?**

Stefan Kessler

*University of Zurich, Zurich, Switzerland*

There is a growing literature on the (expected) massive impact of digitalisation both on work tasks and workplace structures and the resulting dynamics along various industries and sectors. Together with the process of mediatisation, through which modern ICT have been largely integrated in social and cultural practices, this is putting pressure on educational establishments and concepts. Consequently, the potential of digital tools such as tablet computers and the like is at present widely being discussed, and one can see them increasingly being used for vocational educational and training (VET) purposes as well as for different work applications.

In the case of innovating VET programmes in order to meet future work objectives, innovation and implementation research provides helpful insights. Firstly, it has been shown that the innovation of educational and organisational practices, at an initial stage, tends to be prone to acceptance problems among the targeted group of workers or trainees, especially if the innovation calls for radical changes in attitude or behaviour. This may even result in a permanent rejection of a planned innovation and thus foil the initial goals of an innovation process. In reshaping and restructuring education and training (or workplace environments, respectively) through the use of digital devices this has to be taken into account. Secondly, there is also a cultural aspect that has to be considered when using digital devices as tools for work or learning-for-work – both at the individual (a workers/learners routine or habit) and organisational level (specific workplace facilities and compatibility). Thus, existing learning and working cultures should be considered in the reform process. Finally there may also be found an underlying ideological component where the perceived need of promoting digital devices for use in education and training must not necessarily correspond to the actual (objective) need for such devices and neither result in an optimised learning or working environment. Hence, this paper seeks to discuss some of the maybe lesser discussed consequences of ongoing digitalisation processes in VET, using the Swiss banking apprenticeship as an example for the challenges that arise when implementing modern ICT in education and training.

The papers' methodological background relies on a three-year longitudinal evaluation study on the use of tablet computers in the inter-company training establishments within the Swiss VET programme for bank clerks. The study has been conducted from 2013 to 2016, beginning shortly after the training establishments began to digitalise the training environment in 2012. Since then, about 1100 apprentices yearly are being equipped with such a device as a digital learning (and potential workplace) tool. The main study consisted of a three-wave online survey of all apprentices in 2014, 2015, and 2016 on learning related topics, the training-related use of the tablets, and the benefits of using these devices in training and at the (future) workplace. Two additional studies were conducted to also capture the perspectives of the instructors at the inter-company training establishments: an online survey (n=42) and expert interviews (n=9).

The results of this evaluation study show that the enhancement of the existing training environment through the use of tablets as tools for learning and for potential future workplace use only partially fulfils the expected goals of the innovation process. Initially, those were to address future qualification shifts, which are being expected facing digitalisation in some of the core areas of the banking sector, such as the consultation services and information systems. Among the factors that temporarily undermine a successful outcome of this undertaking are partial workplace incompatibilities of the devices due to bank internal security policies, but also the aforementioned acceptance problems (i. e. not every learner/worker is able to make proper use of these devices, and the latter being not appropriate for every intended task). Furthermore there are mismatches in learning styles and workplace cultures making it difficult for some apprentices to appreciate the tablets as a personal learning and working tool. After all, an underlying conception of a future's bank clerk whose appearance represents the modern face of a changing industry is inherent in the undertaking itself. Thus, the findings raise further questions on what kind of a future (mobile) worker's ideal is inherent to present concepts of digitalised education and training programmes or work conceptualisations.

### 23.08

#### **The digitalization of workplaces between affordances and constraints for learning at work**

Christian Harteis, Christoph Fischer, Michael Goller, Lorraine Brinkmann

*University of Paderborn, Paderborn, Germany*

The digitalization of workplaces can introduce changes on various levels of work activities. Educational research follows the transformation to digitalized work with ambivalent approaches: On the one hand, there is the optimistic perspective expecting to improve the quality of work and worklife, whereas on the other hand there is the expectation of decreasing quality of work and worklife. Anyway, there is agreement that digitalization will effect changes at workplaces that workers have to react upon. There is disagreement how employees experience these changes at their workplaces, if they experience affordances to engage into learning processes or if they experience constraints that inhibit further engagement in learning.

This contribution describes an empirical study on workplaces in business administration that are in particular danger to become dispensable because digital technology is supposed to take over routine tasks in administration (Brynjolfsson & McAfee, 2014). As there is disagreement on effects of digitalization, this study focuses empirically administrative workplaces that are already

affected through digitalization. The investigation aims at analyzing how employees experience the effects of digitalization in terms of the demands and resources afforded to them and how they deal with the changes through digitalization.

This proposed contribution describes an exploratory empirical interview study with 9 employees in varying responsibilities and functions working at administrative workplaces at German medium size industrial enterprises. By referring to prominent theories on workplace learning, e.g. the job-demand-control model (Karasek, 1979) and the sociogeneses of work practice (Billett, 2001), the interviews will reveal how employees perceive the effects of digitalization and their potential for learning. Employees' workplace learning is considered to be a crucial precondition to successfully implement digitalized work procedures.

To ensure a wide perspective, this interview study triangulates the various perspectives of each three clerks, members of the workers' council, and human resources staff. This way, this contribution provides a broad range of promises and perils that employees experience through digitalization.

Interviews will be conducted between February and April 2017, all analyses will be completed before the conference.

23.09

### Impact of Information Literacy in the Digital Workplace

Gunilla Widén, Muhaimin Karim

*Abo Akademi University, Turku, Finland*

#### Introduction

The use of information within workplaces has raised exponentially over the years and the variety of information and knowledge that is being processed takes increasingly much of employees' time and effort. The ability to fluently deal with information and information flows becomes a key asset in the digital workplace. This ability is called *information literacy* and it is about the skills to efficiently manage information, information sources, and information technology for specific purposes. The information literacy concept was originally coined in 1974 on behalf of the National Commission on Libraries and Information Science to support students' information seeking skills and information use. Today, we have even a greater demand of information literacies in everyday life, education, and workplaces as internet and technology has brought additional challenges to managing information effectively. If information is power in the digital era, information literacy is the knowledge to obtain and use it.

#### Objective

While information literacy mainly has been developed within education and in connection to learning, there exists a gap in the knowledge about how to support and develop information literacy in workplace context. In the project *Impact of Information Literacy in the Digital Workplace* (Academy of Finland 2016-20), a literature review is conducted to explore how workplace information literacy so far has been studied and identify possible measures to study the impact of literacies.

#### Literature review

In the literature review it is shown that information literacy is mostly discussed within the territory of higher education and its periphery. The emergence and development of this concept were to enlighten and guide students to understand the need, source and use of authentic information. From the concept of information literacy, a number of related literacies have been developed such as digital literacy, computer literacy, internet literacy, media literacy, and visual literacy. This shows that today the information literacy skills are important not only in education but also in all other areas of society.

