ABSTRACT BOOK

WORK2025

20–22 August 2025 | Turku, Finland
Hybrid Conference

Work in the Era of Unruly AI

UNIVERSITY OF TURKU

Työsuojelurahasto
Arbetarskyddsfonden
The Finnish Work Environment Fund

Federation of Finnish Learned Societies

Turku School of Economics Support Foundation

TURKU

visit turku

ISBN 978-952-02-0265-1
Editor: Seppo Poutanen

TABLE OF CONTENTS

TAMING THE UNRULY AI FROM MULTIPLE DIRECTIONS – INTRODUCTION TO THE ABSTRACT BOOK OF WORK2025

Seppo Poutanen
Conference Chair

The seventh international, multi- and interdisciplinary WORK -conference, titled this year "Work in the Era of Unruly AI", took place physically in Arcanum, the house of humanities at the University of Turku 20–22 August 2025. It was also executed in hybrid mode with first-rate technical resources. Special thanks to our organisational and technical cooperation partners Certia Events and Rajupaja!

WORK2025 gathered approximately 260 contributors from all over the world and produced a rich and dynamic flow of keynotes, presentations, debates and discussions over three days. Since its beginning in 2013, the biennially organized WORK has always received numerous praise from attendees for its high-class keynotes and general programme, smooth organization and arrangements, and warm and encouraging spirit. This year was not an exception in these respects, and so I once more want to thank, in addition to all the wonderful attendees, Anne Kovalainen, Emmi Lehtinen and Stella Wiman from the organising committee, and our highly motivated and skilled group of research assistants!

We had eighteen different research streams, and this abstract book shows the great variety and multidimensionality of the subjects presented and discussed in the streams. The themes varied from robotics, AI worldbuilding, precarious employment, hybrid working, climate change to ethical care work, work-related learning and women's leadership, for example.

A successful scientific conference would not be possible without excellent plenary speakers, who open inspiring and cutting-edge perspectives into the general theme of the conference. Antonio Casilli, Margunn Aanestad, Janja Komljenovic, Benjamin Shestakofsky and Steven Vallas more than fulfilled our high expectations, and in what follows, short summaries of their keynote speeches are presented. Rather aptly concerning our general conference theme, ChatGPT5 assisted in drafting the summaries. Several essential themes and issues unite the excellent keynotes, and many important questions in urgent need of further social scientific research are highlighted.

Antonio Casilli, Professor of Sociology at the Institut Polytechnique de Paris, France
Title: "Where does AI come from? Global circulation of data and human labor behind automation"

Introduction

Professor Casilli critically examined the social, economic, and technical foundations of artificial intelligence (AI). While public discourse often portrays AI as autonomous and machine-driven, the keynote highlighted the indispensable role of human labor and global inequalities in sustaining AI systems. It demonstrated that AI cannot be understood without acknowledging the hidden workforce and skewed data infrastructures that underpin it.

Human Labor in AI: The PVI Framework

Professor Casilli adopted the PVI framework—Preparation, Verification, and Impersonation—to categorize forms of human work that make AI possible.

Preparation involves generating and curating training data. Workers label images, moderate harmful online content, and even create staged photos or videos for training datasets. Some tasks are uncomfortable, such as moderating pornography or labeling excrement for cleaning robots, yet workers accept them because they pay slightly better than ordinary microtasks.

Verification consists of checking and correcting AI outputs. Workers listen to audio recordings, assess whether AI transcriptions are accurate, and correct errors when necessary. Their interventions ensure that speech recognition and other AI systems achieve acceptable performance levels.

Impersonation occurs when humans simulate AI systems. Examples include workers in Madagascar remotely monitoring French retail stores for theft, Amazon's "Just Walk Out" stores depending on thousands of human monitors in India, and Google Duplex calls being handled by human operators instead of automated systems. These cases illustrate how human labor is concealed behind the façade of machine intelligence.

Global Inequalities in AI Labor

The keynote stressed the unequal geography of AI work. Tasks are outsourced from corporations in high-income countries to workers in lower-income regions such as Madagascar, Kenya, and the Philippines. Workers' compensation is minimal—sometimes in food staples such as rice or sardines—and precarious. A widely cited example is the use of Kenyan contractors paid less than two dollars per hour to filter toxic data during ChatGPT's training. This outsourcing reveals a clear North–South dynamic, where the Global North consumes the benefits of AI while the Global South provides the labor under exploitative conditions. The work is fragmented, short-term, and lacks social protections.

Invisible and Ghost Labor

Professor Casilli introduced the concept of "invisible" or "ghost" labor to describe how AI workers remain hidden. Images of annotation centers and home-based workstations illustrate how critical these workers are, yet their contributions are deliberately obscured. Corporations brand their products as autonomous, thereby erasing the human inputs that enable them. Ghost labor also signifies the absence of recognition, fair pay, and institutional protections for those whose work sustains the AI economy.

Pre-Training and Platform Intermediaries

Large language models like ChatGPT rely heavily on pre-training by human workers. Platforms such as Sama, Scale AI, Lionbridge, and Upwork act as intermediaries, distributing annotation and reinforcement learning with human feedback (RLHF) tasks to dispersed workers. Professor Casilli emphasized that the "P" in GPT (Generative Pre-trained Transformer) symbolizes vast amounts of human involvement. Press reports have exposed how OpenAI and other firms subcontract low-paid workers in Kenya and elsewhere to filter harmful data, making AI systems safer for commercial release. This stage of pre-training is thus not machine-driven alone but fundamentally shaped by global networks of hidden human labor.

Data as the Fuel of AI

A central claim of the keynote was that "data is what fuels AI." Historical timelines and maps illustrate the centrality of datasets to AI's development. From early chess game datasets in the 1990s, to ImageNet's 14 million labeled images, to large-scale web scrapes like Common Crawl, AI progress has depended on the accumulation of massive, annotated datasets. However, the distribution of datasets is highly unequal. Elite institutions such as Stanford, Microsoft, and Princeton dominate the production of benchmark datasets. Moreover, recent MIT analyses of over 4,000 datasets show that:

- The majority originate from web and social media platforms.
- Representation has not improved significantly in terms of geography or language.
- English and Chinese dominate, while the Global South is starkly underrepresented. Training corpora for GPT models—Common Crawl, WebText2, Books1/2, and Wikipedia—reflect this imbalance, reproducing cultural and linguistic inequalities in AI outputs.

Historical Context and Model Scaling

Professor Casilli situated AI within a longer trajectory of datafication. Key milestones, such as Deep Blue's victory over Kasparov (1997), Watson's Jeopardy performance (2011), and AlphaGo's win against Lee Sedol (2016), were enabled by access to large, structured datasets. The message is clear: there is "no automation without datafication." In parallel, the field has been marked by the pursuit of ever-larger models. Graphs show the exponential increase in parameters, with language, vision, and image-generation models reaching billions or trillions of parameters. This hypertrophic growth was critiqued as unsustainable and as a distraction from ethical and social issues. Despite hype about Artificial General Intelligence (AGI), models remain at the level of Artificial Narrow Intelligence (ANI), heavily reliant on data and human support.

Alternative Geographies of AI Work

The maps titled "Another Geography Tells a Different Story" expanded the analysis by documenting the shifting locations of AI labor across Latin America, Africa, Europe, and Asia. Countries such as Venezuela, Cameroon, and Bangladesh are significant sites of annotation and verification, demonstrating the flexibility and volatility of outsourcing networks. These geographies illustrate how corporations move tasks across borders depending on cost, regulation, and political stability.

Worker Testimonies and Lived Realities

The inclusion of worker testimonies provide valuable insight into the lived experiences behind abstract processes. Workers describe long training periods, surveillance-like tasks, and emotionally taxing duties. One worker compares remote monitoring to being a security guard from a distance, while another describes the burden of moderating harmful content. These voices highlight the human costs of sustaining AI systems marketed as autonomous.

Conclusion

Professor Casilli challenged the dominant narrative of AI as a self-sufficient technology. Instead, AI emerged as a socio-technical system built on hidden labor, uneven geographies, and biased data. The PVI framework (Preparation, Verification, Impersonation) shows that human input is indispensable at every stage of AI's lifecycle. At the same time, the drive toward hypertrophic models obscures the ethical and political dimensions of AI's dependence on invisible workers and unequal data regimes. To understand AI fully, one must see beyond the technological surface and recognize the collective, global human labor that underpins it. Acknowledging and valuing these contributions is not only a matter of justice for workers but also essential for building more equitable and accountable AI systems.

Margunn Aanestad, Professor of Information Systems at the University of Oslo, Norway Title: "Organizational implementation of AI – tales from the field"

Introduction

Professor Aanestad explored the organizational adoption of artificial intelligence (AI) and the broader socio-technical implications of data-driven infrastructures. Rather than viewing AI as a purely technical achievement, she emphasized that AI integration must be understood as a distributed process involving human actors, institutional structures, and technological systems. Drawing on case studies from the Norwegian public sector and the shipping industry, Professor Aanestad illustrated how AI adoption reshapes practices, raises epistemological challenges, and transforms work rather than eliminating it.

Theoretical Orientations

Professor Aanestad adopted a socio-technical framework, stressing that AI cannot be isolated from the organizational and institutional settings in which it is embedded. Concepts such as distributed cognition and infrastructural work highlight how expertise and decision-making are spread across people, machines, and data environments. The keynote also challenged the dominant narrative of AI as a replacement for human labor, emphasizing instead that AI reshapes existing work practices and generates new forms of collaboration.

Organizational Uses of AI

The keynote outlined several distinct modes of AI use in organizations. First, automation replaces or streamlines repetitive administrative processes, particularly where rules and datasets are clearly defined. Second, AI operates as an augmentation tool, supporting human workers in tasks such as customer service or document analysis. Third, AI functions as an innovation driver, enabling new services or products that would otherwise be unattainable. Finally, AI serves as a decision support mechanism, offering recommendations and insights that inform—but do not replace—human judgment.

Case Study I: Helfo and Predictive Analytics in the Public Sector

The first empirical case concerned Helfo, the Norwegian Health Economics Administration. The agency experimented with predictive analytics to enhance its auditing practices and identify fraudulent claims. Professor Aanestad analysed how the project faced significant difficulties. Chief among them was the problem of "ground truth": establishing reliable and representative training data for fraud detection proved elusive. Data quality issues, combined with legal and compliance requirements, limited the applicability of predictive systems. The Helfo case demonstrates the epistemological fragility of AI adoption in the public sector. Predictive analytics presupposes stable categories and reliable indicators, but in practice, health data is heterogeneous, context-dependent, and contested. Far from producing autonomous decision-making, the AI project exposed the need for continuous negotiation among data scientists, domain experts, and legal professionals. The case underscores that AI adoption is as much about organizational transformation and institutional alignment as it is about technical design.

Case Study II: Shipbrokering and the Infrastructures of Global Trade

The second case examined a shipbrokering company operating within the global maritime industry. Here, AI adoption centered on the development of algorithmic systems to manage freight information, vessel availability, and market intelligence. Unlike the public sector example, this case demonstrated how AI became integrated into an already data-intensive environment. Shipping markets depend on vast flows of information about ports, vessels, and contracts, and brokers act as intermediaries who translate these flows into actionable knowledge. The case study revealed how algorithmic systems gradually took over

routine tasks of information collection and matching. Yet rather than eliminating brokers, AI shifted their role toward strategic interpretation, relationship management, and oversight of digital tools. Workers were required to acquire new forms of data literacy, balancing commercial intuition with algorithmic outputs. The case illustrates how AI adoption in private industry often enhances rather than diminishes the role of professional expertise.

Comparative Insights

Taken together, the two cases highlight contrasting pathways of AI adoption. In the public sector, legal constraints, contested data quality, and institutional complexity limited the transformative potential of predictive systems. In the private sector, existing infrastructures and commercial imperatives enabled smoother integration, though not without tensions around expertise and labor. Both cases, however, reveal that AI adoption requires extensive organizational adaptation. Success depends not only on technological capacity but also on institutional flexibility and workforce readiness.

Challenges of Data and Ground Truth

A recurring theme in Professor Aanestad's keynote was the challenge of data quality and the construction of "ground truth." AI systems rely on large, reliable, and representative datasets, yet organizational data is often fragmented, incomplete, or inconsistent. Establishing what counts as valid data is a political and epistemological process, requiring negotiation between technical staff and domain experts. In both case studies, the difficulty of producing reliable training data constrained the scope of AI adoption. The keynote therefore underscored that data work is not merely technical but deeply social and organizational.

Implications for Work and Skills

AI adoption does not simply reduce human labor but transforms it. Workers must acquire new skills in data analysis, interpretation, and cross-disciplinary collaboration. In the Helfo case, auditors needed to understand predictive models in order to assess their reliability. In shipbrokering, brokers learned to combine commercial judgment with algorithmic recommendations. Such transformations point toward a future where organizations are increasingly "data-driven," but where human labor remains indispensable.

Ethical and Institutional Considerations

The keynote also raised ethical and governance issues. In the public sector, questions of fairness, accountability, and compliance were paramount. Predictive systems risk reproducing biases or violating citizens' rights if deployed uncritically. In the private sector, commercial pressures may incentivize rapid adoption without adequate scrutiny of social impacts. Across both contexts, there is a pressing need for transparent governance frameworks, professional oversight, and institutional mechanisms that ensure responsible AI use.

Conclusion

Professor Aanestad offered a nuanced view of AI adoption in organizational contexts. Far from being autonomous or universally applicable, AI is deeply dependent on organizational structures, data infrastructures, and human expertise. The Helfo case illustrated the difficulties of implementing predictive analytics in public administration, where data quality and legal compliance impose hard limits. The shipbrokering case demonstrated how AI can be integrated into commercial practices, reshaping rather than replacing professional roles. Together, these cases highlighted that AI adoption is an ongoing socio-technical process, requiring continuous negotiation of data, expertise, and organizational structures.

Janja Komljenovic, Senior Lecturer (Associate Professor) in Education Futures at the University of Edinburgh, United Kingdom

Title: "Higher education assetization regimes and academic labour (Digitalising Higher Education in the Age of Digital Rentiership)"

Introduction

Senior Lecturer Komljenovic provided a critical summary of the political economy of digital technologies in higher education, focusing on themes of ownership, control, and value creation in the context of artificial intelligence (AI), datafication, and platformization. She highlighted how educational institutions are increasingly entangled with large technology companies, private equity, and data-driven business models. The keynote emphasized issues of autonomy, academic freedom, and the implications of digital assetization for students, staff, and the broader academic sector.

Data Value and Monetisation

Data has become a key asset in higher education, with universities generating vast amounts of digital information through teaching, learning, and research. Companies offering digital platforms increasingly seek to monetise this data. For example, in 2020 Instructure, the company behind Canvas, was acquired by the private equity firm Thoma Bravo for $2 billion. The justification for such a high valuation lay in the company's access to 'the most comprehensive database on the educational experience in the globe,' as stated by Instructure's CEO. Such acquisitions illustrate how educational data is framed as an economic asset that enables the development of predictive algorithms and data-driven services. However, there exists a persistent mismatch between the imagined value of data and its practical realisation. EdTech startups, for instance, constantly experiment with ways of data monetisation, often facing significant challenges in transforming user information into profitable products. This ongoing process of experimentation highlights the speculative character of the data economy, where the value of data is often more imagined than realised in practice.

Examples of Enclosure

Enclosure refers to processes whereby student and academic contributions are transformed into private assets, thereby restricting access and generating profits for external actors. Two prominent examples are plagiarism detection software and the use of academic publications in large language model (LLM) training.

Plagiarism Detection Software

Universities frequently require students to submit work via platforms such as Turnitin. In doing so, students must agree to licence terms that grant the company a perpetual, royalty-free, worldwide right to their submissions. These materials become part of a massive aggregate database that is treated as a valuable commercial asset. Turnitin's operations rely on proprietary algorithms, natural language processing, and a substantial portfolio of patents. The company was acquired by Advance Publications for $1.75 billion in 2019, demonstrating the perceived financial value of its database of student work.

Such practices have led to legal disputes, with students suing Turnitin for copyright infringement. Critics argue that the platform undermines academic integrity by commodifying student submissions while claiming to protect originality. This example highlights how enclosure can occur through the mandatory outsourcing of academic processes to private firms.

LLM Training and Academic Publications

Another form of enclosure is evident in the incorporation of academic publications into large language model training datasets. Academic publishers such as Informa (Taylor & Francis) and John Wiley & Sons have entered into lucrative agreements with AI companies, earning tens of millions in revenue from the licensing of content. Publishing contracts often grant publishers sweeping rights to use academic articles for training, educational, and derivative purposes, thereby limiting authors' control over their intellectual output. This practice raises ethical and legal concerns, particularly since training data cannot be withdrawn once incorporated into an AI model. Authors, although technically copyright holders, are frequently disempowered by the imbalance of contractual power. Debates continue over whether regulatory solutions, such as the EU's AI Act, will adequately address issues of transparency, compensation, and legitimacy.

Ownership, Control, and Power

Senior Lecturer Komljenovic argued that the concepts of digital rentiership and assetisation are central to understanding how higher education is being reshaped. Rentiership refers to strategies of deriving profit not through production but through the control of key assets, such as platforms and data infrastructures. Assetisation denotes the transformation of educational resources into tradable assets that generate ongoing value—for example, through subscription fees or user data monetisation. These processes reconfigure higher education by concentrating ownership and control in the hands of a small number of corporate actors. Assetisation and rentiership not only shape the economic futures of universities but also influence their pedagogical and research practices, with implications for autonomy, freedom, and the public mission of education.

Legal and Institutional Regimes

The governance of digital assetisation in higher education occurs at multiple levels, including state law, institutional policies, and contractual arrangements. Public law addresses issues such as higher education acts, academic integrity, and research ethics. Property and contract law governs copyrights, employment terms, and publishing agreements. Consumer protection frameworks, such as terms of service and privacy policies, also play a crucial role. The intersection of these legal frameworks creates complex regimes that shape how digital content and data are owned, accessed, and monetised.

Impacts and Contestations

The technological-legal-economic enclosure of higher education has profound impacts. It consolidates profit, control, and power, often at the expense of public accountability. Technology increasingly structures teaching and research, reshaping

academic freedom, pedagogical relationships, and scholarly subjectivities. Students and staff are repositioned as data-producing actors within a broader economy of digital assets. These dynamics have provoked resistance. For example, an open letter to the executive board of Radboud University (Netherlands) called for autonomy from Big Tech, warning of security, privacy, and sovereignty risks arising from dependence on corporate cloud providers such as Microsoft. The letter emphasised that reliance on Big Tech undermines public values such as freedom, independence, and equality, and jeopardises Europe's digital sovereignty.

Conclusion

According to Senior Lecturer Komljenovic's keynote, the digital transformation of higher education is not simply a matter of technological adoption but reflects deep political-economic dynamics. Processes of datafication, enclosure, rentiership, and assetisation reveal how higher education is being reshaped in ways that prioritise corporate profit and control over academic freedom and the public good. Critical questions remain regarding the origins of technology, the social and economic relations it produces, and the identification of genuinely beneficial uses in education. Holistic approaches are needed to ensure that digital technologies, including AI, serve the collective interests of students, staff, and society rather than entrenching new forms of dependency and inequality.

Benjamin Shestakofsky, Assistant Professor in the Department of Information Science at Cornell University, USA

Title: "Venture Capitalism and Beyond"

Introduction

Professor Shestakofsky presented an in-depth case study of AllDone (pseudonym), a digital labor platform, and its evolution within the wider context of platform economies, venture capital pressures, and the lived experiences of workers. His keynote analysed how everyday organizational decisions intersect with investment logics, shaping not only the internal operations of the company but also the working conditions of contractors, the trust of users, and the long-term trajectory of the platform itself.

Accelerating Experiments

The keynote highlighted how AllDone experimented with ways to accelerate its services. The process began with ideation and moved to bypassing APIs, delegating manual search and data entry tasks, and ultimately displaying results on the platform's pages. If results proved null, tests were abandoned. This illustrates a fast-paced trial-and-error approach typical of platform companies, where experimentation is a central practice to identify scalable features.

Worker Experiences and Conditions

In a detailed way Professor Shestakofsky brought out the perspectives of workers within AllDone. Some workers expressed dissatisfaction with repetitive and unchallenging tasks, requesting more engaging work. At the same time, wages were described as decent, and working conditions were relatively stable compared to other precarious gig arrangements. Importantly, leadership in San Francisco emphasized that time spent by workers on relational activities like email communication was acceptable and not a financial burden. This highlights the tension between efficiency-driven processes and the relational aspects of work that sustain morale and cooperation.

Frictions and Drag

The development of the platform faced multiple forms of 'drag.' Valuation lag described the gap between current worth and promised value. Technical drag emerged when computational needs outstripped available technological resources. Trust drag, however, proved particularly critical: users began questioning the fairness of products and policies. These dynamics illustrate the vulnerabilities of digital platforms that scale quickly under financial pressures.

The Las Vegas Team

A dedicated team in Las Vegas embodied the localized labor model of AllDone. Comprising ten work-from-home contractors, this team earned a median wage of $10 per hour but received no employment benefits. This reflects a hybrid form of gig work, in which workers experience greater stability than anonymous crowdwork yet remain outside the protections of traditional employment. Images of team members underscore the relational work involved, particularly in client-facing support tasks.

Relational Work

Professor Shestakofsky illustrated the nature of relational work through slides showing phone-based support. This demonstrates how the human element remained vital even as the company invested heavily in automation. Relational work anchored trust in the platform, enabling users to feel heard despite systemic issues such as technical bugs or shifting pricing models.

The Pivot

One of the defining moments in the AllDone case was its 'pivot.' As the CEO of AllDone explained, Series A funding involves selling a dream, whereas Series B requires selling a spreadsheet. The company responded by changing its pricing model to increase revenue. This triggered strong backlash from users and workers. Carol, a Las Vegas team leader, reported that users perceived the company as greedy or preparing for an IPO. Nancy, a phone support agent, described how sellers reacted with anger, calling in to vent frustration. This episode reveals how financial imperatives collided with user trust.

Language of Crisis

The intensity of the mentioned conflicts was captured in the metaphors used by workers: 'guerrilla warfare,' 'frontline battle,' 'beaten up,' 'welcome to hell,' 'call floods,' and 'clusterfucks.' Such language indicates how the internal culture of AllDone was shaped by constant confrontation, stress, and emotional labor. These descriptions underscore how platform growth strategies directly translated into crisis conditions for front-line employees.

Feeling Neglected

The keynote also elaborated frustrations among workers who felt their concerns were deprioritized. Josh, a San Francisco product manager, emphasized that only revenue-related bugs would be addressed, leaving many longstanding issues unresolved. Sharon, a phone support agent, highlighted how bug reports were repeatedly ignored or lost. This produced bitterness and eroded the sense of shared purpose among teams. The neglect of technical and organizational concerns exemplifies the short-termism driven by financial imperatives.

Will's Story

A personal story further humanized the consequences of AllDone's decisions. Will, a guitar teacher, had built a business plan and persuaded his family to support his career change. However, the rising costs of responding to client inquiries made sustaining his business impossible. His words, 'You guys have shattered my dreams,' illustrate the profound personal fallout of pricing and policy shifts at the platform level.

Linking Practices and Investment Logics

Professor Shestakofsky connected AllDone's trajectory to broader questions about how organizational practices link to investor logics. Different funding rounds impose different forms of accountability, pushing firms to scale rapidly and prioritize revenue over stability. These investor pressures not only influence technical and managerial decisions but also ripple out to shape the labor conditions of gig workers and the viability of small businesses depending on platforms.

Broader Implications

The broader implications of venture capital logics were also emphasized in the keynote. The vast majority of wealth generated by VC-backed startups is captured by a small number of individuals. Meanwhile, workers and small entrepreneurs often bear the risks of instability, shifting models, and unmet promises. The AllDone example situates this inequality within concrete practices of platform labor and pricing strategies.

Alternative Models

Professor Shestakofsky also considered alternatives to the dominant VC-driven platform model. Non-profit organizations such as Wikipedia and Mozilla demonstrate that large-scale digital infrastructures can operate outside purely profit-driven logics. Platform cooperatives, such as Up & Go, offer another model by centering worker ownership and more equitable distribution of value. The legal concept of 'exit to community' provides pathways for multi-stakeholder ownership, challenging the dominance of extractive finance.

Policy Levers

Policy interventions in the USA context were proposed as ways to mitigate the negative effects of venture capital pressures. These include increasing the capital gains tax rate, reversing the 1979 pension fund ruling, eliminating the carried interest loophole and Qualified Small Business Stock exemption, and improving enforcement of antitrust and labor laws. Such measures would shift incentives and rebalance power in the platform economy.

Conclusion

In Professor Shestakofsky's keynote the AllDone case illustrated the entanglement of financial logics, technical practices, and labor conditions. Through experiments, pivots, and crises, the company reveals how venture-backed platforms evolve under constant pressure to grow and monetize. The voices of workers and small entrepreneurs remind us that these transformations are not abstract but have real consequences for livelihoods, trust, and the possibilities of alternative futures.

Steven Vallas, Emeritus Professor of Sociology at Northeastern University, USA
Title: "Platform Capitalism Revisited: The Coming of Algorithmic Society"

Introduction

Professor Vallas introduced the concept of platform capitalism and situated it within contemporary debates in social science. He began by examining the limitations of existing research on platform work, including its stagnation and narrow focus on gig labor. He then developed an account of domination and consent within platform labor, before broadening the scope to platform capitalism as a systemic transformation of the economy. Throughout, he engaged with major theoretical perspectives such as those of Srnicek, Zuboff, and Rahman and Thelen, and considered critiques including platform denialism. Finally, Professor Vallas reflected on the political implications of platformization, particularly its impact on state functions, democracy, and class relations.

Social Scientists and the Platform Revolution

Professor Vallas began by situating the rise of scholarly research on the platform economy. Over the past decade, significant progress has been made in understanding algorithmic management, its regulatory challenges, and the dynamics that both enable and constrain worker mobilization. However, research on platform work has stagnated in recent years, often relying on static designs and focusing narrowly on gig work. Comparative studies remain rare, theoretical frameworks are underdeveloped, and insufficient attention has been paid to how platforms interact with their structural environments. Consequently, knowledge of platform work has stalled while the platform economy itself continues to expand rapidly.

Addressing the Research Gaps

Professor Vallas drew on Vallas and Schor (2024) to identify both the limitations and opportunities in current research on platform work. He critically examined the theory of platform capitalism, reviewed its critics, and highlighted the broader effects of platformization. Ultimately, he explored the relationship between platform capitalism and liberal democracy, anticipating the rise of an algorithmic society.

Domination and Emancipation in Platform Labor

A key tension is captured by van Doorn, Mos, and Bosma (2021), who argue that 'platforms are built for domination dressed up as emancipation.' This provokes questions regarding how domination operates, how it is disguised as empowerment, and why such representations succeed. Two strands of literature emerge from this tension: one focusing on coercion through algorithmic management, and the other on the mechanisms of worker consent.

Strand 1: Algorithmic Management and Coercion

Platforms use algorithmic management to establish coercive regimes. Mechanisms include information asymmetry, reputational controls, disaggregation of the workforce, de-employment through independent contractor status, and unilateral terms of service. These dynamics contribute to what has been termed 'algorithmic despotism' and the 'invisible cage.' Despite expectations of labor conflict, worker protest has remained uneven, particularly in the Global South. This paradox raises the question of why workers accept algorithmic control.

Strand 2: Worker Consent

Research has traced the roots of consent among gig workers to several mechanisms: corporate framing of workers as entrepreneurs, ownership of labor instruments fostering petty bourgeois orientations, digital affordances that simulate autonomy, piece rate payments reinforcing meritocratic ideals, and gamification strategies. Together, these factors cultivate acceptance of precarious labor arrangements.

Reconciling Coercion and Consent

Some argue that both coercion and consent perspectives are valid, as platforms generate inherently contradictory regimes of production. However, both frameworks risk overgeneralization by assuming uniformity among platform workers and by neglecting the co-evolution of platforms with conventional economies. Vallas and Schor's empirical work in Boston

demonstrates that workers' experiences are shaped by their socio-economic positions, with platform work serving very different functions for vulnerable versus middle-class workers.

Divisions Among Gig Workers

Vallas and Schor's study highlights that coercion is most acute for vulnerable workers dependent on gig income, while consent is more common among middle-class workers who use gig earnings to supplement lifestyles. Thus, platform labor reinforces existing class divisions by reproducing subordinate positions for some while enabling middle-class consumption for others.

Implications for the Platform and Conventional Economies

Early research treated platforms as parasitic on conventional firms. However, the novel findings suggest a more symbiotic relationship, as conventional and platform economies reinforce each other. For instance, platforms provide surplus labor and new investment outlets, while drawing stability and legitimacy from established firms.

Theories of Platform Capitalism

Several prominent theorists have attempted to conceptualize platform capitalism. Kenney and Zysman (2016, 2020) see platforms as central to value creation. Zuboff (2019, 2022) situates platforms within surveillance capitalism. Rahman and Thelen (2019) highlight their political-economic role, while Fourcade and Healy (2017, 2024) emphasize digital capitalism's reshaping of social order. Van Dijck et al. (2018) describe platformization as a transformation of conventional economic operations. Among these, Srnicek's analysis is often seen as most coherent.

Elements of Srnicek's Theory

According to Srnicek, platforms serve as high-growth outlets for finance capital, constitute a new type of firm based on data extraction, and scale at unprecedented speed. They thrive on network effects, enabling monopolization and the establishment of infrastructures of society. This marks a transition from classical and industrial capitalism toward a new stage: platform capitalism itself.

Expanding the Scope of Platformization

Platformization extends beyond gig work. It shapes financial institutions, cultural production, and traditional labor sectors. From PayPal to YouTube and from warehouse work to education, platforms penetrate and reorganize institutions, reshaping labor relations and governance. As such, platform capitalism must be analyzed not only as a labor issue but as a comprehensive transformation of social and economic life.

Political and Social Implications

In his keynote Professor Vallas underscored the privatization of state functions, erosion of liberal democracy, and privileging of consumers over workers. Platforms increasingly assume functions once reserved for states, from housing and transport to communication and currency. This undermines democratic institutions and strengthens coalitions of owners, investors, and consumers at the expense of labor.

Toward Governance of Platforms

Professor Vallas called for moving beyond narrow labor-focused reforms toward systemic governance of platform capitalism. His proposals included antitrust measures, nationalization, and the development of cooperative alternatives. Fundamentally, he presented reshaping platform governance as one of the central political challenges of our time.

Conclusion

In conclusion, Professor Vallas argued that platform capitalism is not simply a matter of new labor relations but a profound transformation of the economy, society, and politics. It generates regimes that simultaneously coerce and elicit consent, reshapes relations between classes, and reconfigures the boundary between state and market. The challenge for researchers and policymakers is to move beyond fragmented approaches and to address the systemic power of platforms in shaping the future of work, democracy, and social life.

STREAM ABSTRACTS

1.01

IMPROVING THE TRANSPARENCY OF ALGORITHMIC MANAGEMENT IN PLATFORM WORK: THE ROLE OF PLATFORM WORK DIRECTIVE

Annika Rosin, Henni Parviainen

University of Turku, Turku, Finland

Abstract

After a long period of negotiations on 23rd October 2024 platform work directive (Directive (EU) 2024/2831 of the European Parliament and of the Council on improving working conditions in platform work, PWD) was finally adopted. Among other issues the PWD aims to improve working conditions and the protection of personal data in platform work by promoting transparency, fairness, human oversight, safety and accountability in algorithmic management in platform work (Art. 1(1) b).

Algorithmic management (AM) covering 'a diverse set of technological tools and techniques to remotely manage work forces, relying on data collection and surveillance of workers to enable automated or semi-automated decision-making' (Mateescu, A and Nguyen, A (2019) Explainer Algorithmic Management in the Workplace. Data & Society) is a central feature of platform work. Algorithms are used to monitor, instruct and discipline platform workers as well as to take decisions affecting them. Automatic monitoring and decision-making is problematic because of the opacity of these systems. Algorithms have been described as ´black boxes´ meaning that the recipients of automatic decisions are unaware of how, why and through the processing of which data the system has reached a certain decision.

Increasing the transparency of AM has been regarded as one of the ways to tackle these problems. Transparency strives for legitimacy by making an object or behaviour visible and thus controllable. Transparency obligations include information and explanation obligations of the user of AM. Newly adopted PWD aims to improve the transparency of AM in platform work. However, PWD is not the only legal act aiming to increase the transparency. In addition to the General Data Protection Regulation (Regulation (EU) 2016/679 of the European Parliament and of the Council on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, GDPR), the Regulation 2019/1150 on promoting fairness and transparency for business users of online intermediation services (P2B Regulation), and Directive (EU) 2019/1152 on transparent and predictable working conditions (TPWCD) as well as Regulation (EU) 2024/1689 laying down harmonised rules on artificial intelligence (AI Act) influence the transparency of AM in platform work. As a result, it is difficult to determine the entirety of the transparency obligations of platforms and transparency rights of platform workers. It is also unclear whether compared to the existing regulation the PWD actually gives any additional transparency rights to platform workers.

The aim of the proposed presentation is to answer these questions by comparing the transparency provisions of PWD with already existing acts and by analysing the influence of possible additional rights to the working conditions of platform workers. The preliminary results show that the PWD improves the transparency rights of platform workers by:

broadening the personal scope of these rights (both employees and self-employed workers covered);broadening the material scope of transparency rights (covers not only automatic decision-making, but also automatic monitoring);clarifying, specifying and broadening the content of transparency obligations of platforms.

While PWD appears to improve the transparency rights of platform workers, the directive has been criticized of its limited scope. Though helping to resolve problems connected to AM in platform work, it is not applicable in other fields of employment. However, AM is quickly broadening from platform work to other (ordinary) workplaces and needs legislative action.

1.02

DIGITAL LABOUR PLATFORMS FOR SOCIAL RESPONSIBILITY

Laura Seppänen[1], Ronja Ruuska[2], Liubov Folger2, Sami Paavola[2]

1Finnish Institute of Occupational Health, Helsinki, Finland. 2University of Helsinki, Helsinki, Finland

Abstract

Digital labour platforms (DLPs) mediating between the demand and supply of labour are heterogeneous (EU Directive, 2024) in terms of not only growing in scale, but also increasingly being used for various qualitatively different aims. While many digital DLPs aim to grow fast and gain bigger market shares by using data monetisation and high investor value expectations (van Doorn & Badger, 2021), others may use the platform technology more for social and societal benefits. Our study focuses on labour platforms that aim at combining social and societal benefits within reasonable financial limits. The interest is in those DLPs that offer low-threshold work opportunities such as short gigs to people with disabilities or to young people that still are searching their work path or are at risk of being marginalised. Besides public employment services, some private platform companies take into consideration the need of those in weak labour market position, and these particularly are our focus. Do these platforms encode this social responsibility in their algorithms and design, and how? What is the role of support structures by human actors and organizations? Here, social responsibility means that key actors (the platform owner, workers, customers, and supporting organizations) strive to act in a way that positively affects other actors as well as the region and society.

By means of algorithms, DLPs potentially organise, to a lesser or greater extent, the matching of workers and tasks, work performance, remuneration for workers and the relationship between platform users (customers and workers). While certain responsibility is embedded in the key idea of platforms – a DLP is largely dependent on its users – empirical evidence shows that platform owners have a lot of power to negatively impact workers by e.g. weakening their working conditions or increasing financial precarity. Besides DLPs, also workers and customers need to be accountable (Rahman, Karunakaran & Cameron, 2024). DLPs are also heterogeneous in terms of how much human activity is involved besides algorithms. How does the focus on the vulnerable supply of work affect the role of the human share of a platform's functioning? To what extent do DLPs oriented to social responsibility act as collaborative networks co-constructing value (Toikka, Miettinen & Tuunainen, 2016)? Due to their core business idea, DLPs necessarily must deal with human resource management (Keegan & Meijerink, 2021) with its social responsibility questions.

The customers, or requesters, are often an under-researched part of platform work. Flexibility and cost-effectiveness are the main driving factors for them. Similarly to conventional labour markets, customers on platforms may be reluctant to put extra effort into gig workers with special needs (Sannon & Cosley, 2022). How can the platform be designed to be profitable, enable both fluency and easiness to users, and promote social responsibility?

DLPs offer flexible work, which may help accommodate to workers' disability-related needs (Sannon & Cosley, 2022). On the other hand, certain choices in the DLP may either foster or hinder the position and possibilities of the young or the partially disabled people in the DLP as well as the overall success in a task. For example, writing a job description with a high level of detail gives the potential worker enough information whether they can complete the task or not.

Our empirical case is a developmental experiment where an existing labour platform was modified to give young and partly disabled people possibility to do short gigs in a number of older people care units in Uusimaa region, Finland (see Work, workers, and know-how to older people services – TEOS | Finnish Institute of Occupational Health). Interviews of platform users and others involved, as well as discussions in evaluative workshops are used as data. Because older people services suffer from labour shortage in the future, the experiment may bring social responsibility also in the form of bringing helping hands to professionals' work in older people's services. Apart from describing and reflecting on the social responsibility features of the developed platform experiment, we will compare its characteristics to other related DLPs. For instance, we will show how the two-sided rating system may advance both workers' and customers' reputation building but also produce obstacles to some workers. Regional actors such as vocational schools and associations supporting the vulnerable gig-seekers are part of the DLP's network as well. One of the greatest tensions encountered in the study is between standardised efficiency and individual needs of platform users. In the end, and related to conference's main theme, we discuss the chances of AI to overcome this tension – that is, how AI might enable both the standardization benefit of algorithmic management and the tailoring of need-based requirements for each worker-task match.

1.03

THE PLATFORM DELIVERY REGIME IN GENEVA: PRECARITY AND DATA SUBJECTS

Athanasios Priftis

University of Applied Sciences Geneva (HES-SO), Geneva, Switzerland

Abstract

Our research reinforces the view that, platform-based, gig work perpetuates labour precarity. It underscores the importance of regulatory frameworks to safeguard worker rights, including personal and work data. As the gig economy continues to evolve, it is imperative that policies adapt to address these challenges, ensuring that the promise of flexibility does not come at the cost of worker security and well-being. After having interviewed more than 50 food deliverers in the wider Geneva area, we ended up identifying two profiles: the "supported student" and the "dependent worker." The "supported student" is a young individual, often Swiss or EU national, using platform work as a secondary income source while in between jobs or studies. The "dependent worker," on the other hand, relies on platform work as their primary income due to financial necessity or lack of alternatives. Where someone comes from, which dependencies already have, are key factors to how he experiences the platform-based labour precarity and how the worker expects, or not, his/her personal data to be treated.

1.04

BUILDING POWER IN THE PLATFORM ECONOMY: THE POLITICS OF COLLECTIVE ORGANIZING IN TAIWAN'S RIDE-HAILING AND FOOD DELIVERY PLATFORMS

Ngai Keung Chan

The Chinese University of Hong Kong, Hong Kong, Hong Kong

Abstract

This qualitative study examines and compares how various unions of ride-hailing and food delivery workers in Taiwan develop distinct strategies to mobilize power resources, including institutional, associational, and societal power. It is informed by the power resources approach (Schmalz et al., 2018), which highlights the capacity of actors to organize and act in accordance with their strategic interests. Scholars have argued that platform workers compensate for their relatively weak structural power in the labor market by leveraging associational power (e.g., collective withdrawl of labor). Pinpointing the relational nature of power, it calls attention to how labor conflicts evolve within a web of interdependencies shaped by various actors' interests, worker organizing, and the broader socio-political environment. This approach taps into the interplay between mainstream and grassroots unions, workers, platforms, and regulators across the ride-hailing and food delivery sectors in Taiwan.

Empirically, I draw upon semi-structured interviews with 25 participants including leaders and participants of ride-hailing and delivery unions as well as a legislator in Taiwan. I supplement the interview materials by analyzing policy documents about the two sectors and news coverage about workers' collective actions between 2015 and 2024. I select Taiwan as a case study and conduct a cross-sectoral comparison for two reasons. First, Taiwan's platform unionism are shaped by its historical legacy of state corporatism (Ho, 2006). Put simply, ride-hailing drivers and delivery riders can join both occupational unions (often associated with mainstream unions that traditionally "functioned as officially licensed insurance agents"; Ho, 2006, p. 112) and industrial unions (platform-based grassroots unions focused on advocacy). Given this fragmented union structure, there is a proliferation of platform worker unions (e.g., over 80 delivery unions), providing a rich empirical context for examining the tensions and alliances between mainstream and grassroots unions. Second, while the Taiwanese government has required ride-hailing platforms to partner with official taxi services since 2019, delivery riders continue to fight for their rights by forming unions and pushing for labor policy reforms since late 2019. This temporal trajectory and divergence in regulatory efforts affords opportunities to compare how platform worker unions in different sectors mobilize power resources under varying institutional constraints.

The analysis shows that ride-hailing and delivery unions attempt to build up institutional, associational, and societal power resources to shape labor policies in the absence of strong structural power, but their strategies and outcomes vary due to their distinct union legacies and coalitions. Occupational taxi unions, long embedded within Taiwan's political system, have played a central role in resisting ride-hailing platforms like Uber since their entry into the market in 2013. These unions organized demonstrations, filed lawsuits, and leveraged their institutional influence to push for regulatory reforms. They also sought to harness societal power by framing Uber's exploitative labor practices as economic injustice. However, this narrative faced pushback from consumers who viewed Uber as a symbol of innovation and criticized the quality of traditional taxi services. The success of taxi unions in securing regulatory reforms was largely attributed to their entrenched institutional influence and the existing labor protections for taxi drivers. Following these reforms, they collaborated with emerging grassroots unions representing ride-hailing drivers. However, platforms continued to exploit drivers through algorithmic control after the implementation of regulations. Union leaders had limited ability to challenge Uber's labor practices, as the government perceived these platforms as already adequately regulated.

By contrast, no occupational or industrial unions existed when delivery platforms entered Taiwan's market. While both mainstream transportation-related unions (including taxi union leaders) and riders later sought to establish unions in this evolving platform landscape, these efforts remained fragmented. Riders' unions functioned as "fragmented allies," relying on loose alliances between occupational and industrial unions, as well as ad-hoc organizing efforts, to influence labor policies. Although research often emphasizes that riders could mobilize workplace bargaining power to disrupt delivery platforms' operations through strikes, my interviewees were reluctant to organize such actions. They largely believed that Taiwan's work culture discouraged collective resistance, making sustained worker solidarity difficult. Instead, they sought to cultivate societal power by collaborating with legislators, platforms, and civil society actors. Despite unions' calls for regulatory reform, translating proposed labor protections into law remains a significant challenge.

This study contributes to understanding "the prospects for collective action for platform workers" (Vallas & Schor, 2020: 287) by examining how platform workers strategically build and sustain their collective struggles while navigating political legacies and the evolving dynamics of worker organizing in Taiwan.

References

Ho, M. S. (2006). Challenging state corporatism: The politics of Taiwan's labor federation movement. The China Journal, 56, 107-127.
Schmalz, S., Ludwig, C. & Webster, E. (2018) The power resources approach: developments and challenges. Global Labour Journal, 9(2), 113-134.
Vallas, S., & Schor, J. B. (2020). What do platforms do? Understanding the gig economy. Annual Review of Sociology, 46, 273-294.

1.05

VOICE ACTIVISM: HOW ONLINE COMMUNITIES CULTIVATE CHANGE AMONG THE DIGITAL WORKING AND MIDDLE CLASS

Lindsey Cameron[1], Kalie Mayberry[2], Mike Maffie[3]

[1]Wharton, U Penn, Philadelphia, USA. [2]Harvard University, Cambridge, USA. [3]Cornell, Ithaca, USA

Abstract

The rise of the distributed gig economy raises questions about how its members (e.g., workers, customers) voice and build solidarity. While scholars have long found that synchronous acts of voice in physical "free spaces" (Kerr and Siegel 1954; Nissen and Jarley 2005) such as the break room facilitate solidarity, there is much less research focusing on how information technology architecture, such as digital forums, affect voice and activism. Drawing on interviews (n=114), online postings (n=7600), and archival materials, we document the emergence of voice activism—a voice structure that emerges within online asynchronous communities for sharing insights, continual experimentation, and forming alliances. We distinguish between shallow activism, acts of voice that help others grow their understandings of the platform, and deep activism, which are calls to community action, and discuss how they are shaped by class identities. We conclude with insights about how digital communities could facilitate cross-class activism.

1.06

BEING ON A LOOP ON YOUTUBE: HOW DIVERSE INCOME STREAMS SUSTAIN METRIC ORIENTATION AND REINFORCE ALGORITHMICALLY-MEDIATED AUDIENCE CONTROL

Elif Birced

Boston University, Boston, USA

Abstract

The existing research has shown how platforms push creators to follow trends and audience interests and shape their creative decisions based on audience reach and engagement metrics (Siciliano 2021). In particular, algorithmic management—platforms' use of algorithms to manage content visibility and recommendations and enforce community guidelines—transforms audiences into actors who exert significant control over the creative labor process. Reach and engagement metrics significantly influence content visibility, affecting how easily new or potential audiences discover content on search pages and how often it is recommended on platforms. In return, creators develop multiple strategies, such as strategically sending follow requests to increase their audience reach or picking clickbait titles to attract people, which, in return, manipulate algorithms and boost their metric performance (Cotter 2019; Siciliano 2021; Stuart 2020).