Focusing workplace context, information is often valued as a resource, but seldom given attention from an information literacy point of view. There are some exceptions, and these studies remain mainly on a more theoretical level. E.g. in the study of Workplace experiences of information literacy lead by Christine Susan Bruce, seven different ways of experiencing information literacy were identified. These experiences are closely related to important workplace processes confirming that information literacy should be considered a significant part of the character of learning organizations. However, there are also a number of challenges connected to the implementation of information literacy in organizational context. The traditional workplaces are transforming into digital workplaces implementing and adopting new technologies to keep the employees connected, and to ensure a more collaborative approach in extracting information and to use them efficiently with a view to reaching the organizational goals. These new practices have forced a change in the culture, structure and the work processes of those workplaces. The progress towards new technologies has exposed the workplaces to a virtually unlimited amount of information which is the key success factor for almost all types of organizations irrespective of the industry they belong. The digital workplaces have improved technological framework, more tools for collecting and sharing information. It possesses the potential to stay connected and collaborate to make the best use of the information it extracts. However, to use information effectively, a set of new skills is required. With a large amount of information in different forms, the ability to evaluate information and its reliability is a key competence which is often found weak. "*White Paper for Moreover Technologies*" reported on a study conducted on 6,000 corporate employees. It concluded that the majority of the sample lacked enough knowledge about availability, quality and crucial utilities. Workplaces also face information overload, leading to information stress and affecting negatively well-being of employees. Also, several generations are working together in the workplace. We know that younger generations have a different approach to information technology and ways to communicate than the older generation. The information literacy of different age groups becomes of key importance in the overall information and knowledge management of the organization. The ability to evaluate the reliability of information sources has additionally been put forward as a huge challenge in our information society and is tightly connected also to efficient information management in any workplace.

#### Conclusions

The focus to improve the information literacy of the employees in today's workplace is important. The digital workplaces are adopting new technologies, but they are often found less attentive towards the development of information literacy within the employees which is vital in the optimal use of those facilities. In order to ensure a strong collaboration of the employees and the technological framework, the development of information literacies in the digital workplaces is imperative. Information literacy was primarily a concept, defined and implemented within the academia to assist the students in higher education. However, the mass use of information and communication technologies within workplaces has forced emphasize on the development of

information literacy at workplaces as well. The awareness of information literacy in the digital workplaces has emerged, but not yet been studied to a large extent.

## 24. WORKPLACE CHANGE: PANEL DISCUSSION

### 24.01

#### Panel discussion: Digitalization changes the content and context of our work

Aki Koponen<sup>1</sup>, Taina Eriksson<sup>1</sup>, Kirsimarja Blomqvist<sup>2</sup>, Tommi Rissanen<sup>2</sup>, Ari Viitanen<sup>3</sup>, Lauri Heiliö<sup>4</sup>, Jari Savola<sup>5</sup>, Simo Lintula<sup>6</sup>

<sup>1</sup>University of Turku, Turku, Finland, <sup>2</sup>Lappeenranta University of Technology, Lappeenranta, Finland, <sup>3</sup>Carinafour Oy, Kaarina, Finland, <sup>4</sup>Wiima Logistics Oy, Turku, Finland, <sup>5</sup>Eurolan Engineering Oy, Raisio, Finland, <sup>6</sup>Sininen Polku Oy, Kaarina, Finland

Digitalization is a buzzword that carries many promises of improved efficiency and productivity for companies in all fields. However, for the benefits to materialize, companies may need to change the ways they operate. Old processes and organizational structures are likely to become obsolete when digital tools are implemented. Thus, to achieve the best potential outcome, the company needs to break the existing structures and processes and establish new ones. Such that support the utilization of digital tools in the best possible ways.

This means a change (maybe even a dramatic one) for all levels of the organization. First of all, operational level employees' jobs are changing. Mobile devices, sensors and other apparatuses that are connected to the Internet are increasingly becoming essential part of for instance construction workers' work. The connected devices collect and share real-time data on the progress of operations. Thus, it is possible to implement detailed and responsive work scheduling. In addition, augmented reality will be utilized more and more in the industry. On the other hand, platform economy offers workers possibilities to sell their expertise to various target groups. They can become part of an international virtual team of experts that solve client's problem.

All of the aforementioned developments entail significant changes in how people work. In addition, where they work is also likely to change. Remote controlled operations are reality already nowadays. An employee that used to travel around the world can operate solely at the home base and communicate with the sites all over the globe as if she/he was there. Also through a platform that connects experts internationally, the work can be detached from a physical location.

These developments cause significant changes in how the work is managed. Most notably, all employees are becoming specialists in their own niche. This entails that they are the best experts of their own work. Hence, management needs to accommodate to support employees development and motivation. On the other hand, managing from distance also presents managers with a number of new challenges.

Furthermore, the implementation and initialization of new digital systems involve challenges as employees need to adapt to new ways of working. The digitalization does not deal with systems change, but how people react to and accept new systems. The role of management is essential when tackling this challenge. The commitment to change needs to start from the managers who communicate the effects on employee level and support the personnel in the changes. The organization is able to successfully drive change only when the commitment occurs on all organization levels.

These issues are addressed in a panel discussion that combines academic researchers and experienced business professionals. Academic researchers give short introductions to the topic based on their own research. The introductions are followed by a discussion that is facilitated with interesting questions by a moderator.

## 25. WORK PRACTISES AND QUALITY OF WORK

### 25.01

#### Conflict mediation as an instrument in promoting organizational well-being and productivity

Pia Lappalainen

*Aalto University, Espoo, Finland*

Today's work life is experienced as socially and emotionally more consuming than ever before, due, among others, to workforce diversification, autocratic work cultures, increasing competition, technological advances and intensifying demands for employee flexibility. Between individuals, asymmetric engagement, power imbalance, multiparty dynamics and misaligned interests evoke discord. In the absence of instruments for managing controversies in their early stages, they tend to escalate into conflicts.

Organizational research has harnessed a long-time interest in the association between employees' affective commitment and level of achievement, and between work engagement and organizational outcomes. Due to their growing number and ramifications, workplace conflicts as a factor impacting employee affects have recently taken centre stage in work life studies.

A relationship conflict is defined as an incompatibility that is emotional and personal in nature and causes animosity and tension. Interpersonal conflicts constitute the most frequent and dramatic occupational strain factor, the impacts of which are rarely contained to the disputing parties but typically extend to co-workers as bystanders.

Emerging evidence shows that disharmony exposes employees to oppressive physical and psychological affects that trigger cynicism and reduced levels of resilience and optimism, corrupting job satisfaction, commitment, well-being and performance. Generally, an association has been established between intra-organizational conflicts and productivity, and between inter-personal conflicts and counterproductive work behavior, and knowledge is gradually



accumulating on the correlates of negative emotions elicited by workplace conflicts.

As a measure minimizing the corruptive effects of workplace stressors, this investigation proposes restorative mediation as a method for solving intra-organizational conflict. The process is also instrumental for promoting future team dynamics - the manner in which an organization communicates in conflict is an important predictor of future team performance: what the members disagree on has less importance compared to how they handle the resolution process.