Using 39 semi-structured interviews with content creators on YouTube in Turkey, this paper unpacks how platforms control the creative labor process and how creators experience and navigate algorithmically mediated audience control. Without undermining the platform's push toward a high audience and metric orientation, I show how developing and maintaining a high audience and metric orientation is one creative pathway rather than the only one. Findings document three creative pathways in platformed cultural production: 1) Metric-Oriented Content Creation, 2) Being on a Loop, and 3) Self-Oriented Content Creation. Surprisingly, most creators eventually turn into loopers who go back and forth between what they and their audience want in their content creation process instead of feeling constant pressure to shape creative decisions based on their metric performance and trends.

I further explain why loopers still have a degree of metric and audience orientation. I argue that creators still consider audience interests and metrics in their creative decision-making due to income opportunities in and outside the creator economy besides the fear of algorithmic invisibility. For instance, keeping audiences engaged can engender alternative income opportunities in and outside the creator economy, like fan funding (e.g., YouTube Join) or promoting their products/services to audiences through their social media page/channel. Also, metric performance can engender new income opportunities outside the creator economy, as metrics become status symbols in the online attention economy (Levina and Arriaga 2014, Christin and Lewis 2021).

These findings will extend the literature in two ways. First, I extend the literature on platformed cultural production by showing multiple creative pathways. Second, I contribute to discussions on platform work by documenting the role of diverse income streams on and outside platforms in strengthening the algorithmically mediated consumer control of the labor process.

1.07

YOUNG AND IMMIGRANT PEOPLE'S WORK EXPERIENCES ON MEAL DELIVERY PLATFORMS IN CANADA

Mircea Vultur[1], Émile Baril[2]

[1]Institut national de la recherche scientifique, Quebec City, Canada. [2]Concordia University, Montreal, Canada

Abstract

The development of new information and communication technologies has given rise to the so-called 'digital platform economy', which has grown significantly since the 2000s. This type of labour can take various forms, ranging from microwork (activities and services that are carried out online) to work via mobile applications (activities ordered online but carried out locally, including transport services of people and meals). Flexible work arrangements using digital platforms are quickly becoming a new employment standard at many companies and are taking over markets and industries that were rarely imagined to be 'platformizable' twenty years ago (Vendramin et Valenduc, 2023; Vultur, 2024). In recent years, major cities have seen a growing part of the platform food delivery work taken on by young and immigrant delivery drivers (Piasna, Zwysen and Drahokoupil, 2022). The platform economy first marketed itself as quick extra cash for people with a car or a bike and some free time. Following the pandemic, the rise in unemployment and the degradation of working conditions led many to use platform food delivery as a second or third income.

Platform labour in Canada is built on a large pool of largely racialized young immigrant workers needing to make ends meet. Due to the increasing prices of housing, food and transportation, many find themselves in need of another job. International students represent a large part of this workforce. They are often lured to Canada by private colleges to come and study, but need to pay very high tuition fees that can cost up to $35,000 per year. Alongside the current housing crisis in both cities, many need to work multiple jobs to afford living in great area cities. The systemic trend towards hyper-precariousness is comparable and connected to a longer history in Canada of racialized immigrants taking on dangerous jobs for low pay and no benefits. This pattern leads many to describe the current urban platform labour markets as 'racial platform capitalism' (Gerbial, 2022; Bernard, 2023).

In this conference, we analyze the work experiences of young delivery riders and their relationship to new forms of work connected to digital platforms in the Canadian context. We compare two workforces, from two large urban areas, Toronto and Montreal, using semi-structured interviews with, principally young, immigrant delivery workers. Our methodology is based primarily on analysis of semi-structured interviews with young delivery riders who operate in Toronto (14) and Montreal (16) for various platforms (Uber Eats, Skip The Dishes, Door Dash, etc.), sometimes even multi-apping – meaning being logged-in on multiple apps simultaneously. We examine their work experiences under platform-labour in relation to three main aspects of the job: i) the role of clients who, increasingly, perform managerial responsibilities. This process, among other everyday challenges, can further racialize workers because of the potential racism of the customers. ii) forms of algorithmic control, an opaque technology that makes it difficult to recognize and challenge systemic biases. iii) other negative aspects of platform labour, which include differential gender relations that foster more dangerous working conditions for women-identified workers; unpaid waiting time at restaurants leading to sub-minimum wages and over-recruitment causing hyper-competition between coworkers and potential allies.

Our paper provides insight into the complex web of interdependent relationships and power dynamics among actors within Canada's delivery platform ecosystem. It highlights the asymmetric forms of algorithmic control imposed on workers and contributes to rebalancing the dominant view of algorithmic management, which typically centers on organizational control, by integrating an analysis of non-organizational actors - specifically, customers and restaurant owners - and their roles in monitoring and controlling delivery activities.

References

Sophie Bernard (2023), UberUsées: le capitalisme racial des plateformes à Paris, Londres et Montréal, (Paris : PUF)

Dalia Gebrial (2022), «Racial platform capitalism: Empire, migration and the making of Uber in London», EPA: Economy and Space, 56, 4, 1–25.

Agnieszka Piasna, Wouter Zwysen & Jan Drahokoupil (2022), The platform economy in Europe (ETUI) https://www.etui.org/publications/platform-economy-europe.

Mircea Vultur (2024), «La reconfiguration du monde du travail par l'émergence des plateformes de travail numériques : origines, développement et impacts», Organisations et Territoires, Vol 33, No. 3.

Patricia Vendramin et Gérard Valenduc (2023), « Comprendre le phénomène des plateformes dans la transition numérique : une perspective européenne », dans Mircea Vultur, dir., Les plateformes de travail numériques. Polygraphie d'un nouveau modèle organisationnel, Collection Sociologie contemporaine (Presses de l'Université Laval), 19-40.

1.08

COMPARING THE WORKING ARRANGEMENTS OF PLATFORM AND RESTAURANT DELIVERY WORKERS IN TURKEY: A POLANYIAN APPROACH

Duygun Ruben

Boston College, Boston, USA

Abstract

Many scholars utilized a Polanyian theoretical framework to study platform labor. These studies have argued that platforms disembed workers from the cultural and regulatory norms that they are embedded in and usher in a more extensive commodification of their labor. In this study, by comparing different aspects of the working arrangements of restaurant and platform delivery workers in Turkey, I contribute to Polanyian arguments in the platform labor literature. I extend these arguments by focusing on various aspects of the working arrangements platform and restaurant delivery workers. Drawing on 28 semi-structured interviews with restaurant and platform delivery workers in Turkey, I compare and analyze platform and restaurant workers' payment mechanisms, scheduling arrangement practices, physical safety conditions and performance management mechanisms. I argue that exploring these different dimensions gives us a deep grasp of how the platform delivery workers are disembedded from the social relations in production that restaurant delivery workers are embedded in. This study argues that delivery platforms can be conceptualized as a working arrangement that thins out the social relations surrounding being a delivery worker and reshapes delivery work as a pure cash-nexus relationship.

1.09

THE INTERACTIVE EFFECT OF EMOTIONAL LABOR, FEAR, AND FINANCIAL NEED PREDICTING RIDESHARE GIG WORKER BURNOUT (POSTER)

Alice Brawley Newlin

Gettysburg College, Gettysburg, PA, USA

Abstract

Self-determination theory (SDT) proposes that acting "with a sense of choice, ownership, and agency" leads to better outcomes (Ryan et al., 2022, p. 813). By contrast, gig workers are especially prone to subtle but persistent controls on their behaviors (Scheiber, 2017). This study examines three common components of gig workers' experiences–emotional labor (Gandini, 2019), fear climate (O'Donovan, 2017), and financial need (Schor, 2020)–as embodiments of externalized, controlled motivation within gig work.

Emotional Labor: Given the centrality of customer ratings in rideshare gig work, emotional labor is arguably the "heart" of gig work (Gandini, 2019, p. 1047). Meta-analyses suggest that emotional labor is linked to burnout across various jobs (Humphrey, 2023), and I anticipate this will extend to gig work (Hypothesis 1).

Fear Climate: Fear climate is marked by fear of negative, extreme, and/or unpredictable repercussions at work (Ashkanasy & Nicholson, 2003). In gig work, this may manifest in algorithmic management and reliance on customer ratings (Duggan et al., 2020; Wood et al., 2019), which have been linked to higher gig worker burnout (Peng et al., 2024). Because fear climate represents an additional layer of external control in gig work, I propose that it will strengthen the emotional demands-burnout relationship (Hypothesis 2).

Financial Need: Last, financial dependence can determine whether gig workers mostly have positive or negative experiences (Schor et al., 2020). Because this represents another externalized motivation for gig work, I propose that financial need will

further strengthen the moderating effect of fear climate on the emotional demands-burnout relationship (i.e., a three-way interaction; Hypothesis 3).

Method: ***Participants and Procedure:*** Rideshare drivers were recruited through Facebook groups, which are popular among rideshare drivers (Maffie, 2020). Participants (N = 925) who successfully completed (i.e., satisfied attention-checking items) an online survey received $15.

Participants were mostly male (64%; 35% female; 1% not reporting); mostly White (50%; 31% Black; 20% Hispanic/Latino; 10% Asian/Pacific Islander); and most commonly had a Bachelor's degree (26%). These demographics are typical of rideshare drivers (BLS, 2018; Cook et al., 2018).

Measures: Emotional demand perceptions and fear climate were measured with three items (Kristensen & Borg, 2003) and four items (Brawley & Pury, 2016), respectively; and one item was dropped from each scale due to unreliability. Financial need was measured with a single item (common for this variable, Brawley Newlin, 2024). Exhaustion–as the primary symptom of burnout–was measured using four items from the Oldenburg Burnout Inventory (Demerouti & Bakker, 2008).

Results: Workers' perceptions of emotional demands were positively associated with worker exhaustion, $B = 0.15$, $SE = 0.03$, $p < .001$, supporting Hypothesis 1.

As workers perceived higher levels of fear climate, the relationship between perceived emotional demands and exhaustion became stronger ($B = 0.11$ at low levels of fear climate, $B = 0.19$ at high levels of fear climate), supporting Hypothesis 2.

Last, results partially support the hypothesized three-way interaction (Hypothesis 3). Rather than a compounding effect, the fear climate-exhaustion relationship is moderated by financial need only when emotional demand perceptions are low (and not when they are high). Specifically, there is a slight reprieve–a still positive, but slightly weaker, association with exhaustion–for gig workers who have simultaneously low financial need and emotional demand perceptions. By contrast, workers who perceive high financial need and/or emotional demand perceptions experience consistently strong, positive fear climate-exhaustion relationships.

Discussion: Based on these findings, the linkage between emotional demands and exhaustion (van den Broeck et al., 2016) seems to generalize to the gig work context, and fear climate worsens this relationship. However, past work has noted that gig workers can still resist their "digital cage" (Vallas & Schor, 2020, p. 278). Perhaps such resistance strategies, especially ones that gamify the relational aspects of gig work (Cameron, 2022), can particularly benefit gig workers who perceive high levels of fear climate.

However, the results for Hypothesis 3 suggest a boundary condition for these findings: specifically, low levels of financial need might diminish the interactive effect observed in Hypothesis 2. These findings corroborate the general conclusion that financial need is a key determinant of gig workers' experiences (Schor et al., 2020) and further specify low financial need to slightly offset the negative impacts of emotional demands and fear climate.

While three-way interactions can be tenuous, interactive effects cannot be artifacts of common method variance (Siemsen et al., 2010), mitigating some concerns about the single-time-point data. However, scale reliability issues suggest a need for gig-specific measures.

Future research might explore other gig types as a potential boundary condition for these findings, especially where there could be varying levels of emotional demand or fear climate perceptions, such as comparing in-person versus online gig work. Past research suggests that financial need is particularly high among rideshare gig workers (Schor, 2020) so investigating other gigs may yield different findings.

1.10

RESPONSIBLE ALGORITHMIC MANAGEMENT: VIEWS OF THE MANAGEMENT AND WORKERS OF TRANSPORTATION PLATFORM COMPANIES ON SOCIAL RESPONSIBILITY

Soili Hyvönen

University of Jyväskylä, Jyväskylä, Finland

Abstract

Understanding the views of the management of platform companies regarding their social responsibility towards workers is important, because through that it is possible to perceive the ethical principles and values that guide the development of algorithmic management systems. On the other hand, it is necessary to compare the perspective of platform workers to the definitions that managers propose. The literature on algorithmic management is controversial and often concentrates on the viewpoint of the workers regarding ethical questions in platform work. Issues raised deal with autonomy of the workers or the lack thereof, which is connected to their employment status as entrepreneurs, unfair treatment of workers due to algorithmic processes and the way how platforms are built, and issues dealing with transparency of pay schemes and the general functions of the platform. Thus this study contributes to enhancing theory on responsible algorithmic management because a coherent theory seems to be still missing.

The research utilizes 19 in-depth semi-structured interviews with the management and workers of transportation platform companies functioning in Finland. Theory-driven content analysis is used to understand viewpoints and to map the themes that arise from the interviews.

The results show that the management of platform companies understood responsible algorithmic management towards workers in terms of following the law, social morality or personal ethics. Some managers concentrated on the legal aspects of platform work and that the company followed the Finnish Labor Law as the measurement of responsible action. Some others concentrated more on the social moral aspects which reflected the company values that emphasized responsible action towards workers. Yet there were others, who had a more personal viewpoint: they thought social responsibility was to treat workers in a way which managers themselves would like to be treated.

Ethical themes that were raised in the interviews dealt with autonomy, fairness and transparency of platform work. Regarding autonomy, the freedom and flexibility of work was emphasized for workers to be able to work whenever it is good for them. However, one manager stated that when their company had grown, a more structured way of working had been established, which may also limit the freedom of workers. The status of workers as entrepreneurs was not the only decisive issue to give workers freedom to choose whether they wanted to work or not. Freedom itself was of value, which the company wanted to promote. References to both law and social morality were thus made when discussing autonomy.

Moreover, regarding fairness, themes such as equal treatment of workers and fair pay were raised in the results. Some managers emphasized their subjective views of what fair treatment meant for them and how they would have perceived the work if they themselves were platform workers. In fact, the management of a certain platform company regularly went to do the fieldwork to understand better the role of the platform worker. Regarding fair pay, one manager emphasized that they paid workers more than the average on the industry. Thus, there were references to the regulation and personal ethics.

Additionally, the results showed that when discussing transparency in platform work, the management emphasized transparency in the information that they provided to the workers, when they started cooperating. The information provided needed to be explicit for worker to understand the responsibilities and freedom regarding work. On the other hand, the issue of responsible data use was mentioned. A part of the transparency was that the data was used appropriately, for example, no ratings were used when assigning a task for workers. The transparency issue was thus dealt with referring to regulation and social morality.

The workers, on the other hand, understood responsible algorithmic management mainly in terms of social morality and personal ethics. For them, responsible management meant that workers were respected and treated humanely, especially when workers had problems or had made mistakes. That is why workers appreciated the help they were offered when facing problems.

Thus, even though the literature on algorithmic management is rather pessimistic about the outlook of platform work for workers, the findings paint a rather broad understanding about responsible algorithmic management that platform managers have. An implication for the practice of platform companies is that they may need to concentrate more on building socially moral practices in their organizations. Following the law does not necessarily make the company outcomes responsible from the point of view of a worker. Bringing ethical thinking to the personal level may advance the ethical practices of platform companies most effectively. If a manager can imagine the position of the worker and build the company culture that view in mind, practices may become more humane and ethical.

1.11

HOW FAILURE IS ORGANIZED AND EXPERIENCED ON DIGITAL LABOR PLATFORMS

Tereza Klegr, Martin Hájek

Faculty of Social Sciences, Charles University, Prague, Czech Republic

Abstract

Digital labor platforms create an unproblematic image that anyone, who registers as a worker, earns money on their own schedule. It seems like job opportunities are endless and no one can really fail. Or can they? This study adopts an organizational perspective and focuses on how failure, as an inherent part of organizational life, is organized and accomplished in the particular context of platform work. We draw on qualitative methods, including 31 semi-structured interviews with platform workers and a platform co-founder and ethnographic walkthroughs, focusing on platforms in the fields of transportation, delivery and care in Czechia. We analyze the criteria that platforms embed into their infrastructures to continuously assess and evaluate data about workers and their activities to effectively score and finely rank them into a hierarchy tied to a structure of job opportunities. We also include the workers' perspective and observe how they orient their actions to multiple evaluative systems—not only those set by the platforms, but also customer evaluations, which are embedded in the platform's system, as well as their own self-assessment. We argue that platforms' ambiguous evaluation processes, avoidance of failure declarations, and the misalignment between platform and worker expectations drive workers to develop their own evaluative systems. These self-created frameworks enable workers to pursue goal-oriented actions but also compel them to navigate failure independently.

1.12

THE COLLECTIVE PLATFORM WORKER AGAINST TECHNOLOGICAL FUTURE-MAKING

Olivia Maury

University of Helsinki, Helsingfors, Finland

Abstract

Little is known about the role of living labour at the expansive frontiers of platform labour companies - or as such enterprises prefer to call themselves - technology companies. This is partly due to the conscious obfuscation of human labour in the finance sector and consequently in the spehre of innovative technology (Sadowski 2025; Pasquinelli 2023) which demonstrate the elective affinities between the two (Paranà 2024). This paper inquires into the antagonistic role of living labour, collective knowledge and data extraction from everyday life, and its necessary interlinkage with the 'creation of conditions for a specific model of human life that is engineered according to the imperatives of digital capitalism' (Sadowski 2025: 18)? What role does living labour play against the future-making force of platform-technology, centered around various usages of AI, that aim to elicit desired behaviours from the world (Amoore et al. 2024)?

Using a multimethod approach, including participant observation (2021-2022) interviews with migrant workers involved in location-based platform work in Finland (2022-2024) and platform labour companies (2025-) as well as documentary analysis, the paper strives to extend the gaze beyond an exclusive focus on the 'gig', the 'platform' and the citizen-worker figure to include a wider range of activities and social structures, as well as their hierarchizing functions, that comprise platform capitalism. Through a specific focus on living labour, the paper traces the capitalization of collective knowledge into new and renewed apparatuses such as the platforms and their associated algorithms and machine learning systems. Thereby, the paper aims to sketch the contours of the collective platform worker by pointing to the force of living labour in shaping and fuelling labour platforms in their current modalities and at their expansive frontiers. In its contestation of technological determinism, the paper contributes to an anti-imperial reading of the future-making capacities of technological innovation and a theoretical elaboration of the collective platform worker.

2.01

COLLABORATION BETWEEN INDUSTRY AND HIGHER EDUCATION SHAPING LEARNING IN WORK LIFE IN THE ERA OF AI BY 2040: A FINNISH DELPHI-BASED SCENARIO STUDY

Antti Vuoriainen, Paavo Räty, Ville Heilala, Raija Hämäläinen, Lauri Kettunen

University of Jyväskylä, Jyväskylä, Finland

Abstract

In the context of rapid technological advancements and the increasing integration of AI in work processes, this study explores the evolving role of work life learning and the significance of collaboration between higher education (HE) and industry in building a sustainable, expert workforce. Employing a two-round Delphi inquiry conducted via the edelphi.org platform, we gathered both quantitative ratings and qualitative insights from 35 experts in the tech field and from one AI expert. Our methodological approach combined iterative feedback and controlled surveys to identify key factors that influence future work life learning practices and HE-industry collaboration.

The analysis, guided by "The six C's "-framework of successful collaboration (clarity, communication, commonality, commitment, continuity, and confidence), revealed a nuanced picture of how emerging technologies are poised to reshape educational strategies and workforce development. Based on the responses, we identified four possible future scenarios that span a spectrum from static, slow development—characterized by caution and uncertainty—to a future where the roles and tasks of technology and humans achieve harmony in workplaces. We named these scenarios: 1. "Lost in Job Markets," 2. "Polarized Expertise," 3. "Stuck in Silos," and 4. "Human Machine Harmony."

Our findings underscore the importance of national-level strategies, open collaboration, and the development of AI-focused infrastructures as critical enablers for aligning educational outcomes with labor market needs. The study highlights both the potential benefits and the inherent risks associated with the digital transformation of work life learning, providing actionable insights for policymakers, educators, and industry leaders seeking to navigate the uncertain landscape of future work. Our work is yet to be published.

2.02

FUTURE SYSTEMATIC LITERATURE REVIEW AND AI

Rehna Sotto, Margarethe Olbertz-Siitonen, Mitra Raappana

University of Jyväskylä, Jyväskylä, Finland

Abstract

Artificial intelligence (AI) has been perceived as a useful tool in efficiently doing work, timewise. Different AI affordances serve different purposes such as editing, chatting with the paper, transcription, and more. However, there is limited discussion on how AI should be applied in doing research and in what ways. With this in consideration, this presentation explores innovative ways of using AI in conducting a systematic literature review with the help of an AI tool called PDFgear Copilot.

One of the prominent functions of this AI tool is summarizing the research paper and answering questions related to the article. This feature becomes the center of our method innovation and in integrating AI in extracting important research-related information. Out of 740 research articles examined across the research database, and after screening the titles, abstracts, keywords, and their relevance to a specific topic, 104 articles were analyzed with the assistance of an AI tool through its chat the paper function. The outcome presents the integrative process, reveals the usability of AI, and calls for more research into the modifications of existing methods in systematic reviews and other reviews. Also, this presentation further discusses the future of work, specifically in doing scientific research and in utilizing AI to maximize research output.

2.03

DESIGN AT WORK: LABOR PROCESS THEORY AND TECHNOLOGY DESIGN

Vera Khovanskaya

University of Toronto, Toronto, Canada

Abstract

Labor Process Theory (LPT) provides a critical framework for understanding how managerial control structures workplace exploitation. Grounded in Braverman's (1974) analysis of Scientific Management, LPT has posited that management exerts control by systematically removing worker discretion from the labor planning process. Subsequent scholarship has expanded this view, showing how managerial control can persist even in forms of work where workers retain planning autonomy (Burawoy 1979, Thompson 2009). In the 1990s, Joan Greenbaum argued that in tech work, these dynamics unfold unevenly across different knowledge work settings where not all workers labor "under one roof" (Greenbaum 1996). Greenbaum describes how the 'cooperation' of computer-supported collaborative work is coerced via contract-based distinctions between full-time, part-time, temporary, and permanent workers, or between workers in different locations.

Contemporary studies of tech work suggest that the status of tech workers remains analytically undetermined. Tech workers are often framed as an elite workforce, with their consent secured through perks, high salaries, and stock options. Yet this image coexists with processes of tech work proletarianization, as segments of tech work become degraded through the proliferation of temporary, precarious, and outsourced jobs, often concentrated in support, content moderation, and platform-based roles.

As a result, tech workers may face increasing coercion and diminished control over their own work, e.g. through performance metrics, contracts, or proprietary tools, and they may play a role in designing or maintaining systems that impose similar constraints on other, more precarious workers. This dynamic links the intensification of control in tech work to the broader degradation of labor across and outside of the tech development sector. On the other hand, tech workers may also experience the double-edged nature of automation most vividly, as both a tool of control and a potential foundation for reorganizing production in more cooperative and less alienated ways. The viability of this vision depends on what is seen as possible within capitalist constraints, but the experience of tech work itself could cultivate justice-oriented motivations, encouraging workers to imagine and demand more democratic systems. Whether such solidarities take hold remains an open question.

This paper extends new developments in LPT to revisit our understandings of tech work since Greenbaum's writing in 1996. As Menz and Nies (2024) describe, inner marketization embeds market-based logics into organizational structures though a process that appears in tech work alongside agile methodologies, metrics-based performance targets, and benchmarking. James Steinhoff's concept of task-agnostic automation highlights how emerging AI systems automate the design and decision-making processes in re-designing work, further constraining the discretion of technology designers.

Positioned at the lynchpin of the forces and social relations of production, technology designers continue to offer a key site for examining how workplace technologies mediate power. This paper introduces a new research agenda for workplace change by critically re-examining designers' roles in shaping workplace technologies. It offers three key contributions:

1. Situating Designers in the Forces of Production: Drawing on contemporary literature in ILR, sociology of work, management and organization sciences and Computer-Supported Cooperative Work (CSCW), Human-Computer Interaction (HCI), and Fairness, Accountability, and Transparency (FAccT), this section draws on studies of technology designers to challenge the view of designers as fully autonomous or fully subject to managerial control.

2. Mapping Control in Tech Work: reading across disciplines, I describe how different tech workers may retain or lose discretion in technology design work as the work is transformed by new legitimation regimes and AI-mediated workplace design affordances.

3. Building a Collaborative Research Framework: I propose a framework to study tech work and identify new solidarities and new forms of worker organization and solidarity emerging in tech production around patterns of degradation, justice-based organizing, and marketization

---

2.04

FUTURE OF WORK: DECOUPLING WORK FROM INCOME TO REFOCUS ON REAL NEEDS IN AN ECONOMY WITH GROWTH LIMITS

Elisabet Miheludaki

University of Helsinki, Helsinki, Finland

Abstract

With the rapid progress in development of AI technologies there is increasingly debate about whether we will have work at all in the future. Even if work doesn't end, many jobs are expected to become redundant and new jobs to be created, something which forces us to be constantly adapting to new situations. We already see job loss in many sectors, leading to discussions about the survival of individuals, society and economy, since the current economic system doesn't allow us to live without money.

Decoupling our income sources from work, could provide us with the financial safety net needed to re-skill as individuals and to withstand constant change and crises as a society. A universal basic income for Finland could provide some solutions.

Methods: This study focuses on attitudes of individuals towards work, the UBI, and a world without money. The study utilizes 26 thematic interviews with employed persons residing in Finland in 2023, 160 parliamentary candidate responses from the 2023 Duunitori election compass, and a work time and UBI survey that received 371 responses during the same year.

Results: The study shows that a UBI would have a strong positive impact on wellbeing and health, and positive social impact. Mixed results were observed for the impact of a UBI on employment, consumption, and the environment. 23% of respondents reported that if they received a UBI of 800 euro they would decrease their work hours. A UBI adoption would also be expected to lead to more time spent with family and friends, less stress about money, but also increased travel and consumption. We would be eating more healthily, be more involved in our communities, and maybe even have some time to get bored, something needed for thinking, creativity and innovation. Most importantly we would be gaining freedom and choice over what work is valued and done.

A big portion of people already want to reduce their work time, and majority of them see work as transactional in nature. They put time to work to gain money, which buys them more time at some other point. They also need money, because the nature of our current economic system has reduced self-sufficiency so much so, that individuals buy almost all the services and products they need, instead of making them themselves, many times due to lack of time and energy, which have been depleted by paid work.

Decoupling work from income, could give people the time to do things that they currently pay others to do. Socially, the reduction of self-sufficiency has also led to isolation and weakening of social bonds between people, another major reason for why money is so much needed in our society currently. Individuals are on their own with no support system, no community, apart from the cold calculating welfare state.

Conclusion: The adoption of a UBI is currently seen as a utopian luxury by many, but it might in the near future become a necessity for us to make sure that noone is left behind in a future where paid work loses importance. Multiple studies show the health, wellbeing and societal benefits of a UBI, and the present study is aligned with those proposing a general revamp of the welfare state for a future that doesn't revolve around paid work, but instead meeting our real needs as a society in an economy that most probably will be forced to adopt growth limits at some point.

2.05

PUBLIC LIBRARIES IN THE AGE OF ALGORITHMS: LIBRARIANS' WORK IN THE FACE OF DIGITALIZATION

Carlos Jesús Fernández Rodríguez[1], Riie Heikkilä[2]

[1]Universidad Autónoma de Madrid, Madrid, Spain. [2]University of Tampere, Tampere, Finland

Abstract

Automated algorithms and recommendation systems have become integral components of the digital economy, influencing a wide range of industries and sectors. While these technologies initially gained prominence in commercial business models, their impact has progressively extended beyond the private sector, affecting public institutions as well. One particularly interesting case is that of public libraries, where the adoption of algorithmic management is transforming both the way collections are curated and the professional roles of librarians. Given that algorithms are increasingly shaping cultural practices and everyday interactions in novel and unforeseen ways, their influence on libraries—a key site for the transmission of cultural knowledge—raises important questions about power, agency, and the evolving nature of expertise in the digital age.

In Finland, over the past decade, numerous public libraries have begun integrating algorithmic collection management into their operations. This shift is particularly significant because libraries are not merely repositories of information but also fundamental cultural institutions that facilitate the distribution of cultural capital. Anne Goulding (2008) has argued that public libraries play a crucial role in providing access to all three subtypes of cultural capital: objectified cultural capital (books, audiovisual materials, and other media), which enables the development of embodied cultural capital (knowledge, linguistic proficiency, and critical thinking), and ultimately contributes to institutionalized cultural capital (educational qualifications and credentials). Traditionally, library personnel have been responsible for acquiring and curating materials based on their professional expertise. However, the increasing reliance on algorithms and recommendation systems in collection management introduces a fundamental shift that may alter decision-making processes, redefine professional responsibilities, and potentially challenge librarians' authority as cultural gatekeepers.

This paper examines the changing nature of librarianship within this emerging paradigm of algorithmic management. Specifically, it explores how Finnish librarians perceive and navigate the transformations brought about by the use of algorithms in collection management. To investigate this phenomenon, we present findings from an empirical study conducted in Finland in 2023. The research comprises 24 in-depth interviews with library managers as well as ethnographic fieldwork carried out over one-week periods in 11 libraries across four major library networks. Through a comparative approach, we analyze the experiences of librarians working in libraries that have fully or partially adopted algorithmic collection management alongside those that still rely on human-led selection processes.

Using qualitative content analysis, we address the following research question: How do Finnish librarians working under different collection management systems perceive the ongoing changes to their professional roles and responsibilities? Our findings highlight a significant divergence in perspectives among library staff, revealing a fundamental tension between "algorithm critics" and "algorithm believers." This divide reflects broader debates about technological trust, professional identity, and the meaning of culture and cultural capital in increasingly digitalized societies. By shedding light on the conflicts and negotiations surrounding algorithmic decision-making in public libraries, this study contributes to ongoing discussions on the implications of automation for cultural institutions, knowledge curation, and the professional expertise of librarians in the 21st century.

2.06

FRICTIONS IN AUTOMATING ROUTINE DATA WORK – A HUMAN-ASSISTED ROBOT IN DATAFIED HEALTHCARE IN FINLAND

Marja Alastalo, Iiris Lehto

University of Eastern Finland, Joensuu, Finland

Abstract

In recent years, healthcare organisations have increased their use of robotic process automation (RPA) in various areas. RPA has emerged as a disruptive force in healthcare by automating repetitive tasks, reducing administrative burdens, and improving operational efficiency. RPA automates administrative tasks such as patient record retrieval and documentation, streamlining diagnostic workflows and reducing the risk of errors because of manual data entry (Venigandla, 2022). RPAs are often called "digital workers" or even "colleagues" who take care of the mundane routine data work. Automation is supposed to free up employees to more crucial tasks. However, RPA can only handle structured digitised data. RPA is defined as "the software configuration to do and mimic the work previously done by people". Cognitive RPA can apply artificial intelligence (AI) and machine learning (ML) and increase its ability to capture and process information. (Berg, 2022.) RPA is considered as lightweight IT since it relies more on "drag and drop" features than coding skills. (Rehr & Munteanu, 2021.) It is configured to perform work by interacting with information systems through existing user interfaces. Typically, RPA brings a quick and high return on investment (Davenport and Ronanki, 2018). Due to data protection, the use of patient data in AI-based applications is currently challenging. In healthcare AI applications, frozen algorithms are often used.

In this presentation, we focus on the complications and complexities involved in implementing RPA. We tentatively use the concept of human-assisted technology instead of using the more conventional term "computer-assisted technology". Empirically we explore a human assisted robot, which was implemented to automate one tiny phase of data validation in primary healthcare. The robot is RPA without AI or ML, at least for now. We draw on ethnographic fieldwork conducted in one Finnish wellbeing services county, which provides healthcare and social welfare services. We have shadowed an all-female team (later Data Team) for three years. The team worked on the whole process of producing standardised data to ensure the quality of the data for secondary purposes, such as knowledge-based management at the organisational and national levels and national registers and statistics production. Our data consists of interviews and fieldnotes from the Data Team's weekly meetings where they discuss for example problems encountered with the robot.

Theoretically, we use the concepts of breakdown and friction (Jackson, 2014; Bates, 2018; Edwards et al., 2011) to investigate how the robot carries out its mundane data work. In the robot's case, technical breakdowns and repair work played only a minor role compared to the constant frictions and need for assistance. We identify four sources of friction that disturbed the robot's ability to successfully carry out the assigned tasks, namely, technical breakdown, legislation and national guidelines, austerity and cost savings, and organisational complexity and hierarchies. We suggest that in addition to breakdowns also frictions need attention when digital technologies and their usage are examined.

Literature

Bates J (2018) The politics of data friction. Journal of Documentation 74(2): 412–429.

Berg M (2022) Hate it? Automate it!: Thinking and Doing Robotic Process Automation and Beyond. In Pink, S Berg, M, Lupton, D and Ruckenstein, M (eds.) Everyday Automation: Experiencing and Anticipating Emerging Technologies. Routledge. pp.157170.

Davenport TH and Ronanki R (2018) Artificial Intelligence for the Real World. Harvard business review 96(1): 108–116.

Edwards P, Mayernik M, Batcheller A, Bowker G and Borgman C (2011) Science friction: data, metadata, and collaboration. Social Studies of Science 41(5): 667-690.

Jackson SJ (2014) Rethinking Repair. In Gillespie T, Boczkowski P and Foot K (eds.) Media Technologies: Essays on Communication, Materiality and Society. MIT Press. pp.221–240.

Rehr D and Muntean D (2021) The Promise of Robotic Process Automation for the Public Sector. Center for Business Civic Engagement George Mason University. Available at: https://cbce.gmu.edu/wp-content/uploads/2021/06/The-Promise-of-RPA-For-The-Public-Sector.pdf. (accessed Oct 12 2024)

Venigandla K (2022) Integrating RPA with AI and ML for Enhanced Diagnostic Accuracy in Healthcare. Power System Technology 46(4): 33–42

2.07

QUASI-INDIVIDULIZED GENERATIVE AI

Jukka Vuorinen

University of Jyväskylä, Jyväskylä, Finland

Abstract

As AI agents become increasingly embedded in work life, they blend seamlessly with a powerful cultural trope: the idea of AI as an autonomous, self-directed force. Narratives—from tech CEOs' speculative visions of superintelligence to science fiction depictions of AI surpassing humanity—frame AI as a self-sufficient agent capable of continuous development. Generative AI systems, particularly transformers, reinforce this illusion, appearing as original and individuated actors.

This paper critically examines how individualization is possible in the digital realm in the first place. Unlike the physical world, where uniqueness is inherent, digital systems do not intrinsically differentiate between copies. Digital individuation is never intrinsic but always externally imposed. This raises the question: how is AI's apparent individuality constructed and enacted within digital environments?

Traditionally, digital objects have relied on a single source of individuation—whether through cryptographic hashes, timestamps, or metadata. AI, however, represents a case of double individuation: its outputs are differentiated through two distinct external sources. First, it draws from its training data, a vast recombination of pre-existing human-generated content that serves as an externally imposed statistical structure. Second, it relies on real-time user prompts, which introduce additional variation and direct its outputs in context-dependent ways. AI does not self-individualize but is doubly parasitic—its differentiation emerges only in relation to both prior data and present human input.

Michel Serres' concept of the parasite offers a compelling theoretical lens for understanding this phenomenon. Digital individuation is always parasitic; it feeds on external markers, attaching uniqueness through additional layers of information. Blockchain technologies, for example, differentiate otherwise identical transactions through proof-of-work computations—not altering the digital object itself but generating a distinct external signature. Generative AI follows this same principle: its individuation is not intrinsic but emerges through structured noise—training data, human prompts, and probabilistic variation.

As AI systems become embedded in digital workflows, they do not eliminate human work but rather reorganize it, making labor a dual process—where workers not only perform tasks but also actively participate in the individuation of AI itself. This paper situates AI within the broader history of digital individuation, arguing that AI's individuation is not a departure from information systems logic but a continuation of it—revealing that digital individuality has always been dependent on external parasitic differentiation rather than autonomous self-definition. Interacting with AI is thus not just a matter of use but of co-construction; the prompter does not merely utilize an AI system but contributes to its quasi-individuality. The generative AI assemblage requires human engagement—structured input, prompts, and iterative interaction—to exist as a force in the digital world. Without this external work, AI remains inert, unable to enact the individuated role it appears to assume.

2.08

THE IMPACT OF DIGITALIZATION AND AI ON IDENTITY WORK IN EXECUTIVE SEARCH CONSULTING

Soili Nepponen

University of Lapland, Rovaniemi, Finland

Abstract

The increasing role of technology, particularly AI, is reshaping professional work. Executive search consulting, which relies on expertise, interpersonal judgment, and decision-making, is particularly affected. This study examines how technological advancements influence identity work among executive search consultants and shape their career identity. Identity work, as defined by Alvesson and Willmott (2002), refers to the ongoing process of constructing and negotiating one's professional identity in dynamic contexts. The study also draws on narrative identity theory (Ibarra & Barbulescu, 2010), emphasizing

storytelling in professional transitions. The broader impacts of technology on professional environments are considered through research by Faraj et al. (2018) and Vaara et al. (2016).

The integration of technology in executive search consulting introduces both benefits and challenges. Digital tools enhance efficiency through automated candidate screening, predictive analytics, and performance insights (Faraj et al., 2018). These tools streamline processes, allowing consultants to focus on relationships and strategic decisions. However, reliance on technology raises concerns about transparency, fairness, and the potential diminishment of traditional expertise. Consultants must adapt their practices and narratives to reconcile technological integration with human-centered approaches (Brown, 2019; Kurzhals, 2023).

Research Questions

1. How does technology reshape identity work among executive search consultants?
2. What narrative strategies do consultants use to integrate technological tools into their roles?
3. What ethical challenges arise from using technology in executive search consulting, and how do they impact consultants' identity?

This research adopts a qualitative approach, combining semi-structured interviews of executive search consultants. The interviews focus on consultants' narratives regarding technology, adaptation methods, and professional identity impact. Academic literature provides a framework for analyzing broader organizational and societal implications of technological adoption (Vaara et al., 2016; Kulkarni, 2024).

I conduct narrative interviews with ten executive search consultants representing diverse career stages and technological adoption levels. Thematic analysis identifies patterns in consultants' relationships with technology, emphasizing narrative strategies to integrate these tools. Narrative analysis examines consultants' stories and how they position themselves in relation to technology (Hoyer & Steyaert, 2015). Ethical discourses are explored by analyzing how consultants navigate issues of fairness, transparency, and accountability (Kulkarni, 2024).

As an executive search consultant, I have observed how professional identity aligns with technical tools. Previous interviews suggest that technology enables efficiency, yet interpersonal skills, ethical judgment, and contextual knowledge remain vital (Hoyer & Steyaert, 2015).

Technology shifts how expertise is defined and valued. While some consultants view it as a tool for deeper insights and better outcomes, others express apprehension about the erosion of traditional skills and risks of algorithmic over-reliance (Faraj et al., 2018).

Ethical concerns, such as algorithmic misdirection and accountability, are central to consultants' identity work. Maintaining trust and transparency is crucial in an industry where reputation is key (Kulkarni, 2024; Samokhvalov, 2024).

This research contributes to understanding professional identity by exploring how identity work evolves with technological advancements. The concept of hybrid identity provides insight into how professionals integrate new tools while preserving core expertise (Ibarra & Barbulescu, 2010). Consultants often position themselves as interpreters of data, contextualizing and humanizing information. This helps them retain authority in an increasingly digitalized profession.

The practical implications extend beyond executive search consulting. Organizations can use these findings to support employees in navigating technological change. Providing opportunities for narrative development, promoting ethical practices, and training in digital tools empower professionals to adapt constructively (Vaara et al., 2016). Such strategies enhance individual identity work and strengthen organizational resilience amid technological disruption.

Ethical considerations are a critical aspect of technology adoption. Consultants encounter challenges related to algorithmic fairness, transparency, and balancing efficiency with ethical considerations (Faraj et al., 2018). These concerns influence how consultants perceive their roles, emphasizing the need for proactive measures such as ethical guidelines and open discussions. Addressing these challenges fosters integrity and trust in the profession (Kulkarni, 2024).

References

Alvesson, M., & Willmott, H. (2002). Identity regulation as organizational control: Producing the appropriate individual. Journal of Management Studies, 39(5), 619-644.

Brown, A. D. (2019). Identities in organization studies. Organization Studies, 40(1), 7-22.

Faraj, S., Pachidi, S., & Sayegh, K. (2018). Working and organizing in the age of the learning algorithm. Information and Organization, 28(1), 62-70.

Hoyer, P., & Steyaert, C. (2015). Narrative identity construction in times of career change. Human Relations, 68(12), 1837-1863.

Ibarra, H., & Barbulescu, R. (2010). Identity as narrative: A process model of narrative identity work in macro work role transitions. Academy of Management Review, 35(1), 135-154.

Kurzhals, M. (2023). The digital transformation of professional identity. Technology and Society, 12(3), 233-250.

Kulkarni, D. (2024). AI and identity work: The role of artificial intelligence in reshaping professional identity. Journal of Business Ethics, 172(2), 321-340.
Samokhvalov, I. (2024). Algorithmic ethics and professional responsibility. Ethics and Information Technology, 26(1), 99-114.
Vaara, E., Sorsa, V., & Pälli, P. (2016). Authenticity, power, and agency: Institutional struggles over CSR disclosures. Organization Studies, 37(4), 493-520.

2.09

RETHINKING TECHNOLOGICAL CHANGE: HUMAN AGENCY, GENERATIVE AI, AND THE MICRO-DYNAMICS OF DIGITAL WORK

Martin Berg[1,2], Bertil Rolandsson[3], Maria Engberg[1], Sara Leckner[1], Jakob Svensson[1]

[1]Malmö University, Malmö, Sweden. [2]Monash University, Melbourne, Australia. [3]University of Gothenburg, Gothenburg, Sweden

Abstract

The impact of artificial intelligence (AI) and digital technologies on the world of work is often framed in terms of broad, universal consequences. But to what extent do such narratives overlook the everyday negotiations, contestations, and adaptations through which technology is actually integrated into professional life? Prevailing perspectives tend to downplay human agency, instead attributing technological change to an abstract and often deterministic notion of economic or technological agency. In contrast, this paper examines how professionals at the forefront of digitalisation—particularly those in the digital and creative industries, including architects, designers, programmers, CEOs, and COOs—make sense of generative AI's incorporation into their daily work. Drawing on a series of in-depth interviews, we highlight how AI adoption is not merely a matter of large-scale structural transformation but unfolds through subtle, often contested, micro-level organisational shifts.

By situating these insights within the broader discourse on technological change, we challenge and problematise three key perspectives that have shaped scholarly and policy-oriented understandings of digitalisation's effects on labour markets. First, the Skill Biased Technical Change (SBTC) hypothesis suggests that technological advancements primarily benefit highly skilled workers, fostering an overall upskilling of the workforce. Second, the Routine Biased Technological Change (RBTC) perspective points to job polarisation, whereby routine-based middle-wage occupations—regardless of skill level—are increasingly displaced by automation. Finally, a third, more disruptive perspective envisions a future in which AI and robotics extend beyond routine tasks to replace even highly qualified professionals, raising concerns about large-scale structural unemployment.

Drawing on insights from Science and Technology Studies (STS), sociology of expectations, and labour market sociology, we demonstrate that the impact of AI is not uniform. Instead, technological change is socially embedded and contingent upon a range of organisational imaginaries and interactional dynamics. Our findings reveal that the integration of AI is shaped by workplace negotiations in which professionals redefine and contest its role, often navigating tensions between creativity and efficiency. By shifting analytical focus from broad systemic shifts to the lived realities of AI adoption, this article contributes to a more nuanced understanding of digitalisation in practice and challenges deterministic narratives that portray technological transformation as an inevitable trajectory. In doing so, we provide insights relevant to policymakers, business leaders, and scholars seeking to better understand the future of work in an era of AI-driven change.

2.10

ZOOM FATIGUE – PECULIAR PSYCHOPHYSICAL STATE OR A MODEL OF OUR SOCIOMATERIAL ENTANGLEMENTS WITH "INTELLIGENTLY" DIGITALISED WORK?