This presentation reviews the principles of restorative mediation, adopted from the 1970s US restorative justice practice, as a process founded on the principles of facilitation rather than evaluation. It acknowledges the wrong, empowers the parties, helps restore disputant self-views, reconciles stakeholder interests, and rebuilds trust among the disputants, while setting aside legal foci. In Finland, restorative mediation follows a science-based, validated process that follows seven key steps. However, the process and its parts can be implemented iteratively, which adds to its flexibility and adaptability.

To deepen understanding of the process in question, this work outlines the two key functions of restorative mediation: it facilitates conflict resolution by encouraging disputants towards the tangible outcome, the agreement. As a process, it skills employees in work life abilities and life competences such as self-critical thinking, reflexive introspection and self-awareness, liberating and empowering them not only as workforce but also as individuals. In addition, disputants acquire mindsets that allow them to enhance social support, leadership and communication, which are pertinent for future conflict prevention and mitigation.

The aims of the current presentation are two-fold. On the one hand, it raises awareness of the restorative conflict mediation process as a method for solving conflicts at the inter-human interface at the workplace. On the other hand, it contributes to conflict mediation theory and practice by examining the affective and relational outcomes moderated by restorative mediation.

As an endeavour supporting future mediator training, the study examines the views of disputants from eight mediation cases by means of participant observation and a survey that analyzes participant (n=27) perceptions, especially the socio-emotive load induced during the mediation process, the perceived learning outcomes, and expectations placed on the mediator style and conduct.

Attendees in general perceived the process as an emotionally exhaustive ordeal. Most disputants had high expectations regarding the process itself and the mediators' ability to solve the conflict and were at times disappointed with the outcome, which often seemed like a compromise. Many felt awkward and embarrassed about addressing their emotions, even though they understood the significance of openness and expected that of the others. Most respondents expressed relief about the opportunity to finally address issues that had corrupted the team spirit, which effectively reduced their mental load.

What is probably the most noteworthy empirical finding here is that even when the conflict disputants were dissatisfied with the agreement, they felt the mediation had triggered a longer-spanning process that promoted team dynamics and individual growth. This agrees with prior studies indicating that directive mediator behaviors tend to lead to settlement more effectively, whereas nondirective styles that preserve disputant ownership enhance organizational learning and individual growth.

## 25.02

### Security at Universities

Kari Kuoppala, Sirpa Virta, Vuokko Kohtamäki

*University of Tampere, Tampere, Finland*

We started in the beginning of the year 2017 one and a half year lasting research project concerning the security of universities as working places. The project is funded by the Finnish Work Environment Fund. The first aim of the project is to chart the security and insecurity experiences, knowledge, and development challenges of the personnel at Finnish universities. Security/insecurity is analyzed mainly in connection with the governance of new outside threats in work communities and work environment. The second aim of the project is to develop resilience, situational awareness, snapshot work, and preparedness to new threats at the universities. By the new security threats we mean armed attacks, intrusions into systems, hate mails to individual researchers or teachers, threats, and violence. This kind of research has not been done in Europe almost at all.

We have set two research targets:

1. To chart the present state of security from the perspective of different personnel groups and university organizations, and to compare, if the snapshots between the individual level and organization security differ from each other.
2. To build a model of the resilience, situational awareness, snapshot work, and preparedness to new threats of personnel and university organizations.

We have chosen five Finnish universities as case units to analyze the security of universities. We have planned to do a survey among the personnel groups (teachers, researchers, administration) of the five case universities. In addition we are going to interview the administrative directors of the case universities, safety managers or corresponding from all the Finnish universities, chiefs of police of the chosen university cities, and corresponding chiefs of security police. In the project we make an account of legal responsibilities, of the present state of legislation, and of the needs to develop for the new threats and for the preparation to them.

We analyze our research object mainly from the managerial and organizational point of view. Theoretically our analysis is based on higher education studies, administrative science, and there particularly security administration. Our scientific challenge is based on the specific characteristics of university organization. Security and safety management has been analyzed in the private companies and for them there exists quality systems and managerial models for security management. Because of the special nature of university as an organization these systems and models developed in the company sector suit only partly to university organizations.

Our starting point is the lack of earlier research. In the higher education sector there are some studies from the United States mainly connected to the cases of campus shooting. Security has been analyzed in connection with the development of ICT and its use in teaching. Security of information systems has developed to form a particular field in data sciences. Information security plays only minor role in our research because of the technological nature of information security, which connects to personnel only indirectly. Its importance in the modern organizations is undeniable but it does not belong to our core areas.

In the English language there are two words, safety and security that play important role for

us. Our aim is to concentrate on the security problematics, but much more research is done on the organizational safety. This is true even when universities are concerned. When security is analyzed at universities, the special nature of their organization pops up. Universities are loosely coupled organizations, which means that different units (e.g. faculties) are quite autonomous from many perspectives. Variation among functioning at universities, both personnel and students, is great. Among personnel fixed term contracts are very common and every year a new cohort of students enters the organization. Apart from this there are all the time personnel from other organizations (e.g. catering) functioning in the campus. In addition different events draw people outside the university organization to the campus and buildings all the time. All these things make security management of these open campuses at least challenging. The ideal nature of universities is that they are open in their functioning and their facilities are many ways open, too.

The aim of this presentation is to demonstrate a new research area connected with many different kinds of working life organizations (social service organizations, hospitals, schools). Research area, which according to our minds, is rapidly growing in postmodern societies. At the time of the conference we will people

have preliminary results from the survey study mentioned earlier to give some description about the security situation in the Finnish universities. Our aim is to get the survey replies in May and to start their analysis and to report the preliminary results of the study from the beginning of June.

## 25.03

### **The role of employer, job and employee characteristics for flexible working time. An empirical analysis of overtime work and flexible working hours arrangements using employer-employee data**

Ines Zapf, Enzo Weber

*Institute for Employment Research, Nuremberg, Germany*

Modern working societies face the challenge to combine the establishments' needs with the employees' needs for working-time flexibility. Establishments require working-time flexibility above all to deal with and to respond quickly to fluctuations in demand and to increase performance and productivity. Employees have to be able to cope with this employer-driven working-time flexibility. But there are also growing demands from employees for working-time flexibility, as e.g. work patterns change in households and employees need to adapt the working hours to opening hours of schools or kindergartens. In this case, employees can be in favour of flexible working hours arrangements with a certain degree of self-determination. Consequently, conflicts between the employers and employees' needs for working-time flexibility can arise.

The purpose of our study is to examine the employer-, job- and employee-sided driving factors of working-time flexibility using Germany as a role model. For this purpose, we consider overtime and four different working hours' arrangements as two measures for working-time flexibility. In Germany, overtime work is widespread and working hours' arrangements can be quite different depending on the negotiations between employers and employees' representatives, such as works councils. Whereas overtime hours are a measurement for the actual flexibility in the short

run, the different working hours' arrangements can be regarded as the fundamental regulatory framework in which flexibility occurs. We use overtime as an example for working-time flexibility for employers. Two of the working hours' arrangements provide examples for working-time flexibility mainly for employers and two of them provide examples for working-time flexibility mainly for employees.

We assume that working-time flexibility for employers is mainly driven by employer characteristics, whereas working-time flexibility for employees is mainly driven by employee characteristics. Accordingly, we examine the determinants of overtime and four different working hours' arrangements considering the employers' and employees' side simultaneously. We do so by estimating logistic regression models with a unique linked employer-employee data set for Germany. This data set combines information on individual work contexts and working conditions of employees with workplace-related and establishment-specific information of their employers. It provides crucial information about employees and employers characteristics and, furthermore, about job characteristics having an intermediate position.

In general, our results show that paid and unpaid overtime work and the different working hours arrangements are mainly driven by employer and job characteristics, whereas employee characteristics play a comparatively minor role. This result is most clear for fixed daily working hours and working hours fixed by employer, which may vary. Contrary to a priori assumptions, self-determined working hours by employees and flexitime within a working hours account are also mainly driven by employer and job characteristics. Employer characteristics are most important for paid overtime, working hours fixed by employer, which may vary and flexitime within a working hours account pointing to the power of employers. In contrast, job characteristics are most important for unpaid overtime, fixed daily working hours and self-determined working hours by employee. All in all, our results reveal that overtime and the different working hours' arrangements are mainly employer-oriented. Thus, the appearance of these flexibility settings are mainly determined by employer characteristics, although employees can flexibly organize their working times and can benefit from certain arrangements, such as self-determined working hours and flexitime. For the development of industrial relations and the organisation of flexibility in the future, this result should be considered as a point of departure.

## 25.04

### **Exploring different forms self-employment in Europe: a reflection on working conditions, tools and instruments**

Greet Vermeylen, Mathijn Wilkens, Isabella Biletta

*Eurofound, Dublin, Ireland*

#### Introduction

In the European Union, self-employment seems to surge on the forefront of many policy discussions. While self-employment can be encouraged by member states through policy initiatives supporting start-ups, not all these forms are equally sustainable. Self-employment takes many shapes and forms, some of which are more successful than others. This paper will look at different forms of self-employment in the European Union. Different legal and statistical

classifications will be explored, including forms at the boundary between self-employment and employed work, ie economically dependent workers. This classification will be complemented by analysis of the data on self-employed workers of the 6<sup>th</sup> EWCS (in which a series of extra questions were added to capture better self-employed workers), clustering 5 groups of self-employed, based on a number of criteria related to economic (in) dependency, economic magnitude, economic sustainability. For both the legal forms and clusters of self-employed workers, selected job quality characteristics and work outcomes, in terms of health, mental well-being, work-life balance and work sustainability are explored. A final part will look into specific tools for self-employed workers in terms of extension of social protection rights and representation which are being discussed and/or introduced in the respective member states.

#### Methods

The paper is based on two main sources:

- secondary analysis of the data of the 6<sup>th</sup> European Working Conditions Survey, a European-wide survey of workers in 35 countries, including latent class analysis.
- legal analysis of different forms of self-employment, social protection systems and representation forms for self-employed workers, or subgroups of self-employed workers, in the countries of the European Union

#### Results and conclusion

The aim of the paper is to reflect on the heterogeneity of self-employment as well as to reflect on sustainability of these forms of work, both in terms of work outcomes, job creation potential and building up of social protection rights over the life course in European countries. The mapping will help to overcome some of the generalisations in the policy debate in the European Union.

## 25.05

### **The quality of jobs: the role of job security and the broader institutional context in European comparative case studies**

Pedro Mendonca<sup>1</sup>, Julia Kubisa<sup>2</sup>, Pille Strauss-Raats<sup>3</sup>, Laurens Deprez<sup>4</sup>

<sup>1</sup>Nottingham Trent University, Nottingham, UK, <sup>2</sup>Warsaw University, Warsaw, Poland, <sup>3</sup>Gothenburg University, Gothenburg, Sweden, <sup>4</sup>University D'Evry, Paris, France

This paper explores workers' experiences of job quality in two economic sectors: manufacturing and knowledge industries. Drawing on comparative empirical research from three case studies in Poland, the UK and Belgium, it highlights tensions between the EU aspiration for 'more and better jobs' and the flexible strategies of companies reacting to market pressures. The objective of this paper is to explore employment security in the country context and to consider how organizations deliver job security in terms of workers' contractual status and its effects on job quality.

It is claimed that not only job creation, but also the quality of those jobs, contributes to economic sustainability, social cohesion and individual well-being (European Commission, 2001). While the objective of raising job quality has been prominent, progress towards this aim has been challenged by wider external factors. The processes of globalization, financialization and

technological change in combination with the effects of the economic crisis have led to growing pressure for the flexibilization of labour markets. In the EU, flexibility for employers is balanced by a set of prescribed 'securities' for employees in the concept known as 'flexicurity'. However, there is a growing consensus that institutional changes that have taken place under this policy are biased towards increasing various forms of flexibility for employers while lowering levels of job quality and its polarization (Gallie, 2013). Little is known about the strategies practised by organizations as they respond to the market and political pressures, shaping the experiences of job quality for employees.

This paper first examines job quality as a concept, together with the major analytical approaches to it, and draws attention to how debates focusing on institutional frameworks do not entirely explain the changing drivers of job quality at an organizational level.

Second, the paper presents qualitative research evidence from three case studies in three countries representing two different manufacturing sectors and the software industry. In doing so, it draws from qualitative [semi-structured interviews, observation and document analysis] and quantitative data [questionnaires] gathered in three countries. Using the whisky industry in Scotland, commercial transport vehicle manufacturing in Poland, and information and communication technologies (ICT) work in Belgium, the paper shows, for each country, the institutional framework of employment security within which the companies build strategies to remain competitive and flexible.

Third, the main findings of this paper relate to emerging patterns of employment dualization – the segregation of workers into groups with different forms of contracts. It shows how, within the same employment security arrangements, workers can experience different job-security and job-quality outcomes at the sectoral and organizational level.

## 25.06

### **'Flexiquality'? Towards new research pathways and policy recommendations on protecting job quality in an era of flexibility**

Tommy Isidorsson<sup>1</sup>, Julia Kubisa<sup>2</sup>

<sup>1</sup>University of Gothenburg, Department of Sociology and Work Science, Gothenburg, Sweden, <sup>2</sup>University of Warsaw, Institute of Sociology, Warsaw, Poland

The objective of the paper and presentation is to present and discuss the general outcomes of the edited volume 'Job Quality in an Era of Flexibility' that investigates the relation between experiences of job quality and flexibility practices in order to present new research pathways and suggestions for policy recommendations.