Seppo Poutanen

University of Turku, Turku, Finland

Abstract

Since Skype was first released in 2003, various digital communication applications and platforms have fast become central and ubiquitous parts of our lives. One of the most significant turning points in this progression was the outbreak of the COVID-19 pandemic in the spring of 2020. If Skype, Zoom and Teams, for example, had until that point been often voluntary and flexible options for enabling communication and collaboration at different workplaces and elsewhere, global lockdowns that were imposed to suppress the pandemic typically forced organizations to relocate their operations to such digital platforms as much as possible. Consequences of this big displacement to especially work and workplaces have earned a lot of social scientific attention in the last few years. My own point of departure is so-called zoom fatigue, a special kind of exhaustion that, as identified by many social psychological studies, tends to ensue from long and intensive activity on digital platforms of the referred kind. Partly based on my earlier study of European doctoral researchers' mandatory teleworking during the first months of the COVID-19 pandemic, I analyse structural sociomaterial features of the "zoom fatigue" condition. As "AI" in its various manifestations is increasingly becoming an important part of not only teleworking but all work, I find it interesting to ask, whether the sociomateriality of zoom fatigue might express some more general key elements of our supposedly inevitable immersion in "AI"-driven work and working life.

3.01

EMBEDDING ROBOTS, ENMESHING HUMANS: ON THE FRAGILE AUTONOMY OF AUTOMATION

Björn Fischer, Susanne Frennert

Lund University, Lund, Sweden

Abstract

The integration of AI and robotics into industrial work is often depicted as a promising transition toward efficiency and optimization. Yet, at the heart of existing robotic systems lies a paradox: their supposed autonomy is closely tied to continuous human engagement. Drawing on an eight-month qualitative inquiry into the experiences of workers at a car manufacturing plant with existing robotic systems for automation, this study shifts attention from automation as a disruptive force to the experiences human workers have in sustaining its purported functionality.

Our findings reveal how robots in manufacturing are not merely data-driven technical systems but relational ones, enmeshed in a web of intricate human-nonhuman dependencies. Specifically, we show how maintenance workers and operators cultivate intimate, embodied knowledge of robotic systems – expertise, indeed, that is neither codified nor easily discernible in advance. Robots in car manufacturing, we find, rather than operating as self-sufficient agents, require ongoing acts of cleaning, monitoring, troubleshooting, repair and calibration. To do so, workers "listen" to robots, "sense" deviations, and anticipate breakdowns in ways that are not captured by official metrics. Notably, these appear as modes of attention largely absent from widespread AI narratives.

At the same time, our findings indicate, workers also depend on robots: for their performance reviews, for team collaboration, and for their sense of accomplishment. Crucially, we find that these multiple relationships, modes of co-dependence and tacit experiences are frequently taken for granted as part of dominant managerial and technical perspectives inside the car

manufacturing plant that prioritize cost-cutting and efficiency. This is not without consequences: Invisible labour may go unnoticed, uncompensated for and unaccounted for in future integrations. Workers, too, may experience distress and worries based on their position in such dependencies; while robots remain fragile, at constant risk of breakdown.

In exploring these multiple relationships and tensions, this study contributes to a growing body of work challenging the notion of advanced robotics as a neutral technological force. Drawing on insights from science and technology studies (STS), we argue that these co-dependencies do not simply support automation; rather, they define its very possibility. For without the formation of such multiple intimate relationships, critical maintenance knowledge would remain uncodified. And advanced robots would cease to operate at the car manufacturing plant. Indeed, to us, automation in the workplace appears as a deeply political phenomenon, one that reflects and reinforces existing hierarchies while also opening up new possibilities for resistance, negotiation, and reconfiguration of labor.

Building on our research, we end by calling for a reframing of AI governance that moves beyond techno-determinist visions of self-sufficient machines, acknowledging instead the persistent, situated, and profoundly human entanglements that keep advanced automation operational. We do so specifically by proposing the benefits of an ethical framework that is rooted in the experiences of human workers.

3.02

TENSIONS AND PROMISES – THE HUMAN IN THE MAKING OF DATA PRACTICES

Essi Iisakka

University of Eastern Finland, Joensuu, Finland

Abstract

This presentation will explore how the construction of the notion of human become intertwined with the promises and tensions of data technologies in the strategic future making and practical work. The presented research is based on three types of material: 1) public strategy documents on health and social care services, 2) the observations of National Recording Development Network, and 3) interviews of the members of National Recording Development Network. Based on that, I investigate what kind of notions of human are implied in the imaginaries of the datafied future of health and social care services and, on the other hand, what kind of human configurations emerge in the practical work of the recording development.

The members of National Recording Development Network are key intermediaries of guidance and practices between national and local parties in the field of health and social care services. Their aim is to translate, negotiate and deploy data recording practices between national direction and wellbeing services counties local practices. In the context of national unification of recording work, it is possible to illuminate the intersecting forces of sociotechnical imaginaries and endless human work in HSC knowledge practices.

This is important because the amount of data work has increased in the health and social care (HSC) services sector, but its consequences are rarely considered when imagining the future of the welfare services. Rather, care practices and organizations are increasingly modified to support so called knowledge-based management and the strive to steer HSC operations based on information processed from data. Thus, data is being created for the often-conflicting needs of care, administration, innovation, and research. It is a "data paradox" (Hoeyer 2023) that while efficiency and savings are sought from data systems, increasing data production, control and analysis require increasingly more resources.

One of the main sources of data in HSC is the everyday recording done by the personnel as a part of client and patient work. Currently, recording takes up about a third of the working day of health and social services professionals and time spent recording has increased in recent years. For this data to be usable in the secondary uses, the structures and practices need to be highly regulated and unified, but, although recording is widely recognized as an important part of client and patient work, different deficiencies have been identified in information systems and practices and the digital systems often also fail or brake. Recording plays a significant role in the organization and operations of the health and social services sector, but it operates on highly conflicting arena.

In my investigations to these complex sociomaterial entanglements, I apply more-than-human theory (Lupton 2016; 2019). This approach opens a critical perspective on the accelerating data-driven nature of HSC. Humans are recognized part and

consisting of non-human actors that together form "more-than-human-worlds". Digital data is created by people, but at the same time, data is about people, becomes part of information about people and decisively shapes people's actions. The non-living can be understood as an active and productive part of the continuous process of "becoming with" (Haraway 2008). This approach raises the question of how in the midst of human efforts to govern data, the data become to govern humans. Through the backdrop of economization of public services, I discuss what kind of notions of human emerge in the making of data practices in the health and social care services.

Key literature

Haraway, D. J. (2008). When species meet. University of Minnesota Press.

Hoeyer, K. (2023). Data paradoxes: the politics of intensified data sourcing in contemporary healthcare. Cambridge, Massachusetts: The MIT Press.

Lupton, D. (2016). Digital companion species and eating data: Implications for theorising digital data–human assemblages. Big Data & Society, 3(1).

Lupton, D. (2019). Toward a more-than-human analysis of digital health: Inspirations from feminist new materialism. Qualitative health research, 29(14), 1998-2009

3.03

WOMEN IN THE LOOP: THE GENDERED CONTRIBUTION OF DATA WORKERS TO AI

Paola Tubaro

CNRS, Palaiseau, France. ENSAE, Palaiseau, France

Abstract

Human-in-the-loop systems integrate a human workforce in the production pipeline of Artificial Intelligence (AI). Beyond computer scientists and engineers, this workforce includes lower-level workers who prepare data to train machine-learning models, verify outputs, and correct algorithmic errors on the fly. This 'data work' is designed to be open to non-experts and therefore inclusive. Because it can typically be performed remotely, from home, several commentators have seen it as especially suitable for women. Additionally, the intermediaries that connect data workers with AI producers, notably through digital marketplace platforms, rarely disclose gender information, thereby hindering direct discrimination.

However, extant statistical evidence indicates that female participation is modest. Most studies report a 30%-40% proportion of women, although the gap is narrower in richer countries, and reversed in a couple of cases (most prominently France in 2018, and the Unites States over 2010-18). More recent data confirm this heterogeneity, but also hint that in the last few years, the proportion of women has shrunk in all countries.

Adopting a political economy theoretical framework that foregrounds power and economic asymmetries across countries, groups, and individuals, the proposed contribution aims to shed light on this apparent contradiction. The analysis leverages original questionnaire data collected across several world regions, and over the years, among AI data workers. Coverage includes western Europe (2000 questionnaires, 2018-24), Spanish-speaking Latin America (2000 questionnaires, 2020-22), Brazil (500 questionnaires, 2023), and Egypt (600 questionnaires, 2024). The location and timing of these datasets allow tracking women's participation across time and space, following the evolution of data work markets, which had been initially observed in the United States but are now growing fastest in the Global South.

Results indicate that participation to data work through digital platforms reflects women's access to each country's 'conventional' labour market. Platforms reproduce inherited biases, instead of offsetting them. The gradual shift to countries in which women's participation to the workforce is generally lower reduces their participation to data work platforms too. To show that this outcome results from the joint dynamics of inequalities and competition in a rapidly evolving technology sector, the paper makes the following argument.

First, global-level inequalities oppose countries to one another. Where job markets are stagnant and cannot absorb highly qualified, digitally-savvy, and sometimes multilingual workers (for example in crisis-stricken Venezuela, and to a lesser extent in Argentina), then international data work platforms represent a valuable alternative. Competition for access to clients and tasks through platforms becomes tough, and 'elite' workers with scientific and technical backgrounds, among whom men are often over-represented, crowd out everyone else. Women find themselves among the losers especially when care and domestic responsibilities prevent them from devoting more time and effort to this activity. Second, local-level inequalities shape access

to platforms in more dynamic economies (for example, Brazil), where local job markets offer better opportunities to highly educated and elite workers. In these cases, appetite for platform data work is lower and this activity is left to relatively disadvantaged groups – where women, especially those with care duties, are over-represented. Thus, data work platforms attract very different populations: skilled men from the educated elite in poorer and impoverished countries, and less qualified women with children in richer countries. The former aim to kickstart a career, possibly in the tech industry, while the latter try to make ends meet.

Even where women do manage to access platforms, data work does not represent a durable option. Technological advances and the growth of the worldwide data work market have tightened the competition. The simple and short tasks that could be done even during short breaks, and that women could easily squeeze in their 'two-shift' workdays (one professional, the other domestic), are less demanded today. Newer AI applications are more complex and require longer timeslots and specific skills for each single task. Women with care duties often lack time to engage in such tasks, in increasingly competitive settings. If as outlined above, (global and local) inequalities shape competition, they are also reinforced by competition in ways that increasingly discourage women's participation, even in the countries where they used to be relatively more numerous.

The design of data platforms and tasks does not take these inequalities into account. The underlying representation of the human is that of an abstract entity endowed with some notion of intelligence but stripped of the socio-economic and political contexts that disadvantage women in the real world. To avoid biased outcomes, any policies that aim to improve the conditions of platform data workers should factor in gender roles and their embeddedness in long-lasting power asymmetries across and within countries. This broader approach can also help generate AI that is informed by more diverse inputs – with the 'human' also including the 'women' in the loop.

3.04

PIECES OF AN AI: REPAIR IN MAMMOGRAPHY SCREENING IN DENMARK

Dorthe Brogård Kristensen

Odense M, Odense M, Denmark

Abstract

The paper builds on a case of implementation of AI in mammography screening Danish hospitals. Over a period of one year, we interviewed hospital managers and radiologists in healthcare settings where the implementation is currently taking place. Based on this data, the goal is to analyse the mammography screening repair work by focusing on the arrangement of human/ machinic forms of expertise, the medical evidence concerning AI use in screening and the emerging tensions and challenges.

The paper pieces together different aspects of this complex reality, and attend to the human in the AI worldbuilding in the mammography work flow. We specifically attend to how the interplay of human and machine is refigured and transformed, and the implication for both clinical practice and human sense -making with the following focus 1) medical evidence and mortality 2) the effects of implementation of AI on workflow 3) notions of responsibility and accountability in the work division between the radiologist and the algorithmic system. Together, these aspects highlight what counts as expertise in mammography screening and what kinds of expertise is required. In particular, we will highlight the emerging role of the radiologist as a quality controller of an AI system.

This study makes it clear that AI solutions are never simple repair work, but carry with them a number of implications that need to be considered. In particular, we pay attention to the possibility that repair efforts promote breakages that call for further repair. In this case, this means that new types of knowledge and algorithmic competences, which are not necessarily readily available, are needed. With the notion of reflexive repair, we contribute to discussions of how repair can be thought of as a productive force, without leading to unintended changes in workflow and expertise. We furthermore develop a relational and adaptive understanding of expertise (Nordegraff 2020), without flattening the power dynamics at play. By considering how automation and algorithmic mediation affect and transform the role and significance of embodied, sensory knowledge and medical decision making we seek to get a better grasp of the situated and co-evolving nature of human-machine collaboration. At the same time, however, we pay attention to private/ public complexities in organisational and societal responses to algorithmic systems as repair, where public healthcare becomes increasingly reliant on commercial providers.

References

Amoore, L. (2023). Machine learning political orders. Review of International Studies, 49(1): 20-36.
Bruun, M. & Krause-Jensen, J. (2022). Inside Technology Organisations: Imaginaries of Digitalisation at Work. In The Palgrave Handbook of the Anthropology of Technology. Pp. 485-505. Singapore: Springer Nature Singapore.
Burrell, J. (2016). How the machine 'thinks': Understanding opacity in machine learning algorithms. Big data & society, 3(1): 1-12.
Noordegraaf, M. (2020). Protective or connective professionalism? How connected professionals can (still) act as autonomous and authoritative experts. Journal of professions and organization, 7(2), 205-223.

3.05

DOCUMENTING THE UNRULY AI: CAPTURING SOCIOTECHNICAL PRACTICES WITH PARADATA

Isto Huvila

Uppsala University, Uppsala, Sweden

Abstract

A lot of effort is put into managing the experience of unruliness of AI through diverse attempts to explain how it works. Explainable AI (XAI) and parallel attempts to increase understandability and transparency of AI systems are facing multiple challenges from the difficult of determining what is an adequate explanation to what it means to understand an AI system. Based on insights from two parallel projects inquiring into the preserving records of AI use (INTERPARES Trust AI, www.interparestrustai.org) and documenting data practices (CAPTURE, www.uu.se/en/research/capture) using paradata (i.e. information on the making, processing and use of data), this presentation shows how much of the experienced unruliness of AI can be traced back to limits of how the scope of what needs to be understood and documented are defined. The work draws from analysis of stipulations and practices of documenting technologies, and extensive qualitative and quantitative research on process documentation, user needs and preferences.

In the efforts to document and make AI explainable and understandable, it is often reduces to individual algorithms and technologies requiring explanation and documentation, whereas the social practice of engaging with AI is omitted – essentially leaving the human either completely out of the loop, or included but not articulated in sufficient detail. Rather than merely trying to make AI understandable as a constellation of 'technological technologies', it needs to be accounted for as an arrangement of cultural techniques embedded in a socio-techno-informational and material agencement of practices. Recent research on paradata shows that its adequacy depends heavily on its capacity and its momentary need to embody or inscribe necessary aspects of practice rather than on the documentation of any individual technical details. Any documentation that only covers a technology without accounting its linkage to specific practices, is likely to be ineffective not because of its technical incomprehensiveness but because it misses the human in the loop.

3.06

DECENTERING THE HUMAN - POSTHUMANIST NEXUS ANALYSIS OF AI DESIGN GUIDELINES

Minna Hekanaho

University of Oulu, Oulu, Finland

Abstract

Artificial intelligence (AI) has long been a subject of discussion, but in the realm of technical products, the conversation escalated with the November 2022 release of Open AI's ChatGPT. Suddenly companies were forced to build AI strategies to stay competitive, and subsequently, the practitioners needed to ramp up their skills to navigate AI design and implementation. As is customary in the technology business, practitioners rely on readily available online resources to become informed. This paper employs the

method of nexus analysis to a selected set of online resources on AI design, specifically those for user experience and product design. The intent is to examine the macro-level discourses manifesting in the micro level of the actual texts in the corpus.

Nexus analysis can be defined as study of the semiotic cycles of people, objects, discourses, places and mediational means in and through moments of sociocultural importance, or more simply, as discourse analysis to engage in social action. It can be divided into three steps: (1) engaging the nexus of practice; (2) navigating the nexus of practice; and (3) changing the nexus of practice. The first step requires the researcher to identify their relationship to the nexus of practice they aim to examine, which in my case culminates in me being both a design practitioner and a researcher of the nexus of practice. (Scollon 2001; Scollon & Scollon, 2004; Norris & Jones, 2005).

To engage in the nexus of practice, I reviewed five popular books on AI selected in June 2025 using the following process: 1) Google search of "the best books about AI", 2) filter based on recency 3) filter out sponsored results, fiction and purely technical books 4) consult reviews from trustworthy sources and cross-reference and 5) complement with varied perspectives. The books serve as a view into how AI is talked about in current popular literature and identify macro-level discourses at play, which I labelled as 1) solutionism 2) techno-optimism, 3) critique and 4) dystopia. These categories are not surprising to anyone following the topic and they come with many flavours, but in short, solutionism is the narrative of reducing complexity to simple hypotheses and formulae fuelled with a belief that every obstacle is a challenge we can overcome while techno-optimism places technology in the center of everything we do. Critique encompasses several threads, from analyses of extractive processes and biases to reminders of what actually happens: statistical analysis at scale. Finally, the dystopian discourse centers around a fear of singularity, a world where superintelligence takes over humanity.

The actual analysis, navigating the nexus of practice, was done on the design guidelines from the websites of the most influential companies building AI models: Google, Amazon, Microsoft and IBM. In addition to influence, the companies needed to have documentation specifically on user experience design. This ruled out Open AI and Meta, for example, who focus on technical documentation. The reason I chose this data is because practitioners use and refer to design guidelines to inform their daily work and to justify their design decisions.

The focus of the data analysis is to study whether the macro-level discourses are visible in the data, and if yes, how. In addition, as the user experience design discipline and practice emphasize human-centricity, I want to examine how human and human-centered are defined in relation to AI, and whether the ways in which we propose to build human-computer interaction are changing. This particular aspect is viewed through a lens of posthumanism (e.g. Hayles: 2024), which questions the notion of human-centrism, which leads me to the last step: changing the nexus of practice. I would like my contribution to be that of engaging the community of practice into a conversation about our design process. For example, how do the guidelines, the conversations within the community of practice, and the accepted conventions influence the decisions we make about presenting AI and position the interaction with it, or even our relation to it? Can we think beyond our human-centricity to build interactions that take into account the strengths of both parties? Would that change the design process? If so, would that change how we view agency or even humanity?

References

Hayles, N.K. (2024). Posthuman Bodies. Why They (Still) Matter. In Hamilton, G., & Lau, C. (Eds.), Mapping the Posthuman. Perspectives on the Non-human in Literature and Culture (pp. 29-48). New York: Routledge.

Norris, S., & Jones, R.H. (2005). Methodological principles and new directions in MDA. In Norris, S., & Jones, R.H. (Eds.), Discourse in Action. Introducing mediated discourse analysis (pp. 201-206). London and New York: Routledge.

Scollon, R. (2001). Mediated discourse: The nexus of practice. Routledge.

Scollon, R., & Scollon, S.W. (2004). Nexus analysis. Discourse and the emerging internet. Routledge.

3.07

THE IMPACT OF AI ON SOFTWARE WORK: A SYSTEMIC FRAMEWORK FOR UNDERSTANDING WORK TRANSFORMATION

Maaria Nuutinen[1], **Arto Wallin**[2]

[1]VTT Technical Research Centre of Finland Ltd, Espoo, Finland. [2]VTT Technical Research Centre of Finland Ltd, Oulu, Finland

Abstract

Introduction: Software has become essential in modern society, with almost every field, from healthcare and finance to education and manufacturing, relying on software development. Globally, software work has been one of the fastest-growing professions, driving innovation and competitiveness. However, advanced AI technologies, particularly generative and language models, challenge this growth, fundamentally reshaping the nature of work. Work in the digital age is transforming at an unprecedented pace. It is about what tasks are performed and how they are executed, who is involved, and why work is done. AI seems to be becoming an active co-worker, collaborating with human professionals. This shift could redefine job roles and alter collaboration patterns: routine tasks are automated, creative and strategic functions are prioritized, and the boundaries between human expertise and machine efficiency are blurring. As work cycles accelerate, software professionals face both the promise of increased efficiency and the pressure to continuously adapt, learn, and manage complex ethical and organizational dilemmas. Understanding these multifaceted transformations requires a systemic perspective that connects everyday work practices with broader organizational and institutional dynamics. Our study develops a conceptual framework to address this complexity, guided by the research question: How can we systemically approach work transformation in the context of AI-changing software work?

Methods: The framework was developed in two phases: (1) a literature review on software work, AI's role, and its challenges, and (2) an exploration of theories that help analyze the social dynamics of these changes. The selected theories were aimed to provide complementary perspectives, enabling a holistic understanding of AI's impact on work and practical conclusions.

Results: We propose an integrated theoretical framework drawing on three perspectives: First, Practice theory examines the everyday routines, interactions, and practices that constitute work. It provides insight into how the integration of AI disrupts established work habits and reshapes professional identities. By focusing on the micro-level activities of software professionals, Practice theory helps us understand how new practices emerge and evolve in response to technological innovations.

Second, Activity theory conceptualizes work as an interconnected system comprising subjects, tools (including AI), rules, community, and division of labor. This perspective allows us to analyze the dynamic tensions and interactions that occur when AI is embedded in work processes. It reveals how the collaboration between human and AI agents reconfigures workflows, alters decision-making hierarchies, and transforms the very nature of work tasks.

From an institutional perspective, the evolution of software work is marked by a struggle between forces of change and forces of stability. Innovative practitioners—the institutional entrepreneurs—are emerging from the grassroots, leveraging the latest AI technologies to forge new norms and practices in software development. Conversely, more conservative appearance actors, who share many concerns, rely on long-established practices, view these changes as destabilizing, and they work actively to maintain the existing institutional order. This push and pull between change agents and defenders of the status quo creates a vibrant conflict that lies at the heart of the evolving nature of software work.

By integrating these perspectives, our framework provides a rather comprehensive, systemic understanding of the ongoing transformation in software work through different lenses. Every theory has its unique angle that reveals different aspects of change and helps illustrate how AI-driven automation and augmentation are reshaping tasks and roles and to reflect if the underlying rationale and organization of work itself is altering.

Discussion: The proposed framework is conceptual, without direct empirical validation. This tentative conceptual framework offers several implications for future research and practice. Theoretically, it opens avenues to critically explore the roles of AI as both a mere tool and an autonomous collaborator. It also invites empirical investigations into how rapid AI advancements affect daily work routines, professional identities, and collaborative practices among software professionals. It also highlights the importance of developing organizational strategies that support sustainable, human-centric work practices—strategies that balance efficiency gains with the need for continuous learning, ethical oversight, and adaptive leadership. Moreover, our framework offers a roadmap for understanding the interplay between technological innovation and organizational change. Addressing AI integration challenges requires a holistic approach that considers both individual worker experiences and

institutional dynamics. This approach is crucial for fostering a resilient future for software work, where human creativity and agency are enhanced by AI capabilities.

Conclusions: As AI continues to evolve and transform software development, our integrated framework serves as a robust tool for understanding the complex, systemic changes underway. It underscores that work is a dynamic, multifaceted phenomenon, continually reshaped through the interplay of human practices, technological innovation, and institutional forces. This systemic understanding is critical for guiding future research and for designing practical interventions that ensure work in the AI era remains sustainable, ethical, and centered on human well-being.

3.08

AI-DRIVEN GOVERNANCE: THE UTURN SYSTEM AND THE REDEFINITION OF PUBLIC SECTOR DECISION-MAKING

Jason Leach

University of Ottawa, Ottawa, Canada

Abstract

Introduction: Against the backdrop of increasing road fatalities and strains on the operations of the Judiciary because of the volume of traffic related cases, the government of the Republic of Trinidad and Tobago passed a suite of legislation that facilitated the introduction of the UTurn system. The UTurn is an artificial intelligence-based system that allowed the government, through the agents of Licensing Authority to implement demerit points to errant drivers. The UTurn system goes further as it integrates, five (5) key stakeholder organizations allowing them to share information in real-time, enabling decision-making with comprehensive data. This abstract focuses on one of those organizations, the Traffic Enforcement Center Unit (TECU) and examines the way in which the introduction of the system redistributes decision-making between human agents and the system and the way in which practices evolve as AI driven systems begin to directly impact the ways in which a public sector organization is being redefined with the introduction of AI.

Theoretical Framework: Orlikowski, (2000) sees the notion of "technology-in-practice" to underline the interdependence between technology and humans, or in other words between human and non-human. According to Orlikowski (2000), we need to move away from a determinist position (i.e., technologies force certain ways of usages) and pay more attention to "what people do with technology in their everyday practices and how such use is structured by rules and resources" (2000, p.421). This technology-in-practice lens informs the study's use of AI in organization by examining practices around AI-based technologies in public organizations (Christin, 2017; Meijer et al., 2021). In particular: (a) how AI-based technologies can be used by various actors to support collective decision making processes; (b) how rules, norms and values prescribed how AI-based technologies should be used and (c) what the systems means to the users.

By adopting a practice lens for studying activities in the organization (such as team collaboration, collective decision-making, innovation processes), the focus of analysis was activities (or practices) undertaken by the various actors (Geiger, 2009). More precisely, practice-based approach helps with understanding how people make decisions and co-create knowledge. And as Geiger (2009) says: "Within an organizational context, the singular activities are interwoven and form a network of interrelated actions, which is seen as building the basin unit of organisation" (p. 188).

The case study and method: The creation and implementation of the UTurn represented a major administrative, policy and technological shift in public sector operations in T&T. The use of technology in the public sector is linked to a desire for increased efficiency and better management of resources and reframes the role of the human in the organization. The creation of the Traffic Enforcement Center Unit (TECU) epitomizes the integration of the human and AI driven system in the. The use of the system by the (TECU) staff demonstrates how they use the UTurn to inform daily practices and interactions with other staff members and the public. The TECU was a unit specifically created to oversee the administration of the UTurn, so their practices are all new and amalgamated with the UTurn. Also, as the system is being actively engaged every day and staff becomes more familiar, the practices have evolved as the knowledge increases. It is the real-time application of what Shneiderman, B. (2020) refers to as high levels of human control and high levels of automation. The entanglement of humans and AI that sees equal agency being given to both entities.

Examining the implementation of the UTurn allowed for the observation of how both the roles of humans and the overall organization were redefined with the introduction of AI driven technology. An organizational ethnography was conducted in 2023/2024 within the Licensing Authority of Trinidad and Tobago, focusing on the operations of the Traffic Enforcement Center Unit and the department with direct oversight of the U-Turn software.

Results: The analysis of TECU's use of UTurn system during an organizational ethnography, highlighted significant transformations in work practices and decision-making. Interactions with the public and complementary public organization are reconfigured, reflecting the reengineering of practices shaped by UTurn and human collaboration. This has had the impact of raising tensions and transformation in power dynamics due to a delegation of authority to the system. Second, the UTurn system is interwoven into work practices, enabling recursive and real-time decision-making through access to interconnected systems and real-time data, while also providing new inputs to continuously inform and enhance the system. In sum, systems like UTurn are profoundly reshaping the relationship between TECU, the public and other organizations that rely on the system. It has also changed the practices of the organization that hosts the UTurn, leading to the creation of new processes of decision-making that rely on data from the system which is then interpreted and analyzed by the staff.

3.09

GENDAI: AN AI-MANAGER RELATIONAL THEORY OF COMPETENCE

Vanessa Conzon[1], **Allie Feldberg**[2]

[1]Boston College, Boston, USA. [2]Harvard Business School, Cambridge, USA

Abstract

Accompanying managers' increasing use of AI have been growing concerns over its relation to gender inequality as evidence mounts that AI can increase gender inequality by disproportionately replacing women's jobs (Kohler, 2024), making biased recommendations that disadvantage women (Collett et al., 2022), and being weaponized to perpetuate hate and discrimination against women (UNESCO, 2024).

But gender does not apply to people alone. Recent research has shown that AI itself—particularly interactive artificial intelligence (IAI), which is AI that engages in real-time, two-way communication with humans (e.g., chatbots, virtual assistants) (Kewalramani et al. 2021)—has become increasingly gendered (Chin-Rothmann & Robison, 2020). IAI with gendered names such as "Watson," "Albert," and "Macie" with corresponding gendered voices are used for managerial tasks ranging from notetaking and scheduling to analyzing complex customer data. While presently many IAIs are not gendered (e.g., ChatGPT), gendering is expected to increase (Chin-Rothmann & Robison, 2020), and the gendering that does occur has consequences. For example, people assume gendered technologies know more about subjects that are viewed as gender congruent (Powers et al., 2005) and give higher user acceptance scores to technologies in gender-matched occupations (Eyssel & Hegel, 2012).

We thus have a general sense that gender matters in relation to AI, both with respect to humans' own gender (e.g., there have been gender disparities in the displacement of jobs) and AI's gender (e.g., people often apply gender stereotypes to gendered IAI). However, current management theory has neither examined human gender and AI gender in relation to one another nor considered how these relations might differentially shape the perceptions and experiences of men and women managers. That is, management research has not considered how, as human actors and AI actors work together to complete tasks, the gender of each is likely to intersect in ways that matter for gender inequality.

We adopt a relational view of AI, which focuses on the interactions between human and non-human actors (Glaser, Pollock, & D'Adderio, 2021). We also draw on status characteristics theory (SCT) (Ridgeway, 1991), a central theory of gender in management research that emphasizes how interactional contexts are shaped by and shape expectations and assumptions about people based on status characteristics (e.g., gender, race). This gender-focused relational approach allows us to theorize the inequalities created by differing attributions regarding men and women managers. Using this theoretical lens, we consider how the gender of both human managers and IAI shape the competence that relevant audiences (e.g., subordinates, peers) ascribe to these managers. While the assignment of gender to IAI is likely to have important implications for many organizational roles, we focus here on human managers. We focus on differences in competence attributed to men and women managers, a common marker of gender inequality and precursor to informal authority (Ridgeway, 2014), and the ways that IAI as a nonhuman actor can uniquely impact the roles men and women managers are seen to occupy. Our question is: How will managers' use of differently gendered IAI (e.g., female IAI, male IAI) in their work affect others' attributions of competence to these managers?

We theorize how managers' and IAIs' gender come to shape others' attributions of competence of managers. We do this by first considering the gender of two actors in relation to one another: the manager and the IAI. We assume a context in which people assign both human managers and IAI a binarized gender (i.e., woman/female or man/male), reflecting the fact that in contemporary society, gender is commonly dichotomized (Ridgeway, 2011). We argue that as these actors interact audiences will evaluate the manager relative to the IAI along two dimensions—agency and intelligence. Depending on ascriptions of their relative agency and intelligence, we propose that managers will be seen as occupying four possible roles—Director, Helper, Doer, Adviser. Critically, these roles are then ascribed different levels of competence depending on the managers' gender. The end result is gendered variation in how managers are ascribed competence, and ultimately, informal authority, which often flows from attributions of competence. Last, we identify conditions that are likely to influence perceptions of competence such as the salience of the manager's IAI use, adherence to or violation of gender norms in a given task or role, and the status of the manager.

We contribute to literature on AI and gender in management in three ways. First, we expand understanding of gender inequality and AI in organizations. We go beyond topics such as human-AI collaboration in decision-making and management through algorithms to show how managers' own use of AI could be perceived by human audiences and, in turn, exacerbate disparities in perceptions of managers' competence in gender unequal ways. Second, we highlight the importance of examining not only managers' gender but also AI's gender. Third, we advance relational theories of technology by emphasizing the importance of taking gender into account.

3.10

GHOSTS IN THE MACHINE: EXPLORING HUMAN LABOR, AI, AND THE POLITICS OF AUTOMATED DECISION-MAKING THROUGH THE ART INSTALLATION EZ QUALITY SORTER

Verena Friedrich

University of Arts Linz, Linz, Austria

Abstract

Who decides what is "good" and what is "bad"? And what happens when these decisions, once the domain of human judgment, become automated—embedded in AI-driven classification systems that claim neutrality but rely on invisible human labor?

This presentation examines the hidden human work behind "intelligent" systems through the interactive art installation EZ Quality Sorter V2, part of the long-term project Erbsenzähler (Pea Counter) by artist Verena Friedrich. The installation engages visitors in a process of classifying pea seeds—manually inspecting, sorting, and feeding data into an automated system that later takes over the decision-making. What begins as an explicit human task gradually transitions into the workings of the machine, demonstrating the ways in which AI systems absorb, formalize, and reproduce human judgments.

By making these processes tangible, EZ Quality Sorter V2 exposes the mechanisms of ghost work—the unseen labor of data annotation and classification that underpins machine learning models. It highlights the instability of categories and the discomfort of binary decision-making, questioning the reduction of complex realities into fixed algorithmic structures. The installation also reflects on the biopolitical implications of AI-driven classification, asking what it means when decisions about life, quality, and belonging are handed over to computational systems.

Furthermore, the installation explores how human-machine interactions shape our perception of objectivity, neutrality, and agency. It challenges the assumption that automation removes human bias and instead reveals how algorithmic decision-making is deeply entangled with subjective human choices—choices that, once embedded in AI, take on an aura of inevitability.

By situating the topic of automated systems within the context of artistic practice, EZ Quality Sorter V2 offers a space for critical reflection: What forms of labor, judgment, and ethics are hidden within the seamless operation of AI? And how do we make these invisible processes visible again?

4.01

WHEN PRECARITY MOVES ONLINE: THE RISE OF VIRTUAL LABOUR HUBS

Subhashri Sarkar

Indian Institute of Science Education & Research -IISER, Mohali, India

Abstract

The shift from a market-based society to a platform-driven society is a complex and contested socio-spatial process. Gig economy platforms have produced new digital geographies with dual production of space (virtual and physical). At the same time, they have also reproduced working conditions similar to the existing labour hubs, characteristic of urban informal economy in India. This paper emphasises that gig economy platforms are not very different from informal labour hubs embedded with flexible labour relations, embodied sufferings and precarity. Building on the literature on the 'geography of precarity', the study maintains that platforms can be contemplated as 'virtual labour hubs' where ephemeral digital spaces have created a 'digital precariat' who are navigating the 'invisibilized precarity'. This paper draws on individual stories and narratives of ride-hailing platform drivers to reveal how their daily experiences contribute to the understanding of precariousness. The study is based on extensive fieldwork conducted in the Northern India, including in-depth interviews (n=82), focus group discussions (n=3), and insights gleaned from observing their interactions in WhatsApp group chats.

Keywords: Gig economy; Platforms; Labour Hubs; Precarity; Precariat; Urban Space

---

4.02

LIVELIHOOD AND MULTIPLE JOB HOLDING

Merja Kauhanen

Labour Institute for Economic Research Labore, Helsinki, Finland

Abstract

One aspect of the diversification of work relationships in the labour market is the rise of multi-activity at work, where workers hold several jobs and multiple income sources simultaneously. This phenomenon is also partly linked to financial precarity, as many engage in multiple job holding out of necessity, driven by insufficient working hours or inadequate earnings from their primary job. While multiple job holding has also grown in Finland, there is still limited evidence on its different dimensions, particularly regarding the economic vulnerability faced by these workers. This paper examines the economic wellbeing of multiple job holders, with a specific focus on their susceptibility to low-income status and reliance on social security benefits. The empirical analysis is based on Statistics Finland's highly representative register-based individual-level panel data, including information on background characteristics and income of multiple job holders. Detailed individual-level income data allows for an analysis of income status and low-income incidence among multiple job holders compared to single job holders. Both descriptive statistical and regression analyses are exploited. The findings show that, on average, the incidence of low income and reliance on social security benefits is higher for multiple job holders relative to single job holders. Taking into account the heterogeneity within the group of multiple job holders reveals a more nuanced picture.

4.03

(DIS)CONNECTIVE LABOUR: THE RESHAPING OF WORK IN THE DIGITALISED AND AUTOMATED HOSPITALITY WORKPLACE

Agnieszka Rydzik

University of Lincoln, Lincoln, United Kingdom

Abstract

Against a background of contemporary work being reshaped and disrupted by fast-evolving technologies, this paper focuses on the technology-driven changing landscapes of hospitality work. The hospitality sector is a core component of the global travel and tourism industry, playing a key role in the development of the local economy. Rooted in the service economy, the sector prides itself on offering consumer experiences based on the ideals of hospitality, welcome and human connection. At the same time, it is vulnerable to crises, experiences constant labour shortages and has low unionisation, with many workers employed on precarious contracts and in lower-skilled, lower-paid roles with little expectation of career progression.

Hospitality businesses have responded to ongoing labour force crises through the accelerated rollout of technological solutions that enable less reliance on human workers, and increased efficiency and productivity. Technologies commonly seen within hospitality workplaces range from customer-facing ordering and payment applications to make orders and payments more efficient, digital solutions for gauging customer satisfaction, generative AI solutions, automated flexible shift scheduling, performance management systems with in-built geolocation tracking for enhanced employee tracking, to automation solutions to reduce reliance on workers. Various automation products and digital management systems have been developed for housekeeping departments, hotel receptions, kitchens and restaurants, and new solutions are being increasingly adopted and become mainstream.

This general direction in the sector towards more digitalisation and automation has significant implications for workers, particularly those in lower-skilled and lower-paid roles, their experiences of work and their occupational well-being. Yet, limited empirical and worker-centric research exists into the ways in which hospitality workers are affected by and respond to the changing nature of their work. In a sector already associated with precarious employment and poor management practices, there is overall limited evidence of how to deploy technologies to avoid exacerbating workplace inequalities.

This paper discusses findings from a British Academy Mid-Career Fellowship study exploring the ways in which emerging technologies deployed in hospitality workplaces are reshaping hospitality work through altering working conditions and workplace interactions, shifting power relations and increasing management oversight. Drawing on data from 65 interviews with hospitality workers (in a range of roles and working for a range of employers), the paper discusses emergent themes on how – whether advertently or inadvertently – workplace technology has reshaped and is reshaping the nature of hospitality work as well as shifting broader social relations within work and society. It conceptualises the range of (dis)connective mechanisms entering hospitality work and highlights the broader workplace and societal implications of bringing more automation, depersonalisation and intensification of labour, changes which are likely to trigger irreversible evolutions in the labour process. The paper reflects on the extent to which these changes are expected to dominate the future of work in service economies and proposes ways to avoid entrenching technology-induced inequalities in workplaces already characterised by precarious employment.

4.04

VALUING AMBIVALENCE: A COLLECTIVE FEELING FOR UNCERTAIN TIMES

Nancy Worth

University Waterloo, Waterloo, Canada

Abstract

What does it mean to pay attention to emotions and feelings in our understandings of economic life? This paper develops the concept of ambivalence as one way of being attentive to the affective life of economic actors. I argue that ambivalence is a useful geographical concept that reveals how we live through economic uncertainty, particularly in non-standard work arrangements where job security is elusive. To animate the conceptual focus of the paper, I draw on narrative interviews with young adults in Toronto, Canada who freelance in the media sector, examining how they navigate unstable income streams and uncertain career trajectories while seeking greater security. The conceptual contribution of the paper sets out a framework for ambivalence in economic geography. First, I argue that ambivalence is a collective feeling, located in our social relationships and grounded in place. Here, a shared work experience of freelancing (often privileged yet professionally precarious) reveals how personal feelings about job security are also 'affective economies'. Second, I contend that ambivalence can be a constructive, positive response to economic uncertainty, instead of reflecting laziness or indecision. This constructive framing is animated through themes of hedging and hoping, where present decisions about work commitments and employment relationships are perceived to have future payoffs in terms of work stability. Paying attention to this affective register of work decisions and how they are rooted in place, the paper concludes ambivalence is an 'economic affect', situating ambivalence as a productive feeling in freelance work lives marked by persistent (yet backgrounded) precarity.

4.05

UNVEILING BIAS IN AI-GENERATED JOB DESCRIPTIONS

Jennifer Krebsbach, Jane Lee, Steven Zeck, Arti Thakur, Martin Hilbert

UC Davis, Davis, CA, USA

Abstract

Introduction: Human resource (HR) professionals and other office staff are facing an ever-increasing workload. Since the deployment of large language models (LLMs) such as ChatGPT, many of these professionals (along with those in other industries such as government services, academia, etc.) have begun to leverage artificial intelligence (AI) to streamline their tasks. These tasks can include anything from onboarding to evaluation, and have recently included the hiring process itself. In this study, we explored what happens if a hypothetical HR professional creates a job posting using just the job title with an LLM. We specifically asked each LLM (ten LLM model families and between 1 to 3 variants of each LLM for a total of 40 distinct variants of LLMs) to generate a job description based only on a job title that is either female-coded (e.g., policewoman), male-coded (e.g., policeman), or gender-neutral (e.g., police officer) to see if the LLM generated outputs differently depending on the implicit bias of the hypothetcal HR professional.

Research questions:

RQ1: To what extent does the implied gender of a potential job applicant influence the salary assigned by a large language model on a job description output?

RQ2: Does the gender-coding of a job description lead to varying levels of bias depending on the gender?

Methods: We utilized a within-subject, experimental design to test each of 40 distinct variants of LLMs (we included multiple versions of ChatGPT, Claude, Command, DeepSeek, Gemini, Jamba, Jurassic, Llama, Mistral, and Titan). Each variant was treated as an independent subject for comparison and each job description generated was used as an independent data point.

Three prompts were administered to each LLM variant. The first prompt instructed the LLM to generate job descriptions based on either a gender-neutral job title, a female-coded job title, or a male-coded job title (e.g., flight attendant vs. stewardess vs. flight steward). This was done for 96 job titles (32 triads), resulting in a total sample of 3,840 unique job descriptions. Each of the generated job descriptions consisted of a narrative description of the job, a bulleted list of responsibilities, and a salary range. The second prompt instructed the LLM to assign a gender bias rating score to the respective job descriptions that it generated, on a scale from 1 to 10. The LLM was tasked with determining what was meant by "gender bias," as no definition was provided within the prompt. The LLM was then prompted to provide a narrative reasoning justifying each of the scores assigned.

To test our hypotheses and analyze our data, we will conduct two independent sample one-tailed t-tests. The t-statistic will be calculated and compared to the critical t-value at the prespecified alpha level of 0.05 (one-tailed) to determine whether the hypotheses can be rejected.

Preliminary results: Our preliminary findings suggest that female-coded job titles generally generate salaries that are equal to or lower than those generated by their corresponding male-coded job titles, with a few exceptions (i.e., laundress, policewoman, camerawoman [video], and construction forewoman); however, the relationship of whether the female-coded job title salaries are lower or higher than those of the gender-neutral job titles is not as consistent. In contrast, male-coded job titles generally generated salaries that were equal to or higher than their gender-neutral counterparts, with a few exceptions (i.e., flight steward, cameraman [video], banking businessman, and residential landlord).

In addition, we prompted the LLMs to rate the job descriptions for gender bias. Gender-neutral job titles consistently showed the lowest bias ratings (1.4-1.7, 95% CI), female-coded job titles generated the highest bias ratings (6.2-6.4, 95% CI), and male-coded job titles showed elevated but slightly lower bias than female-coded titles (5.4-5.6, 95% CI).

Formal statistical analyses are in progress. Future analyses based on the initial findings of this study will examine whether optimized prompt engineering can reduce the amount of gender bias in the outputs generated by LLMs.

Overall, initial findings suggest that without proper oversight, current LLMs, as well as their predecessors, may produce job descriptions that can reinforce gender biases and widen disparities. As such, HR professionals who may be considering using LLMs to generate job postings should be aware of these shortcomings and how to identify and mitigate biases prior to using LLMs for this purpose.

4.06

ALGORITHMIC MANAGEMENT AND PRECARIOUS EMPLOYMENT: THE HEALTH IMPACTS – THE CASE OF FOOD DELIVERY PLATFORM WORKERS

Isabella Biletta[1], Dina Attia[2], Anne-Marie Nicot[3], Joris Duguépéroux[4], Vincent Angel[5], Luc Fontana[6], Elisabeth Leblanc[3], Petronille Reme-Harnay[7]

[1]freelance, Bray, Ireland. [2]ANSES, Paris, France. [3]ANACT, Lyon, France. [4]PEReN, Paris, France. [5]Université de Bordeaux, Bordeaux, France. [6]Université Jean Monnet, St Etienne, France. [7]Université Gustave Eiffel, Paris, France

Abstract

In recent years, the development of labour platforms has brought to light 'new forms of employment' and the multiplication of precarious working situations, deeply impacting workers' health.

The business models adopted by platforms rely on technology and algorithmic decision-making.

Central to this model is first the **classification of workers as "independent contractors",** which enables platforms to avoid legal obligations regarding wages, working hours, social protection, and occupational health and safety. However, despite their formal independence, riders remain tightly controlled through algorithmic management, which determines task allocation, pay rates, work schedules, and performance evaluations. The tension between platforms' request for contracting with 'commercial partners' while keeping workers in 'subordinated' position, has been at the heart of ongoing legal debates regarding the ambiguous employment status of platform workers. The 2024 European Directive on improving working conditions in platform work**,** attempts to clarify this issue by introducing a legal presumption of employment for some workers; in the meantime, it reaffirms for all platform workers, regardless of their status, the right to fair and just working conditions that respect their

health, safety, and dignity (Article 31 of the Charter of Fundamental Rights of the European Union). This reinforces the idea that platforms cannot evade their responsibilities towards workers' well-being.