The qualitative and quantitative research in four European countries, in manufacturing, public services, service sector and in temporary work agencies, collected in the book shows how different kinds of pressure for flexibility practices shape workers' experiences of job quality but also show their strategies to cope with internal and external pressures for flexibility in workplaces, professions and sectors. We state that organizations currently are under constant market pressure to adopt to change, which results in engaging in various internal and external flexible practices taking its form in such as annualisation of working hours, casualization of workforce, and use of temporary agency workers. The extent of these flexibility practices allows



us characterising current situation on labour markets as an era of flexibility. The job quality is understood as combination of different dimensions: employment quality (e.g. wage, type of contract, working hours, skill development) and work quality (autonomy, speed, work intensity, participation), and reveal the multidimensionality and dynamic nature of job quality (Munoz de Bustillo et al. 2009). The cases show how intensively different dimensions of job quality are intertwined.

The presentation aims to discuss more general conclusions of the collected various research projects conducted under shared framework of relation between job quality and flexibility. Which dimensions of job quality are most affected by flexibility practices and what are the effects for workers? Are there flexibility practices that improve job quality? What is the role of the role of workers' agency in securing job quality in the context of flexibility practices?

We strive to take the job quality research further by introducing the concept "flexiquality", i.e. a combination of flexibility and job quality. We will discuss new possible pathways for research on job quality, and last but not least we want to formulate initial policy recommendations we discuss if and how it is possible to achieve "flexiquality", a combination that is beneficial for both management and workers?

## 25.07

### Organization of work in Nordic countries: analyzing change in public and private sector 2005-2015

Tomi Oinas, Timo Anttila, Armi Mustosmäki

*University of Jyväskylä, Jyväskylä, Finland*

The introduction of new forms of work organization has been on the European and on national policy agendas since the Luxemburg Employment Summit and the publication of the European Commission Green paper on new forms of work organization. New forms of work organization are regarded as key to competitive performance. According to European comparative studies, organizational change and restructuration have been especially prevalent in Nordic countries. Especially public sector organizations have been under turbulence due to pressures for cost reduction and increasing efficiency. Yet, not much is known about how these changes have affected the organization of everyday work and employee experiences. Are new forms of work organization (so called learning organizations) becoming more prevalent or are the new pressures increasing more traditional management techniques?

Our analysis is based on the last three waves of European Working Conditions surveys (2005, 2010 & 2015) including employees from public and private sector organizations in Sweden, Finland, Denmark and Norway. We apply the two-phase methodology developed by Lorenz and Valeyre (2005) for deriving types of work organisation. First, multiple correspondence analysis (MCA) is used to find common dimensions among variables measuring work organisation. Second, the scale values of dimensions derived from MCA are used as a basis for clustering individuals into types of work organisation using hierarchical cluster analysis.

Preliminary results indicate that there has been slight decrease in work formalization, especially in Finland and Norway. There were no differences between sectors in work formalization. Learning and autonomy based models of work organization showed no increase in any of the

countries. However, there were marked differences between sectors. These forms of work organization were more common in public sector in all countries. Finland seems to be lagging behind the other Nordic countries in the adoption of new innovative and productive forms of work organization in both the private and the public sector.

## 25.08

### Gamification as a teamwork method for entrepreneurial teams – an experimental study

Polina Trusova

*Heinrich-Heine-University, Düsseldorf, Germany*

The vast majority of German start-ups (Ripsas & Tröger, 2015) is founded by teams. This has some important advantages compared to firms founded by single entrepreneurs. Empirical studies show that young enterprises founded by teams grow faster (Cooper & Bruno, 1977) and are more successful (Cooney, 2005). At the same time, ineffective teamwork is considered as one of the crucial reasons for failure of young enterprises (Bruno, McQuarrie & Torgimson, 1992; Terpstra, 1993). Therefore, gaining knowledge about teamwork methods, its implementation and effectiveness is essential for understanding the success and failure factors for young enterprises.

There is a big range of methods which are supposed to make teamwork more effective. A new and up to now seldomly investigated approach is gamification. Deterding et al. (2011) define it as "the use of game design elements in non-game contexts". Diverse gamified approaches were already successfully implemented for idea generation in groups (e.g. Birke, Bilgram & Füller, 2012; Gray, Brown & Macanuso, 2010). Hamari, Koivisto and Sarsa (2014) speculate that the participant's personality may have an effect on their performance in a gamified task.

Taking into account the concept of "entrepreneurial personality", it can be assumed that gamification can have a positive impact on performance of entrepreneurs and entrepreneurial teams. Previous meta-analyses show that entrepreneurs, for example, score higher on risk propensity (Stewart & Roth, 2001), Conscientiousness and Openness to Experience, but score lower on Neuroticism and Agreeableness compared to non-entrepreneurs (Zhao & Seibert, 2006). As entrepreneurs tend to perceive risky or new experiences more positively than non-entrepreneurs, it can be speculated that they are highly motivated by new methods, e.g. gamification. In general, people perform better on tasks they enjoy compared to other tasks (Rheinberg, 2010). It is therefore reasonable to assume that gamification has an especially positive effect on results of entrepreneurial teams compared to non-entrepreneurial teams. Although Extraversion does not correlate with entrepreneurial status (Zhao & Seibert, 2006), we still believe that this Big Five factor could be relevant for our study. For example, Codish and Ravid (2014) show that introverts and extraverts perceive playfulness of some gamification elements differently. Based on Eysenck's (1967) theory of introversion-extraversion we assume that introverts who are more sensitive to stimulation than extraverts do not benefit from gamified settings providing extra stimuli. However, this research field was not investigated in detail yet. Therefore, the aim of the study is to test whether gamification is an effective teamwork method for entrepreneurial teams considering entrepreneurial personality.

In our experiment with a student sample we simulate a crisis meeting of two or three persons

by presenting a case study in a gamified and a control condition. As dependent variables we implemented the total number of ideas, the number of creative ideas which are not mentioned in standard solution and personal speech time during discussion. We control for team size, relationship duration between team members, sex of team members and frequency of game playing in everyday life. The participants fill out a personality questionnaire which is being presented randomly either at the beginning or at the end of the case study. It consists of the entrepreneurial intention scale (Zapkau et al., 2015), a short version of the Big Five Inventory (Rammstedt & John 2005), a short version of the internal and external locus of control scale (Jakoby & Jacob 1999) and the Arnett Inventory of Sensation Seeking (Roth & Mayerhofer 2014).

In the case study participants are asked to imagine themselves to be part of the entrepreneurial team and to develop an analytical approach as well as to generate creative ideas in order to solve current problems of their enterprise. The procedure includes individual idea generation and group discussion in both conditions. We complement the gamified condition with following mechanics: special opening ritual (McGonial, 2016), points for ideas, extra points for creative ideas, badges and leaderboard of top 5 teams.