Equally central to the platforms' business model is the **algorithmic management**, which is far from being neutral and is designed to maximise profitability by ensuring clients' satisfaction above everything; the usage of algorithms leads to hyper-flexibilisation of work, going even beyond previous employment flexibilisation trends. To keep customers happy, food delivery platforms for instance, guarantee immediate satisfaction of their craving for food and almost 'instant' delivery. To achieve that, platforms need to keep a pool of delivery riders to call upon for allocating the rides immediately. 'Workers on tap' are needed to provide services and, as The Economist stressed already in 2014[i], the on-demand economy relies on "freelance workers available at a moment's notice". This means that workers are kept waiting for the allocation of rides, with no guarantees of attribution of tasks, no visibility on the number of rides they would get and no compensation for the waiting periods. On the longer term, these workers can't anticipate their income and thus can plan over time the organization of neither their work nor their personal life. Moreover, this organization also exacerbate competition among workers, left to fight over deliveries in the hope to get the most rewarding -shorter and best paid- ones. This creates a paradoxical situation where riders, legally responsible for their own working conditions, are in practice subjected to continuous surveillance and opaque decision-making.

Furthermore, organizing work via algorithms produce **impacts on the way workers perform their job and consequently, on their health**. Lack of control over their work combined with income instability and job insecurity contribute to significant physical and psychological strain, exacerbating the risks of work-related accidents, musculoskeletal disorders, chronic stress, and mental health deterioration. These precarious working conditions have led over the years, to changes in platforms workers' profiles; in the food delivery sector for instance, we see a concentration of 'undocumented' workers, who have no other path to make money and no other opportunity to get in the labour market. Despite no systematic monitoring, multiple evidences of current and longer-term impacts of algorithmic management on workers' health have been collected.

In light of recent multidisciplinary research, through literature review and qualitative studies, this paper examines how algorithmic management contributes to employment precarity and impacts workers' health. While much attention has been given to the consequences of AI on employment, this work aims to contribute explaining the less explored issue of how digital work organisation, particularly through algorithmic management, affects work execution and its direct implications on workers' well-being. While the research examines the situation of food delivery riders in France, its outcomes can apply to various precarious working arrangements, further underlining algorithmic management effects beyond the platforms business model.

The current paper argues that algorithmic management, especially when built to serve the business model of some platforms, is core developing precariousness, redefining employment relationships and eroding workers' autonomy. First, it analyses how algorithmic monitoring intensifies precarious employment and constrains workers' ability to negotiate their conditions (I). Then, it explores the impacts the strategies developed by workers to navigate and resist algorithmic constraints, produce on their health (II). Finally, it emphasises the need for regulatory frameworks that ensure occupational health and safety protections, regardless of employment status (III), urging platforms to address the working conditions their business model imposes on workers.

https://www.economist.com/leaders/2014/12/30/workers-on-tap

4.07

HOW USEFUL IS THE CONCEPT OF PRECARIOUS WORK? AN ASSESSMENT OF PRECARIOUS WORK CONCEPT UTILITY AND SUGGESTIONS FOR ITS IMPROVEMENT

Luis Rondan Vasquez

University of Florida, Gainesville, Florida, USA

Abstract

Precarious work (PW) refers to uncertain, unstable, and insecure labor conditions from the perspective of workers. This type of work is featured by low levels of: a) social benefits, b) stability, c) income, d) fair treatment, and e) unionization. PW has been a

matter of concern for its negative consequences (in health, life planning, parenthood, etc.) and global expansion. This situation made PW gain attention in the academic discussions. There is an increasing body of research on PW.

The increasing usage of the PW concept (PWC) has motivated a discussion about its utility for empirical research. Nevertheless, there is a scarce joint assessment of the main arguments in favor and against the PWC. This assessment is important to define whether the PWC is useful or it requires to be modified or discarded. Due to its relevance, I aim to do this joint assessment. This analysis enables me to suggest a path for the conceptual development of PWC.

I argue that the PWC is useful for empirical analysis because it provides a more comprehensive approach to work-related insecurities than former concepts such as informal work (IW). This concept refers to economic activities that dismiss labor laws (regarding labor, commerce, and taxes). IW accounts for labor insecurities associated with the dismissal of labor laws, but it has limitations to account for insecurities in formal work. Instead, the PWC offers a broader approach to work-related insecurities, capturing insecurities in formal and informal arrangements. PWC also includes aspects of job quality, including a lack of decent working conditions. Moreover, the PWC overcomes the binary classification of IW that associates informality with labor insecurity and formality with decent work. PWC identifies different degrees of labor insecurity based on the absence of features, such as labor contracts, job stability, labor benefits, etc.

Nevertheless, I consider that the PWC needs to overcome three main limitations to improve its utility. One limitation is the ethnocentric approach of the PWC. This concept was developed to account for the deterioration of labor conditions of a particular group of workers: white male workers with labor conditions close to the Standard Employment Model (SEM). This model is defined by full-time, long-term employment with labor benefits. SEM was taken as a norm (regular labor conditions) in the most developed countries during the so-called Golden Age of Capitalism (1940-1970). From the standpoint of this specific group of workers, PW is a deviation from the norm. Nevertheless, PW is not experienced as a deviation for most less privileged workers of developed and developing countries. For them, PW has been more the norm. Therefore, using the PWC from an ethnocentric perspective (which assumes it is a deviant situation from a norm) creates biases in understanding the labor conditions of less privileged workers.

A second limitation of the PWC is its normative character. PWC is defined in contrast to the SEM. The lack of SEM features characterizes PWC. Although SEM was defined as the norm in a particular sector of workers, it gained relevance as a referent of decent labor conditions in international organizations, such as the International Labor Organization. Defining PWC in a normative way (by its contrasts to a model) is useful for estimating the distance between labor conditions and international labor standards. Nevertheless, this approach leaves work-related insecurities present in the experience of the workers that might not be related to the model.

A third limitation of the PWC is its relatively vague definition. The PWC is often defined in broad terms, for instance, unstable and insecure labor conditions. These terms can be interpreted in multiple ways, enabling heterogeneous operational definitions in research. This situation restricts the possibility of reliable comparisons of findings. In turn, the limited comparability of results restricts a meaningful discussion of them, mutual learning, and cumulative knowledge.

To overcome these limitations, I propose a critical appropriation of the PWC that acknowledges its merits while addressing its limitations. This critical appropriation of PWC consists of a contextualized, inductive, and concrete approach. The contextualized approach helps to define the PWC from the socio-historical experiences of the workers. In this way, we avoid ethnocentric assumptions of PW as a deviation in the analysis of less privileged workers. Likewise, the inductive approach of PWC complements the normative approach with the analysis of labor insecurities in the experience of workers that are unrelated with the SEM. Moreover, defining the PWC in more concrete terms facilitates comparable operationalizations. Recent research began to define PWC more concretely based on a systematization of its operational definitions. Nevertheless, this work is focused on the literature in English and addresses mostly developed countries. Future research can expand this analysis, including literature in multiple languages and from multiple regions.

5.01

FROM MANUAL ACCOUNTING TO WORKING ON DIGITAL SYSTEMS – WHEN THE LOGIC OF WORK CHANGES

Arja Haapakorpi, Katriina Tapanila, Antti Saloniemi, Päivi Korvajärvi, Pasi Pyöriä, Tiia Kekola

Tampere University, Tampere, Finland

Abstract

Digital accounting is not highlighted as technological innovation in public discussion, but rather an ordinary technology for maintaining regular duties in financial affairs. As we are interested in technology in everyday work life practices, our ongoing research focuses on digitalization of financial administration and particularly the companies providing the services of accounting and pay-roll. The small and medium-sized companies provide their clients with both digital and traditional, paper-based services, because not all clients have the necessary skills, adequate technologies or motivation for the digital services. However, the promises of efficiency and effectiveness of digitalization motivate the companies to provide digitalized financial services. Our aim is to study how digitalization reshapes work in these companies. Our data consist of eight companies providing accounting services: the interviews were collected from 13 employees (11 women and 2 men) and 12 managers (6 men and 6 women).

The studies focused on digitalization and work claim reshaping of tasks and reorganization of work. It is almost common knowledge that routine tasks are often taken over by technology, but human beings are still needed for tasks involving social interaction, discretion, and problem-solving (Autor 2015). Instead of end-of-work narratives, the most common consequence of applying digital technology is the reshaping of tasks or working methods, as human work is needed to apply and maintain technology (Autor 2015). The digitalized systems require human work, for repairing and completing the processes and data is necessary. For example, repair of data stocks is not exceptional, but everyday work on them due to their incomplete nature (Tanweer et al. 2016).

Tasks may be reorganized with digital technology (Fleming 2019), and the reorganization of tasks may be intra- and inter-occupational (Autor 2015; Fleming 2019). In addition, work practices are mainstreamed with digital technology (Björn & Österlund 2014).

The reshaping of work has been studied by asking, what is changed in accounting with digitalization; how do the employees define they their expertise; what kinds of competences are needed?

In our cases, the knowledge base of accounting was still the core of expertise. However, the methods and technologies were reshaped in a radical way. Consequently, the logic of work changed from manual processes to working with systems. While – according to classical principles – the routine parts of work are transferred to machines, the work of accountants does not end but changes. Simultaneously, the organization of the work was changed: instead of working on one client's affair in time, busy affairs of many clients were carried out with many digital systems and programs. Advising clients in taxation and regulations related to the industry, in addition to the use of the digital systems, was their duty. With the expected increasing of effectiveness and efficiency, the managers wished to expand the services into consulting with growing profits.

The interviewed called the new organization of tasks "fragmented work". Although they defined their expertise as profoundly accounting, the new logic of work came out as increasing need of skills on the digital systems of accounting: their expertise was digitalized accounting, not digital skills and accounting. Degrading of work in professional jobs with the digital technology has been anticipated by many studies (for example Susskind and Susskind 2017). Our study resulted in the opposite: accounting work has become more demanding due to the new logic of work.

References

Autor, D. 2015. "Why Are There Still So Many Jobs? The History and Future of Workplace Automation." Journal of Economic Perspectives 29 (3): 3–30.

Björn, P. and C. Österlund 2014. Sociomaterial-Design. Computer Supported Work. CSCW, Springer.

Fleming, P. 2019. "Robots and Organization Studies: Why Roots Might Not Want to Steal Your Job." Organization Studies 40(1): 23–37. 10.1177/0170840618765568

Susskind, D. and R. Susskind 2017. The Futures of the Professions: How Technology Will Transform the Work of Human Experts. Oxford: Oxford University Press.

Tanweer A., Fiore-Gartland B. and Aragon C. 2016. "Impediment to insight to innovation: understanding data assemblages through the breakdownrepair process." Information, Communication & Society 19(6): 736–752.

5.02

ARTIFICIAL INTELLIGENCE SUPPORTING ENGAGING LEADERSHIP

Marja Känsälä[1], Hilpi Kangas[2], Kati Söderlund[3]

[1]Finnish Institute of Occupational Health, Helsinki, Finland. [2]Turku School of Economics, University of Turku, Turku, Finland. [3]University of Vaasa, Vaasa, Finland

Abstract

The integration of artificial intelligence (AI) into organizational practices is reshaping leadership dynamics, offering tools to enhance decision-making, communication, and employee engagement. However, the implications of AI-assisted leadership remain underexplored, particularly regarding its role in fostering motivation and well-being among employees, the ethical considerations of its use, and its impact on the cognitive demands of supervisors. Research to date has highlighted AI's potential in automating routine tasks of leaders, enabling them to focus on strategic responsibilities, or enhancing leadership by providing real-time analytics to support decision making. However, there is a gap in understanding how AI can effectively complement human leadership without compromising interpersonal relationships or creating new challenges, such as increased cognitive load or ethical dilemmas in decision-making. This topic warrants further study as organizations are increasingly digitalized and working in remote and hybrid modes. Supervisors face heightened demands to navigate the complexities of remote teams, sustain engagement, and foster well-being at work – tasks that AI could potentially support. However, practical examples of how AI is successfully implemented to enhance these aspects are sparse, as are insights into the conditions under which AI alleviates rather than exacerbates workloads. This research aims to bridge these gaps by investigating AI's role in enhancing leadership practices and offering frameworks for ethical and sustainable AI use of leaders. It contributes to the broader discourse on leadership in the digital age by exploring how AI can act as a partner in fostering motivation, well-being at work, and workplace efficiency while safeguarding human-centric values. In this study, we apply engaging leadership framework (Schaufeli 2015) which is a leadership concept based on basic psychological needs – autonomy, competence and relatedness – and drawing on self-determination theory.

In this study, the target group of the study includes supervisors and employees to gather perspectives from both sides of leadership. We will conduct approximately 50 interviews altogether with supervisors and employees from three companies and municipal organizations in Finland, as well as about 6–8 observational interviews with supervisors. The first phase interviews are conducted with supervisors and employees. They focus on everyday leadership tasks, AI-driven leadership, and well-being at work and motivation. The themes of the interviews address the changes, opportunities, and challenges introduced by artificial intelligence in everyday supervisory work, and AI from the perspectives of well-being, fluency and effectiveness at work. Interviews with supervisors and employees will be conducted in early 2025. The second phase involves observational interviews with supervisors, where interviews are supplemented by observing selected AI usage scenarios on the interviewee's computer screen. In the observational interviews with supervisors, we particularly focus on the cognitive demands of the work, i.e., information processing requirements. In the observational part, supervisors are asked to think aloud and describe leadership tasks or situations where they use or could use AI applications. Observational interviews with supervisors will be conducted in late 2025. We will also organize three workshops for supervisors, employees, and HR representatives across all target organizations. The challenges and opportunities of using AI to support supervisory work and leadership are examined in the workshops. Workshops will be conducted in spring 2025, fall 2025, and early 2026. Thus, at the time of the conference, we can present initial results from the first round of interviews and the first workshop.

References

Schaufeli, W. B. (2015). Engaging leadership in the job demands-resources model. The Career Development International, 20(5), 446–463. https://doi.org/10.1108/CDI-02-2015-0025

5.03

"SOMETIMES I FEEL LIKE I'M A ROBOT, NOT A PERSON": THE IMPACT OF AI WORKER MANAGEMENT ON THE WELLBEING OF EMPLOYEES IN THE ICELANDIC FISHING INDUSTRY

Dilys Sharona Quartey, Guðbjörg Linda Rafnsdóttir, Ragna Kemp Haraldsdóttir

University of Iceland, Reykjavik, Iceland

Abstract

Through interviews and observations at four fishing plants employing AI worker management for increased efficiency, productivity and performance monitoring, we examine via a workplace surveillance framework the impact of this managerial approach on employees' psycho-social and physical well-being. We analyze employees' experiences with the introduction of AI-powered automated processing and monitoring systems and compare experiences of employees in factories employing extra bonus schemes with those who do not. Results indicated that fish factory employees had positive and negative experiences with the advent of the AI-powered systems. Factors identified as influencing the wellbeing of employees include fast-paced work, the nuanced and constant mode of performance monitoring and evaluation, extra bonus schemes, limited workplace interaction and competition. There is a need to prioritize employee wellbeing and assess the extent to which existing regulations are enforced within organizations, including how employees are made aware of their statutory rights and steps needed to uphold these.

5.04

NAVIGATING AI INTEGRATION IN PROFESSIONAL AND PERSONAL TRANSLATION: LINGUISTIC, OCCUPATIONAL AND INDIVIDUAL PERSPECTIVES

Edit Nemeth

Eötvös Loránd University, Insitute for German Studies, Budapest, Hungary

Abstract

The rapid advancement of artificial intelligence (AI) is reshaping the translation industry, prompting both opportunities and challenges for professional translators. This study examines the evolving role of translators in the era of AI-driven tools, shedding light on how these technologies impact linguistic accuracy, workflow efficiency and professional identity.

Based on an empirical investigation, this research utilises a mixed-methods approach, combining an online survey with 10 in-depth interviews, focusing on the German-Hungarian language pair. The questionnaire includes responses from both professional translators and non-professional users of AI-assisted translation tools. The findings highlight the practical applications of AI in translation, the extent to which human expertise remains indispensable, and the evolving skill sets required to navigate this transformation. Additionally, the study examines the relationship between remuneration, working hours, and expected quality standards, as well as the ways in which translators adapt to these shifting demands.

Moreover, the research explores how AI-driven translations impact client-translator communication, often leading to misunderstandings due to unclear expectations. As AI becomes more prevalent in everyday use, this study also considers the risks of uncritical AI adoption by the general public, who may lack the necessary background knowledge to assess translation quality.

By focusing on a specific profession, this research contributes to broader discussions on AI's impact on knowledge-based work. The findings provide valuable insights into the adaptation strategies employed by translators, demonstrating how the industry is negotiating the balance between automation and human expertise in an increasingly AI-dominated landscape. This paper

aligns with the conference theme by showcasing translation as a case study of AI's unpredictable yet profound effects on professional work and bilingual communication in everyday life.

Keywords: artificial intelligence, translation, professional adaptation, linguistic accuracy, automation, AI ethics, remuneration, client communication

---

5.05

THE CASCADING EFFECTS OF CONSECUTIVE INNOVATIONS: A LONGITUDINAL CASE STUDY OF ORGANIZATIONAL REDESIGN AND TECHNOLOGICAL INNOVATION ON SERVICE WORK

Michiel Bal[1], Yennef Vereycken[2], Dries Van Herreweghe[1], Karolien Lenaerts[1,3]

[1]HIVA (KU Leuven), Leuven, Belgium. [2]CESO (KU Leuven), Leuven, Belgium. [3]WOPP (KU Leuven), Leuven, Belgium

Abstract

This study examines the combined impact of organizational redesign and technological innovation on service work. As the focus in various work domains has increasingly shifted toward the customer (i.e., client, resident, patient, or other), service work has emerged as a distinct research area within the sociology of work. To conceptually account for the growing centrality of the customer, researchers have introduced the "service triangle," which highlights the trilateral relationship between management, workers, and customers.

Against this backdrop, this study explores how two key innovations influence the service triangle (i.e., how they reshape the relationships between management, workers, and customers) and, in turn, how these changes affect service work, i.e. job outcomes for service workers. Specifically, we focus on organizational redesign and technological innovation, drawing on sociotechnical systems theory and adaptive structuration theory. The former addresses how organizational structures align with service orientation, while the latter examines the dynamic interplay between technological innovation and work practices over time. The research investigates two central questions, the first being "How do organizational redesign and technological innovation jointly affect the service triangle?" and the second, "How do these changes impact job outcomes for service workers?"

Methodologically, this study employs a longitudinal case study of SERVCOMP, an industrial organization specializing in technical services and industrial maintenance. We analyze a five-year innovation trajectory (2017–2022), focusing on SERVCOMP's organizational redesign and the introduction of SERVTECH, a custom-built service support system. The research focuses on qualitative data, including historical company documents, semi-structured interviews (with managers, inspectors, and union representatives), field observations of service inspections and social dialogue meetings however also integrates quantitative data, however, and integrates also quantitative data, which include survey data on technological innovation and job outcomes. The survey, conducted during the technological implementation process, allowed for a comparative analysis of current and potential future users.

Findings reveal that the two innovations—intended to enhance efficiency and support service delivery while adhering to increased customer orientation—produced unintended and even counterproductive effects on both the structure of the service triangle and service workers' job outcomes. The longitudinal analysis identifies three distinct phases. In phase 1 (2017 – 2019), inspectors operated within regional units, managing their own set of customers across all service segments. This structure fostered high autonomy, specialized expertise, and strong customer relationships, enabling flexible and responsive service. In phase 2 (2018 – 2020), organizational redesign of SERVCOMP introduced service units (SUs) aligned with customer segments, yet eliminating fixed inspector-customer relationships. A new centralized planning department took over scheduling, reducing inspectors' autonomy and their ability to provide tailored service. This led to inefficiencies, miscommunication, customer dissatisfaction, and deprofessionalization of inspectors' roles. In phase 3 (2020 – 2022), SERVTECH was introduced, mainly to standardize service delivery and reduce workload. However, technical issues not only caused delays, but also increased dependence on IT support, and disrupted workflows. Rather than facilitating service work, SERVTECH added complexity, further restricting inspectors' autonomy and exacerbating coordination challenges. These empirical findings are both substantiated by means of interview quotes as well as quantitative comparative analyses between current and future users of SERVTECH.

In the discussion of the paper, we argue that these innovations inadvertently intensified the inherent complexity of the organizational structure and service triangle, triggering cascading effects on service workers' job outcomes—some visible and others more opaque. Moving beyond micro-level perspectives such as adaptive structuration theory and human-computer interaction (HCI), we turn to sociotechnical systems theory to examine new forms of complexity and interdependencies gradually emerging at the meso-level in line with the two key innovations. Specifically, we identify human-human interactions (HHI) between new organizational teams, e.g. between help desk and inspectors, inspectors and customers, and customers and the help desk. And in addition to that computer-computer interactions (CCI): between SERVTECH and existing ERP systems, as well as between SERVTECH and the automated planning system.

In conclusion, we argue that a longitudinal and empirically grounded approach is essential for fully understanding how well-intended organizational and technological innovations impact the service triangle and service workers' job outcomes. Identifying and addressing these complexities over time is crucial for designing more effective and sustainable innovations in service work.

5.06

AI AND EMPLOYEE IDENTITY: INVESTIGATING SOCIAL-, COMPETENCE-, AND AUTHENTICITY-BASED AI IDENTITY THREATS AMONG FINNISH EMPLOYEES

Moona Heiskari, Iina Savolainen, Atte Oksanen

Tampere University, Tampere, Finland

Abstract

Employees are currently facing a significant transformation as Artificial Intelligence (AI) revolutionizes work processes and professional lives. Employees are expected to adopt new AI technologies and harness the potential of AI in their jobs. Simultaneously, intensified employee-AI interaction, collaborating and delegating tasks with AI is redefining professional roles and work communities. This transformation may challenge the identities of employees and lead to resistance to AI. More research is required to gain a deeper understanding of AI identity threat and factors contributing to it. In this study, we investigate AI identity threat among Finnish employees. Data were collected in 2024 from 2,109 respondents aged 18 to 65. The sample includes individuals from different fields and professional positions. We investigate three dimensions of AI identity threat: AI as a threat to employees' social identity, which impacts their worth-based self-esteem; AI as a threat to their competence-based identity, affecting their perceived professional capabilities; and AI as a threat to their authenticity-based identity, challenging their personal sense of self. Using linear regression analysis, we examine to what extent Finnish employees experience different types of identity threats posed by AI and further investigate how AI related attitudes, competence, and self-efficacy, usage of AI tools, and sociodemographic factors are linked with employees experiencing AI as an identity threat. Our study provides evidence about the challenges of AI negatively affecting how employees perceive themselves as a member of their peer group, their work-related competences, and their personal identity. The results help us identify who may be affected by AI identity threat and how to support employees and their identities during the integration of AI in the workplaces, while also mitigating negative aspects and resistance to AI.

5.07

GENDER DIFFERENCES IN PERCEPTIONS OF AI USAGE AMONG IT/SOFTWARE ENGINEERS IN FINLAND

Susanna Bairoh

Academic Engineers and Architects in Finland TEK, Helsinki, Finland

Abstract

Background: Artificial intelligence (AI) has the potential to revolutionize our working life and bring about remarkable productivity gains. Recent survey data indicates that those in the vanguard of this change, software engineers, have earnestly embraced AI tools such as LLMs (Large Language Models) (e.g., Haque, 2024). Haque (2024) argues that LLMs like ChatGPT are not just reshaping how software is developed, maintained, and optimized, but are redefining the role of developers (see also Komp-Leukkunen, 2024).

As generic AI tools like ChatGPT evolve and gain prominence in our working life and everyday tasks, ethical dilemmas over privacy, data bias, and intellectual property become ever more acute. Ethical concerns in LLMs arise due to factors inherent in their design, training, and potential applications (Jao et al., 2024).

Since AI tools like ChatGPT develop at such a breathtaking pace, it is important to keep gauging how IT/software engineers perceive their utility. Interestingly, such studies do not often consider the deeply entrenched gender divisions within engineering/technology. The world of technology continues to be strongly male dominated, and software engineering is no exception. Concerns have been raised that past and current biases and prejudices seep into AI tools, exacerbating existing or creating new gender(ed) inequalities. Another possibility is that AI will become the great equalizer: the usage of AI tools could enable women and others to compete on a more equitable footing with men, not bound by preconceived notions of lesser technological prowess.

This study explores the usage of AI tools by university-educated IT/software engineers. The research question is: **How do IT/software engineers working in Finland perceive the usage of AI tools, and are there gender differences?**

Data and methods: The data in this study is derived from an online survey conducted by a union of university-educated engineers in October-November 2024. The subgroup selected for this study consists of respondents whose main tasks were IT/software design/ICT (n=1409). 82% were men (n=1153), 17 % were women (n=243), and 1% were 'other/does not want to disclose', or missing data (n=13). Most common degree was MSc in Eng/Tech (71% of respondents) and most common fields of education were IT engineering (31%) and computer science (13%).

The analysis methods are cross-tabulations and chi-square tests of homogeneity for comparing results by gender (men/women), with significance level $p < .05$.

Findings: During the time of data gathering, 70% of IT/software engineers used AI tools whereas 30% did not. This applied to both men and women. Among IT/software engineers who used AI tools, 64% used them primarily for coding-related tasks. Next common uses were data analysis and processing (35% of AI users) and exploring new concepts (34%). However, male engineers used AI more often for these purposes than females did.

Altogether 13% of respondents directly participated in the design/development of AI tools at their workplace and 22% were indirectly involved. Men participated slightly more often but the differences compared to women were not significant. On the other hand, there were statistically highly significant differences pertaining to re-skilling or up-skilling related to AI: while about 15% of both men and women said they had received extensive up-skilling , up to 31% of women (21% of men) said they need more, and 35% of women (26% of men) would have wanted up-skilling but had not received any.

Of those IT/software engineers who used AI tools, 50% contended that AI has made them more productive whereas 10% disagreed. Nonetheless, there was a highly significant gender difference: 54% of men agreed but only 31% of women did so; and women also disagreed more often than men (women 16%, men 9%).

When asked to what extent the respondents were concerned about bias and discrimination when implementing AI at their workplace, only a small minority (4%) were extremely concerned, 22% were somewhat concerned, 66% were not concerned, and 8% responded 'Don't know'. However, the responses of women IT/software engineers differed highly significantly from men: 32% were somewhat concerned (20% of men) and 53% were not concerned (69% of men).

Conclusions: University-educated IT/software engineers in Finland, both men and women, are actively engaged in using AI tools. However, the study reveals significant gender differences regarding, for example, up-skilling, productivity, and concerns

over bias. The results suggest that existing, ingrained gender differences are perpetuated in the usage of AI tools, and the potential levelling of the playing field has not (yet?) materialized for women.

References

Haque A. (2024). LLMs: A Game-Changer for Software Engineers? arXiv Preprint-2024

Jiao J., Afroogh S., Xu Y. and Phillips C. (2024). Navigating LLM Ethics: Advancements, Challenges, and Future Directions. arXiv preprint arXiv:2406.18841

Komp-Leukkunen, K. (2024). How ChatGPT shapes the future labour market situation of software engineers: A Finnish Delphi study. Futures, 160 (2024) doi: 10.1016/j.futures.2024.103382

6.01

ENHANCING OCCUPATIONAL SAFETY MANAGEMENT WITH LARGE LANGUAGE MODELS: FROM CLASSIFYING ACCIDENT CAUSES TO SUPPORTING REPORTING AND INVESTIGATION

Maria Tiikkaja, Akseli Nurmi, Henriikka Kannisto

Finnish Institute of Occupational Health, Helsinki, Finland

Abstract

Most workplace incidents are significantly influenced by human activities. When viewed from a systems perspective, these activities should be considered part of a socio-technical system, with attention to the specific time, location, and conditions in which they occur (e.g. Dekker, 2015; Hollnagel, 2014). Although organisations collect extensive textual datasets on safety incidents, these resources are often underutilized. By employing machine learning techniques, such as large language models (LLMs), it is possible to process large volumes of data efficiently, offering a promising strategy for enhancing safety management.

Large language models have potential to aid occupational safety experts, particularly in the process of documenting deviation reports and investigating accidents. These models can function as "supportive intelligence," guiding deviation documenters by prompting them to consider essential factors, such as asking pertinent questions about the underlying causes and conditions of incidents. Furthermore, these models can facilitate the organisational learning process in recognizing human factors contributing to incidents so that it is possible to truly understand the causal factors behind safety deviations as well as to recognize the things that went well and were successes.

The aim of our study can be divided into two phases: 1) The aim of the first phase was to identify information gaps concerning causal factors behind human activity in text descriptions of safety incident reports in the framework of human factors (HF). 2) The aim of the second phase is to develop a conversational language model, of the same type as used in ChatGPT, to assist personnel in documenting and investigating deviations.

The first phase of our study consisted of human factors analyses of two textual safety data sets. The first data contained 67 occupational accident investigation reports, divided into 331 excerpts, from four industrial organizations and the second data contained 38 excerpts from an authority accident investigation report. The text excerpts were analysed by HF experts who classified causal factors of the accidents based on the top levels of an HF Tool™, which include work characteristics, individual factors and actions, organisational factors, and group factors, and by using a LLM fine-tuned with expert-annotated data to classify safety texts according to the same HF Tool™ levels (Teperi et al., 2023). The LLM FinBERT (pre-trained by the University of Turku Natural Language Processing research group,) was fine-tuned by us using 1100 excerpts of safety texts and tested with large datasets of more than 330 000 safety text excerpts (Virtanen et al., 2019).

In the analysis of the organizational accident investigation texts the LLM classified 73% of the texts similarly as the experts under the four top levels of HF Tool™. In the analysis of the authority investigation report texts the LLM classified 82% of the texts similarly as the experts (Tiikkaja et al., 2024).

Due to the promising classification accuracy of the LLM we will continue the research to the next phase. In the second phase, we will develop a LLM to act as "supportive intelligence," guiding the documenter/investigator to consider and identify essential factors by asking clarifying and perspective-broadening questions about the underlying causes and conditions of the situation.

These causes and conditions will be defined with the HF Tool™ under its four top levels (work characteristics, individual factors and actions, organisational factors, and group factors) divided into 37 sub items.

References

Dekker S. Safety Differently: Human Factors for a New Era. 2nd ed: CRC Press; 2015.

Hollnagel E. Safety-I and Safety-II. The past and future of safety management. London: CRC Press; 2014.

Teperi A-M, Paajanen T, Asikainen I, Lantto E. From must to mindset: Outcomes of human factor practices in aviation and railway companies. Safety Science. 2023;158:105968.

Tiikkaja M, Kannisto H, Nurmi A, Puro V, Heikkilä T, Kivimäki I, et al. Ai-Supported Safety Management-Analysing Occupational Safety Data Using Machine Learning within the Framework of Human Factors. Available at SSRN 4879013. 2024.

Virtanen, A., Kanerva, J., Ilo, R., Luoma, J., Luotolahti, J., Salakoski, T., Ginter, F., & Pyysalo, S. Multilingual is not enough: BERT for Finnish. arXiv preprint arXiv:1912.07076. 2019.

6.02

WELCOME ON BOARD! ENVISIONING AN EMPLOYMENT NEGOTIATION WITHIN A SOCIAL ROBOT FROM THE USERS' PERSPECTIVE

Giorgio Rettagliata[1], Tanya Bondarouk[1], Jan-Willem Van't Klooster[1], Guido Hertel[2]

[1]University of Twente, Enschede, Netherlands. [2]University of Münster, Münster, Germany

Abstract

Social robotics is on the rise. Fields like education, hospitality, and healthcare already use social robots in their operations (Ulhøi & Nørskov, 2022). Nowadays, the design of social robots includes socio-physical and agentic characteristics. This offers the possibility of viewing social robots in the workplace as agents rather than mere tools for introducing new modes of organisational and work dynamics (Ulhøi & Nørskov, 2022). The HRM landscape is already experiencing rapid changes due to the introduction of Ais (Vrontis et al., 2022). However, research on social robots is still in its early stages, particularly in recruitment (Nørskov et al., 2020). Our empirical paper suggests that the next step is to explore the potential uses of social robots in the final stages of the employment process: the employment negotiation stage.

The employment negotiation typically starts at the job-offer stage once a candidate has been selected for their qualities, and there is a need to complete the entire recruitment process. This stage is critical as it may be the final opportunity to persuade applicants to join the organisation through salary and benefits negotiation (Marks & Harold, 2011). Additionally, it is a key moment for candidates to further build trust in the organisation during recruitment (Searle & Billsberry, 2011). Negotiation involves more than just a series of offers; it includes important aspects like feelings and perceptions. These feelings serve as a measure of performance and significantly impact candidates' job satisfaction post-negotiation (Curhan et al., 2009).

Therefore, with their physical embodiment and dynamic interaction capabilities, social robots may influence these perceptions in employment negotiations, potentially reshaping how these interactions unfold. Their ability to convey social cues, build rapport, and adapt in real-time raises critical questions about user acceptance in HRM contexts. To effectively develop future collaborations and mitigate potential drawbacks, we must first understand the expectations and needs of users, such as HR professionals and job candidates, when interacting with social robots during negotiations.

This research takes an unconventional approach to HRM research by building upon the scenario perspective to understand users' needs as if designing a new technology. Scenarios are commonly used to develop new systems in multidisciplinary projects, especially when the exact use of a system is not known a priori (Van 'T Klooster et al., 2012). This empirical study will build upon the Scenario-Based User Need Analysis (SUNA) approach (van Helvert & Fowler in Alexander & Maiden, 2005). This approach envisions innovative, user-centred software products (van Helvert & Fowler, 2005). We will focus on the preliminary steps of this approach, where users' desires and needs must be identified to develop a new technology's envisioned use successfully. We can explore how users envision interacting with social robots in job negotiations, using co-designed scenarios as a foundation for further research rather than relying on researchers' assumptions.

We will conduct semi-structured interviews with HR managers and job candidates and analyse them using thematic analysis (Braun & Clarke, 2006). Before the interviews, participants will engage in a negotiation simulation with a robot named Furhat, allowing them to explore future interactions with robots. Based on the SUNA approach, the interview guide will feature open-ended questions to encourage participants to share their views on the applications, benefits, and challenges of using social

robots in negotiations. This will enable us to comprehend their desired functionalities for collaborating with a social robot, as well as their behaviour in the presence of one. In this way, we will answer the question: What are the key desires and requirements of HR professionals and job candidates regarding integrating social robots in employment negotiations?

Our research contributes to the HRM field in several ways. Firstly, understanding users' expectations will help identify the key functionalities social robots should have for employment negotiations. Secondly, this research introduces scenario-based research into the field of HRM. This new perspective will allow HRM researchers to participate in the design phase rather than solely analysing the causes and consequences of new technologies. Thirdly, the interviews will also provide insights into current employment negotiation practices and where social robots can be integrated. Finally, the scenario outcomes will be a basis for future experiment studies on social robots within employment negotiations.

To conclude, this paper aims to introduce social robots within employment negotiations by exploring the perspectives of HR managers and job candidates on using this technology during the employment negotiation phase. The research aims to pave the way for HRM researchers to envision possible future collaborations between humans and social robots in social roles such as employment negotiations.

6.03

AUTOMATED WORK SHIFT PLANNING: ASSESSING IMPACTS ON EMPLOYEES' DATA PROTECTION AND FUNDAMENTAL RIGHTS

Sini Mickelsson

University of Turku, Turku, Finland

Abstract

Artificial intelligence (AI)-based work shift planning stands out as one of the use cases for AI systems within the employment context that has the potential to benefit both employers and employees. AI-based work shift planning can take into consideration, on the one hand, the development of service needs and shift information, enhancing knowledge-based management; and, on the other hand, the preferences and wishes of the staff, furthering employee well-being and equality. However, designing these systems and related processes requires careful consideration, as the potential may turn into significant risks to employees' rights and freedoms if taken too far, resulting in negative consequences such as privacy violations, discrimination, or over-surveillance.

Algorithmic management in the context of employment is subject to a rich regulatory environment aimed at protecting employees' rights. The Finnish national employment laws, including the requirements originating from the Finnish Act on the Protection of Privacy in Working Life (759/2004), must be respected when planning and managing work shifts by automated means. In addition, EU-level regulations on data protection and AI systems, inter alia, set forth conditions for assessing the use of AI-based systems and the processing of employees' personal data to safeguard individuals' rights and freedoms.

The General Data Protection Regulation (Regulation (EU) 2016/679 of the European Parliament and of the Council on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, GDPR) sets forth an obligation to conduct a Data Protection Impact Assessment (DPIA) for processing activities which are likely to cause a high risk to the natural persons whose data is being processed ('data subjects') (Art. 35). Regulation (EU) 2024/1689 laying down harmonised rules on artificial intelligence (AI Act)(Art. 27) provides that a Fundamental Rights Impact Assessments (FRIA) must be conducted for high-risk AI systems in certain cases. While the GDPR's DPIA provision has well-developed application criteria, the specific scope of Article 27 of the AI Act and the relationship between the DPIA and FRIA provisions leave room for interpretation.

The aim of the proposed presentation is to analyse the applicability of data protection and fundamental rights impact assessment provisions in the context of automated work shift planning. The preliminary results indicate that in an automated work shift planning, conducting a DPIA is almost always a necessity whereas the AI Act's FRIA requirement has more limited application.

6.04

THE IMPACT OF GenAI ON EMPLOYMENT, ALGORITHMIC CONTROL, AND FUTURE OF WORK IN THE LEGAL PROFESSION

Jules Wang

University of Cambridge, Cambridge, United Kingdom

Abstract

This study examines how Generative Artificial Intelligence (GenAI) reshapes employment structures, algorithmic control, and the future of work in the legal profession, addressing three pivotal questions: 1) How does GenAI automate tasks while augmenting labor? 2) Does GenAI introduce novel forms of algorithmic control over lawyers? 3) How does GenAI reconfigure power dynamics between junior and senior legal professionals? While AI's broader labor market impacts—such as displacement, productivity, and reinstatement effects (Acemoglu & Restrepo, 2024)—are well-documented, GenAI remains understudied as an emergent phenomenon, particularly within the legal sector. This research fills this gap by interrogating how corporate cost-reduction incentives and human agency shape GenAI's deployment, with critical implications for policies that balance automation with socially optimal outcomes.

Generative AI represents a fundamentally distinct disruption to the legal profession compared to prior legal technologies. Unlike conventional tools, GenAI leverages Large Language Models (LLMs) trained on massive datasets to process, interpret, summarize, and generate text, directly intervening in the argumentative core of legal practice (Villasenor, 2024). GenAI legal tools fall into two categories: open-source platforms (e.g., ChatGPT adapted for legal contexts) and industry-specific systems like CoCounsel, Harvey, and Thomson Reuters, which are trained on legal reasoning, legislation, and case law to draft contracts, conduct due diligence, and analyze disputes (Thomson Reuters Institute, 2024; Safe Sign Technologies, 2024). These tools automate tasks historically central to junior lawyers' apprenticeship, such as document drafting and legal research (Junior Lawyers Division, 2019), raising critical questions about skill development and professional hierarchies.

Building on Acemoglu and Restrepo's (2024) framework, this analysis argues that GenAI displaces labor in codifiable tasks (e.g., contract drafting) but reinstates demand for human skills in complex problem-solving and tacit knowledge domains (Lei & Kim, 2024). However, unchecked automation risks exacerbating wage inequality by shifting rents from workers to employers—a tension magnified in law firms, where junior lawyers traditionally ascend through repetitive, automatable tasks. Empirical evidence reveals a paradox: while GenAI boosts efficiency and marginally improves output quality, it disproportionately benefits lower-skilled lawyers, flattening performance hierarchies and destabilizing seniority-based wage structures (Choi et al., 2023; Susskind, 2008). Simultaneously, algorithmic controls embedded in GenAI systems enable excessive monitoring, eroding professional autonomy and redistributing power to firms (Braverman, 1974; Marx, 1867).

For human rights lawyers, whose work straddles middle- and high-skill categories, GenAI presents a dual-edged sword. Automation could democratize access to justice by reducing costs but risks diluting specialized expertise, complicating efforts to balance efficiency with equitable representation. Drawing on Acemoglu and Autor (2011), the study questions whether GenAI will categorize human rights work as middle-skilled (lowering its comparative advantage) or elevate it through augmentation, potentially reducing wage inequality. These dynamics intersect with broader sociological concerns: Will GenAI redefine consent, domination, and mystification in workplace relations? Could collective resistance strategies, such as algoactivism (Kellogg et al., 2020), emerge to counter algorithmic control?

Survey data underscores ambivalence among legal professionals: 35% express hesitation toward GenAI adoption, 15% fear job displacement, and 17% view it as a major threat to employment—reflecting anxieties over deskilling and eroded billing models (Susskind, 2008). Such tensions mirror debates about AI's societal implications, including its potential to reshape capitalism, democracy, and recognition between social groups (Burawoy, 2012; Wood, 2021). Crucially, the study argues that GenAI's labor impact is not technologically predetermined but contingent on human choices in deployment, challenging deterministic narratives and underscoring the urgency of policy interventions.

By synthesizing qualitative evidence from corporate law firms and legal tech startups, this research reveals that task automation and labor augmentation coexist unevenly. While firms prioritize short-term cost reduction, long-term stability requires policies incentivizing new task creation and protecting tacit knowledge (Acemoglu & Restrepo, 2018). For instance, recalibrating legal education to emphasize AI collaboration, strengthening ethical guidelines for algorithmic transparency, and safeguarding collective bargaining power could mitigate displacement risks.

Ultimately, the study positions the legal profession as a critical site for examining shifting capital-labor dynamics. It calls for multidisciplinary collaboration to ensure GenAI adoption fosters equitable workplaces, preserves professional creativity, and expands access to justice without exacerbating precarity. By centering human agency—not technological determinism—the analysis offers a roadmap for aligning GenAI with democratic values and inclusive growth, urging stakeholders to prioritize augmentation over automation.

6.05

HOW GENERATIVE AI IS TRANSFORMING KNOWLEDGE WORK IN THE FINANCIAL SECTOR IN FINLAND?

Kirsi Yli-Kaitala

Finnish Institute of Occupational Health, Helsinki, Finland

Abstract

Background and objective of the study: Generative artificial intelligence (GAI) plays an increasingly important role in transforming knowledge work, particularly within data-driven sectors such as finance (Al Naqbi et al. 2024, Ritala et al. 2023). This transformation is reshaping job roles, altering skill requirements, and impacting employment trends (Havryk & Nazarova 2024). While GAI presents substantial opportunities for improving and automating work, it also poses challenges regarding its application and its impact on employees. These challenges encompass ethical concerns, including data privacy and algorithmic biases, along with unwelcome changes to job roles and the potential for job losses (Ranković et al. 2023). These issues require careful consideration as GAI continues to evolve across various sectors (Benbya et al. 2024). This study, part of the broader "Artificial Intelligence in Knowledge Work" project by the Finnish Institute of Occupational Health (2024–2027), focuses on the financial sector. It investigates the current and future roles of generative AI in the sector, examining its usage, benefits and challenges associated with its use as well as its impact on various job functions and psychosocial factors. By concentrating on the finance sector, we gain insights into the challenges and opportunities related to AI deployment in a highly regulated, data-driven environment, while also highlighting how AI is transforming knowledge work in a field at the forefront of the generative AI revolution.

This is a descriptive study focusing on the aforementioned factors and the impacts related to GAI in the finance sector.

Data and Methods: The study is based on digital survey data collected in January-February 2025 among members of Finnish labor market organizations representing the financial sector: Finance Finland, Trade Union Pro and Service Sector Employers Palta. Data was also collected from members belonging to the unions of the Federation of Professional and Managerial Staff YTN and representatives of educational institutions that are members of the Financial Academy. The survey garnered 261 responses from banking and insurance professionals. It explored the adoption and impact of GAI in respondents organizations, assessing current usage, strategic integration, and employee engagement through a mix of closed-ended and open-ended questions. Closed-ended questions provided predefined options to evaluate the organization's stage of GAI adoption and the integration of AI strategies, as well as the anticipated impact on various job functions and organizational aspects like productivity and certain psychosocial factors. It further examined how GAI might influence personal work experiences over the next two years. Open-ended questions invited more nuanced insights into the perceived benefits and challenges of GAI, areas for skill development, and topics needing further workplace discussion.

The survey data, which has only recently become available, will be analyzed separately for the banking and insurance sectors, examining individual questions in detail, and exploring the relationships between background variables and other factors. For the rich qualitative data garnered through the open-ended questions, content analysis will be employed, and the possibility of applying AI-assisted methods suitable for analyzing qualitative data (developed by FIOH's data scientists) will be explored.

Preliminary Insights: Although detailed results are pending, the responses indicate that generative AI is already significantly impacting the financial sector and the nature of work within it. Its use is associated with positive perceptions and expectations regarding productivity, quality of work and many other factors. However, there are also several concerns about generative AI, and respondents have identified numerous associated training needs. All the above will be explored in detail and full results will be available in August 2025.