From previous empirical findings we derived the following research hypotheses:

1. The higher people's entrepreneurial intention, the more their personality traits overlap with entrepreneurial personality traits.
2. The higher people's entrepreneurial intention, the more ideas they generate in gamified teamwork.
3. More creative ideas are generated in gamified teamwork in comparison to non-gamified teamwork.
4. The higher people's score on extraversion, the longer their speech time in gamified teamwork.

The study will be carried out until February 2017, so that data analysis will be completed by August 2017 and results and discussion can be presented. We expect contributions to literature in the following aspects: (1) effectiveness of gamification, (2) teamwork methods and (3) idea generation. A unique feature of our study is its embedding in entrepreneurship research.

## 25.09

### Job quality and trade unions: bringing labour to the job quality debate

Pedro Mendonca

*Nottingham Trent University, Nottingham, UK*

This paper examines the role of workers in regulating and shaping job quality. It explores how the drive towards flexibility—reflected in the casualisation of labour—impacts on workers' job quality experience. Furthermore, it examines whether such flexible practices hinder the union's role in shaping and regulating job quality on the shop floor. By analysing the dynamics happening on the company level, this paper addresses job quality as a contested outcome of the power

relation between employer and employee (Kelly, 1998), rather than a static outcome of national institutional forces (Gallie, 2013; Holamn, 2013). The paper also engages in the debate on the validity of core (a full-time group of workers who are fundamental to the successful running of the business) and periphery (contingent workers who are functionally used to adjusting to market fluctuations), and on the use of flexibility for employers and employees.

This paper draws on research evidence from one case study, a large bottling hall involved in the process of bottling and packaging of spirit in the UK. Qualitative research data was gathered using semi-structured interviews and through numerous hours of observation. Danermark et al. (2002) argue that the importance in case study research relates to the way it allows an in-depth understanding of the workplace. In this way, it was conducted 28 semi-structured interviews and 3 focus groups with a number of 6 participants in each group. The participants included full-time and flexible workers, managers and line managers, and union representatives. The interviews were in general 45 minutes to 1 hour long and were conducted within the premises of the workplaces, whereas the focus groups varied between one and one and half hours. In addition, a number of organisational documents were analysed, such as employee engagement survey, measurement of labour utilisation documents, recruitment and selection documents, as well as other financial official papers. Also, observation of the day-to-day working tasks was undertaken, totalling an overall of 7 visits. As it is standard practice in qualitative research, the sample was not aimed at making it statistically significant; rather it aims at discussing in a comprehensive way the theoretical aspects using a multilevel analysis (Ackroyd, 2004).

The findings highlight the level of flexibility required across the shop-floor workforce. In the case study, both numerical and working time flexibility were complementary, and management relied on both for the successful running of the business. This was found to deeply affect workers' job quality, not only in terms of stress and work-life balance, but also in work intensity and work pressures. Data revealed that the union was not able to ameliorate job quality experiences, and it actually deepened the segregation and segmentation of certain groups of workers. This was related to the lack of institutional and, in some way, associational power.

## 25.10

### Poster Presentation: Lean-thinking in Health Care, case Healthcare Center of Turku

Riikka Maijala<sup>1,2</sup>, Heli Irmeli Leino<sup>3</sup>, Sini Eloranta<sup>4,5</sup>, Tuija Ikonen<sup>1,2</sup>

<sup>1</sup>Turku University Hospital, Turku, Finland, <sup>2</sup>Department of Public Health, University of Turku, Turku, Finland, <sup>3</sup>City of Turku, Turku, Finland, <sup>4</sup>University of Applied Sciences, Health and Well-being, Turku, Finland, <sup>5</sup>Department of Nursing Science, University of Turku, Turku, Finland

The Lean-thinking, which originally has been developed at the Toyota car factory in Japan, has increasingly been adapted worldwide to healthcare systems since the beginning of this millennium. The aim is to produce more value to the clients and use resources effectively.

#### Aim

The aim of this research was to increase the knowledge of the present Waste in healthcare centres and of how to prevent it.

#### Methods

At one healthcare centre altogether 1743 Waste factors were estimated in client contacts by using specially developed estimation form (Outpatient Waste Identification Tool) to estimate the Waste. First, members of staff at this healthcare center during a two day period, estimated the Waste factors, then they analysed the basic reasons and effects of the Waste and based on the results, mended the ways of how to operate. Another period of two days was taken place and result analysing was done after six weeks from the first estimation.

#### Key findings

Waste appeared mostly in work breakups, longer lasting consultations than planned, and the office working hours of doctors, for instance in prescription renewal methods. Waste was successfully eliminated for instance by developing consultation methods.

#### Conclusion

Systematic recognition of the Waste factors in healthcare centres they can be eliminated and at the same time make the work more fluid.



Aaltio I, 4.01  
 Aalto A, 17.10  
 Aaltonen I, 16.07  
 Aaltonen S, 10.04  
 Aho S, 7.02  
 Ahonen P, 16.06  
 Ahrens D, 2.13  
 Ajunwa I, K6  
 Ala-Laurinaho A, 23.06  
 Alasoini T, 11.02  
 Alatalo P, 19.03  
 Amble N, 2.11, 2.14, 17.07  
 Amundsen O, 2.14, 17.07  
 Ansio H, 6.05  
 Anttila T, 2.18, 17.11, 25.07  
 Arnerić N, 4.10  
 Badger A, 20.02  
 Baiyere A, 12.07, 14.05  
 Bakker A, 6.03  
 Baxter D, 12.04  
 Beck V, 7.03  
 Bergman A, 1.14  
 Berki E, 3.06  
 Bianco A, 7.01  
 Bie-Drivdal A, 21.06  
 Biese I, 15.02  
 Biletta I, 25.04  
 Bleys B, 13.02  
 Blignaut S, 11.21  
 Blomgren J, 4.05  
 Blomquist T, 10.03  
 Blomqvist K, 24.01  
 Bolin M, 21.02  
 Bondarouk T, 12.03, 16.09  
 Bordi L, 1.05, 8.02  
 Boshuizen E, 15.04  
 Bos-Nehles A, 12.03  
 Brinkmann L, 23.08  
 Brown C, 15.01  
 Brozsely B, 2.08  
 Bäck H, 3.01  
 Bäck E, 3.01  
 Bähr H, 10.01  
 Caprani I, 2.12  
 Carter N, 8.07  
 Castanheira F, 6.04  
 Castillo M, 19.02  
 Chambel M, 6.04  
 Chiaromonte W, 10.09  
 Conen W, 18.01  
 Cowen Forssell R, 12.01  
 D Farashah A, 10.03  
 De Beer P, 18.01  
 De Witte H, 6.06  
 Deprez L, 25.05  
 Dernovšek Hafner N, 4.10  
 Diebig M, 4.02  
 Dietz M, 10.01  
 Dodić Fikfak M, 4.10  
 Dorau R, 23.05  
 Draksler K, 4.10  
 Duemmler K, 2.12  
 Dyer A, 2.10  
 Eikeland O, 2.14  
 Elkina A, 7.04  
 Eloranta S, 25.10  
 Elsholz U, 2.16  
 Elnäs S, 8.07  
 Engström A, 8.07  
 Eriksson P, 2.01  
 Eriksson T, 24.01  
 Faupel S, 8.01  
 Fayankinnu E, 11.15  
 Felder A, 2.12  
 Fischer C, 1.08, 23.08  
 Fogelberg Eriksson A, 3.07  
 Forma P, 11.16, 11.19  
 Fors P, 8.11  
 Forsten-Astikainen R, 8.04  
 Fuglsang L, 21.05  
 Ghaffaripour S, 4.06  
 Goller M, 23.08  
 Gorbis M, K1  
 Greene D, K6  
 Grosjean V, 13.04  
 Gustafsson Sendén M, 3.01  
 Güntürk-Kuhl B, 23.04  
 Haapakorpi A, 2.15  
 Habraken M, 16.09  
 Hakanen J, 6.01, 6.02, 6.05  
 Hakanurmi S, 11.08  
 Hakkarainen K, 2.17  
 Hakola L, 12.02  
 Halttunen T, 2.18, 17.11  
 Harikkala-Laihin R, 4.21  
 Harju M, 22.04  
 Harjumaa M, 8.05  
 Harris L, 12.04  
 Harteis C, 23.08  
 Hassett M, 4.21  
 Hasu M, 17.09, 21.01, 21.05, 23.06  
 Hazak A, 11.17, 11.14  
 Heikkilä M, 4.13  
 Heikkilä J, 11.20  
 Heikkilä-Tammi K, 1.05, 1.07, 4.14, 8.02  
 Heiliö L, 24.01