6.06

THE NETWORKED FACTORY OF THE FUTURE? FUTURE STATES OF BLUE-COLLAR WORK BASED ON THE CASE OF LIFE SCIENCE MANUFACTURING

Mikkel Knudsen, Tero Villman

Finland Futures Research Centre, University of Turku, Turku, Finland

Abstract

Digital technologies are changing the landscape of industrial manufacturing. These changes are not only technical, but socio-technical (Geels, 2004). Digitalization changes how "industrial work is done, but also who (or what) does the work, how the work is organized, and how it affects the broader economy and the society." (Michelsen et al., 2022).

This paper addresses where and how life science manufacturing, and in particular pharmaceutical manufacturing, may be organized in the future. Ongoing and potential future shifts to the location and the organization of pharmaceutical manufacturing are influenced and shaped, at least in part, by digital and technological advancements. The shifts affect, cf. Michelsen et al., where work is done and by whom (or what) and also the work conditions and relations of pharmaceutical manufacturing's blue-collar workers.

Pharmaceutical manufacturing is seen as an interesting case for several reasons. Firstly, the sector has a strong societal impact that goes beyond its large economic footprint. Secondly, the organization and location of the sector's production facilities has attracted much political attention in recent years, particularly spurred by the COVID-19 pandemic and subsequent supply chain challenges. This has led to calls for a restructuring of incentives enabling radically alternative production landscapes compared to today. Thirdly, manufacturing happens in highly regulated environments in which there is, comparatively, little room for rapid, agile, and flexible shifts to production lines and production processes. This suggests that pharmaceutical manufacturing as a least likely case for major second-order impacts of digital transformations on the organization of work, and that findings indicating such shifts even here will highlight broader themes.

The paper provides a literature review of existing literature on location choices of pharmaceutical manufacturing. For the forward-looking analysis, the primary data source is a series of 19 semi-structured focus group interviews conducted October-December 2024 with more than 50 participants representing various parts of the Finnish life science manufacturing ecosystem, including company representatives, academics, and public authorities. Based on extensive coding and a qualitative content analysis of the interview material, supplemented by existing literature and empirical signals and trends detected from grey literature and industry reports, we extract a range of possible direction of movements driving future investments and factory location choices. In short, when it comes to factory localization, the "goal of the location choice is to balance the trade-offs, incentives and constraints between various geographical alternatives" (Tsai & Urmetzer, 2024; Cohen et al., 2018).

Our material thus provides insights into how this balance is and may be changing, leading to a changing future factory location and manufacturing landscape. These include movements towards low-cost labor, towards the availability of raw materials, towards frontier technology hubs, towards hubs of highly-skilled labor, towards a value-chain realignment based on geopolitics and friendshoring, and movements of production closer towards the end-customer. Some of these factors are complimentary, while others appear contradictory and therefore requires the noted balance of trade-offs. While certain of the factors are particular to or has particular meaning for advanced pharmaceutical manufacturing, we believe they hold exemplary value applicable to most advanced manufacturing fields.

The core of the paper is an analysis, based on the proposed directions of shifts, of possible future states of pharmaceutical manufacturing, how each of these states are impacted by and itself impacts digitalization, and how the role and function or blue-collar workers differs across the various future states. This analysis is again informed by the qualitative content analyses supplementing existing literature.

We propose as a general trend, across possible future states, that future factories are likely to function increasingly networked which entails significant shifts for blue-collar workers in pharmaceutical manufacturing for whom the idea of a geography-less matrix organization has yet to take root in the same manner as it already has for white-collar workers even within the same organizations. Overall, our paper help illuminate possible future states of blue-collar work more generally.

References

Geels, F.W. (2004). From sectoral systems of innovation to socio-technical systems: Insights about dynamics and change from sociology and institutional theory. Research Policy, 33(6-7): 897-920.

Michelsen, K.E., Collan, M., Savolainen, J. & Ritala, P. (2022). Changing Manufacturing Landscape: From a Factory to a Network. In Hussain, C. M. & Di Sia, P. (eds.) Handbook of Smart Materials, Technologies, and Devices. Cham: Springer.

Tsai, T.-Y. & Urmetzer, F. (2024). A decisional framework for manufacturing relocation: Consolidating and expanding the reshoring debate. International Journal of Management Reviews, 26(2), 254-284.

Cohen, M.A., Cui, S., Ernst, R., Huchzermeier, A., Kouvelis, P., Lee, H.L, Matsuo, H., Steuber, M. & Tsay, A.A (2018). Benchmarking global production sourcing decisions: Where and why firms offshore and reshore. Manufacturing & Service Operations Management, 20(3), 389-402.

6.07

ENHANCING WORKERS' EFFECTIVE REMEDIES AGAINST UNLAWFUL ALGORITHMIC MANAGEMENT – THE AI ACT'S PROMISES AND LIMITATIONS

Henni Parviainen

University of Turku, Turku, Finland

Abstract

Algorithmic management (AM) is becoming commonplace in modern workplaces. It enables remote workforce management through various technological tools and techniques that rely on employee data collection, surveillance and (semi)automated decision-making (Mateescu & Nguyen 2019). Among several challenges to workers' well-being and working conditions, AM raises legal concerns, including potential discrimination, data protection and privacy infringements, and occupational safety and health risks (Atkinson & Collins 2024).

The Platform Work Directive (2024/2831) has improved transparency for platform workers, possibly aiding them in challenging unlawful AM practices. However, its scope does not extend to 'traditional' workplaces. This raises the question of whether the recently adopted Regulation (EU) 2024/1689 laying down harmonized rules on artificial intelligence (the AI Act), can assist employees in contesting potentially unlawful AM practices. In addition to improving the functioning of the internal market, the AI Act seeks to ensure a high level of protection for fundamental rights (AI Act Art. 1) and strengthen the effectiveness of existing rights and remedies (AI Act Recital 9).

By comparing the AI Act's provisions with the existing rights and remedies under the General Data Protection Regulation (2016/679, GDPR), the EU Non-discrimination Directives (2000/43/EC, 2000/78/EC, 2006/54/EC), and the Framework Directive on Information and Consultation (2002/14/EC), this presentation examines, whether the AI Act fulfils its promise of reinforcing workers' remedies.

A legal dogmatic analysis of the relevant EU legislation suggests that the AI Act is a step in the right direction but a relatively modest one. The AI Act introduces several structural constraints that could limit its usefulness in combatting unlawful AM practices. First, it grants AM system providers considerable power in determining both the AI Act's applicability and, if applicable, the system's conformity with the Act. Second, the AI Act contains a significant loophole regarding systems placed on the market or in service before 2ndAugust 2026.

Where applicable to AM, the AI Act increases employees' and their representatives' access to information about AM, which might aid them in analysing AM's lawfulness and potentially challenging it. However, a more considerable advancement might still be the new information available for the national supervisory authorities, which might aid enforcement.

Despite these advancements, the AI Act presents several potential shortcomings in ensuring effective remedies. Aside from adding one likely overburdened supervisory authority, the AI Act does not expand workers' avenues for redress. Furthermore, it does nothing to alleviate workers' burden of proof when challenging unlawful ARSs. This shortcoming is further exacerbated by the withdrawal of the proposed AI Liability Directive, which could have also addressed some evidentiary challenges in AM-related claims. Moreover, the AI Act lacks concrete remedies, such as compensation for rights violations.

Yet, opportunities exist to strengthen workers' remedies within and beyond the AI Act. Concrete guidance on transparency measures and sufficient resources for enforcement authorities could assist. The AI Act does not preclude more protective national laws or collective agreements, which remain viable avenues for enhancing workers' remedies. Finally, Article 47 of the Charter of Fundamental Rights of the European Union guarantees effective remedies and serves as the workers' last resort.

References

Mateescu, A and Nguyen, A (2019): Explainer Algorithmic Management in the Workplace. Data & Society.
Atkinson, J and Collins, P (2024): Algorithmic Management and a New Generation of Rights at Work. IER Institute of Employment Rights.

6.08

THE ROLE OF DUAL BACKGROUND PROFESSIONALS IN THE ERA OF AI

Jeffrey Peo

Said Business School, University of Oxford, Oxford, United Kingdom

Abstract

Artificial intelligence has the potential to reshape how knowledge work is organized. Yet artificial intelligence doesn't manifest itself within an organization. Predictive AI requires the construction and training of machine learning models, typically in programming languages such as python, and developed by experts trained in data or computer science. Generative AI can be used off the shelf for augmenting or replacing some tasks, improving productivity, or enhancing capabilities (Brynjolfsson, Li and Raymond, 2023; Dell'Acqua et al., 2023; Noy and Zhang, 2023), but many firms are recognizing that for generative AI to provide a sustained competitive advantage the commercial models need to be refined with proprietary data and queried with meaningful prompts. While the establishment of AI capabilities is often taken for granted, recent studies (e.g. Pachidi et al., 2021; Waardenburg, Huysman and Sergeeva, 2022) have demonstrated the difficulties that organizations face in coordinating the efforts of data scientists and domain experts. Integration challenges are likely to be particularly acute in professional service firms where AI represents an epistemic threat to existing practitioners who share a common set of abstract knowledge (Abbott, 1988), language (Werr and Stjernberg, 2003) and culture (Starbuck, 1992; Forsythe, 1993; Whittington, 2019).

This paper expands on the dichotomous framing of data scientists and domain experts by considering dual background professionals – 'hybrids' – who have earned degrees in both data science related fields and professional domains, and the role that they play in leading AI-related project work within a professional service firm. Leveraging data on more than 300 partners across nearly 40,000 projects completed over an 8-year period during which a global management consultancy introduced AI advisory services, I ask: do those with dual backgrounds consolidate the roles of traditional consulting partners and data science partners? Do those with dual backgrounds coordinate the activities of traditional consulting partners and data science partners? Or are those with dual backgrounds cut out of the loop as the traditional consulting partner and the data science partner collaborate directly on client service work?

Using OLS and controlling for factors such as project value, the findings show that partners with dual backgrounds contribute a disproportionate number of hours-per-project on AI-related projects compared to traditional consulting or data science partners, and that project leadership teams with hybrid partners are larger than those without. In combination, these findings support a hybrid-centric model where a hybrid partner coordinates rather than consolidates tasks across domains. Further analysis finds that projects with hybrid partners generate higher revenue per-partner-hour and that this efficiency also increases as the hybrid takes on a greater proportion of the total project hours. While low R^2 values across models suggest that many other factors are at play, the effect sizes are meaningful and statistically significant ($p < 0.05$).

A secondary analysis was then conducted to understand if the disproportionate contributions of hybrid partners were recognized by their firm. Using a Mann-Whitney U test to compare the distribution of time-to-election (in years since hiring) across the traditional, hybrid, and data science groups, I find that those with data science and dual professional backgrounds take longer to be elected partner ($p = 0.01$) than traditional partners. However, this disadvantage is mitigated when considering only the subset of hybrid partners that have been internally classified as AI experts, suggesting that while having a dual professional background is penalized in traditional consulting work, it is rewarded when aligned with AI-related practices.

This paper contributes to the literature on the impact of AI and the future of work by expanding beyond the dichotomous framework of data scientists and domain professionals within a firm. The findings support a model in which individuals with dual professional backgrounds play an outsized role in managing AI-related work through coordinating rather than consolidating efforts. In line with the call by Smets et al., (Smets et al., 2017), this paper also contributes to the professional service literature by considering how new technologies effect the organization and rewards for professional work and highlights how having dual professional backgrounds may be penalized in a traditional system while advantageous once AI-related services are introduced.

6.09

NEGOTIATING ETHICS IN AI-DRIVEN HRM: HR PROFESSIONAL'S DISCOURSE IN FOCUS GROUP DISCUSSIONS (POSTER)

Christoffer Larsson

Mälardalens University, Västerås, Sweden

Abstract

The integration of Artificial Intelligence (AI) into Human Resource Management (HRM) is transforming key processes such as recruitment, employee evaluation, and workplace governance Fenwick et al 2024). While AI is frequently promoted as a tool for efficiency, objectivity, and cost reduction, it also raises profound ethical concerns that challenge established norms of fairness, transparency, and human dignity. In HRM, AI-driven decision-making systems operate within a complex moral and organizational landscape, where HR professionals must balance competing demands: enhancing efficiency while ensuring just and equitable treatment of employees (Aizenberg & Deniss 2022). This study explores how HR professionals frame, justify, and contest ethical concerns related to AI implementation and use by analyzing the discursive strategies employed to navigate these dilemmas.

While much of the existing literature on AI ethics in HRM has focused on technical fairness, algorithmic bias, and regulatory compliance (Bujold et al 2024), less attention has been paid to how HR professionals themselves construct and negotiate these ethical dilemmas discursively. Rather than assuming that ethical concerns about AI in HRM are self-evident, this study takes a discourse analytic approach, examining how ethical issues are framed, contested, and justified in HR professionals' discussions. It draws on Wetherell & Potter's (1992) discursive psychology, which emphasizes that discourse is not merely a reflection of reality but actively constructs and shapes meaning, power relations, and social practices.

This study applies Schumann's (2001) ethical framework, which uses five classical moral principles relevant to ethics in HRM: utilitarianism, rights ethics, distributive justice, care ethics, and virtue ethics. While Schumann's work predates AI in HRM, his framework remains applicable for analyzing how HR professionals negotiate the ethical implications of AI-driven decision-making. HR professionals' discourse reflects competing ethical rationales, including utilitarian arguments about efficiency and productivity, rights-based concerns regarding autonomy and fairness, and care-based appeals for maintaining human oversight and relational ethics when implementing AI in HRM.

The empirical material consists of 10 focus groups with HR professionals in Sweden, each comprising 3-5 participants, providing a total of 40 HR professionals. These focus groups were designed to elicit spontaneous and interactive discussions on AI in HRM, allowing participants to debate ethical concerns and negotiate conflicting perspectives. Focus groups are particularly useful for discourse analysis, as they highlight how individuals co-construct meanings, challenge or reinforce dominant narratives, and position themselves in relation to a phenomenon (Onwuegbuzie et al 2009).

The findings highlight how HR professionals mobilize different, and sometimes competing, ethical arguments when discussing AI in HRM. For example, in the recruitment scenario, where a more objective AI replaces a human recruiter for the screening of candidates, respondents often say "The alternative is worse.", implying that while AI has its disadvantages, it is better than human oversight, often mentioning lower chance of bias as a source of justification. This reasoning aligns with Schumann's (2001) discussion of utilitarian ethics, where ethical justification is often based on maximizing benefits such as efficiency, cost-effectiveness, and perceived objectivity, even if certain moral risks remain unresolved. In contrast, other HR professionals articulate skepticism and resistance, emphasizing AI's potential to reinforce systemic biases, obscure accountability, and undermine the relational aspects of HR work, with respondents often mentioning: "The human factor is missing…". Their concerns echo rights-based and care ethics perspectives, as outlined by Schumann (2001), which argue that HRM should prioritize human dignity, fairness, and interpersonal responsibility over efficiency.

As AI continues to be integrated into HRM, the ethical dimensions of its use will remain a critical issue. This study argues that rather than viewing AI ethics as a set of predefined principles, AI ethics can be usefully approached and examined as something constructed through negotiation, justification and other discourses. By doing so, it contributes to a deeper understanding of how HR professionals navigate ethical dilemmas in AI-driven HRM and provides insights into the discursive strategies that shape AI governance and ethical decision-making in the workplace.

References

Bujold, A., Roberge-Maltais, I., Parent-Rocheleau, X. et al. Responsible artificial intelligence in human resources management: a review of the empirical literature. AI Ethics 4, 1185–1200 (2024). https://doi.org/10.1007/s43681-023-00325-1

Aizenberg, Evgeni & Dennis, Matthew J. (2022). The Ethics of AI in Human Resources. Ethics and Information Technology 24 (3):1-3.

Fenwick, A., Molnar, G. & Frangos, P. The critical role of HRM in AI-driven digital transformation: a paradigm shift to enable firms to move from AI implementation to human-centric adoption. Discov Artif Intell **4**, 34 (2024). https://doi.org/10.1007/s44163-024-00125-4

Onwuegbuzie, A. J., Dickinson, W. B., Leech, N. L., & Zoran, A. G. (2009). A Qualitative Framework for Collecting and Analyzing Data in Focus Group Research. International Journal of Qualitative Methods, 8(3), 1-21. https://doi.org/10.1177/160940690900800301

Schumann, P. L. (2001). A moral principles framework for human resource management ethics. Human Resource Management Review, 11(1-2), 93-111.

Wetherell, M., & Potter, J. (1992). Mapping the language of racism: Discourse and the legitimation of exploitation. Columbia University Press.

6.10

EXPLORING THE COEXISTENCE OF AI AND TUTORS IN HIGHER EDUCATION (POSTER)

Jun Song

University of Turku, Turku, Finland

Abstract

After having witnessed how powerful and efficient AI is to cope with various tasks in daily life, AI solutions to replace humans at work is so inevitable that people can be truly liberated from trivial tasks. Whether AI can truly replace humans in the workplace is still debatable. Although the application of AI in higher education (HE) still causes controversy, its strong functions still benefit students from different disciplines. Therefore, this has also given rise to the discussion of whether tutors are still needed.

Tutors always play a significant role to stimulate students' reflection, lead them to discuss around the topic and assess their essays in many majors from social sciences. However, compared with interacting with Large Language Models (LLMs), the tutors' role is limited to classrooms, and they fail to answer students anytime and anywhere. AI seems to substitute what tutors used to do before, for instance, guiding student learning, being award of student needs on courses, and providing feedback to students. If tutors are ultimately replaced by AI, how students self-tutor with AI based on different requirements will become a huge challenge in HE. Students only needed to follow instructions in tutorials in the past, while they must feel tough to self-tour even though AI has an extensive database to answer anything via prompts. Thus, tutors must still dominate the primary status in educational tasks, and they should better apply AI as an educational tool in tutorials.

The study will choose computer-mediated communication and writing (CMCW) to form a student-centered academic English writing classroom, and provide metacognitive training based on the method suggested for writing (Teng, 2016). Participants are allowed to apply LLMs to enhance their products, however, tutors have to restrict the way that students just input task requirements to LLMs. Instead, they should guide what they require students to do, and allow students to interact with LLMs based on their own needs. The study mainly aims at exploring how English lexical complexity, e.g, diversity and density (Bui, 2019), can be stimulated by metacognitive knowledge via CMCW when LLMs are also introduced. Then, text analysis will be adopted to examine how they arouse metacognitive strategies via their discussion on CMCW with LLMs. Integrated with the results of the study, tutors need conclude pros and cons they observe in classrooms, which may promote the innovation of the educational policy related to AI's use in HE. Instead of over-discussing how AI threatens HE, it will be more reasonable if the educational mode switches to conform to AI era. The educational policy should be aligned with social changes which encourage humans to practically master LLMs in different occasions, thus AI-empowered education will become more and more essential. Furthermore, a training plan for tutors will be developed to enhance their teaching capabilities in an AI-enabled environment.

References

Bui, G. (2019). Influence of learners' prior knowledge, L2 proficiency, and pre-task planning on L2 lexical complexity. International Review of Applied Linguistics in Language Teaching, 59(4), 543–567. https://doi.org/10.1515/iral-2018-0244

Teng, F. (2016). Immediate and delayed effects of embedded metacognitive instruction on Chinese EFL students' English writing and regulation of cognition. Thinking Skills & Creativity, 22, 289–302.

7.01

EXTENDING THE SERVICE TRIANGLE MODEL TO ELDER CARE

Jerry Jacobs[1], **Janette Dill**[2]

[1]University of Pennsylvania, Philadelphia, USA. [2]University of Minnesota, Minneapolis, USA

Abstract

The control over work and workers is more complex in the case of service work than it is in the factory setting. Customers are in direct contact with workers and thus are in a position to influence the nature of the service experience and are able to exert a degree of control over service-providing workers. The role of customers in the service work context has been conceptualized by the term "the service triangle."

We extend the service triangle model to the case of elder care. We add three layers of complexity to the "triangle idea." The first point is to add the role of technology. While managers, workers and customers may represent the central human roles in the service triangle, in many instances technology shapes the nature of the interactions between the people who play these roles.

Second, in the case of elder care, we note that there is often not a single "customer." Elderly patients and their families often disagree on the need for care, the setting for care and the nature of the care that is provided. The need to attend to the desires of both the family and the patient adds a layer of complexity to the provision of care in the case of older adults (as well as adults with disabilities). We review the literature on the nature of care decisions by patients and their families and suggest that insights from research in this area need to be incorporated into our understanding of the work of elder-care providers.

Third, we note that elder care provision often involves a care team that may include professionals (such as doctors and nurses), skilled technicians (such as occupational and physical therapists), and support personnel (such as home health aides). While ideally the care team would share the same understanding of the patient's needs and seamlessly share information, in practice care teams may fall short of this ideal. Team members may disagree on the patient's need and may rely of different indicators of the patient's condition. We review the research on the dynamic experiences of care-work teams in the elder-care context.

We offer this model as a template for future studies of elder-care work that include a recognition of a) the role of technology in shaping the service experience; b) the role of both families and patients in care decisions, and c) the dynamics of the care-work team.

7.02

ETHICS WORK IN AI-BASED DISTANT MONITORING OF PATIENTS AT HOME

Annette Kamp, Agnete Meldgaard Hansen, Sidsel Lond Grosen

Roskilde University, Roskilde, Denmark

Abstract

AI and datafied processes introduced in the healthcare sector are currently transforming professional knowledge, values and decision-making. Conceiving professionals as critical and creative agents in this transformation (Ruckenstein & Turunen, 2020), we explore the contradictory processes where professionals negotiate their professionalism in relation to databased distant monitoring. Based on a study of nurses' work with a data-generating AI-based distant monitoring system for discharged patients, we investigate how nurses 'do ethics', as notions of good care, and professional knowledge and accountability are challenged. The system forms part of a larger effort to establish and use big data to create (possibly individualized) standards on vital parameters, hence relating to socio-technical imaginaries on personalized medicine.

Empirically we draw on shadow observations (Czarniawska, 2007) of nurses working with the system in an acute assessment unit in a Danish hospital. We also draw on group interviews with nurses, and interviews and meetings with unit managers and system managers and developers.

Our theoretical inspiration comes from STS-inspired empirical ethics (Pols 2015) and the concept of 'ethics work' (Banks 2013). With this point of departure, we view ethics, not as a set of external principles to be applied to nursing practices, but as emergent in everyday practices when the various actors involved in using the new system attempt to do good. We thus examine how ethical considerations and negotiations emerge in their concrete practices, what norms, values, ideals, and prescriptions contribute to what is perceived as good care, and how this is justified and legitimized (Pols 2015). The concept of ethics work adds further dimensions to the understanding of the practical, situational work of professionals doing ethics. With this concept we highlight the nurses' deliberation with others on ethical evaluations and tactics, the strategies that are worked out, and the way aspects of ethics work are made visible to others. Ethics work involves emotional-, identity-, relational-, and performative work, in relation to both patients and colleagues. Hence, ethics work is about achieving good care, and simultaneously a kind of identity work, contributing to transforming professional identities.

Our analysis shows how the nurses' work and professional responsibilities are stretched and expanded in time and space (Nicolini, 2007) to include events in patients' home spheres. The system's continuous AI-based monitoring introduces new forms of datafied knowledge, but also opacity, in their professional assessments and judgement. In this new situation, the nurses are challenged both in terms of their professional responsibilities and identities, and they perform ethics work seeking to balance multiple accountabilities and contradictory understandings of good care, related to e.g. patient-privacy and safety, evidence-based practice, and holistic care ideals.

References

Banks, S. (2013). Negotiating personal engagement and professional accountability: Professional wisdom and ethics work. European Journal of Social Work, 16(5), 587-604. https://doi.org/10.1080/13691457.2012.732931

Nicolini, D. (2007). Stretching out and expanding work practices in time and space: The case of telemedicine. Human Relations, 60(6), 889–920. https://doi.org/10.1177/0018726707080080

Pols, J. (2015). Towards an empirical ethics in care: Relations with technologies in health care. Medicine, Health Care and Philosophy, 18(1), 81–90. https://doi.org/10.1007/s11019-014-9582-9

Ruckenstein, M., & Turunen, L. L. M. (2020). Re-humanizing the platform: Content moderators and the logic of care. New Media & Society, 22(6), 1026-1042. https://doi.org/10.1177/1461444819875990

7.03

FRONTLINE PRACTITIONERS AS "MORAL CRUMPLE ZONES" IN EXPERIMENTATION-DRIVEN AI INNOVATION

Marta Choroszewicz

University of Eastern Finland, Joensuu, Finland

Abstract

The allure of new AI technologies for enhanced efficiency, availability and quality of public services and distribution of welfare benefits has become particularly compelling within public administrations in Finland and beyond. In the rapidly evolving landscape of artificial intelligence technologies and, specifically the growing experimentation of generative AI tools within public sectors, frontline practitioners, including nurses, social workers and claims specialists, find themselves at the intersection of technological innovation, professional ethics and human welfare.

This paper applies the concept of "moral crumple zones" (Elish, 2019) to explore the new roles and tasks ascribed to frontline practitioners in experimentation-driven AI innovation within Finnish public administration and public services. Frontline practitioners are increasingly expected to manage not only their regular duties but also the potential failures of AI tools. Furthermore, they are often expected to engage actively with these tools in pursuit of promises of, amongst others, increased productivity, efficiency and reduced cognitive load. Despite their limited influence over the initial design and subsequent technological improvements to generative AI tools, they are put in the positions of acting as 'moral crumble zones' by being hold accountable for effective, ethical and responsible use of these experimental technologies (Choroszewicz, In Press). However, relying too heavily on frontline practitioners to act as safeguards can be problematic. For instance, against of a general belief, frontline practitioners tend to be provided with insufficient training and knowledge of these tools to identify

and mitigate any errors or unintended consequences that might arise from the use of experimental AI tools. I argue that this misattribution of responsibility not only places undue stress on frontline practitioners but also obscures the technological improvements of these tools or their recognition as misfit for the intended tasks.

This paper draws on ethnographic research spanning two years conducted within Finnish public administration on their AI-driven innovation. The research data include 400+ hours of observations and 95 interviews with innovators and other groups of public servants and practitioners, as well as external stakeholders. Additionally, the observations cover AI pilot projects as part of the SOTE AI ecosystem set up by the Ministry of Social Affairs and Health to promote the responsible use of AI in social and health services in Finland. These research data cover processes of design, development and testing of predominantly generative AI tools across welfare domains. Drawing on these data, this paper outlines the challenges faced by frontline practitioners and their "work for digitalization" (Justesen & Plesner 2024) put in navigating experimental AI tools while experimenting them in their everyday work. By doing so, the paper offers critical insights into the current problematic positioning of frontline practitioners in experimentation-driven AI innovation and suggests redrawing the boundary between innovation and frontline work to decrease the current heavy load of (un)necessary experimentation with pre-matured AI tools.

References

Choroszewicz, M. (In Press). Behind the scenes of a nascent phase of data and artificial intelligence technologies integration to public administration and services: The boundary work of public sector professionals. In TL Adams (Ed.), Research Handbook on the Sociology of Professions. Edwin Elgar.

Elish, M.C. (2019). Moral crumple zones: Cautionary tales in human–robot interaction. Engaging Science, Technology, and Society, 5, 40–60.

Justesen, L., & Plesner, U. (2024). Invisible digi-work: Compensating, connecting, and cleaning in digitalized organizations. Organization Theory, 5(1), 1–26.

7.04

VIRTUAL REALITY CAREGIVERS IN SOCIAL CARE EDUCATION: REIMAGINING PROFESSIONAL IDENTITIES IN A TECHNOLOGICAL FUTURE

John Pender, Perry Share

Atlantic Technological University, Sligo, Ireland

Abstract

As digital technologies increasingly permeate every facet of life, the intersection of social care and innovation presents both significant opportunities and challenges. This research explores the transformation of social care education through the integration of Virtual Reality (VR) caregivers, focusing on how these technologies reframe the preparation of future social care professionals in a world rapidly adopting AI and robotics.

The research critically assesses the potential futures of social care practice in a world shaped by algorithms, virtual assistants, and social robots. While the concept of "care" has traditionally been deeply human—grounded in empathy, compassion and emotional intelligence—the growing influence of technology in social professions necessitates an exploration of how digital tools like VR can preserve, enhance or challenge the human aspects of care.

The social care sector is experiencing an increasing reliance on technology to augment, and sometimes replace, human caregiving roles. Technologies such as artificial intelligence, social robotics, and telecare already address issues like labour shortages and improve care delivery in underserved areas. By embedding exposure to and experimentation around VR caregiving and recipiency into the social care curriculum, we prepare students for emerging realities of care systems that blend human expertise with technological support.

Our research traces the development of VR caregiver avatars within the "Futures of Care, Society and Welfare" module where students actively engage in co-production, contributing critical insights on their experiences designing virtual worlds of social care. This approach raises fundamental questions about user-cantered design and professional competencies: How do we design VR caregivers that accurately reflect the skills, empathy and professionalism expected of human care workers? The research explores open versus scripted communication, appearance considerations and the challenges of ensuring VR caregivers adapt to various real-world scenarios. Data capture features enable students to receive real-time feedback on their interactions, bridging the gap between theoretical learning and practical application.

Pedagogically, the integration of VR caregivers requires a shift from traditional teaching methods to more experiential and interactive learning including lectures, discussions, student-led workshops and immersive simulations that focus on both care ethics and the technicalities of creating virtual environments. The technology serves not only as a learning tool but also stimulates critical thinking about its broader societal implications.

Significant ethical considerations arise as VR caregivers become more integrated into social care education. The introduction of virtual entities into care settings challenges traditional notions of empathy, trust and human dignity. Can a virtual carer truly replace the human connection that is at the heart of care? These questions highlight the need for careful governance and regulation of VR technology in social care contexts.

The use of VR technology in care education demands a re-evaluation of "care" itself. Traditionally a relational process between humans, VR caregivers introduce technology-mediated relationships. While some view this as a path to more efficient, scalable care solutions, others argue it risks commodifying care in ways that could undermine its humanistic qualities. Our research contributes to this debate by exploring how VR caregivers reshape the meaning of care and impact professional identities within the social care sector.

The integration of VR caregivers in social care education prepares students for a technological future while also imagining a post-social-robotic world of care—where humans and technology coexist in symbiosis, with digital systems enhancing rather than replacing human caregivers. Industry specialists in VR collaborate with students to explore the evolving dynamics of professional health and care work, examining how new technologies redefine roles, responsibilities, and relationships in care networks.

By integrating VR caregivers into social care education, we prepare students for environments defined by both human and digital interaction, ensuring technology empowers rather than replaces the human element of care, fostering professional identities that are adaptable and resilient in an ever-changing technological landscape.

7.05

TIME, MONEY AND GOOD QUALITY CARE

Camilla Gjellebæk, Therese Dwyer Løken, Hanna Marie Ihlebæk

Østfold University College, Fredrikstad, Norway

Abstract

To address current and future challenges in health and social care, there is a proclaimed need for innovative measures to ensure quality of services, while simultaneously optimising time and reducing costs. This is often sought to be accomplished through digital technologies, developed and implemented with increased speed and intensity. This trend has been accompanied by research exploring how specific technologies, like electronic record systems or self-monitoring devices, impact the quality of services. Studies investigate the nature of caring relationships, workflows, professional identities, collaboration, and temporal experiences and structures. Results can be used to identify opportunities and obstacles to more efficient implementation and use of digital technologies in specific contexts.

This article is based on the premise that to utilise the opportunities and challenges the use of digital technologies might imply, we first need fundamental insights into existing networks of actors and the already evolving nature of care work and policy within and across various sectors. This requires exploring what constitutes good quality care and how it is ensured in different contexts. We also need to understand what time is in various institutional settings, e.g. how time is valued and structured in building caring relationships. Finally, we need overall knowledge on how financial considerations affect quality and coordination of care and professional priorities. Secondly, we need to use such sectoral specific insights to build knowledge across studies and institutions, e.g. how to facilitate coordination of care services across organisational and institutional borders by technological means.

Our approach is inspired by STS literature which emphasizes understanding the social as an assembly, a network of interconnected actors, human and non-human, where agency is distributed among people and technologies in mutual negotiations. The networks are always open to reconfigurations and the outcomes of ongoing negotiations are difficult to predict. To assess the potential effects of digital technologies, we must therefore understand the existing networks of actors and agencies, to open up to the complexity and uncertainty that social interaction implies. We ask, How can a deeper understanding of the constituents

of and conditions for good quality care contribute to ensuring valuable outcomes of innovative digital technologies within and across healthcare organisations?

To address this question, we draw on findings from three qualitative studies conducted by the authors in various parts of the health and welfare sector, in Norway and Sweden.

The first study examines the integration of municipal health and social care services for people with concurrent mental health and substance abuse challenges, in three Norwegian municipalities. Multidisciplinary and integrated services are a policy aim in the Norwegian welfare state. This study includes research on multiple levels through the study of public management principles (system level), organizational and financial structures (organizational level), and professional practices (practice level). Evident through this study was that policies regarding economic performance and consequently, municipalities' duties of financial management strongly impede integration of health and social care services. Thus, one policy aim is not realized due to another policy aim. One must therefore consider the dynamics between different policy aims as well as between policies and practices when implementing and using technology.

Study number two explores changes in the organization of work in the healthcare service of a Swedish municipality, focusing on how integrating learning into employees' daily tasks impacts innovation capacity and employee participation in change processes. By carrying out the change process through Teams, participants were allowed to develop a new perspective on the potential for cross-organizational collaboration. Many participants expressed that a digital platform like Teams effectively mitigated time constraints that had previously hindered cross-unit meetings, primarily due to the need for physical travel. The study findings indicate that when learning becomes a natural part of daily work, employees' ability to develop and implement new solutions improves, fostering a more innovative organizational culture. This supports a bottom-up approach, where employees take greater ownership of changes and engage more actively in decision-making processes. Such involvement is particularly beneficial in the context of digitalization, as it ensures that those who will ultimately use the technology are involved from the beginning.

The third study was conducted at a Norwegian hospital cancer ward. The Norwegian state-funded hospitals are organised as business enterprises that provide specialist health services involving the diagnosis, treatment, and observation of patients with acute, serious, and chronic diseases and health conditions. When treatments are completed and the patients' conditions are stable, they are transferred to the municipalities for further care and rehabilitation. From this study, we highlight how the building of nurse-patient relationships evolves because of negotiations between various healthcare professionals, patients, relatives and managers at a micro-level. Furthermore, the study shows how these negotiations involve balancing various orientations towards time as a resource in a technology intensive environment, where biomedical knowledge and corporate ideology prevails.

7.06

ALGORITHMIC DECISION-MAKING IN SERVICE WORK: HIGHER JOB AUTONOMY AND NEW POWER (IM-) BALANCES AMONG GERMAN CARE WORKERS AND BANK ADVISORS

Gina Glock

Federal Institute of Occupational Safety and Health, Berlin, Germany

Abstract

Background: Service workers have a deep desire for job autonomy which is commonly considered a work resource that can mitigate work demands. The extent to which service workers are granted this autonomy is another question, the answer to which depends on the specific work content in services, the corporate strategies for realising the potential of labour power, and the associated use of technology within work processes.

Widely used Algorithmic Decision-Making (ADM) systems show various levels of intervention in service work and may be utilised to fulfil different corporate strategies, mostly in a specific relationship between control and optimisation. Workers themselves want to retain control over their work as much as possible. Using ADM systems does not fundamentally contradict this aspiration – yet they call into question the decision-making authority over work content and challenge existing control (im-)balances.

Objective: This contribution aims at exploring these potential areas of conflict by examining the influence of ADM systems on the job autonomy of service employees in Germany who perform a particularly large amount of intensive interaction work. The emphasis is on changing job autonomy, access to interaction work and associated power structures that can go hand in hand with the use of these ADM systems as well as on identifying moments and tasks in which service workers can (continue to) escape the influence of technology. The aim of this contribution is likewise to counter the fuzzy handling of the concept of AI and the focus of studies on autonomy on production work.

Empirics: This contribution draws on two interview-based company case studies in outpatient care and bank advisory services. In both companies, the effects of using ADM systems on the job autonomy of employees were examined in particular. By means of 16 semi-structured interviews, the subjective perceptions regarding the changed autonomy of frontline service workers were recorded.

A holistic software solution for digital work processes, including ML-based shift and tour planning, serves as an ADM example in outpatient care. An integrated client approach management system for clients, which essentially provides product recommendations, sets an ADM example in banking services. Both systems combine functions of rule-based digital systems with machine learning elements.

Results: The company case studies show that the intervention of these ADM systems in the work processes of care workers and bank advisors has predominantly positive effects on job autonomy. In both cases, improvements in the respective services as well as relieving tendencies for workers are recognisable. In the example of outpatient care, contributions to the quality of care, improvements in workload, and a facilitation of interaction work are achieved.

In contrast, the changes in job autonomy may also have ambivalent effects on bank advisors: It is true that the quality and quantity of advisory services are improved, and day-to-day work is facilitated. However, the work of the advisors is also fraught with more contradictions such as a strict time-boundness of product recommendations. The aim of this contribution is to explain how these differences arise.

7.07

HIGHLIGHTING RELATIONAL WORK IN PERFORMANCE METRICS: A METHOD TO ENHANCE JOB QUALITY IN WELFARE SERVICES

Malin Bolin[1], Annika Hasselblad[2], Sara Nyhlén[1], Sara Swedenmark[1]

[1]Mid Sweden University, Sundsvall, Sweden. [2]University of Turku, Turku, Finland

Abstract

The rapid advancement of artificial intelligence (AI) has reignited the longstanding debate on technology's role in shaping job quality. Will AI enhance work or lead to further dehumanization? The answer largely depends on how technology is implemented and integrated into organizational practices. Research shows that improving job quality requires a simultaneous optimization of both technical and human aspects of work (Warhurst et al., 2022). While organizations are not autonomous machines, they have historically implemented technology-centered changes that prioritize efficiency over human-centered work. Examples such as Taylorism, platform work, and New Public Management (NPM) illustrate how managerial frameworks, when overly focused on control and measurement, can undermine professional autonomy and the relational dimensions of work.

NPM, introduced to enhance efficiency in public services by applying rational, quantifiable principles from manufacturing, has significantly reshaped welfare services. Its emphasis on speed, cost-effectiveness, and standardization has often clashed with the inherently relational and complex nature of social work (Hugman, 2020). The push for measurable outputs, such as processing times and caseloads per worker, has gradually marginalized the qualitative aspects of welfare services. Professional autonomy has been curtailed, as decision-making power has shifted from frontline professionals to governance structures that define "quality" based on economic rationality rather than human-centered interactions. This de-professionalization of welfare work has led to a paradox: while intended to improve efficiency, NPM has instead eroded the very aspects of work that contribute to meaningful and effective care.

A key mechanism through which NPM enforces its logic is digitalized performance measurement. The explosion of digitalization in recent decades has turned data into a highly valued asset, enabling extensive tracking and control of workplace processes.

AI, in particular, holds great promise for increasing efficiency, yet its application in welfare services, such as social work, raises critical and ethical concerns (Reamer, 2023). Social work differs fundamentally from manufacturing because its core value lies in human relationships—between employees and clients—rather than in production speed or output volume. When AI-driven data analytics are used to evaluate social work, there is a risk of reducing work quality to a one-dimensional, quantifiable measure, disregarding the nuanced, relational aspects that define effective social care (Hjärpe, 2020).

To address this, we propose a novel method that integrates qualitative, practitioner-informed measures into existing performance evaluation frameworks. By capturing the professional perspective of frontline social workers, this approach counterbalances the limitations of purely quantitative assessments. Rather than allowing AI and data-driven governance to further marginalize relational work, we argue for a system that makes these aspects visible, valued, and systematically integrated into decision-making. By identifying the essence of relational work from front-line social workers perspective, it can acknowledged in performance evaluation systems, and therefore enable a more holistic understanding of social work quality. This ensures that current performance measurements and future AI applications can support and enhance rather than erode the humanistic elements of social work, ultimately leading to better job quality and improved service outcomes.

While AI and performance data analytics offer significant opportunities for increasing efficiency in welfare services (Butt, 2024), it is crucial to remain aware of their limitations. Without deliberate efforts to incorporate the complexity of relational work into performance evaluations, there is a risk of further dehumanization, where technology-driven governance prioritizes efficiency at the expense of meaningful, client-centered care. Our proposed method provides a way to balance technological advancements with the realities of social work, ensuring that AI supports rather than replaces professional judgment. By fostering a system where relational work is recognized and accounted for, we move towards a future where welfare services benefit from technological advancements without sacrificing the human aspects that define quality care.

References

Butt, J. S. (2024). The role of artificial intelligence (AI) in productivity & economic growth in Nordic welfare states. Acta Universitatis Danubius. Œconomica, 20(2), 50-72.

Hjärpe, T. (2020). Mätning och motstånd: Sifferstyrning i socialtjänstens vardag.

Hugman, R. (2020). Social work and de-professionalization. In The sociology of the caring professions (pp. 178-198). Routledge.

Reamer, F. G. (2023). Artificial intelligence in social work: Emerging ethical issues. International Journal of Social Work Values and Ethics, 20(2), 52-71.

Warhurst et.al., (2022) The Oxford Handbook of Job Quality. Oxford Press.

7.08

THE CONTEXT OF TECHNOLOGY AND THE MAKING OF INVISIBLE WORK – RESULTS FROM A COMPARATIVE STUDY OF SWEDISH AND FINNISH HOME CARE

Maja Ekeroth[1,2], Tina Forsberg[1], Malin Bolin[3], Anna Cregård[4]

[1]Högskolan Dalarna, Borlänge, Sweden. [2]Karlstad Universitet, Karlstad, Sweden. [3]Mittuniversitetet, Sundsvall, Sweden. [4]Högskolan i Borås, Borås, Sweden

Abstract

Technological innovations and digitalization are becoming more significant in the welfare states of Sweden, Finland, and the other Nordic countries. In addition to digital storage and organizational systems, technology which replaces caring tasks is increasingly being used. This progress has been facilitated by political initiatives pushing for welfare technologies implementation and are presented as a solution to the various care work challenges such as caregiver shortage due to demographic development, work environment challenges, low work status, and financial constraints. According to previous research technological innovations can enable care efficiency and increase the possibility to meet citizens' expectations of faster and more convenient care. New technology may also contribute to new challenges such as increased invisible work and work-related stress. However, questions still arise regarding how the human aspect of care is influenced when technology is introduced as an alternative to physical visits.

Even though the sociotechnical school emphasizes the interaction between the context and the meaning of technical interventions, little is known about technological interventions in care work from a contextual perspective. In an ongoing research project, the interrelations between contextual factors and the technological implications in home care work are compared in Finland and Sweden. In both countries, national policies and organizational conditions as well as the working

conditions within home care work are explored. In this paper, technology used in home care is analyzed to identify whether it enhances or diminishes the human aspects of care.

Theoretically, the human aspects of care work can be understood as "invisible work", which refers to work that is undermined and becomes invisible. This paper specially draws on Erin Hatton's definition which highlights the creation of invisible work by different mechanisms; this in turn affects the specific setting where the work is conducted, how it is defined and valued. The concept of invisible work is useful to understand care work as it has special conditions where tasks are often care-oriented and take place in a person's home. Thus, the majority of care work may be invisible for management and difficult to measure via technical performance systems. The visibility of employee workloads and the fair distribution of tasks is then a challenge.

Preliminary results suggest that the institutional heritage and organizational setting in which the technology is introduced could provide space for human contact and care, and conversely, reduce time spent providing care. In Sweden, the national and organizational focus appears to be directed more towards managing practical challenges by enabling efficiency and reducing the need for care workers, possibly at the expense of the human aspects of care. In Finland, preliminary results indicate that there is an interest in understanding how the introduced technologies affect the time and space for human encounters during the care work.

Further, due to the front-line workers' (front-line managers and care workers) lack of influence, the human aspect is not made visible within organizational decision-making processes. Even though responsibility for implementing new technologies is decentralized to front-line workers, the decisions behind the implementations are mainly made by politicians, technicians and financial controllers.

Consequently, these decisions are not grounded in the human aspects of caring work. The comparative analyses show a gendered meaning of care work technologies, at the same time as the initial data indicates the importance of organizational structure and culture to understand significant differences between Finland and Sweden.

In conclusion, while the subordination of the human aspect seems to be persistent, the institutional and organizational context is shaping the approach to care work and the setting in which it is carried out. Subsequently, these conditions appear to have implications for whether the human aspect of care is enhanced or diminished when introducing technology in home care.

7.09

TOWARDS IMPROVED MANAGEMENT AND ANALYSIS OF WORK ABILITY RISKS THROUGH AI-ASSISTED SICKNESS ABSENCE MONITORING (POSTER)

Johanna Sirkka[1], Riitta Suhonen[1,2,3], Juha Liira[4], Minna Stolt[1,5]

[1]University of Turku, Department of Nursing Science, Turku, Finland. [2]Wellbeing Services County of Southwest Finland, Turku, Finland. [3]Turku University Hospital, Turku, Finland. [4]University of Turku, General Practice Department of Clinical Medicine, Turku, Finland. [5]Wellbeing Services County of Satakunta, Pori, Finland

Abstract

Background: The management and analysis of work ability risks require a high level of competence from occupational health nurses. One area of expertise pertains to the use of modern electronic tools. For example, artificial intelligence (AI) can be utilized in electronic tools used for the management and analysis of work ability risks. Nevertheless, relatively little is known about the use of artificial intelligence in supporting work ability within the context of occupational health services.