Heilmann P, 8.04  
 Heinonen J, 2.06  
 Helmrich R, 1.06, 17.01  
 Hennala L, 16.03  
 Henttonen K, 2.01  
 Heponiemi T, 17.10  
 Hietapakka L, 17.08  
 Hilger T, 2.16  
 Hiltunen S, 11.21  
 Hofmeister H, 3.03  
 Holmgren Caicedo M, 15.06  
 Horila T, 11.10  
 Horstia J, 4.22  
 Houni P, 6.05  
 Husman P, 4.19  
 Huvila I, 21.03  
 Hyppönen H, 17.10  
 Hytti U, 2.01, 2.04  
 Hytönen K, 2.17  
 Hyypiä M, 1.01, 16.06  
 Håkansson K, 14.03  
 Iguti A, 4.23, 23.03  
 Ikonen T, 25.10  
 Ilonen (os. Suomalainen) S, 2.06  
 Inkinen H, 3.04, 22.03  
 Isidorsson T, 14.03, 25.06  
 Jacobs J, K3  
 Jakobsson Lund A, 17.02  
 Jakonen M, 14.04  
 Jallinoja N, 17.04, 17.05  
 Johansen E, 2.11, 17.07  
 Juvonen-Posti P, 4.19  
 Järleström M, 19.04  
 Kaleva S, 4.16, 4.23  
 Kallioniemi M, 4.25  
 Kantola I, 1.10  
 Karim M, 23.09  
 Karima S, 11.05  
 Kasanen K, 2.02, 2.03  
 Kaseva J, 4.25  
 Kauhanen M, 14.01, 14.02  
 Kenney M, K2  
 Kessler S, 23.07  
 Ketonen-Oksi S, 1.15  
 Keyriläinen M, 1.13  
 Kiviniemi L, 4.26  
 Klaassen J, 19.01  
 Klockmo C, 17.02  
 Kohtamäki V, 25.02  
 Komulainen K, 2.02, 2.03  
 Konle-Seidl R, 7.02  
 Koponen A, 24.01  
 Kork A, 8.09

Koskela I, 4.19, 8.09  
 Koskinen Sandberg P, 11.09  
 Kozlinska I, 2.05  
 Kronberg A, 3.03  
 Kubisa J, 25.05, 25.06  
 Kukumägi Ü, 8.08  
 Kuleva M, 15.08  
 Kultalahti S, 4.03  
 Kunze E, 1.03  
 Kuokkanen A, 4.07  
 Kuoppala K, 25.02  
 Kurki A, 4.18  
 Kuula T, 16.07  
 Kvist E, 11.06  
 Kymäläinen H, 4.25  
 Käpykangas S, 17.09, 21.01  
 Laakso M, 22.01  
 Laaksonen M, 4.05  
 Laapotti T, 11.13  
 Laiho M, 4.24  
 Laitinen H, 4.26  
 Laitinen J, 4.12  
 Lamminen J, 9.03  
 Lappalainen P, 25.01  
 Lappalainen I, 16.05  
 Lappi S, 4.09  
 Larja L, 10.02, 10.06  
 Larjovuori R, 8.02  
 Laulainen S, 17.08  
 Laurila J, 12.06  
 Lehtinen E, 2.17, 15.04  
 Leino H, 25.10  
 Levin P, K4  
 Leväsluoto J, 8.05  
 Liesivuori J, 4.15  
 Lindholm M, 4.26  
 Lintula S, 24.01  
 Looise J, 5.03  
 Loppela K, 8.10  
 Lunner Kolstrup C, 4.25  
 Lusa S, 4.12  
 Luukko J, 2.07, 10.02  
 Lähteenmäki J, 8.05  
 Löwstedt J, 19.01  
 Maijala R, 25.10  
 Marstio I, 16.07  
 Martela F, 18.03  
 Martin P, 23.05  
 Maunula G, 9.01  
 May V, 22.01  
 Melander S, 3.01  
 Melkas H, 1.02, 16.03  
 Mendonca P, 25.05, 25.09

Methorst H, 12.03  
 Mets T, 2.05  
 Michaels L, 11.01  
 Mikkonen S, 2.18  
 Mikonen S, 17.11  
 Miwa H, 16.08  
 Moilanen S, 22.01  
 Monteiro I, 4.16, 4.23, 23.03  
 Montonen T, 2.01  
 Muhonen M, 1.17  
 Multisilta J, 23.01  
 Murto J, 9.02  
 Mustosmäki A, 25.07  
 Mårtensson Hansson M, 15.06  
 Mäkelä L, 4.13, 4.17  
 Mäkikangas A, 6.03  
 Mäkinen K, 3.05  
 Mäkinen M, 1.17  
 Mäkinen J, 1.05, 1.07, 4.14  
 Männasoo K, 11.14, 11.17  
 Naumanen P, 4.15  
 Niemelä M, 16.05, 16.08  
 Niemelä M, 4.05  
 Niemimaa M, 12.07  
 Niemistö C, 4.09  
 Niiranen V, 17.08  
 Nixon D, 2.08  
 Nokelainen P, 2.18, 17.03, 17.11, 17.06  
 Norup I, 7.02  
 Nummela N, 4.21  
 Nurminen M, 11.20  
 Nuutinen S, 8.02  
 Nyman J, 2.09  
 Nätti J, 4.04, 14.01, 14.02  
 Oborni K, 22.02  
 Oinas T, 25.07  
 Ojala S, 4.04, 14.01, 14.02  
 Okkonen J, 1.05  
 Oksanen A, 16.04  
 Olbertz-Siitonen M, 1.12  
 Olofsdotter G, 21.02  
 Ovaska J, 1.02  
 Overud J, 11.06  
 Paalumäki A, 4.24, 12.06  
 Palm K, 1.14  
 Palmgren H, 4.16, 4.23  
 Palmunen L, 23.02  
 Palonen T, 2.17, 2.18, 15.04, 17.11  
 Parjanen S, 1.01  
 Partinen M, 11.17  
 Peeters M, 6.02  
 Pekkarinen S, 1.02, 16.03  
 Pekkarinen A, 19.04