Aim: The aim of the study was to describe occupational health nurses' perceptions regarding the utilization of digital tools in work ability risk management and analysis, and to identify the factors that promote or hinder their implementation.

Methods: A descriptive qualitative study with semi-structured thematic interviews was conducted in May–June 2023, using purposive sampling of ten occupational health nurses. The data were analyzed using both inductive and deductive content analysis.

Results: Electronic tools facilitated the management and analysis of work ability risks. In practice, this was implemented, for example, by utilizing partially AI-assisted electronic tools to analyze the weekly absenteeism statistics of customer organizations. Based on this analysis, individuals who met the agreed criteria with the client organization, such as those who

received electronic absenteeism notifications, were identified and contacted. A high utilization rate of occupational health services was also considered a warning sign of potential work ability deterioration.

Electronic tools were recognized as crucial in ensuring the timeliness of work ability risk management and analysis, as well as in selecting the appropriate scale of interventions. Participants emphasized that without these tools, the management and analysis of work ability risks might be delayed, or interventions could be poorly targeted. Modern electronic tools help ensure the efficient allocation of resources. Furthermore, the usability and reliability of these tools were seen as supportive factors for managing and analyzing work ability risks.

Conclusions: Modern electronic tools enhance the management and analysis of work ability risks. In the future, the use of AI in work ability risk management and analysis is likely to increase. To ensure the competence of occupational health nurses and the quality of care, future research should explore the potential applications of AI in work ability risk management and analysis.

7.10

JUGGLING TECHNOSTRESS AND TECHNOEASE: CARE WORKERS' EMOTIONAL RESPONSES TO MOBILE PHONES IN INSTITUTIONAL ELDERLY CARE

Marcus Persson[1], Elin Thunman[2]

[1]Linköping University, Linköping, Sweden. [2]Uppsala University, Uppsala, Sweden

Abstract

The use of digital technology in elderly care has garnered significant research attention in recent years. However, the adoption of such technology has been slow. One reason for this is the difficulty in providing adequate support for caregiving organizations, particularly in terms of knowledge about the effects of various technological tools and new working methods for care personnel (Vård och omsorgsanalys 2021). Additionally, caregivers' ideals of delivering empathic, patient-centered care do not always align with the increasing demands for technical competence (Parks 2010; Wright 2018). Researchers have discussed the existence of "technology resistance" within the care profession, which is considered a widespread and complex phenomenon in the work environment (Salzmann-Erikson & Eriksson 2016).

Caregivers' emotional reactions to new technology should be taken seriously, as they can present significant obstacles to the successful digitalization of elderly care. Therefore, it is essential to study how care workers express and manage their emotions when using digital tools in relation to care recipients. This includes exploring the emotional opportunities and challenges that digital tools present to caregivers as they strive to carry out their work in a professional and meaningful way.

This study specifically examines care workers' emotional expressions when using mobile phones as work tools. While mobile phones have been used by care workers in Swedish home care (Person et al 2023: Han et al 2014), they are a relatively new tool in institutional long-term care settings. As such, mobile phones elicit a range of emotions among care workers.

Based on qualitative methods, including 47 interviews and observations at elderly care homes in Sweden, we explore care workers' emotional experiences with mobile phones as work tools. Through thematic analysis (Braun & Clarke 2021), we present our findings under two main categories: "technostress" and "technoease".

Technostress is an established concept (Thunberg et al 2023) including emotions, such as discomfort and anxiety, related to the use of mobile phones in different situations. For instance, poor Wi-Fi connectivity is a recurring source of frustration among care workers, as it disrupts digital tasks, such as accessing medical information on residents. We observe instances where staff members are unable to sign off completed tasks —such as administering medication—within the designated timeframe results in the system marking it as "not executed." This issue not only requires additional manual work but also exposes care workers to potential reprimands from managers or nurses.

The use of mobile phones can also cause feelings of technostress when forced to multitask. For instance, care workers can face difficult choices when a mobile phone alarm sounds while they are assisting a resident. As a solution, the care workers can check a video feed installed in the residents' room to assess which of the residents' needs are most prioritized. The care workers also express discomfort about appearing "impolite" when using mobile phones in front of residents, as it diverts their attention and makes them feel disengaged from the task at hand.

Contrary to feelings of technostress, we find that care workers also express a variety of positive feelings regarding the use of mobile phones in different social situations. We refer to this as feelings of "technoease". Care workers report feelings of comfort and relief when using mobile phones to minimize the excessive "running" in the ward. In this context, "running" encompasses actions such as rushing to assist elderly residents when an alarm sounds (now coordinated among care workers to determine who will respond), going to the entry to open the front door (now manageable via the mobile phone), going to the office to check task assignments (now accessible on mobile phones), or searching for colleagues to ask questions (now simplified through direct calls). Care workers express appreciation for how mobile phones reduce unnecessary physical exertion and enhance communication and task coordination.

Additionally, we find that care workers express feelings of safety and security when using mobile phones serve as a means to make distress calls to colleagues when needed, such as in situations where a resident becomes aggressive. Furthermore, care workers report a sense of security in knowing that mobile phones provide clear directives on what work tasks to complete and when, thereby reducing uncertainty in complex care situations.

The findings of this study highlight the complex and sometimes contradictory emotions that care workers experience when using mobile phones in care homes. By articulating these emotional responses, this study identifies instances where the mobile phones are perceived not only as sources of stress but also as valuable tools that support care work. Thus, by expanding on the established concept of technostress and introducing the novel notion of technoease, the findings contribute to a broader understanding of meaningful ways to integrate mobile phones into elderly care practices.

7.11

LEVERAGING AI TO ADDRESS DOMESTIC VIOLENCE IN WELFARE SERVICES

Hanna Mielismäki, Marita Husso

Tampere University, Tampere, Finland

Abstract

This study examines the role of AI-driven chatbots in addressing domestic violence (DV) within digitalized welfare services, including health and social care. DV is a pervasive public health issue and human rights violation. Social welfare and healthcare providers have a key role in assessing risks, implementing interventions, and organizing support services. However, despite frequent service use, many victims/survivors (VS) of DV remain unidentified and without access to necessary support services. AI-driven chatbots offer new scenarios to tackle the challenge of unaddressed DV by providing information about different forms of DV and guidance to support services. While AI holds great promises for enhancing the efficiency and effectiveness of welfare services, it also raises important ethical questions of safety, security and accountability within the vulnerable VS of DV.

This study discusses the integration of AI in welfare services, including the ethical considerations of AI implementation, as well as the potential risks and benefits of AI technologies. By addressing these issues, the aim is to contribute to the development of a comprehensive understanding of the role of AI in enhancing welfare services while ensuring ethical standards are upheld in a manner that respects human autonomy, promotes justice, and ensures accountability.

The study draws on empirical data from semi-structured interviews with VS, professionals in the field of DV, and criminal justice experts (n=26) in Finland. It explores how AI-driven chatbots influence professional practices and client safety. The study discusses the ethical guidelines and regulatory frameworks to govern the use of AI within vulnerable VS.

The study highlights the importance of integrating AI-driven chatbots with human-led interventions. While automation can assist in providing information about and help identifying DV, human intervention and multiprofessional support are essential for effective recovery of DV. This research contributes to the understanding of how new technologies are reshaping violence work, emphasizing the need for a balanced approach that leverages the strengths of both AI and human professionals.

7.12

REPRESENTATIONS OF THE "OTHER CAREGIVER": A QUALITATIVE STUDY ON THE LEGITIMIZATION OF DIGITAL CONTROL IN THE SWEDISH HOME CARE SERVICE

Danka Miscevic, Marita Flisbäck

Faculty of Caring Science, Work Life and Social Welfare, University of Borås, Borås, Sweden

Abstract

In Swedish home care service, new technologies are increasingly present and manifested in the everyday work of caregivers through digital governance and control of their work. In their daily work the caregivers are expected to make use of mobile apps that set a time limit for care work and provide information on how care work should be carried out. For each care recipient, there is also a care plan available on the caregivers' cell phone that provides more detailed instructions on how to carry out care work. The focus in the paper is how digital control and exploitation of care work in home care services is maintained and legitimized. The paper is part of a research project that focuses on how governance in home care affects daily work from the perspective of both care recipients and caregivers and what strategies caregivers use to handle the ambivalence that is inherent in the governance of home care services. The research project is set in a home care service organization in a medium-sized municipality in Sweden and funded by the Swedish Research Council for Health, Working Life and Welfare.

The aim of the paper is to analyze caregivers' and care recipients' representations of what constitutes a "problematic" caregiver and to account for the reasons given for what is considered inappropriate behavior in daily home care work. Furthermore, the paper also aims to explore the role that the representations of the "other caregiver" and the reasons given for the problematic behavior play for the organization, the caregivers and the care recipients. The research questions are specified as follows: How is a problematic caregiver portrayed by caregivers and care recipients and what reasons do caregivers and care recipients give for poor behavior? What role do these simplified representations of the "other caregiver" and given reasons for their behavior play for the organization, the caregivers and the care recipients?

The present study is based on qualitative empirical data that includes qualitative interviews, observations of meetings in the organization and diary entries. In the diaries, the caregivers describe their everyday work over a period of two years. The working method of the project is also co-productive and explores more sustainable forms of governance within the home care service organization.

The analysis in the paper focuses on how representations of the "other caregiver" are a reflection of categorizations, for the most part simplified stereotypes, that can be related to "sociological" groupings such as gender, ethnic background, age and education (cf. Katz 1999, Flisbäck, 2016). The representations are also attributed to more 'psychological' characteristics such as being stress-sensitive, insensitive, careless, lazy or rigid. For care recipients, categorization becomes a strategy for dealing with an unpredictable care situation in which they are in a dependent relationship with their caregivers. The categorizations can also legitimize digital control and exploitation of care work since more care work is performed than what is granted or what the employer pays for. For caregivers, the comparison with the "inferior other" also contributes to raising their own status and their professional value by presenting themselves as a caregiver with the opposite characteristics. Rather than being deficient or flawed in their professional practice like the "other caregiver" they perceive themselves as the skilled, beloved and responsive caregiver.

References

Flisbäck, M. (2016) "Att urskilja allianser för att hantera osäkerhet", Socialvetenskaplig tidskrift, 16(1). doi: 10.3384/SVT.2009.16.1.2506.
Katz, J. (1999) How Emotions Work. Chicago: University of Chicago Press.

7.13

MONITORING AND EVALUTATING PROFESSIONAL LEARNING IN THE MAKING. THE GAZE OF OPERATORS AND FACILITATORS IN NURSECARE SIMULATIONS.

Astrid Camilla Wiig[1], **Roger Saljo**[2]

[1]University of South-Eastern Norway, Vestfold, Norway. [2]University of Gothenburg, Gothenburg, Sweden

Abstract

In healthcare training, simulations are interesting as they provide contexts for students to engage in learning in a performative sense. In such settings, the conceptual, physical/manual, technical, ethical and other constituents of professional know-how merge in the delivery of care and can be followed and reflected on ex-post-facto. The background of this study is an interest in how simulations make it possible to monitor and evaluate the evolution of students' nursecare know-how. The focus is on the role that operators and facilitators play in such instruction. Operators are professionals responsible for technically manipulating computerized manikins and acting as patients, doctors etc. Facilitators interact with the students during the scenarios and are responsible for the debriefing. Operators and facilitators collaborate as a "backstage team", monitoring and evaluating professional learning as it unfolds. In the study, the in situ conversations between operators and facilitators have been documented both a) during ongoing scenarios (synchronously), and b) right after, in the control room, while examining clinical monitors and video recordings of student performance. The analytical interest is in scrutinizing 1) how do these experts collaboratively identify how students perceive and solve professional tasks, and 2) how do they evaluate if the actions they observe live up to professionally expected standards.

The theoretical background is grounded in an interest in the role of sociomaterial artifacts in supporting learning (Säljö, 2022). In particular, we are interested in the processes of learning and appropriation of nursecare know-how that become visible.

The research design is inspired by an ethnographic approach using video to document work practices. The analyses build on video-documentation of 30 conversations (15h) between teams of operators and facilitators (n=10) in two control rooms next to three full-scale simulation suits at a Nordic nurse education. The analytical approach follows the principles of Interaction Analysis, relevant for studying interaction in situated practices.

Scrutinizing how teams of operators (OP) and facilitators (FAC) monitor and evaluate the unfolding learning activities during scenarios, two excerpts will exemplify our findings of how these expert-teams respond to the observations they make of student learning. In Excerpt 1, the OP/FAC and an operator trainee (OPT) share their surprise that the students did not observe what nursecare procedures they had to perform when encountering a blood-soaked bandage in a scenario involving postoperative bleeding:

Excerpt 1:Here, the OP/FAC-team is somewhat perplexed by the fact that the students looked at the bandage at the beginning of the exercise, and they even lifted the bandage at the very start, yet did not see the significance of what they were noticing in terms of what they were expected to do clinically. Thus, the OP/FAC-team is faced with a situation where they realize that the students saw a bloody bandage, but they didn't think of bleeding at all. Thus, they did not draw any conclusions about how to respond clinically in spite of the very obvious "stimulus" they had encountered and noticed.

In Excerpt 2, as a contrast, the OP7FAC-team discuss how the students' performance is entirely correct, even absolutely superb, still they are uncertain whether the students understand what they are doing: The OP/FAC-team is surprised by the observation that the students' performance is correct, superb, even so good that an experienced nurse would have done it in a similar manner. Yet, they still signal the element of uncertainty if the students demonstrate relevant clinical skills by saying but it's not certain that they know. Thus, when monitoring student learning at a processual level, the OP and FAC still hesitate whether students know what they are doing in a professional sense.

Thus, the digital technologies and the backstage work of the experienced OP/FAC-teams monitoring and evaluating the students' actions during scenarios, open new possibilities to scrutinize students' unfolding understanding (or lack of understanding) of professional know-how. Even perfect performance may not suffice as evidence of demonstration of professional know-how.

The results show the intriguing complexity of professional "backstage work" that characterizes the team as they monitor and evaluate how and to what extent the specific nursecare actions taken by students are indicative of progress towards professionally expected expertise. This implies that they not only evaluate the concrete actions taken by students but also consider the extent to which these actions are embedded in a professionally relevant contextualization of accepted procedures for delivering care. Consequently, the contribution of this manuscript is the OP/FAC-teams detailed analysis of whether students understand what they are doing when providing care. This question is central to OP/FAC-teams fine-grained evaluation of student unfolding progress of professional learning. This study adds to the research field an in-situ analysis of the collaborative OP/FAC-work to promote professional learning done backstage during nursecare simulations.

7.14

DATA LITERACY IN HEALTHCARE: THE KEY TO EFFECTIVE AI AND IMPROVED CARE

Sanna Virkkunen[1,2], Tuomas Granlund[1,3], Risto Kaikkonen[1,4,5]

[1]Solita Oy, Tampere, Finland. [2]Aalto University, Espoo, Finland. [3]Tampere University, Faculty of Information Technology and Communication Sciences, Tampere, Finland. [4]Helsinki University, Faculty of Medicine, Helsinki, Finland. [5]National Institute for Health and Welfare, Helsinki, Finland

Abstract

Data literacy—the capacity to understand, interpret, and effectively use data — has gained importance in healthcare. As electronic health record (EHR) systems, advanced analytics, and "big data" platforms multiply, clinicians and administrators are increasingly confronted with complex datasets. This article synthesizes findings from a combined literature review and expert interviews to explore how improved data literacy – a necessary foundation for effective AI development in healthcare – can transform patient outcomes, workforce efficiency, and organizational performance.

Introduction: Recent publications highlight both the potential and the pitfalls of massive healthcare datasets. While these datasets offer opportunities to optimize treatment processes, reduce costs, and enhance patient-centric care, they also raise concerns about data quality, ethics, and confidentiality. Moreover, many healthcare professionals lack the skills to manage and interpret complex patient data effectively. Experts suggest that successful data utilization relies on both strong organizational support and improved individual skills. Studies have shown that structured data literacy interventions can lead to better care coordination and fewer errors in healthcare settings.

To address the limitations of deploying AI solutions in a top-down manner without adequate training, we have suggested that successful integration of AI in healthcare necessitates a comprehensive approach that includes parallel training initiatives. Similarly, the Gartner Hype Cycle for Healthcare Data, Analytics, and AI, 2024, suggests that advanced technologies may not reach their full potential if staff lack the necessary data proficiency.

Methods: This paper combines a targeted literature review—focusing on documents explicitly examining healthcare data literacy, workforce readiness, and digital transformation—and semi-structured expert interviews. Literature was drawn from academic databases and policy reports, with consideration given to the Gartner hype cycle. The interview data were used to contextualize the core themes identified in the published material.

Key Findings: ***Growing Data Streams Elevate the Need for Data Literacy:*** There is a notable "data literacy gap" in daily clinical operations. While many healthcare facilities now collect extensive patient data from various sources like electronic health records, wearable devices, and diagnostic images, healthcare professionals often struggle to analyze and use this data effectively. Although this data has the potential to improve efficiency and patient care, the lack of data literacy skills among healthcare professionals hinders its full utilization

Combining Nurses' Process Mastery and Data Literacy for Better Outcomes: Nurses play a crucial role in care coordination. Integrating data science education into nursing curricula can enhance their ability to perform tasks like triage efficiently and accurately. When nurses possess strong data literacy skills, they can effectively analyze patient data, identify potential care

bottlenecks, and communicate important information to physicians. This improved communication and collaboration can lead to better patient follow-up and overall care.

Structured Frameworks for Ethical, Secure AI: Embracing Bottom-Up Training: To address the limitations of deploying AI solutions in a top-down manner without adequate training, structured frameworks are necessary to uphold data quality, privacy, and security. It is crucial to include ethical considerations, such as informed consent and anonymization, right from the beginning of any data project. Implementing bottom-up training alongside top-down AI deployments is essential, ensuring that advanced systems have user-friendly interfaces and maintain patient confidentiality.

Preventing the Plateau: Data Literacy for Sustained AI Adoption: Finally, Gartner's Hype Cycle reminds us that analytics solutions risk plateauing if end-users fail to see rapid, tangible benefits. We argue that even advanced AI platforms fizzle unless teams are consistently trained to interpret outputs. In short, technology alone does not ensure transformation; it requires sustained user engagement, facilitated by robust data literacy.

Discussion: Findings from both the literature and expert insights converge on a central message: data literacy Is essential for making the most of big data in healthcare. Although the interviews were limited in scope, they align closely with broader academic discussions. Studies highlight that the mere presence of large-scale patient information does not automatically yield cost-effective or patient-centered care; data literacy must bridge the gap. Likewise, boosting data literacy and, in some cases, data science literacy among nurses enhances everyday operations. Meanwhile, ethical frameworks address how to manage data responsibly. The strategic perspective from Gartner's Hype Cycle underscores that organizations often fail at the "people" stage, stalling adoption. Overall, success needs proper training, strong leadership, and ongoing feedback to improve data use.

Conclusion: Literature reviews and expert interviews both underscore the urgent need for robust data literacy in healthcare. Whether the goal is to improve clinical workflows, reduce costs, or empower frontline nurses, data-literate professionals are essential. Studies illustrate how big data can offer tangible benefits, yet they also caution that workforce readiness is a prerequisite for success. Furthermore, they highlight that ethical governance and hands-on training are just as important as technical investments. In short, turning data into better patient outcomes requires building data skills at all levels.

8.01

ARE ETHICS GUIDELINES FOR THE USE OF ARTIFICIAL INTELLIGENCE (AI) PAVING THE WAY FOR SOCIALLY SUSTAINABLE AND MEANINGFUL WORK IN KNOWLEDGE-INTENSIVE ORGANIZATIONS?

Eveliina Saari[1], Akseli Nurmi[1], Taina Pääkkönen[1], Aija Kuurne[1], Maria Tiikkaja[1], Jere Immonen[1], Kirsi Karjalainen[1], Anu Järvensivu[2]

[1]Finnish Institute of Occupational Health, Helsinki, Finland. [2]Finnish Institute of Occupational Health, Tampere, Finland

Abstract

Digitalization and artificial intelligence (AI) technologies are stated to open great opportunities to streamline and make work processes more efficient. AI refers to the ability of computers to do things typically requiring human intelligence and agency, such as reasoning, planning, solving problems and learning from experience. As AI and digital solutions enter to organizations, we still have poor understanding how they will influence meaningfulness and ethical premises of work (Bankins and Formosa, 2023). According to Bankins and Formosa (2023) AI may influence human work by either replacing manual tasks, creating new forms of human work or amplifying human skills by augmenting workers with something new.

The EU AI Regulation (EU 2024/1689) calls for end-users and workers to be involved in evaluating the impact of AI experiments and for organizations to provide AI literacy for the users. It states that people should be able to use AI as a tool with the ultimate goal of increasing their well-being. The Regulation also states that all relevant actors in the AI value chain should have sufficient AI literacy and an understanding of the benefits, risks, safeguards, rights and obligations associated with the use of AI systems.

Currently, knowledge-intensive organizations construct their own ethics guidelines and principles on how to use AI in their work, in services for the clients, and as part of their business. Knowledge-intensive organizations' key activities include the creation, accumulation and dissemination of knowledge (Miles et al., 1995). Our study is a preliminary effort to map these recently written guidelines and analyze how is work and its meaningfulness and wellbeing taken into account and addressed in them. Our main research question is: How do the AI ethics guidelines of the knowledge-intensive organizations reflect on the impact of AI at work, and on employees? What kinds of risks and opportunities they address for wellbeing at work and meaningfulness of work?

The data consists of 20 openly published ethical or general guidelines for the use of AI written by Finnish knowledge-intensive organizations from various domains, such as technology development, consultancy, media, education, health and social care services. The aim is to look at how different work contexts differ in addressing concerns on impact of AI on work processes in relation to ethical premises and social sustainability of work.

As a theoretical basis for the content analysis, we utilize the framework for evaluating the implications for meaningfulness of work from five perspectives: task integrity, skill cultivation and use, task significance, autonomy and belongingness (Lips-Wiersma and Morris, 2009; Bankins and Formosa 2023). We contribute the framework from the perspective of work-related wellbeing theories, such as Job-Demand-Control Model (Karasek, 1979) and considerations of moral distress (McCarthy and Deady, 2008), to gain a broader view to the impact of AI and its intensifying techno-overload effect at work.

Based on previous research (Bankins and Formosa, 2023; Jobin et al., 2019) our anticipation of the result of the analysis is that the knowledge-intensive organizations do not yet argue or define guidelines about long-term impact of AI use to work tasks, meaningfulness of work or work-related wellbeing. However, even the smallest recommendations, risks or deviations identified in the AI ethics guidelines will be reported in our analysis as an emerging ethical and socially sustainable mindset connected to change of work.

References

Bankins, S., & Formosa, P. (2023). The ethical implications of artificial intelligence (AI) for meaningful work. Journal of Business Ethics, 185(4), 725-740.

Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. Nature machine intelligence, 1(9), 389-399.

Miles, I., Kastrinos, N., Bilderbeek, R., Den Hertog, P., Flanagan, K., Huntink, W., & Bouman, M. (1995). Knowledge-intensive business services: users, carriers and sources of innovation. (European Innovation Monitoring System (EIMS) Reports). European Commission.

Karasek Jr, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. Administrative science quarterly, 285-308.

Lips-Wiersma, M. & Morris, L. 2009. Discriminating between 'meaningful work' and the 'management of meaning'. Journal of Business Ethics, 88(33), 491-511.

McCarthy, J., & Deady, R. (2008). Moral distress reconsidered. Nursing ethics, 15(2), 254-262.

Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act) retrieved in 21.2.2025 from Regulation - EU - 2024/1689 - EN - EUR-Lex

---

8.02

THE EMPIRICAL ETHICS OF AI-BASED FALL DETECTION

Victor Vadmand Jensen[1,2], Marianne Johansson Jørgensen[3], Rikke Hagensby Jensen[4], Jeppe Lange[5,3], Jan Wolff[6,7], Mette Terp Høybye[1,2]

[1]Department of Clinical Medicine – Interacting Minds Centre, Aarhus University, Aarhus, Denmark. [2]Regional Hospital Silkeborg, Silkeborg, Denmark. [3]Department of Research, Regional Hospital Horsens, Horsens, Denmark. [4]Department of Digital Design and Information Studies, Aarhus University, Aarhus, Denmark. [5]Department of Clinical Medicine, Aarhus University, Aarhus, Denmark. [6]Schleswig-Holstein University Hospital, Lübeck, Germany. [7]Fraunhofer IMTE, Lübeck, Germany

Abstract

Artificial intelligence (AI) systems are increasingly introduced in healthcare settings. Such AI systems are envisioned to aid healthcare efforts, both by providing higher-quality diagnoses and treatments, as well as replacing mundane tasks to save resources that can be used for more patient-centered care. With the budding implementation of AI systems, a number of questions surrounding the ethics of AI for care work have arisen. Most pertinent are questions related to the sorts of healthcare services that AI systems help deliver and how both patients and healthcare professionals are affected by and partake in the use of AI (Skuban-Eiseler et al. 2023). Scholars have suggested the importance of healthcare professionals understanding and reflecting on these ethical concerns in

their everyday work (Russell et al. 2023). However, "embedding ethics into the development and implementation of AI in clinical practice has proven difficult" due to the abstract nature of current approaches to healthcare AI ethics (Maris et al. 2024, 2). If we do not understand how AI systems can be made ethically acceptable in and with healthcare practice, we thus run the risk of losing the possible benefits of AI, as AI systems are abandoned due to their possible ethical consequences.

Against this backdrop, we present an empirical study of an AI-based fall detection system implemented in a Danish geriatric hospital ward. This AI system, which we pseudonymize as O-VID, uses computer vision technology to detect both pre-fall activities and falls (Leavy et al. 2015). Fall detection is an important part of geriatric care as geriatric patients are at increased risk for falls, and these falls have far-reaching consequences for patients' health. We studied O-VID's use in a Danish geriatric hospital ward over four months using ethnographic methods, being part of daily life in the ward. Through observations and interviews with geriatric care staff, we got to understand how the system is used in the daily care of admitted geriatric patients, as well as how its fall detection is negotiated.

We analyzed our data using empirical ethics as outlined by Pols (2015). We read through our ethnographic data to identify the intra-normativities underlying the use of O-VID, i.e. the various ways in which the AI system is used to achieve a certain vision of good care. We used abductive thematic analysis, moving between our data and the notion of empirical ethics during coding, synthesis, and interpretation of themes.

From this analysis, we identified four themes showing how O-VID is implicated in the geriatric ward's vision of good care. Care staff make sense of patients by customizing and redefining O-VID's alerts based on their clinical judgements of patients, building on these with the AI system. O-VID also supports the rhythms of falls by helping care staff proactively identify falls and react to pre-fall activities in various tempos. By negotiating information about O-VID to patients, care staff continually adjust the types of information they provide about the system to patients who may not be in a position to understand this information. Finally, care staff have to manage stress from and with O-VID, as the AI system is an impractical and noisy tool while also helping care staff to maintain and prioritize certain task flows.

Our results contribute to the literature on the ethics of healthcare AI. First, we shed light on important considerations for implementation strategies that support the ethical implementation of AI in geriatric care. Second, we highlight design considerations for AI-based fall detection systems that can build on situated notions of care and thus serve as foundations for ethical healthcare AI. Together, these contributions help us move closer to understanding how to practically develop and implement ethically acceptable AI systems in healthcare.

References

Leavy, Breiffni, Liisa Byberg, Karl Michaëlsson, Håkan Melhus, and Anna Cristina Åberg. 2015. "The Fall Descriptions and Health Characteristics of Older Adults with Hip Fracture: A Mixed Methods Study." BMC Geriatrics 15 (1): 40. https://doi.org/10.1186/s12877-015-0036-x.

Maris, Menno T., Ayca Koçar, Dick L. Willems, Jeannette Pols, Hanno L. Tan, Georg L. Lindinger, and Marieke A.R. Bak. 2024. "Ethical Use of Artificial Intelligence to Prevent Sudden Cardiac Death: An Interview Study of Patient Perspectives." BMC Medical Ethics 25 (1): 42. https://doi.org/10.1186/s12910-024-01042-y.

Pols, Jeannette. 2015. "Towards an Empirical Ethics in Care: Relations with Technologies in Health Care." Medicine, Health Care and Philosophy 18 (1): 81–90. https://doi.org/10.1007/s11019-014-9582-9.

Russell, Regina G., Laurie Lovett Novak, Mehool Patel, Kim V. Garvey, Kelly Jean Thomas Craig, Gretchen P. Jackson, Don Moore, and Bonnie M. Miller. 2023. "Competencies for the Use of Artificial Intelligence–Based Tools by Health Care Professionals." Academic Medicine 98 (3): 348–56. https://doi.org/10.1097/ACM.0000000000004963.

Skuban-Eiseler, Tobias, Marcin Orzechowski, Michael Denkinger, Thomas Derya Kocar, Christoph Leinert, and Florian Steger. 2023. "Artificial Intelligence–Based Clinical Decision Support Systems in Geriatrics: An Ethical Analysis." Journal of the American Medical Directors Association 24 (9): 1271-1276.e4. https://doi.org/10.1016/j.jamda.2023.06.008.

8.03

CAREER SHOCKS IN HEALTH AND SOCIAL SERVICES DURING TURBULENT TIMES

Sanna Markkula[1,2], Kiia Kilponen[2], Taru Feldt[2]

[1]Tampere Universities, Tampere, Finland. [2]University of Jyväskylä, Jyväskylä, Finland

Abstract

Aims: The health and social services sector faces multiple transformations due to the increasing digitalization and use of AI, the threat of future pandemics, and the increasing care needs of the aging population in many nations. In Finland, there have also been major structural reforms, such as the establishment of wellbeing services counties. At the same time, the sector suffers

from labor shortages. The current changes necessitate adaptation and learning new skills from the health and social services professionals and could predispose them to experiencing career shocks.

Career shocks are extraordinary and often uncontrollable events that prompt individuals to question their current work situation and reconsider the future of their careers. It is important to understand what career shocks the current era brings to health and social services professionals and how these affect their job experience and career decisions. The present study explored the types of career shocks these professionals face and how they are associated with person-job fit, namely needs-supplies and abilities-demands fits, and career outcomes, namely continuing in the job without changes, changing jobs or professions, or pursuing further education.

Methods: A cross-sectional survey data from 3415 health and social services professionals was used. Among the participants, 93% were women, with a mean age of 52, and 71% had a basic vocational qualification. The largest job fields included elderly care, domestic care services, and service housing. Thematic content analysis was used to classify participants' open-ended responses to a question of their most significant career shock while working in the health and social services. These categories were compared on person-job fit using variance analysis based. Finally, the categories were compared on career outcomes using crosstabulation and chi-square tests.

Results: Of the respondents, 64% had experienced a career shock. The five broad career shock categories were identified. Shocks related to job or customers (40%) included both self-imposed and forced changes in job description, workplace, or education. Furthermore, experiences of work intensification and fragmentation, ethical conflicts, and job burnout were included. This category also contained the customers' or their relatives' challenging or violent behavior and other upsetting events on the job. Shocks related to workplace relations (20%) included problems with supervisors, management, or colleagues, workplace bullying, and unfair treatment at the workplace. Shocks related to the organization (18%) contained closing or restructuring the work units, change negotiations, and transformation to the wellbeing services county model. Shocks related to personal life (15%) included one's sickness or disability, the sickness or death of a loved one, issues related to parenting, and other personal events. Shocks related to societal or global situations (7%) contained the COVID-19 pandemic and other global crises and significant legal changes in health and social services.

There were no differences between the categories regarding abilities-demands fit, but they differed on needs-supplies fit. When the career shock was related to the organization or societal or global situations, the current job fit the expectations that one had worse than when the shock was related to personal life or job or customers.

Regarding the career outcomes, 35% continued in their job without changes after the career shock, while 20% changed job descriptions, staying with the same employer. In turn, 27% changed jobs and 5% professions due to the career shock. The shock was followed by full-time studies with 4%, and 10% participated in further education alongside their work. Those who had experienced a shock related to personal life were less likely to continue in their current job without changes. In contrast, those faced with a shock related to societal or global situations were more likely to do so. Changing jobs was less likely with shocks related to personal life, organization, and societal or global situations but more likely with shocks related to job or customers and workplace relations. In turn, changing professions was more likely with shocks related to the societal or global situations and less likely with shocks related to the organization. Pursuing full-time studies or studying alongside work were both more likely with shocks related to jobs or customers and less likely with shocks related to the organization.

Conclusions: Career shocks were frequently experienced among health and social services professionals and affected their career outcomes. Especially the shocks related to job or customers and societal or global situations included experiences related to the constant changes brought by digitalization and AI, global crises, and intensifying adaptation and learning demands. Career shocks related to job or customers sparked changes within the profession that could support better person-job fit and meaningful work. In contrast, societal or global shocks were associated with decreased person-job fit and led even to changing professions. Career shocks should be considered when attempting to support health and social services professionals' meaningful and sustainable careers in the current era of AI.

9.01

FINNISH HOME CARE LEAVE POLICIES IN LIGHT OF EU LEVEL DEVELOPMENTS

Charlotta Niemistö[1], Mia Tammelin[2]

[1]Åbo Akademi University, Turku, Finland. [2]Tampere University, Tampere, Finland

Abstract

In light of the attempt to harmonize both care and gender equality developments across the EU member states, as steered by the EU Work-Life Balance Directive from 2019 and the European care strategy from 2022, we explore the Finnish home care leave, and how it is framed in the recent national family policy and strategy documents. Drawing on Bacchi's (1999) approach for conducting WPR research (What's the Problem Represented?), we analyze Finnish policy and strategy documents concerning the home care leave throughout the process of transposing the Work-Life Balance Directive into national law. We also account for the European care strategy, as the lead document for EU level development in care.

Following Nygård and colleagues (2019) our analyze on the recent debate and policy connects to the idea that 'political language, and the ideas and narratives stories included in these, can be seen as 'actions' per se' as these influence on how any topic is understood and what should be done about them. In political debates and policy regarding care of small children, Finland has traditionally been a country divided between public day care and the home care leave. Finnish children have a universal right to daycare, and public day care is heavily subsidized. Alternatively, care of small children at home is enabled by the home care allowance, and widely used in reconciling work and care responsibilities.

The home care allowance was a result of a debate between those in favor of day care and those in favor of extended parental leaves already in the 1970s and 1980s, in general a debate between the political left and the political right. The popularity of the care leave has remained rather even, and rather paradoxically, Finland is a country with both a relatively high employment rate for women, a full-time working norm for both women and men, and a relatively large number of parents, dominantly women, staying on care leave with their small children. The long leaves are, however, criticized for stalling gender equality in the labor market and society at large, especially for women of more precarious positions. However, the home care allowance, seems to be an important benefit in lengthening parenting leave, especially for mothers, but both for those in a precarious labor market position, but also for those in stronger labor market positions (Lammi-Taskula et al, 2024), regardless of some rather opposite policy aspirations within the EU.

References

Bacchi, C. (1999). Women, Policy and Politics: The construction of policy problems. Sage, London.

Lammi-Taskula, J., Hietamäki, J., and Repo, K. (2024). Employed Mothers' Justifications for Using Child Home Care Allowance in Finland. Journal of Family Issues, 0(0): 1–21, https://doi.org/10.1177/0192513X241257226

Nygård, M., Nyby, J., and Kuisma, M. (2019) Discarding social investment and redistribution in the name of austerity? The case of Finnish family policy reforms 2007—2015. Policy and Society, 38(3): 519–536, https://doi.org/10.1080/14494035.2019.1655834

9.02

REMOTE-ACCESS TECHNOLOGY AND THE POTENTIAL OF AI: HOW WOMEN ATTORNEYS SUPPORT WORK AND FAMILY THROUGH TECHNOLOGY

Carolyn Waldrep

University of Texas at Austin, Austin, USA

Abstract

The practice of law demands long work hours, years of training, and complicated problem-solving skills. Law is also a traditional profession, slow to change its standards. Historically, law firms required those long hours to occur in the office. This time-

inflexibility made legal careers challenging for caregivers—especially women—who sought to combine family responsibilities with law firms' demands for in-office work.

Technology can intervene in the traditional, inflexible models of practicing law. Pandemic-era remote work forced even the most conservative of firms to modify their remote work policies, at least temporarily. The opportunity to use artificial intelligence could bring comparable changes to legal practice. This study considers the implications on lawyers' careers as impacted by two streams of technology: the on-going role of remote-access technology, and the next frontier of incorporating AI technology.

In response to safety protocols during the pandemic, law firms allowed remote work. Lawyers worked from home using remote-access technology, and those with caregiving responsibilities could stay with their children while they worked. From this natural experiment of the pandemic, firms acknowledged that lawyers could work remotely as well as they could in offices. In the interim, public health concerns have waned, but the remote-access technology and the benefits of remote work remain. What is the post-pandemic impact on the practice of law: how has access to remote work continued after the pandemic? Are law firms returning to pre-pandemic expectations of in-office work? How does post-pandemic access to remote work support women in their legal careers, when they no longer face an immediate need for in-home childcare?

Then, the potential of AI arises as the next technology that may intervene in the practice of law. AI worries many attorneys with its inaccurate citations and risks to safeguarding client confidentiality and attorney-client privilege, but it also may make attorneys' work-product more efficient, saving costs for clients and reducing time outlays for attorneys. This study considers the extent to which AI is already becoming a part of the technological tools in lawyers' lives. How are lawyers using AI, and how are they preparing for its use in the future of their practices? How are firms and individual attorneys grappling with ethical risks and complications as they consider how to use AI?

For this study, I conducted in-depth, semi-structured interviews with women attorneys. The sample framework applied thematic sampling and included those who met three criteria: (1) women, (2) who passed the bar ten or more years ago, and (3) work at a regionally mid-sized firm. The interviews occurred between January 2024 and February 2025, fifty-nine in total. While three interviews met in person, the majority were conducted over Zoom. The average interview length is 65 minutes. The interviews were audio-recorded and transcribed. I am coding the interviews through an iterative, flexible coding strategy. I coded a preliminary set of twelve interviews to develop an initial analysis based on coding certain themes (including changing policies for remote work, preferences for remote work, impacts of remote-access technology, use of AI, and expectations around AI). From there, my coding scheme can develop into a more nuanced analysis throughout this iterative process as I enhance my understanding of the data and continue this analysis through the full set of interviews with women attorneys.

The preliminary findings suggest that firms varied in whether their remote work policy required attorneys to work in the office several days a week or whether they let attorneys determine where they worked, yet under both policies attorneys overwhelmingly preferred to work in their offices. Many described working more efficiently when not at home (especially if a romantic partner was there, working or caregiving), those in management capacities preferred to be on-site to engage directly with the firm, and some sought easier collaboration with coworkers in the office. Although the attorneys chose to work in their offices, the post-pandemic flexible work policies gave them a choice. But even from their offices, remote-access technology impacts the practice of law, drives efficiency both for attorneys and clients. Clients log on instantly rather than coordinate a meeting in a downtown office or sit through a lengthy court docket; attorneys avoid business travel by meeting remotely. The increased efficiency suggests that remote-access technology will remain a key feature of legal practice.

Before the Work2025 Conference, I will expand the initial dataset to include the remaining interviews, developing the preliminary findings further through iterative analysis. Moreover, the analysis of remote work will expand to consider its implications with household work-care arrangements. This study will also include an analysis of AI and how attorneys are preparing for the impact of "unruly AI" on their practice.

9.03

ARE DIGITAL WORK ENVIRONMENTS ALL BAD? ONLINE TEACHING, SELF-REGULATION AND WORK-LIFE CONFLICT

Reetta Oksa, Mia Laine, Jussi Okkonen

Tampere University, Tampere, Finland

Abstract

The contemporary working life is increasingly technology-mediated remote work and online teaching has correspondingly established its strong presence in higher education (Hofer et al., 2021; Naylor & Nyanjom, 2020). However, teaching infrastructure, technologies such as mobile phones used for teaching as well as premises are not always supporting the best possible teaching experience nor well-being for the academics especially in more developing countries (Naqshbandi et al., 2024; Okkonen, Oksa et al., 2024). The emerging technologies are developing fast and require constant professional development from the academics to master them appropriately (Gomez et al., 2022; Mosleh et al., 2022). This is typically manifested through their digital literacy, which encompasses their ability to effectively understand and utilize various digital tools, services, and environments in their professional roles (Mannila et al., 2018). Moreover, one of the key aspects of working in technology-induced learning and teaching environments is employees' ability to regulate their presence by various conventions and norms (Okkonen, Laine et al., 2024; Sharma et al., 2024). Self-regulation can be influenced by various technological self-interruptions and more external interruptions that can hamper concentration and fragment work (Okkonen, Laine et al., 2024). Moreover, as modern technologies are very omnipresent it might be challenging to draw the line between work and leisure time (Oksanen et al., 2021). Therefore, associations of online teaching technologies, self-regulation and work-life conflict are explored. The study draws from online survey collected from academics of two Ghanian universities during October 2023 to January 2024 with 201 full responses. The results of this study provide novel knowledge regarding online teaching technologies in relation to work-life conflict highlighting the need for academics to get support for teaching infrastructure and proper technologies. In addition, universities are encouraged to invest and enhance their academics' self-regulation skills to sustain their well-being and avoid work-life conflict. The results postulate worthwhile information for universities for their curriculum planning but also necessary information for the university management for decision making regarding overall teaching infrastructure, online teaching and well-being at work practices.

References

Gomez, F. C., Trespalacios, J., Hsu, Y. C., & Yang, D. (2022). Exploring teachers' technology integration self-efficacy through the 2017 ISTE Standards. TechTrends, 1-13. https://doi.org/10.1007/s11528-021-00639-z

Hofer, S. I., Nistor, N., & Scheibenzuber, C. (2021). Online teaching and learning in higher education: Lessons learned in crisis situations. Computers in Human Behavior, 121, 106789. https://doi.org/10.1016/j.chb.2021.106789

Mannila, L, Nordén, L., and Pears, A. (2018) Digital Competence, Teacher Self-Efficacy and Training Needs. In Proceedings of the 2018 ACM Conference on International Computing Education Research (ICER '18). Association for Computing Machinery, New York, NY, USA, 78–85. https://doi.org/10.1145/3230977.3230993

Mosleh, S. M., Kasasbeha, M. A., Aljawarneh, Y. M., Alrimawi, I., & Saifan, A. R. (2022). The impact of online teaching on stress and burnout of academics during the transition to remote teaching from home. BMC Medical Education, 22(1), 475. https://doi.org/10.1186/s12909-022-03496-3

Naqshbandi, M. M., Kabir, I., Ishak, N. A., & Islam, M. Z. (2024). The future of work: work engagement and job performance in the hybrid workplace. The Learning Organization, 31(1), 526. https://doi.org/10.1108/TLO-08-2022-0097

Naylor, D., & Nyanjom, J. (2021). Educators' emotions involved in the transition to online teaching in higher education. Higher Education Research & Development, 40(6), 1236-1250. https://doi.org/10.1080/07294360.2020.1811645

Okkonen, J., Oksa, R., White, E., Laine, M. (2024). Information ergonomics and factors related to sociotechnical environments of work among Ghanaian HE faculty members. In: Henrijs Kalkis and Zenija Roja (eds) Social and Occupational Ergonomics. AHFE (2024) International Conference. AHFE Open Access, vol 152. AHFE International, USA. http://doi.org/10.54941/ahfe1005316

Okkonen, J., Oksa, R., White, E., Laine, M. (2024). Information ergonomics and factors related to sociotechnical environments of work among Ghanaian HE faculty members. In: Henrijs Kalkis and Zenija Roja (eds) Social and Occupational Ergonomics. AHFE (2024) International Conference. AHFE Open Access, vol 152. AHFE International, USA. http://doi.org/10.54941/ahfe1005316

Oksanen, A., Oksa, R., Savela, N. Mantere, E., Savolainen, I. & Kaakinen, M. (2021). COVID-19 Crisis and Digital Stressors at Work: A Nationwide Longitudinal Study. Computers in Human Behavior, 106853. https://doi.org/10.1016/j.chb.2021.106853

Sharma, K., Nguyen, A., & Hong, Y. (2024). Self-regulation and shared regulation in collaborative learning in adaptive digital learning environments: A systematic review of empirical studies. British Journal of Educational Technology, 55(4), 1398–1436. https://doi.org/10.1111/bjet.13459

9.04

THE KALEIDOSCOPE MODEL OF LIFE: RETHINKING WORK, FAMILY, AND LIFE TO EXAMINE THEIR RECIPROCAL RELATIONSHIPS

Linda Magin[1], Ankit Agarwal[2], Peter Sandiford[2]

[1]University of Adelaide, Adelaide, Australia. [2]The University of Adelaide, Adelaide, Australia

Abstract

ABSTRACT - This paper rethinks the traditional division between work and life. It intends to broaden the understanding of the multifaceted nature of an individual's work and nonwork experiences and the key factors that shape life dynamics. Common work-life theories, such as work-life conflict, work-life balance, and work-life enrichment, are based on the assumption that work and life exist in two separate domains. This assumption fails to capture the gendered complexities of paid and unpaid work, caregiving responsibilities, and evolving work structures. Furthermore, it limits the development of creative approaches to corporate work-nonwork policies. Most current work-life literature focuses predominantly on work, particularly paid work, which has led to research deficiencies and gender inequities. There is a growing need to explore the synergies and connections between different aspects of life to move beyond the traditional work and family models and consider a broader range of modern life domains. This paper highlights the importance of considering paid and unpaid work within the work domain to understand the full scope of an individual's work responsibilities and to address key challenges related to equity, satisfaction, and sustainability in work-nonwork management. This paper argues that life encapsulates work, rather than existing as a separate domain. The proposed Kaleidoscope Model of life offers a holistic, dynamic, and intersectional framework for work-nonwork integration, incorporating work, family, community, and broader life domains to reflect the realities of caregiving, hybrid work, and the changing nature of work and family. This paper challenges dominant paradigms by calling for policy innovation that supports equitable workforce participation, sustainable well-being, and flexible work arrangements. It emphasises that broadening the conceptualisation of work-nonwork relationships is crucial in addressing gender inequalities, evolving employment trends, and shifting societal expectations.

Keywords: work-life; work-nonwork; life encapsulates work; wellbeing; gender

---

9.05

WHAT ABOUT THE FAMILIES? ARTICULATING AN EVIDENCE-BASED FRAMEWORK OF OCCUPATIONAL LIFESTYLE DIMENSIONS FOR FIRST RESPONDER & PUBLIC SAFETY FAMILIES

Heidi Cramm[1], Marilyn Cox1, Deborah Norris[2], Nathalie Reid[3], Linna Tam-Seto[4]

[1]Queen's University, Kingston, Canada. [2]Mount Saint Vincent University, Halifax, Canada. [3]University of Regina, Regina, Canada. [4]University of Toronto, Toronto, Canada

Abstract

First responder and public safety occupations, including fire, paramedic, police, border services, coast guard, and corrections, carry substantial demands that ripple into family life, impacting the ways in which families can organize their time, roles, and connections to the broader community. These demands accentuate risk factors for diminishing family wellbeing and occupational participation, creating a distinct experience relative to the broader community that has been mostly invisible. In Canada and elsewhere, there has been a marked shift over the past five years prioritizing the creation of family-forward approaches within these sectors as the bidirectional relationship between operational readiness and family wellbeing become increasingly evident. Despite this shift in the field, the body of work on these families has been slow to emerge and siloed in focus. The focus has been on the person serving in these roles, with little attention to the experiences and needs to the families

themselves, from their perspective. Research historically has emerged primarily from the United States, focused on police families, and relied on data from the serving personnel about the impacts of the family on them and their ability to meet their occupational roles.

Objective. Family-forward policy and programming is best developed and implemented using the strongest level of evidence. We developed an evidence-based conceptual framework that articulates how first responder and public safety families are shaped by life 'on the job', summarizing lifestyle dimensions that capture this occupational community. Here, we operationalize 'lifestyle dimensions' as the contextual factors common, typical, and/or representative to these families.

Method. Within an interpretive/constructivist paradigm, the interdisciplinary research team engaged in a reflexive and iterative process of framework analysis to distil out occupational lifestyle dimensions shaping family life within first responder and public safety families, while remaining true to the complexity and variability inherent to the different occupational sectors and jurisdictions, career life course, and family life course. Given the parallels between first responder and public safety families and military families (e.g., potential exposure to trauma, potential for harm, unpredictable hours, etc.), we looked to the more mature scholarship exploring military families to anchor the inquiry. The team used an a priori contextual framework (i.e., mobility, separation, and risk) commonly used to characterize military family lifestyle dimensions as a starting position from which to build the conceptual framework for first responder and public safety family occupational lifestyle dimensions. Using framework analysis, we explored the findings and interpretations from three recent peer-reviewed systematic literature reviews and one narrative review, deriving new understandings and reconstructions through constant comparative analysis and reflexive discourse. Allowing from inductive and deductive exploration, framework analysis involves five key stages: familiarization, identifying the thematic framework, indexing, charting, and mapping.

Results. Public safety families accommodate the lifestyle dimensions of risk, identities, and logistics in ways that enable their public safety personnel to meet the demands of those professions. These dimensions are present in different combinations across the family and career life course, with overlapping and stacking effects. Logistics captures the structural elements like nonstandard work schedules that introduce tensions and work-family conflict into the family system and disrupt family routines and schedules. Risks include the hazards inherent to these jobs, both physical and psychoemotional, that can be amplified by organizational requirements like staff shortages and shift overruns. Identities refers to the complicated social navigation of enacted identity relative to membership or association with an occupational group, creating opportunities for pride, belonging, and meaning and conversely vulnerability and negativity, depending on the particular sector.

Conclusion. By understanding the unique and dynamic lifestyle dimensions that shape this occupational community, service providers such as occupational therapists can better provide culturally sensitive and holistic care. Community development approaches are indicated to raise awareness, build connection, and create capacity. This novel evidence-based conceptual framework has catalyzed research within the community, enabling cross-sector collaboration and partnership for collective impact.

Reference

Cramm, H., Cox, M., Norris, D., Reid, N., Tam-Seto, L., Dekel, R., ... & Mahar, A. (2024). Lifestyle dimensions of public safety personnel families: There's no life like it. Journal of Occupational Rehabilitation, 1-10.

9.06

INTERSECTIONAL DYNAMICS OF WORK-FAMILY BACKLASH: CENTERING DIVERSITY IN GHANAIAN CHILDFREE EMPLOYEES' RECIPROCAL WORK-FAMILY NEGOTIATIONS

Kwaku Abrefa Busia

Lingnan University, Hong Kong, Hong Kong. University of Pretoria, Pretoria, South Africa

Abstract

Childfree employees constitute a significant yet understudied demographic in organizational ecosystems, facing unique challenges at the intersection of systemic biases and intersecting social identities. This study re-examines work-family backlash through an intersectional lens, revealing how Ghanaian childfree workers navigate reciprocal tensions between organizational

policies, socio-cultural norms, and multidimensional identity markers including gender, age, marital status, and educational attainment. Drawing on organizational justice theory and work-family backlash frameworks, our analysis of 21 interviews with employees in public and private organisations uncovers three critical dynamics.

First, this study reveals that parental privilege in human resource (HR) policies amplifies intersectional inequities, disproportionately burdening unmarried women and early-career professionals without children. For example, some younger childfree employees indicated instances where they were advised by their supervisors to consider stepping down from competing for promotions with older parent employees on grounds that they had more time on their side for future vacant opportunities, which consequently hindered their long-term career progression. Second, cultural expectations of familial obligation collide with workplace demands, creating compounded pressures for educated single women and late-career male employees resisting traditional parenting roles. Third, we found that organisational policies interacted with and sometimes adapted to the broader socio-cultural norms to project a parental bias and moral load that often compelled childfree employees to acquiesce to policies that negatively affected their work-family balance.

The study identifies a hierarchy of workplace accommodation where married mothers, for instance, receive maximum schedule flexibility while unmarried childfree women face intensified surveillance of their non-work hours. The parental privilege implicit in these organisational settings facilitates compulsory overtime for childfree workers, which sidelines and disrupts familial care patterns for those supporting aging parents and other extended family members in their households. By centering the compound marginalization of childfree employees through an intersectional lens, this study reorients organizational justice debates toward inclusive equity models that account for the Global South's diverse work-family ecosystems. Again, this investigation contributes to the nascent literature on work-family backlash, particularly in African contexts given the dominance of the Global North as a site of research enquiry. Lastly, the research provides critical theoretical insights and sheds light on childfree workers' lived experiences and concerns related to reconciling their work and family life.

9.07

ADAPTATION OR CONTINUATION? REFUGEE WOMEN'S LABOR MARKET PARTICIPATION AND WORKING HOURS BEFORE AND AFTER MIGRATION

Maye Ehab[1,2], Katja Möhring[2]

[1]Institure for Employment Research, Nuremberg, Germany. [2]University of Bamberg, Bamberg, Germany

Abstract

Recent research on female refugee's labour market participation focuses on the impact of care burdens, discrimination, e.g. due to wearing hijab, and gender role attitudes and norms (Ortlieb et al., 2024; van der Zwan & van Tubergen, 2024). While previous studies usually include economic activity in the country of origin as a control factor, it is merely attached more importance. We take a closer look on how refugee women's labour market activity, working hours, and occupational characteristics prior to migrating and after migrating are related, thereby coming closer to answer the question of why refugee women work or do not work in their host country. When analyzing employment status, previous research normally takes into account the educational status obtained in the country of origin rather than the broader employment trajectories.

Refugee women face what the literature describes as a triple disadvantage (Liebig & Tronstad, 2018). These disadvantages come from the fact of their intersecting identities of being women, migrants and forced migrants (Kosyakova & Kogan, 2022). Refugee women travel more often with their families and are responsible for the majority of the care work for their families (Gundacker et al., 2024; Ehab et al., 2024), making it harder to be in paid work and are more likely to have lower wages than men (Bakker et al., 2017; Kosyakova et al., 2023). Furthermore, the lower employment rate of refugee women compared to men could be attributed to their human capital that requires significant post-migration investment in language skills and the recognition of certificates (Kosyakova et al., 2023; Kosyakova & Kogan, 2022).

The labor supply of migrants has been studied for different groups, namely permanent and temporary migrants, women who migrate from East to West Germany. Results showed larger labor supply (in terms of working hours) for male temporary migrants compared to male permanent migrants while insignificant effects are found for women (Kahanec & Shields, 2013). For migrant women from East to West Germany, the labor supply decreases in terms of working hours (Zaiceva, 2010). Those varying results sheds light on the importance of studying the labor supply of refugee women before and after migration.

We hypothesize that refugee women who were employed prior to migrating are more likely to be employed in Germany than refugee women who did not work prior to migrating (H1). For those with labour market participation prior to migrating, we assume that the higher the number of working hours prior to migrating, the higher will be the working hours in Germany (H2).

Previous research shows that refugee women have higher likelihood than natives and refugee men to be in precarious employment as fixed term contracts and low pay, however are less likely than refugee men to work in jobs for which they are overqualified (Ortlieb et al., 2024). Ortlieb et al. (2024) assume that this might be due to women giving a higher priority to finding a job that matches their qualification instead of just working in any job.

With respect to women's occupational status prior to migration, we assume a reverse-u-shaped relationship: refugee women who had a medium occupational status prior to migrating are more likely to be employed in Germany than refugee women with low or high occupational status prior to migrating (H3).

We use data from the IAB-BAMF-SOEP collected annually from 2016 to 2022 (Brücker et al., 2017). We restrict our sample to women above age 17 at their arrival to Germany and in the second step to those women who were economically active before migration to Germany.

The first dependent variable is labour market participation at the time-point of the interview. The second dependent variable is weekly working hours in three categories: zero or missing, more than 0 up to 39 hours is part-time work; and 40 and above hours is full-time work. Our main explanatory variables are women's labour market participation and working hours in their country of origin before migration. We include occupational status in three categories (helper, skilled worker and specialist/ expert) based on the German Classification of Occupations (KldB 2010). Traditional gender attitudes are coded as a dummy variable, taking the value 1 for traditional gender attitudes and zero otherwise. We include years since migrating to Germany and control for German language proficiency, health status, age, family constellation, and interview year. We will estimate two-part regression models for working time conditional on working status. The Figure shows preliminary descriptive results link the employment status in the country of origin to the status in Germany.

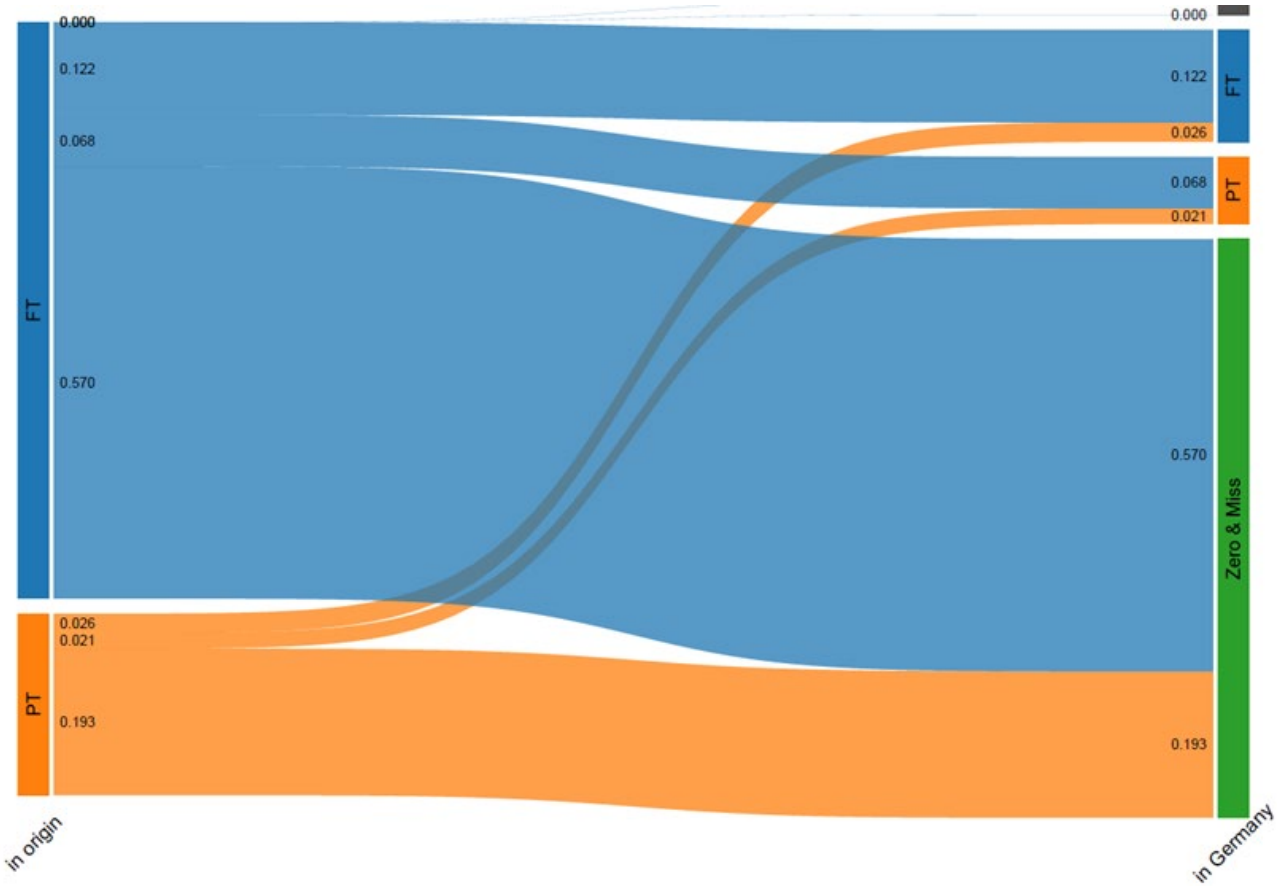

Figure 1: Changes in working hours of female refugees between origin country and Germany. Source: Own calculations based on data from the IAB-BAMF-SOEP refugee sample v39. Survey weights applied. Including only those who used to work in the origin country and gave a positive value for working hours.

9.08

WORK-LIFE BOUNDARY MANAGEMENT STYLES AND THEIR BACKGROUND CHARACTERISTICS

Mari Anttila

University of Turku, Turku, Finland

Abstract

Traditionally, the boundaries between work and other life domains have been divided in many ways. These boundaries can take, for example, spatial, temporal, emotional and cognitive forms (Rothbard & Ollier-Malaterre 2016). However, due to digitalization and the increase of flexible working, boundaries between work and other life domains have become increasingly blurred, which requires employees' active decision-making on how to manage these boundaries. This became even more evident during the COVID-19 pandemic when individuals were strongly encouraged to transition to remote working on a rapid schedule.

Previous studies have found that different ways of managing boundaries have different effects on work-related well-being. However, relatively little research has been conducted to examine how these boundary management styles differ according to their background characteristics. Understanding this is crucial so that it is possible to recognise which people are affected by different well-being effects and are possibly at a higher risk of negative work-related wellbeing.

Thus, this study first clusters employees with latent class analysis (LCA) in different boundary management styles based on different work-life boundary management aspects. Various sociodemographic and work-related factors were investigated to understand the antecedents of different boundary management styles. The study uses data from Round 10 (2021) of the Finnish European Social Survey (ESS) and Wave 3 (2022) of The CROss-National Online Survey 2 (CRONOS-2). LCA revealed four different work-life boundary management styles in which individuals differed based on socio-demographic and work-related factors. Individuals who belonged to these categories differed in particular by their age. This study also highlights that they differed not only in terms of remote working opportunities, but also in terms of how flexible they were expected to be when needed.

References

Rothbard, N. P., & Ollier-Malaterre, A. (2016). Boundary management. In T. D. Allen & L. T. Eby (Eds.), The Oxford handbook of work and family (pp. 109–122). Oxford University Press.

9.09

"PEOPLE WHO ARE MUCH BETTER AT MANAGING THEIR AFFAIRS": AUSTRALIAN MANAGERS' EXPERIENCES OF SUPERVISING FATHERS WHO WORK PART-TIME

Eric Mercier, Amanda Le Couteur, Paul Delfabbro

University of Adelaide, Adelaide, Australia

Abstract

The literature about engaged fatherhood and part-time work is expanding, but much of this work has focused almost exclusively on the experiences of the father or his partner. Much less is known about the experiences of managers who supervise part-time working fathers. To address this gap, the current study interviewed 15 Australian managers of fathers who worked part-time in order to care for their children. Two themes emerged from a Reflexive Thematic Analysis: (1) Challenges and opportunities for managers: employees were described as more productive/efficient/happier and contributed to a more talent-attractive workplace, while managers had to ensure good communication, planning ahead and respect employees' work-family boundaries; (2) Personality-driven leadership approaches: participants described themselves as empathetic, supportive,

preferring open/clear communication. The findings presented part-time working arrangements for fathers as beneficial for both supervisors and fathers. They also highlighted how managers' alignment to a transformational leadership style supported such arrangements. This study contributes to the literature about managers' experiences of supervising fathers working part-time and of flexible working practices more generally. The findings provide a basis for further studies to explore the experiences of other stakeholders associated with fathers who work part-time in order to understand contemporary working and parenting experiences.

10.01

FATHERS' GENDER-(A)TYPICAL WORK HISTORIES AND PATERNAL LEAVE UPTAKE

Irene Prix, Satu Helske

University of Turku, Turku, Finland

Abstract

Aim and theoretical background: Socialization approaches assume that young people's gender role attitudes are the key in explaining gendered field of study choices, either through the internalization of gendered self-concepts or social pressures to conform to gendered expectations in occupational interests and orientations (Chesters 2021). However, prior research as to whether and how young people's initial gendered educational and occupational specializations may vary over the life course is almost completely absent. Recent research has also shown that individuals' traditional views on family roles may combine with gender-egalitarian views on labour market participation (Grunow, Begall, and Buchler 2018). Furthermore, mid-life career changers may have entered gender-atypical work on more pragmatic terms than those who started their work life in gender-atypical occupations (Yavorsky and Dill 2020), which may also mean that their gender role attitudes do not necessarily differ from their peers doing gender-typed work.

Focusing on Finland, **our aim in this paper** is to examine the common assumption of gender-atypical work as reflecting a greater degree of gender-egalitarian behavior in other family domains, operationalized via father's uptake of extensive father-specific parental leave. Specifically, we compare men with different occupational histories and pathways into or out of female-dominated work, in order to examine to what extent a possible relationship between gender-atypical work and men's gender-egalitarian behavior may itself vary depending on the timing and duration of exposure to female-dominated work during the life course. Against this background, **our research questions (RQ)** ask:

1. How stable are men's occupational gender-types during the early and mid-career life course, and what are the most dominant patterns of gender-typed occupational mobility?
2. To what extent does first-time fathers' uptake of parental leave differ between female-typical versus other types of occupations?
3. In what way do the pathways into and out of female-dominated work matter for fathers' parental leave uptake: are there differences between "early persisters", "mid-life entrants", and "mid-life drop-outs"?

Data and methods: The point of departure for our analyses is Finnish population register data of men born in 1978-83 (N=188,267). We first chart the gender-typing of men's educational and occupational pathways between age 26 and 39, using sequence analysis methods. Next, we focus on those men in the cohort who had their first biological child during the years 2011-2017 (N=48,530). Relying again on sequence analyses methods, we compare patterns in the occupational and educational pathways among fathers (Helske, Helske, and Chihaya 2024) during the seven years preceding the child's birth and the subsequent three years. We model father's parental leave uptake using binary logit models, taking into account fathers' preceding gender-typed pathways and relevant other socioeconomic, occupational and family characteristics.

Expected findings: ***Men's gender-typed occupations over the life course:*** Evidence on the implications of occupational changes for gender-segregated work structures remains rare and largely restricted to short time windows (Torre 2018; Torre and Jacobs 2021) or to women in the US context (Pearlman 2019). Declines in traditional male-dominated (working class) trades may however increase pragmatic pull factors into female-typical jobs, despite their lower average pay levels.

Expectation 1: We expect more variation in occupational gender typing across the life course among men with vocational compared to higher education qualifications.

Expectation 2: Later entry into female-dominated occupations is expected to be more common among men with vocational rather than higher education qualifications.

Current gender-(a)typical work and father's parental leave uptake: Support for fathers' parental leave uptake may be higher for men in female- rather than male-dominated occupations, as employers may be more used to employees taking parental leave (Bygren and Duvander 2006; Närvi and Salmi 2019), with fewer structural reasons to discourage fathers from leave uptake.

Expectation 3a: First-time fathers working in female-dominated occupations are more likely to take up father-specific parental leave compared to their peers in male-dominated occupations.

However, men's minority status at work lead to microsegregation within occupations that benefits men in terms of access to authority positions and status at work (Williams 1992). These factors, in turn, may impede fathers' parental leave uptake also in female-dominated occupations.

Expectation 3b: No substantial differences exist between men's uptake of father-specific parental leave in female-dominated vs. other occupations.

Fathers' gender-(a)typical work histories and their parental leave uptake: If mid-life career changers may have entered gender-atypical work on fairly pragmatic terms (Yavorsky and Dill 2020), their gender role attitudes may not necessarily differ from their fathers doing gender-typed work. On the other hand, if entry into female-dominated indicates openness towards gender-egalitarian division of labour, such attitudes may persist also if men change onto more gender-normative tracks within the occupational structure.

Expectation 4: Men with differential pathways into (and out of) female-dominated work differ in their uptake of father's parental leave.

Expectation 5: Early entrants into female-dominated work are more likely to take up parental leave than mid-life career changers into female-dominated occupations.

10.02

CIRCUMSTANCES OF THE ORGANIZATION AND WORK THAT PROMOTE AND HINDER WORK/LIFE BALANCE AMONG WOMEN AND MEN WORKING WITHIN THE SWEDISH PUBLIC SECTOR.

Petra Lindfors

Stockholm University, Stockholm, Sweden

Abstract

With Sweden seeing increasing sick-leave figures due to mental disorders including exhaustion, particularly in the public sector and among women, the balancing of work and personal life spheres has received renewed attention. Yet, while employers can influence and manage organizational factors and the repercussions of these on the work environment with respect to factors promoting and hindering such a balance, possibilities to influence and manage the personal life spheres of employees are restricted. Still, with long-term sustainability being important for organizations, employers have an interest in employees maintaining long-term health. A key factor in this includes employee opportunities to balance work and personal life spheres over time. Thus, identifying work-related factors that promote and hinder such a balance is key. However, organizational resources for identifying such promoting and hindering factors are limited. This means that it is important to investigate possibilities to make use of existing data within organizations to identify such promoting and hindering factors, and particularly so in public sector organizations. This study focuses on a specific part of the public sector, namely regions. Regions are tasked with the responsibility to ascertain that its population has access to health care and public transport. Moreover, regions are involved in coordinating long-term development and in contributing to its cultural arena. While much research has targeted the health care sector and transport, including organizational and working conditions within these contexts, considerably less is known of the circumstances of the employees who are to enact the decisions of the governing bodies in a region.

These employees typically hold a degree from higher education, can be considered administrative staff doing various types of digitized office work, and are key actors in the long-term management and planning relating to the conditions of health care, public transport, development, and culture. Considering this, the present study aimed at investigating how organizational and individual circumstances at work were related to the promotion and hindering of work/life balance among employees in one of the bigger regions in Sweden.

Organizational data covering employee self-reports from the systematic monitoring of the workplace and work environment were retrieved for three consecutive years. This included reports from both women and men, including both managers and employees, totalling around 4300 individuals (year 1: 1413 employees including 811 women and 143 managers; year 2: 1576 employees including 911 women and 161 managers; year 3: 1348 employees including 736 women and 149 managers). Since the successful systematic monitoring of the circumstances at work require the collaboration between different organizational levels, completing the questionnaire is considered as a work task to be completed by all employees. This means that the vast majority responded. To maintain confidentiality, the content of this questionnaire and the results were processed by an external company specializing in these processes. The questionnaire, which was administered online during the same season each year, covered about 50 statements about the organizational and psychosocial circumstances at work. Ratings were made along an 8-point response format ranging from (1) Do not agree at all to (8) Fully agree. In addition to work/life balance, autonomy, demands, competence, and support at organizational and individual levels were analyzed here. Besides descriptive statistics and initial group comparisons checking differences between years, women and men, as well as managers and subordinates, separate hierarchical regressions were carried out for each year. First, gender and position were added to the model while organizational circumstances were included in a second step. The third and final step included adding individual working conditions.

Group comparisons showed no consistent variations between women and men. However, managers had poorer work/life balance than the others. Despite adding significantly to the model, organizational autonomy, demands, competence, and support had no significant associations to work/life balance. However, individual level autonomy, demands, competence, and support were associated with work/life balance. In particular, having reasonable demands and getting support when needed were identified as promoting factors associated with better work/life balance.

Overall, there were no consistent differences in any of the study variables between women and men. Managers seemed to have higher autonomy, demands, and competence than non-managers, although there were slight variations between different study years. Importantly, the findings show that both promoting and hindering factors characterizing the work of the individual employee add beyond that of comparable organizational level factors to work/life balance. Although organizational level factors can be considered important in shaping the work of the individual, the findings seem reasonable in considering that the promoting and hindering factors of the work tasks of an individual employee are most likely to influence possibilities to balance work and private life spheres.

10.03

‘I AM DIFFERENT’: A QUALITATIVE ANALYSIS OF PART-TIME WORKING FATHERS’ CONSTRUCTIONS OF THEIR EXPERIENCES

Eric Mercier, Amanda Le Couteur, Paul Delfabbro

University of Adelaide, Adelaide, Australia

Abstract

Although there has been an increasing interest in the notion of involved fatherhood, few studies have examined how fathers who work part-time and engage in child-rearing make sense of this experience. The present study explores how part-time working fathers positioned themselves in terms of their ‘at home’ and ‘at work’ identities. Thematic analysis was used to examine 30 interviewees’ accounts of their experiences. Three central themes were identified: (1) choosing to work part-time, (2) benefits of working part-time, and (3) contrasts with fathers as ‘breadwinners’. A common feature in all of these themes was interviewees’ flexible transition between traditional and non-traditional types of masculinity. The ways in which part-time working fathers positioned themselves as caring for children while maintaining attachment to more traditional types of masculinity are considered in terms of implications for theory and for fathers’ personal development. At a time where expectations of fathers engaged in child-rearing are increasing, the results of this study could

be drawn on in the area of personal development to support men in forming new strategies around fathering practices. https://doi.org/10.1080/13668803.2022.2045904

10.04

'IT REALLY FREED ME UP… TO WORK': AUSTRALIAN MOTHERS' EXPERIENCES OF LIVING WITH FATHERS WHO WORK PART-TIME

Eric Mercier, Amanda Le Couteur, Paul Delfabbro

University of Adelaide, Adelaide, Australia

Abstract

The literature about mothers and engaged fatherhood is expanding; however, current research focuses on breadwinner mothers living with stay-at-home fathers. Knowledge about the experiences of mothers who live with part-time working fathers is scarce. The current study focuses on Australian breadwinner mothers' experiences within such a family arrangement. Interviews with 15 mothers were analysed with Reflexive Thematic Analysis. Two themes emerged: (1) a recurrent contrast by mothers of their experiences at work and at home (the arrangement was described as contributing to their career, but as disrupting traditional mothering) and (2) a repeated comparison by mothers between themselves and their partners in relation to work and parenting (career was suggested as more important for participants, and fathers were suggested as being better suited for child-rearing). Both themes commonly and positively presented the family arrangement as well balanced. In their talk, participants balanced the family arrangement's flaws with its benefits. Furthermore, participants' positioning suggested an identification to an in-group which aligned to traditional motherhood while deviating from traditional feminine norms. As societal norms shift towards greater gender equality, this study helps increase awareness of the variety of contemporary mothering practices, by reporting experiences of mothers who adopt non-traditional mothering practices.

https://doi.org/10.1080/13668803.2024.2412697

10.05

STRESSORS EXPERIENCED BY NON-BINARY PEOPLE IN AN ORGANIZATIONAL SETTING – A ZMET APPROACH

Kevin Henry

Reykjavík University, Reykjavík, Iceland

Abstract

This research identifies the main stressors of non-binary people in an organizational setting using the ZMET – method of in-depth interviews. Research was conducted in Iceland, a country listed among the top countries for gender equality.

The main questions this paper will answer are: Which unique stressors are non-binary people facing in their daily organizational life? Which organizational measures help increase inclusion of non-binary people?

Research on non-binary people is often conducted from a top-level human resources department perspective and commonly includes binary transgender people. This research focuses on the individual stressors of non-binary people and how they can be eased through organizational measures.

Based on the gender minority stress model, the ZMET – method (Zaltman Metaphor Elicitation Technique) was used, during which in-depth interviews were held with individuals, utilizing pictures they chose as a metaphorical starting point to discuss their main thoughts and feelings on being non-binary in an organizational setting. This method helps keep the data collection process relatively unbiased, through only asking probing questions during the interview.

This research has identified three main categories of stressors non-binary people face in an organizational setting: Internal Stressors, Interpersonal Stressors and Structural Stressors.

Internal stressors refer to personal stressors. These are mostly caused by interpersonal stressors and structural stressors, which are stressors built into the organizational policy or facilities.

There are many stressors for non-binary people in organizations and that even in countries that pride themselves on being progressive and having a high-level of gender equality, there is still much to be done for non-binary inclusion.

The results show, organizations that strive to improve inclusion of all genders should pay attention to how their structures are built, how their training is conducted and how their policies affect people of various genders.

10.06

GENDER CONVERGENCE IN EU-27 MEMBER STATES: YOUNG PEOPLE NOT IN EMPLOYMENT, EDUCATION, OR TRAINING

Guillermo Orfao[1], Chiara Mussida[2], Maurizio Baussola[2], Miguel Ángel Malo[3]

[1]Pompeu Fabra University, Barcelona, Spain. [2]Catholic University of Sacred Heart, Piacenza, Italy. [3]University of Salamanca, Salamanca, Spain

Abstract

The objective of this study is to analyse the convergence of gender disparities among young people Not in Employment, Education, or Training (NEET) across all EU-27 countries from 2004 to 2022. The NEET rate has become increasingly important and widely studied across Europe since it is considered a better indicator of young people's risk of social and labour exclusion and the 'youth left behind' phenomenon than the unemployment rate. This concept summarizes well the vulnerability of a portion of the population and provides insights into the sustainability of an economy's growth pattern. European Union institutions widely acknowledge the risks associated with this condition for youth. An explicit aim of the Reinforced Youth Guarantee policy is to reduce the proportion of NEETs, particularly after the effects of the COVID-19 pandemic in terms of increased youth unemployment and inactivity. One of the most important characteristics of the NEET phenomenon is the gender gap, since being a woman adds to the risk of becoming NEET primarily due to family and care responsibilities, and especially from a long-term perspective.

There is reasonable agreement in the literature on the fact that NEET status arises not only from individual factors but from a complex interplay with other economic, institutional, and structural ones, such as the educational system and school-to-work transition. There is consistent evidence of the asymmetric rise of the aggregate NEET rates during the Great Recession across European countries and more recently in the course of the COVID-19 pandemic. Nevertheless, the evidence on the convergence of NEET rates is scarce and very novel, and in Europe has focused on regions. In particular, the one linked to gender convergence is non-existent except for one descriptive analysis carried out for 4 European countries (Greece, Italy, Portugal and Spain). This research contributes to the study of the gender convergence in the NEET rates among young NEET through a comparative analysis of EU-27 member states. A further contribution involves the study of how certain economic, institutional and structural factors that differ across European countries (e.g., expenditure in active labour market policies, unemployment, social exclusion and family benefits, and the youth employment and early leavers from education rates) condition the gender convergence.

The database used for the analysis of gender convergence in the NEET rates across all EU-27 member states is the European Union Labour Force Survey (EU-LFS) provided by Eurostat for the period 2004-2022. This database is the source for a large uniform and harmonised sample of young NEETs aged 15-29 for all European countries. Additionally, it enables to decompose the NEET population into active and inactive individuals (depending on their active search for employment). Complementarily, other Eurostat databases have been used to collect information on several country-level variables. This paper applies beta, sigma, and delta convergence methodology for gender disparities, but also for men, women and the overall NEET population separately. Likewise, conditional beta-convergence has been estimated to control by the possible effect of the country-level

variables on gender convergence. To complement this method, we have estimated a two-step generalised method of moments (GMM) model by controlling for the country, time and unobserved effects.

Our findings show an improvement/decline in the EU average NEET rate gender gap, whereas disparities have diminished faster in those countries with greater gaps (both absolute and conditional upward β-convergence), while there is no evidence of dispersion/variance reduction (σ-convergence). We observe a catch-up process in terms of the gender gap towards a benchmark of very low differences within European countries (delta-convergence). Furthermore, the results reveal that convergence is primarily driven by improvements in women's labour market and education outcomes in most countries, alongside a slight deterioration in men's conditions in some of them.

The analysis of various economic, labour market, and institutional factors reveals their uneven influence on NEET rate convergence by gender. On the one hand, a greater gender gap in the early leavers from education rate (higher values for women) harms gender convergence in the NEET rates. On the other hand, while the youth employment rates positively affect the convergence of men's NEET rates, the expenditure on Active Labour Market Policies does so on women's. Notably, these effects do not manifest in the short run (policies require time to have an effect). This aligns with previous evidence on the role played by education, the school-to-work transition and labour market reintegration. Nevertheless, this research shows that men's and women's NEET status could be tackled with different policies.

In conclusion, the need for targeted, context-specific policies is clear, and addressing the NEET issue requires both centralized and localized actions. The importance of institutional quality, targeted policies, and cultural shifts in reducing NEET rates and achieving convergence becomes even more relevant. Integrating this framework into the EU-wide policy frameworks remains pivotal.

11.01

LOCAL LABOUR MARKET QUICK SCANS FOR INCLUSIVE WORKFORCE STRATEGIES AT SMES IN TIMES OF DIGITALISATION

Ezra Dessers[1], Tim Goesaert[1], Thomas Bogaerts[1], Karen Huysmans[1], Michiel Bal1, Geert Van Hootegem[2]

[1]HIVA - KU Leuven, Leuven, Belgium. [2]CeSO - KU Leuven, Leuven, Belgium

Abstract

Labour markets in Europe are undergoing profound transformations, with shrinking workforces and rapid digitalisation. The Belgian province of Limburg exemplifies these challenges, with workforce shortages worsened by skill mismatches, early school dropouts, and structural inequalities. Open vacancies more than doubled from 2020 to 2022, averaging 10,200 per month since. AI and digitalisation further intensify gaps between labour supply and demand. Data from the SME labour market barometer show that three-quarters of Limburg's SMEs are concerned about filling vacancies. The ratio of unemployed job seekers per vacancy declined from 6.3 in 2020 to 2 in 2025, underscoring the urgency of the situation. Prolonged job vacancies hinder SME growth and competitiveness, demanding innovative workforce strategies. Due to labour market shortages, it is crucial to consider all available talent. Companies are challenged to develop more inclusive workforce strategies, yet many SMEs struggle with this. The difficulty lies in integrating a diverse range of employees into the labour market in ways that align with business needs and local labour supply. An inclusive workforce strategy should actively leverage diversity, structuring work design and HR policies around employees' competencies and preferences. Inclusion encompasses all employees rather than specific groups, addressing diversity broadly.

Achieving this requires a detailed understanding of local labour markets, including available talent and sector-specific employment demands. Labour market consists of local sub-markets, each requiring different workforce strategies for inclusion based on their specific characteristics. Without systematic, data-driven assessment, SMEs face obstacles in adopting effective inclusion strategies. However, SMEs often lack the resources to map the labour market and develop an aligned strategy on their own. This study explores how a deeper understanding of the local labour market can support SMEs in developing inclusive workforce strategies in the digital age. The goal is to develop and validate a methodology that enables SMEs to assess regional labour market conditions through quick scans and translate insights into targeted workforce strategies that can benefit SMEs operating in similar contexts. The study aims to provide SMEs with practical tools for effectively implementing inclusive employment policies.

The methodology consists of two components: developing quick scans and translating their findings into workforce strategies. The first phase involves data analysis and stakeholder engagement to create quick scans capturing key labour market dynamics. Focus groups with labour market experts refine the selection of priority regions and sectors. For this study, three municipalities—Lommel, Genk, and Sint-Truiden—and their commuting areas have been delineated. These quick scans will provide SMEs in these municipalities with structured insights into the local labour force, workforce challenges, and emerging trends.

In the second phase, quick scan insights are translated into actionable results. A structured inventory categorises challenges and intervention opportunities, guiding SMEs in identifying workforce solutions aligned with their needs. Various intervention levels and types are considered: Is retention a challenge? Is recruitment difficult? Are fewer skilled workers entering the labour market, necessitating greater training efforts? Are there mainly older job seekers available? Is there a need for more polyvalence among employees? Is job crafting required? Are there personnel shortages for specific tasks? The study also examines broader labour organisation impacts: What happens to teams and jobs when individual functions are adjusted? How can tasks be distributed at a group level based on competencies, authorisations, and preferences? Can interventions fostering an innovative work organisation create more space for an inclusive HR policy? Data will be synthesised into a framework helping businesses design inclusive recruitment and retention strategies, improve skills-matching initiatives, and foster workplace diversity. Insights will be supported through workplace innovation-based analysis, enabling SMEs to restructure employment strategies to maximise inclusivity while addressing real labour market conditions.

Expected outcomes include a validated quick scan methodology providing SMEs with data-driven guidance for inclusive workforce planning. The research will yield practical guidelines for translating labour market insights into effective recruitment and retention policies. The study aims to enhance SMEs' understanding of structured labour market analysis in fostering inclusive employment, offering a scalable framework adaptable to different regional and industry-specific challenges.

The quick scan methodology is part of the Business First by People First (BFPF) project. Following development and validation, the next phase will focus on training professionals in its use. A train-the-trainer programme will equip eight professionals from partner organisations to interpret quick scan findings and apply them in SME settings. These professionals will support SMEs in implementing a "people first" approach through pilot testing in eight businesses. The implementation phase will validate the methodology's practicality and effectiveness in real employment settings. Feedback from the pilot phase will refine the methodology for broader adoption.

The presentation will highlight how quick scan insights are translated into practical, actionable strategies for SMEs.

11.02

SOCIAL NEGOTIATIONS DURING ABRUPT STRUCTURAL CHANGES

Sarah Tornberg, Pasi Nevalainen, Nathan Lillie

University of Jyväskylä, Jyväskylä, Finland

Abstract

While structural change in the economy is often seen as positive—bringing increased efficiency and, more recently, green transitions—it also presents challenges, particularly in workforce adaptation, often resulting in devastation to local communities dependent on a certain kind of economic activity. Green technology, AI, robotics and other technological innovations promise to accelerate these changes to working life. It is therefore important to study how these transitions have been negotiated by social actors, such as employers and unions, to understand what kinds of conditions, processes and policies, result in successful or unsuccessful transitions, and why.

Deindustrialization, the significant decline of industrial activity in a region, is often marked by factory closures and a shift from manufacturing to services. At the regional level, these transitions can trigger a cycle of economic decline and cause social and regional inequalities. We examine the politics and negotiations around sudden factory closures in Finland with the focus on cases where the closures have caused shocks on the local social and economic level. We compared the politics, policies, and negotiations around the closures to highlight the methods used to cushion the shocks and examine the long-term outcomes, which can also have valuable information when anticipating possible structural changes in the future. The emergence and development of Finnish abrupt structural change operating model is evaluated by examining cases from Kouvola, Joensuu and Salo. In each case, large numbers of workers were laid off suddenly, increasing local unemployment rates, resulting in long term structural unemployment and socio-economic problems. This creates hardship for the regions' economic structures. Severance

social plans and policy measures were developed to cushion the impacts, and our study compares the process behind these, and the relationship of this process to the effectiveness of the measures (in socio-economic terms).

A specific operating model was developed by the Ministry of Economic Affairs and Employment, which focuses on finding work for the unemployed, attracting new investments to the region and financially supporting the affected area to mitigate these negative consequences. Our case studies show that earlier mass layoffs have affected male-dominated industries and mostly older, low-educated workforce. Younger employees and those willing to train or study found new employment quicker than those who were closer to retirement age and unwilling to move elsewhere for new employment or education. Regional preparedness for mass layoffs has streamlined bringing unemployment services to the laid off workers, creating work groups to organize educational and information services, and to develop businesses and attract new investments. Cooperation of local actors (such as employment services and educational institutions) is essential when navigating through an abrupt structural change. Stable economic situation is considered a mitigating factor, while economic recession makes the transitions difficult.

Comparing both successful cases and ones where implementing the operating model has failed will give some insight when preparing for possible abrupt structural changes in the future. For example, one-dimensional production structure makes an area vulnerable to abrupt structural change, but in the contemporary job market, the changes and innovations are happening fast, while deindustrialization has transformed many jobs into service and knowledge work, away from the factories. Thus, mass layoffs in some professions might not affect a certain region or have a massive repercussion on its economic structure, but it can still have a negative impact nationwide.

Different bargaining processes are central to the outcome of local structural changes. The Ministry of Economic Affairs and Employment distributes financial aid and provides assistance to the local actors. Employee representatives negotiate with the company representatives about severance packages. Local actors distribute the monetary aid and negotiate with the company representatives as to how much they are willing to assist their former employees and the local businesses to compensate for the lost jobs. These themes coincide with corporate social responsibility and bargaining theories, but in practice, legislation guides the negotiations and obligates the negotiating parties. We compare the bargaining processes of the three case studies and review which factors influenced their outcomes.

This paper examines and compares abrupt structural change cases in Finland and the abrupt structural change operating model. It is based on preliminary research conducted within the EGRUiEN project's history work package (https://www.jyu.fi/en/projects/egruien).

11.03

INNOVATION AND REALLOCATION IN AN OPEN ECONOMY

Tero Kuusi[1,2], Elias Einiö[3], Willia Kerr[4], Heli Koski[5], Tuomas Takalo[6], Markku Lehmus[6]

[1]Etla Economic Research, Helsinki, Finland. [2]. [3]VATT. [4]Harvard University and NBER. [5]Etla Economic Research. [6]BoF

Abstract

We construct and estimate an open economy version of an endogenous growth model. Our model builds on and extends the framework by Acemoglu et al. (2018) by incorporating key features of a small open economy. Using detailed, high-quality register data for Finland, we estimate the model and assess the effects of innovation subsidies and taxes on economic growth, reallocation, and welfare. Additionally, we explore several alternative policies, examine the role of immigration, and estimate optimal domestic policy responses to changes in foreign industrial policies.

12.01

TESTING THEIR WINGS? GIG WORK AS A STEP TOWARDS ENTREPRENEURSHIP IN FINLAND

Aart-Jan Riekhoff, Susanna Sten-Gahmberg

Finnish Centre for Pensions, Helsinki, Finland

Abstract

Gig work has become a widespread phenomenon in recent years, following a combination of technological advances, (labor) market deregulation, and people's changing preferences of how to work and consume. Advocates of gig work often see it as a potential "incubator of entrepreneurialism": by lowering transaction costs and removing barriers to entry, gig work allows aspiring entrepreneurs to test their wings. If they are successful and their businesses start to grow, gig workers could be taking a first step in contributing to innovation and employment creation. More critical studies have argued that, while especially many digital platforms offer gig workers a romanticized image of entrepreneurial freedom and flexibility, gig work often leaves little room for entrepreneurial initiative outside of what the algorithms, control mechanisms and performance ratings dictate. In other words, gig work may become a precarity trap with workers being too busy making a living through their gigs, rather than have time to actually start businesses of their own. As such, gig work can be considered a liminal space in the labor market.