Perttula A, 23.01  
 Perttula P, 23.06  
 Pesonen S, 4.19  
 Peura K, 2.01, 2.04  
 Pietiläinen M, 3.08, 4.04  
 Poutanen S, 20.04  
 Pritchard K, 3.02, 15.01  
 Pylväs L, 17.06  
 Pärnänen A, 1.11  
 Pöhler A, 1.08  
 Raappana M, 11.11  
 Raiden A, 4.11  
 Raisanen C, 4.11  
 Raitis J, 4.21  
 Rajakangas E, 4.26  
 Ram M, K5  
 Rauramo P, 4.20  
 Rebmann A, 2.05  
 Revers M, 3.03  
 Rhein T, 7.02  
 Rintala H, 17.06  
 Rismark M, 2.14, 17.07  
 Rissanen T, 24.01  
 Ristimäki P, 5.01  
 Ristimäki H, 4.19  
 Robinson J, 18.02  
 Rolandsson B, 12.05  
 Rosengren C, 1.14  
 Rothe T, 7.02  
 Ruohonen M, 1.16  
 Ruusuvuori J, 4.12, 4.19  
 Ryömä A, 23.02  
 Räisänen T, 10.08  
 Rätty H, 2.03  
 Rödel B, 11.03  
 Saarenpää K, 4.17, 22.04  
 Saari E, 17.09, 21.01  
 Saari M, 11.09  
 Sahimaa J, 18.03  
 Saikkonen L, 1.17  
 Salakoski T, 11.21  
 Salminen H, 4.01  
 Salminen-Karlsson M, 3.07  
 Salonen L, 4.05  
 Santos A, 6.04  
 Saru E, 19.04  
 Savela N, 16.04  
 Savola J, 24.01  
 Savolainen T, 11.21  
 Schalembier B, 13.02  
 Schaufeli W, 6.02, 6.03  
 Seppälä P, 6.05  
 Seppänen L, 21.04

Sevón E, 22.01  
 Shimizu-Tanaka H, 4.08  
 Siegert S, 15.06  
 Sihvonen M, 1.17  
 Siivonen P, 2.02, 2.03  
 Sinervo T, 17.08  
 Sjöstedt Landen A, 21.02  
 Smale A, 8.06  
 Sohler L, 11.07  
 Stiklestad S, 2.14, 17.07  
 Strauss-Raats P, 25.05  
 Suhonen J, 11.21  
 Sumanen P, 13.03  
 Sumelius J, 8.06  
 Sutela H, 10.06  
 Sutinen E, 11.21  
 Symon G, 15.05  
 Süß S, 4.02, 8.01  
 Syvänen A, 4.14  
 Syvänen A, 1.07, 8.10  
 Szombati J, 10.07  
 Särkikoski T, 16.02  
 Sörensson E, 11.06  
 Talja H, 8.05, 16.05  
 Tammelin M, 22.06  
 Tanskanen J, 8.03  
 Taylor S, 15.03  
 Taylor R, 12.04  
 Teixeira J, 1.09  
 Teperi A, 4.18  
 Thompson D, 2.10  
 Tiainen T, 3.06  
 Tiemann M, 1.06, 17.01  
 Tiitinen S, 4.12  
 Tikkamäki K, 8.10  
 Timonen H, 1.04  
 Toiviainen H, 21.04  
 Toppinen-Tanner S, 17.04  
 Trusova P, 25.08  
 Tuikka A, 12.07, 14.05  
 Tuomi P, 23.01  
 Tuominen T, 21.05  
 Tuomivaara S, 23.06  
 Tuori A, 4.09  
 Tupala M, 10.05  
 Turja T, 16.02, 16.04  
 Turja M, 4.27  
 Turpeinen M, 8.09  
 Turtiainen J, 4.07, 5.02  
 Uusiautti S, 11.05  
 Uusitalo H, 4.18  
 Vallas S, 20.03  
 Van Aerschot L, 16.02

Van den Broeck A, 6.06  
 Van Ootegem L, 11.07, 13.02  
 Vanbelle E, 6.06  
 Vanhala S, 19.04  
 Varje P, 4.07, 5.02  
 Vartiainen K, 1.16  
 Vehviläinen S, 4.12  
 Venter K, 22.05  
 Verhofstadt E, 11.07, 13.02  
 Vermeylen G, 13.01, 25.04  
 Vetoshkina L, 11.04  
 Viitala R, 4.03  
 Viitanen A, 24.01  
 Virkebau M, 11.14  
 Virta S, 25.02  
 Viteli J, 1.07, 4.14  
 Vuorenmaa H, 8.06  
 Vuori J, 1.04, 17.04, 17.05  
 Vuori J, 17.04  
 Vuorinen-Lampila P, 2.15  
 Vähämäki M, 12.08  
 Väyrynen S, 4.26  
 Väänänen A, 4.07  
 Waaler S, 2.14, 17.07  
 Wallin A, 17.03  
 Wallin M, 17.04  
 Wang Q, 4.01  
 Watanabe K, 16.08  
 Weber E, 25.03  
 Weiste E, 4.12  
 Whiting R, 3.02, 15.05  
 Widén G, 23.09  
 Wilke C, 1.03  
 Wilkens M, 25.04  
 Williams G, 7.03  
 Wittrock C, 8.12, 15.07  
 Wulf I, 4.02  
 Yang X, 11.12  
 Ylikauppila M, 16.08  
 Zapf I, 25.03  
 Zimic S, 17.02  
 Zimmer M, 12.07  
 Zitting J, 17.08





*We thank our sponsors for supporting WORK2017*



FEDERATION OF FINNISH LEARNED SOCIETIES

**SITRA**



Työsuojelurahasto  
Arbetarskyddsfonden  
The Finnish Work Environment Fund

**Turku School of Economics Support Foundation**



**CITY OF  
TURKU**

**LUMENE**



OP Turun Seutu