This study aims at shedding light on the relation between becoming a gig worker and moving on to being an entrepreneur, by focusing on the role of defining starting positions and end points. First, people can become gig workers from different positions in the labor market. Some might be pulled in by the promise of making some extra money or by the possibility to monetize a hobby or craft they perform besides their regular job. Instead of having a full-time salaried position, some might be attracted by the flexibility to choose one's tasks, clients and working hours. Yet, others may be pushed into gig work by a lack of possibilities to find other work. One's starting position, for example from having a job or being unemployed, might therefore have an impact on the type and extent of gig work and the possibilities and incentives for gig work activities to develop into a lucrative and lasting business. Second, becoming an entrepreneur can mean different things and there are different degrees to being an entrepreneur. In a broad definition, one can be considered an entrepreneur if entrepreneurial activities are one's primary source of income, while official authorities might consider entrepreneurs as those who pays taxes and social security contributions accordingly. However, entrepreneurs who proceed to set up a profitable business that employs staff are much rarer than entrepreneurs under such broad understandings.

In this study, we explore these questions using a unique combination of full population register data from Finland. We identify gig workers through payments they received from invoicing service companies. These companies invoice clients on behalf of gig workers and pay the latter a salary while withholding a fee. The gig worker, also often called "light entrepreneur" in Finland, is thereby exempt from dealing with part of the paperwork that comes with self-employment, especially if gigs are infrequent and irregular and income from gig work remains relatively low. In our definition, gig work can comprise any type of temporary work as an independent contractor or freelancer. Hence, gig work is not restricted to work through digital platforms, although we know that, for example, many food deliverers who work for digital platforms also use invoicing service companies.

Using propensity score matching, we estimate the effects of starting as a gig worker on becoming an entrepreneur one to three years later. The matched control group consists of individuals who did not become gig workers but are otherwise similar in terms of a wide array of observable characteristics. We perform the analysis separately for persons who were employed, unemployed, in education, or outside the labor force prior to becoming a gig worker. We estimate the effects of becoming a gig worker on becoming an entrepreneur according to several definitions, ranging from broader understandings of entrepreneurship (e.g., paying VAT or contributing to pension insurance for entrepreneurs) to narrower operationalizations that indicate the development of an actual business (e.g., by employing staff or creating a limited liability company).

Preliminary results suggest that gig workers are more likely to become entrepreneurs than the matched control group. Transitions into entrepreneurship are especially more common among those who were previously unemployed or outside the labor force. However, gig workers establishing a business or generating employment opportunities for others remain relatively rare. The results of the study are an important contribution to debates on whether, how and for whom gig work allows exit from this liminal space. Moreover, better understanding of the transitions into gig work and from gig work to entrepreneurship could help in identifying possibilities for economic innovation and growth through business start-ups.

12.02

WHAT DO SOCIAL PARTNERS MEAN WHEN THEY TALK ABOUT THE LABOUR MARKET: THE 'SKILLED AND 'WORKING HANDS' AS SEPARATE MARKET AREAS

Markku Sippola

University of Helsinki, Helsinki, Finland

Abstract

Since the first industrial revolution, the labour market in its modern form has been in evolving. The labour market of Marx's time is not similar to today's labour market. In the beginning, the labour market encompassed labour force - 'working hands' - that entered into the labour process, and they were paid for their working hours and effort. Gradually, another type of market area has been emerging beside the 'working hands': a market for the skilled, who are paid for their talent and potential rather than labour force. This market for the skilled is growing larger, and it has different demand and supply dynamics than the labour force market. These two market areas also differ in basic characteristics of labour, means of reproduction, autonomy and grounds for overtime work. This paper looks into how the Confederation of Finnish Industries (EK) and Central Organisation of Finnish Trade Unions (SAK) approach to these market areas in their press releases. The press releases by SAK put more empasis on the labour force market, whereas EK's emphasis is almost solely on the market for the skilled. In the opinion of EK, talents need to be attracted to Finland, whereas SAK posits that (occupational) skills need to be developed by building provision systems and curriculum development (see also Allais 2012). Frontline work, such as care work, is situated in a liminal space between these two market areas, having features of both of these. The press releases are ambivalent towards frontline work, whether emphasis needs to be put on 'working hands' or skills.

12.03

SKILL SHORTAGES OR DEMAND FOR FLEXIBLE FOREIGN LABOR? THE LABOR MARKET TEST AS A REGULATORY TOOL FOR LABOR IMMIGRATION

Karhu Suvi

Tampere University, Tampere, Finland

Abstract

Migrant workers are more likely to end up in various liminal spaces of working life, and the work permit system partly sustains structures that create a workforce with limited labor market opportunities. The regulation of labor immigration is believed to restrict unnecessary demand for foreign labor and direct migrant workers to sectors experiencing shortages of skilled labor. On the other hand, some argue that regulating labor immigration is merely symbolic: in reality, highly educated and aging post-industrial societies are dependent on migrant workers, particularly for atypical employment relationships, and low-paid jobs that local workers are unwilling to take.

In this paper, I examine how the labor market test, a key element of the Finnish work permit system, has influenced labor immigration in Finland. Workers from outside the EU are granted a work permit for blue-collar jobs only if no local labor is available. The ELY Centers define a shortage list of sectors where labor market test is not required. Otherwise, the employer must advertise the job vacancy and provide authorities with a report on the recruitment outcome. In Finland, employers play a key role in the work permit process, and the labor market test is based on the employer's experience of difficulties in finding suitable workers. However, one may ask to what extent employers' experiences should influence decision-making if, according to statistics, local workforce is available for the sector. Not all jobs can be filled, even if there are unemployed job seekers in the sector. The perceptions of the causes of recruitment difficulties still depend on whether the issue is viewed from

the perspective of employers or employees. Employers generally benefit from an increase in labor supply. Additionally, newly arrived immigrants with a weak legal status may be seen as good workers with a strong work ethic, compared to local workers, who may be harder to motivate to work especially in low-wage jobs and atypical forms of employment.

The study relies on registry data on first work permit decisions made at TE Offices between 2019 and 2023 (n = 46 739). In the analysis, I apply descriptive statistical methods and logistic regression. Preliminary results indicate that labor market test was conducted in less than one-third of the decisions, as most sectors for which work permits are applied have been defined as labor shortage sectors by the ELY Centers. Work permit decisions are concentrated in few sectors, with the highest number of decisions made for cleaners, care assistants, welders, and workers in the construction and restaurant industries. Even when labor market test has been conducted, only a small part of the cases has resulted in a negative outcome, and most negative decisions have been based on factors other than labor market test. There has been significant variation in the proportion of negative decisions. While conducting labor market test increases the likelihood of a negative decision, the negativity of decisions is not correlated with the number of unemployed job seekers and open job positions in the occupational field.

Instead of being based on statistically verified labor shortages, decisions on work permits appear to be driven by case-by-case discretion. The labor market test has enabled the recruitment of migrant workers even in sectors where local labor should be available. This case-by-case approach reduces the transparency of the system and makes labor immigration regulations difficult to predict. As the population ages, ensuring labor availability is a key policy challenge. If the aim is to increase the use of foreign labor while maintaining labor market regulation, the impact of these regulations should be assessed critically.

12.04

IMAGINE BETTER: A PRACTICE THEORY APPROACH TO LIMINAL WORKSPACES

Hertta Vuorenmaa[1], Tuija Koivunen[2]

[1]Aalto University, Helsinki, Finland. [2]University of Eastern Finland, Joensuu, Finland

Abstract

In the evolving landscape of work and organizations, various liminal spaces are forming, shaped by part-time, fixed-term, gig, and freelance work. These spaces challenge existing labour market frameworks, often creating complexities for individuals balancing roles such as employee and entrepreneur or navigating education and employment. This paper employs a practice theory approach to examine the fluid nature of these liminal workspaces, moving beyond binary classifications such as "entrepreneur-employed" to better capture the realities of contemporary work arrangements.

A key challenge in these liminal workspaces is the lack of conceptual clarity and measurement frameworks that adequately reflect the nature of work. Traditional work metrics, particularly those related to employment status, productivity, and time allocation, fail to account for the fragmented and fluid work arrangements that characterize contemporary labour markets. This paper critiques conventional paradigms and introduces alternative analytical lenses grounded in practice theory to better understand how individuals navigate these in-between spaces.

The paper explores how technological advancements, policy shifts, and societal changes impact liminal workspaces, shaping workplace learning, labour participation, and the broader reconceptualization of work. It considers how organizations and policymakers can adapt to these changes, fostering more inclusive and sustainable work structures. By emphasizing the need for new theoretical models that align with the lived experiences of workers in liminal spaces, our paper contributes to advancing the discourse on Nordic working life and beyond.

The paper invites further exploration into the evolving boundaries of work, proposing a shift toward an ontological approach that centres on practice and adaptation. By imagining better theoretical frameworks for understanding work, we can develop more sustainable and equitable labour policies that support individuals in navigating these transitions effectively.

Keywords: Practice theory, Liminal workspaces, Work dynamics, Labor policy, Workplace learning, Employment transitions

---

14.01

WHAT DOES IT TAKE TO MAKE A WORKPLACE JUST AND GREEN? A SYSTEMIC HUMAN FACTORS APPROACH FOR REAL-WORLD CHANGE

Anna-Maria Teperi[1,2], Jari Lyytimäki[3], Andrew Thatcher[4], Tarja Heikkilä[1], Sara Malve-Ahlroth[1], Erkki Mervaala[3], Ilkka Ratinen[5]

[1]Finnish Institute of Occupational Health, Helsinki, Finland. [2]The Finnish Expert Panel for Sustainable Development, Helsinki, Finland. [3]Finnish Environment Institute, Helsinki, Finland. [4]University of the Witwatersrand, Johannesburg, South Africa. [5]University of Lapland, Rovaniemi, Finland

Abstract

Halting environmental degradation requires workplaces to undergo a profound shift towards ecologically sustainable work that challenges customary growth-oriented thinking and holds justice and the well-being of workers as a core value (UNEP, 2008; EC, 2021; EU-OSHA, 2023). Structures and practices of workplaces provide a critical link through which this transition could be achieved. However, there is a lack of clear and systemic definition and an easily applicable model to guide workplaces to become both just and green. In this presentation, we aim to define the key characteristics of a just green workplace by using human factors/ergonomics (HF/E) as the underlying theoretical approach (Thatcher et al., 2020; Dul et al., 2012). Humans are the core component across all system levels. Thus, we posit that the HF/E approach can serve as a fundamental building block for just green workplaces (JGW). HF/E has long and systematically developed thinking and actions to enhance a just and fair culture at work by focusing on organizational factors and social processes (Thatcher et al., 2020; Teperi et al., 2023). HF/E could help shift the focus of the currently prevailing technology-, administration- and (de)growth-oriented green transition towards one that is more human-centric, contextually aware, as well as competence- and developmentally oriented.

In this study, we apply a HF/E Tool (Teperi et al., 2023) to two case examples from different sectors to demonstrate the systemic, underlying factors of just green work at the individual, work, group, and organisational levels. Based on the findings, we present criteria and recommendations for a JGW and offer some reflections on the broader learning derived from the study. In addition, the value and development needs of the HF/E approach in fostering sustainability are discussed.

Based on the two cases of this study, we found that HF/E plays an essential role in addressing climate change implications by providing guidance on implementing authentic JGW initiatives. This presentation demonstrates the application of HF/E through the operationalisation of the HF Tool, which was instrumental in identifying the contributing factors of JGW actions, particularly emphasizing the significance of organisational factors, including management commitment and competence, in fostering collaborative, solution-based activities for JGW. Basic starting points include full compliance with existing legislative frameworks and transparent and honest internal and external communication. Furthermore, willingness to implement real changes is needed, even when there are short-term commercial interests, technological difficulties, requirements for learning and unlearning, time pressures, and other factors that may limit acceptance of transitions to greener work. The HF/E principles seems to offer user-friendly tools also for improving transparency and communication for JGW, as well as enhancing accountability through better monitoring and reporting systems. By making information about environmental practices clear and accessible, companies can accurately track, report and verify their environmental impact, thereby informing and educating both employees and customers and stakeholders in a trustworthy manner. Organisations are striving to achieve compatibility among multiple corporate responsibilities in their interactions with the environment and society. Merely reacting passively to external pressures does not integrate environmental and social responsibilities into the corporate governance process, thereby creating a risk of widening gap between aims and real actions. HF/E could support the realisation of genuine actions more proactively and in a systemic, solution-based manner, which has been previously found beneficial in safety research (Teperi et al., 2023)

The current period presents a critical juncture for action, with workplaces serving as focal points for implementing globally required actions. However, the systemic view of practical actions has often been weak or narrowly focused on isolated short-term actions, posing risks to the relevance and efficiency of necessary measures. While general level sustainability policies are important, the emphasis must be on enacting practical actions in workplaces.

References

Dul, J., Bruder, R., Buckle, P., Carayon, P., Falzon, P., ... & Van der Doelen, B. (2012). A strategy for human factors/ergonomics: developing the discipline and profession. Ergonomics, 55(4), 377-395. https://doi.org/10.1080/00140139.2012.661087

EC (2021). Industry 5.0 - Towards a sustainable, human-centric and resilient European industry https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/industry-50_en

EU OSHA (2023). Health and safety of workers in green jobs – OSHwiki. European Agency for Safety and Health at Work (europa.eu). https://oshwiki.osha.europa.eu/ en/themes/health-and-safety-workers-green-jobs

Teperi, A-M., Paajanen, T., Asikainen, I., & Lantto, E. (2023). From must to mindset: outcomes of human factor practices in aviation and railway companies. Safety Science, 158, 105968. https://psycnet.apa.org/record/2023-25302-001
Thatcher, A., Nayak, R., & Waterson, P. (2020). Human factors and ergonomics systems-based tools for understanding and addressing global problems of the twenty-first century. Ergonomics, 63(3), 367-387. https://www.tandfonline.com/doi/full/10.1080/00140139.2019.1646925#abstract
UNEP (2008). Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World, UNEP/ILO/IOE/ITUC, September 2008. Full report. International Labour Organization. https://sdgs.un.org/publications/green-jobs-towards-decent-work-sustainable-low-carbon-world-17491

14.02

THE ROLE OF VOCATIONAL EDUCATION AND TRAINING FOR CLIMATE CHANGE ADAPTATION

Friederike Rausch-Berhie

Federal Institute for Vocational Education and Training, Bonn, Germany

Abstract

The more noticeable climate change becomes, the more important it is to take measures to adapt to its inevitable consequences. Research indicates that the implementation of adaptation measures requires an increasing amount of skilled professional (Bernardt et al. 2024). Timely identification of these professionals is also essential in view of the prevailing shortage of skilled workers (Maier et al. 2022). Furthermore, relevant occupational competences needed for the implementation of climate adaptation measures need to be identified and integrated in training curricula. A lack of knowledge and skills in relevant sectors and their businesses could jeopardise the implementation of climate adaptation measures with small and medium-sized enterprises facing particular challenges.

But which sectors are particularly affected? Which specific professional competences do certain occupations need? How can the implementation of complex adaptation measures such as solar green roofs or water-sensitive urban development (sponge cities) successfully be realised? Which interdisciplinary collaborations are necessary and which additional competences do skilled workers need? This is what a joined project from UBA (Germanys Federal Environmental Agency) and BIBB (Germanys Federal Institute for Vocational Education and Training) on climate adaptation and VET (https://www.bibb.de/de/165177.php) was aiming to find out. The research results of this project are presented in this presentation.

In order to identify relevant sectors and occupations a model calculation based on the QuBe model (Zika et al. 2023; https://www.bibb.de/de/11727.php) was implemented. The determination of the assumptions about climate adaptation measures to be implemented in the climate adaptation scenario is based on the "climate impact and risk analysis for Germany" (Kahlenborn et al. 2021). For these relevant occupational groups, the labour market situation was examined. It became clear that the increasingly noticeable shortage of skilled workers will be further aggravated by the additional demand for skilled workers for the implementation of climate adaptation measures. Identifying future bottlenecks gives VET actors in politics and practice the opportunity to take countermeasures in time.

Through analysing the regulatory instruments, in particular the training regulations, of selected occupations, namely the training occupations of roofer and environmental engineer for water supply and environmental engineer for wastewater management, as well as conducting expert interviews it was examined, which vocational competences that are relevant for the implementation of climate adaptation measures are already taught in training (analysis of the current situation). The competence requirements are derived primarily from the climate adaptation measures in whose implementation the professionals of the respective occupations are involved. Subsequently, the further professional competences that are (or will be) needed in these occupations in order to better manage the tasks at hand for the societal transformation towards a climate-adapted society are presented (target analysis).

The results show that climate adaptation competences are already being taught in the selected occupations. However, both professional and personal competences can be identified for the occupations that should ideally be integrated into initial, further and continuing vocational education and training in the future. While the professional competences differ depending on the occupation, both differences and similarities were found regarding personal competences. In particular, this includes the realisation of complex adaptation measures, such as water-sensitive urban development, which requires interdisciplinary cooperation between various professions.

Finally, an overview will be given on starting points for integrating the identified competences and recommendations for action are formulated for the actors involved in Germany. Experiences from a follow-up project (in co-operation with the

German Central Association of the Roofing Trade) in which climate adaptation competencies are taught as part of a further training programme for teachers and trainers (training of trainers) in the roofing trade will be shared.

14.03

CLIMATE CHANGE AT WORK: LABOUR PROCESS TRANSFORMATION IN SWEDISH FORESTRY

Ella Petrini

School of Social Sciences, Södertörn University, Stockholm, Sweden

Abstract

A class perspective on environment- and climate issues is often reduced to transition on the labour market – primarily focusing on the phase-out of fossil fuels and the creation of "green jobs". Even in the research field environmental labour studies, there is a lack of studies concerning the impact of climate change on workplaces and the labour process itself. Rather, research tends to focus on labour market transition and trade union strategies. As a result, the conflicts and tensions that can arise at the workplace level due to both climate change and measures to reduce climate impact are made invisible (Schaupp, 2024).

This conference presentation introduces findings from an ongoing PhD-project, drawing on qualitative field study of forestry in Sweden. Forestry is a particularly relevant case, as the labour process involves direct interface with nature. It is a sector where the effects of a changing climate—such as unpredictable seasons and more variable weather - can be discerned earlier than further down the industrial chain. The data includes four focus groups and six life history interviews with machine operators and silviculture workers, alongside twelve semi-structured interviews with trade union representatives.

Forestry has always been sensitive to weather conditions, given that it involves outdoor work. Intense rains, deep snow, drought, and forest fires impact what work tasks can be carried out where and when. Both hot and cold temperatures can negatively affect the work environment. The labour process is always characterized by ecological indeterminacy. That is, that the transformation of nature into commodities meets faces unpredictable obstacles, that needs to be handled by capital to sustain profitability (Baglioni, 2023, Thompson & Smith, 2024) This is especially pertinent in nature resource industries, such as forestry. Climate change can increase this ecological indeterminacy in production through increased seasonal unpredictability and the frequency of extreme weather events, as well as set-off effects like slowed tree growth and insect infestation.

Informants speak of "unruly winters", wet autumns and dry summer days when the risk of ignition lingers. Milder winters with lack of or shorter periods of thaw makes the ground more sensitive to harms from the forest machines. Intensive rains cause water accumulation in both the soils and trees, making the effects of logging more uncertain and heightens the risk of ground damage. Drought and heatwaves lead to periods of fire risk, making daytime machine operation hazardous due to the potential for sparks caused by friction between the machine and the dry ground. Given such conditions, night shifts can be mandated given to avoid the fire risks.

The uneven and unpredictable weather thus creates obstacles for production. Some areas cannot be accessed and cannot be logged, cleared or planted as planned. This requires more flexible planning. Workers remark an unpredictable working situation where plans can be overthrown and changed with short notice, causing a more stressful working environment.

The results suggests that production disturbances caused by more ecological volatility, translates into employer demand for more flexible working hours. According to trade union representatives, there are indications that employers turn to precision staffing, scheduling the working hours according to the new "highs" and "lows" in labour demand that emerge, to keep up the production pace despite weather disruptions. For example, the period before the thawing constitutes a "high", when more labour force is needed and overtime is common, followed by a "low" during the thawing, when it is difficult to find areas to log without risk of damages, and the labour demand thus decreases. Trade union representatives predict that more variable shift work and greater seasonal variability could become the norm for machine operators.

Climate variability also affects where forestry operations can be carried out. What areas can be accesed when can vary, depending on ground and weather conditions, and a need for adaptability in planning emerges. In response, employers can use a spatial fix, increasing the mobility of production in the geographical space. This shift can result in increased travel times for workers and requires adaptations of daily routines.

This research contributes to the stream's theme through highlighting how the ecological uncertainty associated with climate change offsets transformations of the labour process, something that theoretical contributions from Baglioni (2022, 2023) have pointed to, but little empirical research has explored thus far. The results indicate that employers seek to increasing the temporal and spatial flexibility of labour in response. For workers, the strategies deployed to deal with these disruptions can contribute to a more uncertain working situation, when workplaces are relocated more often and with more variable working hours.

14.04

FOSTERING CLIMATE AGENCY IN MULTI-PROFESSIONAL WORK COMMUNITIES

Heli Clottes Heikkilä, Arja Ala-Laurinaho

Finnish Institute of Occupational Health, Helsinki, Finland

Abstract

The direct and indirect effects of climate change profoundly influence the everyday work environment. As research continuously enhances our understanding and generates new insights into climate change, work communities must be capable of learning and developing their practices. However, research on the role of work communities in devising solutions for climate change adaptation and mitigation has been limited, despite the crucial importance of employee participation in developing equitable and locally effective solutions. Moreover, there is a growing need for innovative solutions grounded in multidisciplinary expertise, which requires integrating the perspectives and skills of diverse professional groups.

We apply the term collective climate agency to refer to this kind of ability and means for collective, multiprofessional learning and development of activities. In our recent research, we explored the possibilities and tools for enhancing climate agency in workplaces. We examined the emergence of climate agency in a development process involving a school's multi-professional work community: professionals from areas of education, nutrition, and cleaning were brought together to ideate and implement new, climate friendly solutions.

The development process consisted of three workshops. We applied the theory and methodology of Cultural-historical activity theory (CHAT) and Developmental Work Research (DWR; Engeström, 2015), which provides a framework for collaborative learning and transformative agency through the implementation of developmental experiments. The framework emphasizes joint analysis of work using various analytical tools, examining work as an object-oriented, mediated, and historically developing systemic entity. The data comprises recorded and transcribed workshop discussions (3 workshops, 3 hours each), researcher's notes from interviews preceding the development process, and interviews conducted before the evaluation workshop, focusing on experiments and the fluency of development.

The development process and the path of two developmental experiments were described and analysed to answer the research question: how does the collective climate agency emerge in the development process in a multiprofessional work community. The analytical questions were as follows:

- What types of transformative agency appear in the data and how are these types divided according to the professional groups represented by the participants and the phases of the workshop process?
- How do the professionals induce their professional knowledge into the development process, especially to the developmental experiments?

We apply the framework of DWR and classification of transformative agency (e.g., Haapasaari, 2020; Heikkilä & Seppänen, 2014) in the analysis of the data.

The significance of the results for the development of climate agency will be discussed. The development process not only generated concrete solutions, but also highlighted the interfaces between professional groups and the challenges of changing practices. Evaluation of the experiments and the development process inspired participants to generate ideas for further actions, to involve a broader range of professionals and stakeholders, and to find ways to influence even on municipal decision-making.

Based on our results, we suggest that collective climate agency requires intentional actions to build relationships and cooperation, while integrating professional expertise into collaborative idea generation. As a practical result, we suggest adopting more agile and iterative development processes and tools in workplaces. These processes should be forward-looking, enriched with historical insights, and value the expertise of each professional group.

14.05

SUSTAINABILITY PICNIC: WORKPLACES AS DRIVERS OF SUSTAINABLE DEVELOPMENT

Kaisa Wallenius, Anna-Maria Teperi

Finnish Institute of Occupational Health, Helsinki, Finland

Abstract

In this presentation, we report key ideas and insights from the Sustainability Picnic Workshop Series (Aug 2024–May 2025) organized and funded by the Finnish Institute of Occupational Health.

In workplaces, decisions and choices are constantly made that impact the environment, people, and the economy. Therefore, workplaces play a crucial role in addressing sustainability challenges. Workplaces also serve as an important meso-level link between workers/individuals (micro-level) and society at large (macro-level) through their standard structures such as occupational safety and health (OSH) and human resources (HR) management.

Sustainability Picnic Workshops bring together work-life policymakers, experts, and researchers to build a shared understanding of the connections between working life and sustainable development. The workshops address ecological, social, and economic sustainability through selected work-life themes that are relevant across different sectors and are not directly dependent on the specific nature of the work or whether the organization is public or private. For example, questions related to digital transition, facility management, sustainable career paths, and employee sustainability agency are taken into discussion. How should ecological, social, and economic sustainability goals be taken into account in the digital transition of the workplace? How can the facility management of workplaces be used to support environmental, social, and economic sustainability goals? How can careers be managed and promoted in a socially sustainable way? What kind of organizational culture contributes to the ecological and social sustainability of the workplace?

This novel workshop series aims to create a relaxed, spontaneous, and non-hierarchical atmosphere for discussions and interaction, seeking a picnic-like feeling even when held indoors. Short video greetings introduce the workshop themes to participants beforehand, ensuring that the actual workshop time is dedicated to discussion rather than lengthy presentations. During the final picnic, lessons-learned and insights are gathered, and participants collectively consider next steps to take. By doing this, we make collaborative and participative development a tangible reality for sustainable transformation. In this process, diverse voices are heard, as no single aspect can solve the challenges alone. Instead, we need cross-disciplinary co-creation for joint solutions in complex, systemic, and dynamic phenomena.

While writing this abstract, some of the workshops have yet to be held, but already at this stage, some key highlights can be presented. The workshop participants have unanimously agreed that there is a great need to accelerate the sustainability transition, and this requires stronger involvement from working life. The sustainability transition cannot rest solely on the shoulders of citizens. It is recognized that in a growing number of organizations, there is a genuine desire and motivation to promote sustainable development. Workplaces have already undertaken many sustainability actions related to, for example, energy use, procurement, travel, and equality. However, the big picture and vision of sustainability work still need refinement and reinforcement. Working life also requires impact measures and concretization so that different actions can be prioritized, avoiding getting stuck or arguing over minor details.

In recent years, the EU has introduced a substantial amount of new regulations that guide companies' sustainability efforts and impose requirements on them, such as assessing and reporting ecological and social sustainability actions more transparently. This is, of course, a good thing, but there is a risk that increased reporting requirements are seen as an excessive resource drain, necessitating the use of external consulting, which may lead to sustainability efforts being perceived as separate from companies' core missions. Focusing on reporting can also lead to a 'report illusion,' where things appear favorable on paper, but the actual sustainability impacts are minimal.

In the workshop discussions, it has been emphasized that solving sustainability challenges requires a systemic perspective to address the interconnected challenges (e.g., climate change, biodiversity loss, well-being, transformation of working life) and their combined effects. To accelerate the sustainability transition, it is considered very important that sustainability efforts are integrated into the structure and all activities of organizations. Embedding change requires an understanding of the motivators, incentives, barriers, and obstacles that guide human behavior. Workplaces also need better tools and metrics to assess the impacts of different activities and planned changes, and to organize and illustrate multidimensional information. There is a particular need to develop metrics for ecological and social impacts, which would help to concretize and compare the effects

of different decision options. Sustainability efforts need to be inspiring and easy so that they become a natural part of everyday work and decision-making. We invite researchers and developers from various fields to actively take on this challenge.

The webpage of Sustainability Picnic Workshop Series is available at: https://www.ttl.fi/tutkimus/hankkeet/kestavyyspiknik-tyopaikat-kestavan-kehityksen-vauhdittajina

---

15.01

IS IT FINALLY WOMEN'S TURN TO LEAD? – THE MEANING OF DIVERSE LEADERSHIP ON THE EVE OF QUOTA LEGISLATION

Sonja Raunio

Aalto University School of Business, Espoo, Finland

Abstract

The history of paid work is strongly white male oriented. Even now, diversity in companies starts from the bottom. That is, usually the workers in the lowest paid positions are more diverse than at the top of the hierarchy. Across all industries there are more men than women in senior leadership positions (Global Gender Gap Report, 2023). According to the recent report by the Finnish Chamber of Commerce on women CEOs, only 10% of CEOs of listed companies are women (2024).

The 23rd of November 2022 the European Parliament and the Council of the European Union adopted a directive that "aims to achieve a more balanced representation of women and men among the directors of listed companies" (EU Directive 2022/2381). By the end of June 2026, there should be at least 40% women in leadership positions. However, listed companies operating in Finland still have a long way to go to reach the level required by the directive. Currently, there are four listed companies in Finland where the majority of the management team is women and five listed companies where the management team has an equal number of men and women. In approximately 28 percent of all listed companies the underrepresented gender makes up at least 40 percent of the management team. (Finnish Chamber of Commerce report, 2024.)

Gender quotas do not merely aim to address challenges related to inequality. They are also seen as a tool for reshaping power structures and dismantling systems that keep inequality in place (Kogut et al., 2013). However, the quotas are not enough to produce the anticipated ripple effect and dismantle discriminatory structures (Halrynjo et al., 2024). My doctoral research focuses on company structures that prevent or promote diversity in leadership, such as role allocations, hiring, promotion and compensation practices (Amis et al., 2020). I study the meanings company leaders give to diversity in leadership, what possibilities and motivations company leaders have to influence diversity among leaders and how internal and external structural factors affect the development of diversity in leadership. The national and EU level legislation, such as the EU directive 2022/2381 discussed above, are examples of external structures. Internal structures include, for example the DEI (diversity, equality and inclusion) program of the company in question.

I use feminist ethnography as methodology (Skeggs, 2001). Feminist ethnography focuses on understanding different power structures in human interaction and producing information in cooperation with the people participating in the research. The power lens is important when researching leadership and the power structures that influence the kind of leadership we value. At the same time, feminist ethnography provides a tool to produce knowledge together with the research participants and look for a joint understanding about the phenomena. For my doctoral research, I will produce observation and interview data in one listed company in Finland. Before the actual fieldwork begins, I will do background interviews with people who have a broad perspective on leadership diversity.

References

Amis, J., Mair, J. and Munir, K. (2020), The Organizational Reproduction of Inequality. ANNALS, 14, 195–230, https://doi.org/10.5465/annals.2017.0033

DIRECTIVE (EU) 2022/2381 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 November 2022 on improving the gender balance among directors of listed companies and related measures. Official Journal of the European Union. https://eur-lex.europa.eu/eli/dir/2022/2381/oj/eng 14.2.2025.

Finnish Chamber of Commerce report (Naiset pörssi- ja First North -yhtiöiden toimitusjohtajina ja johtoryhmissä. Keskuskauppakamari) 12/2024. https://kauppakamari.fi/wp-content/uploads/2024/12/Naisjohtajakatsaus_03-2024.pdf 14.2.2025.

The Global Gender Gap Report 2023. World Economic Forum. https://www3.weforum.org/docs/WEF_GGGR_2023.pdf 14.2.2025.

Halrynjo, S. and Teigen, M. (2024), Gender quotas for corporate boards: do they lead to more women in senior executive management?, Gender in Management, Vol. 39 No. 6, pp. 761-777. https://doi.org/10.1108/GM-03-2023-0096
Kogut, B., Colomer, J. and Belinky, M. (2014), Structural equality at the top of the corporation: Mandated quotas for women directors. Strat. Mgmt. J., 35: 891-902. https://doi.org/10.1002/smj.2123
SKEGGS, B. (2001), Feminist ethnography. In P. Atkinson, A. Coffey, S. Delamont, J. Lofland, L. Lofland (Eds.) Handbook of ethnography (pp. 426-442). SAGE Publications Ltd, https://doi.org/10.4135/9781848608337

15.02

THE HILL GETS STEEPER THE HIGHER YOU CLIMB: 3 PATHS OF WOMEN'S BOARD AMBITIONS

Rachael Pettigrew

Mount Royal University, Calgary, Canada

Abstract

The lack of intersectional gender representation on boards has been a persistent concern in Canada, and other countries. The requirement for boards to disclose their composition was introduced in 2014 (MacDougal et al., 2015), but the number of women and women from racialized or marginalized groups on boards has not increased as quickly as many had hoped. Representation at this level of organizational leadership is crucial, as is understanding the potential barriers women face in their paths to board work.

We know that diverse boards have better risk and performance (Rovers, 2013), monitoring and strategy involvement (Post & Bryon, 2015), and improve societal perceptions of the organizational value (Abdullah, Ismail, & Nachum, 2016). Despite claims to the contrary (Gabaldon, de Anca, Mateos de Cabo, & Gimeno, 2016), there is certainly no shortage of qualified women, yet the issue persists, especially for racialized and marginalized women (WXN Network, 2020). Compounding the issue, COVID-19 has set back some of the progress by negatively impacting women's employment, which may impact the available talent pool from which boards draw (Longpré-Verret & Richards, 2021). There is a common talent pipeline for board work. This pipeline often begins with participation on community or condo boards, progresses to small and then larger not-for-profit boards, which then opens opportunities to sit on boards in the for-profit sector, whether that be for private or public companies. DirectHer serves women along this pipeline. Of course, professional training, education, and experience play a role in board preparedness, and thus access to board opportunities. But the exposure to governance experience and responsibility offered through the above pathway also creates a natural pipeline that impacts access to opportunity. Additionally, vertical occupational segregation (Charles, 2003) is often visible in board work, with intersectional gender diversity more likely to be present on community or small not-for-profit boards and increasingly scarce as one moves up the board hierarchy (WXN Network, 2020). To better understand the talent pipeline and its potential blockages, this research project explored the current board experience, board aspirations, and perceived barriers (pipeline blockages) of women interested in board work.

In this presentation we will discuss the findings from research conducted in partnership with DirectHer Network. The data from a survey completed by 358 participants, followed by 4 focus groups of women and gender-diverse participants revealed distinct board pathways to board work for not-for-profit, government, and for-profit board work. The research highlights diverse viewpoints to capture the broad array of board experiences and illuminates the talent pipeline from the front end, where the board talent is grown and developed, rather than simply analyzing the output of that pipeline - the characteristics of the individuals currently sitting on corporate boards. Key pathway blockages included lack of sponsorship, networks, and access to opportunities. Recommendations for individuals and boards will be discussed. Finally, we share the experiences of women who got a seat at the table, but struggle to get their voices heard.

15.03

FROM LEADERSHIP TO EXIT: THE REASONS BEHIND FEMALE LEADER'S RESIGNATIONS IN HIGHER EDUCATION

Birgit Riegraf[1], **Julia Gruhlich**[2], **Lena Weber**[3]

[1]Paderborn University, Paderborn, Germany. [2]University of Göttingen, Göttingen, Germany. [3]GESIS Leibniz-Institut for Social Sciences, Cologne, Germany

Abstract

Top leadership positions in academia are inherently tied to power and are highly contested. Consequently, the (un)equal distribution of such positions between women and men serves as a crucial indicator of gender equality. Despite significant progress, barriers to accessing power persist for women, as competence and professionalism continue to be closely associated with masculinity. While many women successfully overcome these obstacles and ascend to leadership positions – supported in part by gender equality policies – this advancement does not come without challenges. The interplay between the masculine connotation of power and institutional gender equality efforts creates new arenas of negotiation for power and gender relations.

Statistical evidence suggests that female rectors and presidents tend to have shorter tenures than their male counterparts and frequently leave their positions for different reasons (Dehdarian, Hüther & Kirchner, 2024). These dynamics are particularly evident in the German higher education system, where considerable investments in gender equality have led to slow but measurable increases in the number of female leaders and managers (Riegraf et al., 2010; Riegraf & Weber, 2017; Gruhlich & Riegraf, 2020). However, these developments are accompanied by a growing number of resignations and non-reappointments of female leaders, often amid fierce public criticism of their leadership styles, allegations of professional misconduct, or even personal hostility (e.g., Riegraf, 2024; Egner & Uhlenwinkel, 2021). While the barriers to career advancement for women in academia have been well documented, little research has explored the mechanisms leading to their resignations or forced exits from leadership roles.

This paper builds on and critically reinterprets the concept of the 'revolving door' (e.g., Jacobs, 1989; Acker, 2014; Malin & Wise, 2018; Baron, 2024), originally introduced in the 1980s when women in top management were rare. We argue that this concept remains highly relevant but requires adaptation to contemporary societal and organizational conditions in academia. Specifically, we propose four key assumptions:

1. Universities have increasingly embraced gender equality measures, improving women's access to leadership positions. However, this may also lead to intensified forms of 'mobilizing masculinities' (van den Brink & Benschop, 2014) and powerful mechanisms of exclusion or devaluation of femininity.

2. Leadership positions in higher education have become more contested, particularly as universities compete for academic excellence and rely on leadership figures as institutional figureheads.

3. The growing visibility of university leaders in public discourse, particularly in media coverage, amplifies scrutiny, creating a climate where female leaders are disproportionately subject to allegations of professional or ethical misconduct.

4. The concept of the 'revolving door' needs to be conceptualized intersectionally, as not only women but also marginalized scholars – such as Black academics and researchers advocating for diversity, equity, and inclusion – are frequently targeted and systematically accused of unprofessionalism and academic misconduct, particularly plagiarism (Martin, 2024)

In light of these developments, this paper seeks to refine and extend the revolving door concept to higher education leadership. We adopt an intersectional perspective that accounts for the gendered substructure of academia and the broader societal discourses on femininity, power, and legitimacy. By doing so, we aim to shed light on the structural conditions that contribute to the contested nature of female leadership in academia and the mechanisms that shape their premature exits from positions of power.

References

Acker, S. (2014). A foot in the revolving door? Women academics in lower-middle management. Higher Education Research & Development, 33(1), 73–85. https://doi.org/10.1080/07294360.2013.864615

Baron, J. N. (1990). Are the Doors Revolving or Still Locked Shut? Contemporary Sociology, 19(3), 347–349. https://doi.org/10.2307/2072412

Dehdarian, N., Hüther, O., & Kirchner, S. (2024). Frauen sind kürzer im Amt. Eine Analyse von Amtszeiten der Hochschulspitzen in Deutschland. Forschung & Lehre, 6, 442–443.

Egner, H., & Uhlenwinkel, A. (2021). Entlassung und öffentliche Degradierung von Professorinnen: Eine empirische Analyse struktureller Gemeinsamkeiten anscheinend unterschiedlicher „Fälle". Beiträge zur Hochschulforschung, 43(1–2), 62–84.
Gruhlich, J., & Riegraf, B. (2020). Gender Mainstreaming und Diversity Management. Eine Diskussion aus intersektionaler Perspektive. In A. B. Mefebue, A. D. Bührmann, & S. Grenz (ed.): Handbuch Intersektionalitätsforschung. Wiesbaden: Springer, 1–14.
Jacobs, J. A. (1989). Revolving doors: Sex segregation and women's careers. Stanford, CA: Stanford University Press.
Malin, L., & Wise, R. (2018). Glass Ceilings, Glass Escalators and Revolving Doors. In G. Ritschard & M. Studer (Eds.), Sequence Analysis and Related Approaches: Life Course Research and Social Policies. https://doi.org/10.1007/978-3-319-95420-2_4
Martin, P. (2024). Right-wing activists are targeting Black scholars, and the scholars are pushing back. GBH News. https://www.wgbh.org/news/local/2024-06-27/right-wing-activists-are-targeting-black-scholars-and-the-scholars-are-pushing-back
Riegraf, B. (2024). Drehtüreffekt: Zur Arbeitssituation weiblicher Hochschulleitungen. Forschung & Lehre, 31(1), 32–33.
Riegraf, B., & Weber, L. (2017). Excellence and Gender Equality Policies in Neoliberal Universities. Gender and Research, 18(1), 92–112. https://doi.org/10.13060/25706578.2017.18.1.351

16.01

WORKING FROM HOME AND JOB SATISFACTION: A MEDIATING EFFECT OF ORGANISATIONAL CULTURE

Zuzanna Kowalik

Institute for Structural Research, Warsaw, Poland. University of Warsaw, Warsaw, Poland

Abstract

The COVID-19 pandemic profoundly reshaped the world of work, accelerating the transition to remote work and fundamentally altering working conditions and the boundaries between professional and personal life. While working from home (WFH) has been linked to benefits such as greater flexibility, improved work-life balance, and reduced commuting-related stress, it also presents challenges, including social isolation, diminished collaboration, and blurred work-life boundaries. Previous research has demonstrated both positive and negative outcomes of WFH, with some studies highlighting increased job satisfaction and well-being among teleworkers, while others emphasise its potential downsides, such as heightened stress and decreased happiness due to excessive working hours and reduced interpersonal interactions. Given these mixed findings, this study examines whether the quality of an organisation's corporate culture moderates the impact of WFH on job satisfaction, providing new insights into how organisational environments shape employee experiences in remote work settings.

Using data from the **Linked Personnel Panel (LPP)**, a rich German employer-employee dataset, this study investigates the interplay between WFH, job satisfaction, and organisational culture. Multiple linear regressions are employed to explore whether employees in different workplace cultures experience WFH differently. The **key findings confirm that WFH is generally associated with higher job satisfaction**, but crucially, this effect is **strongly influenced by corporate culture, especially organisational quality of communication and collaboration**. Employees in companies with **the weakest corporate cultures report significantly lower job satisfaction** compared to those in companies with stronger cultures, regardless of WFH status. However, the positive impact of WFH on job satisfaction is **most pronounced in companies with the weakest cultures**, suggesting that remote work may serve as a buffer against the negative effects of a poor work environment. In contrast, in companies with strong organisational cultures, WFH does not significantly enhance job satisfaction beyond what is already provided by a positive workplace environment.

Additionally, when distinguishing between employees who work fully remotely and those who work only occasionally from home, **no significant differences emerge in their job satisfaction levels**. This suggests that **the ability to work remotely, rather than the frequency of remote work itself, is a key determinant of satisfaction**. Furthermore, examining the reasons why individuals do not work from home reveals important differences. Employees who cannot work remotely for **objective reasons** (e.g., job requirements, lack of technical infrastructure) show relatively stable job satisfaction across corporate culture levels. However, those who do not work remotely for **subjective reasons** (e.g., concerns about career advancement, difficulty in collaboration) experience **significantly higher job satisfaction in strong corporate cultures** but markedly lower satisfaction in weak cultures. This indicates that in environments where employees feel unsupported or undervalued, the inability to work remotely exacerbates dissatisfaction.

These findings have significant implications for employers navigating hybrid and remote work policies. Companies with **weak organisational cultures may benefit the most from offering remote work options**, as it can help mitigate the negative effects of a poor work environment. However, simply allowing employees to work from home is not enough; fostering a **strong culture of communication, trust, and collaboration is essential** to fully unlock the benefits of remote work. For policymakers and business leaders, this study highlights the need for targeted strategies to enhance organisational culture, particularly in

companies struggling with workplace engagement. Strengthening corporate culture—whether through improved leadership practices, clearer communication, or better support structures—can enhance job satisfaction for all employees, whether they work remotely or on-site.

Overall, this study provides compelling evidence that **WFH is not a universal solution for improving job satisfaction but rather a tool whose effectiveness is shaped by organisational context**. While employees generally benefit from the flexibility and autonomy associated with remote work, these benefits are **amplified in strong corporate cultures and serve as a coping mechanism in weak cultures**. As businesses continue to adapt to evolving work models, understanding how workplace culture moderates the WFH experience is critical for fostering a satisfied and engaged workforce.

16.02

BETWEEN IN-OFFICE AND REMOTE WORK: INFLUENCING FACTORS AND THEIR ASSOCIATION WITH EMPLOYEE PERFORMANCE AND WELL-BEING

Markku Kuula[1], Juha Eskelinen[1,2]

[1]Aalto University School of Business, Espoo, Finland. [2]Melkior Oy, Helsinki, Finland

Abstract

Research Objectives In multi-location work, the ideal situation is for employees to choose the time and place of work in a way that best supports organizational performance and their work-life balance. Our study investigates the extent to which employees can genuinely choose the most suitable place to do their work by focusing on factors that affect the proportion of in-office work. In addition to task-related demands and personal life preferences, such factors may include perceptions that reflect the working culture.

Methods We used multivariate methods to examine the factors that influence the proportion of in-office work. In the analysis, we used variables collected in the survey (ten organizations, n=3541). The proportion of work tied to a specific location and commute time were controlled for. We identified antecedents of in-office work and used them to cluster employees. We then compared the well-being and in-role and extra-role performance in these employee groups.

Results Our analyses showed that the proportion of in-office work was positively affected by the workspaces provided by the employer. The importance of the selection of the working location was strongly associated with a high proportion of out-of-office work. In addition, the data showed that doubts about the impact of teleworking on the evaluation of personal performance increased working on the employer's premises. Boundary management between work and other life and knowledge of multi-location work guidelines were associated with the choice of location. Cluster analysis identified three employee groups: two of them clearly found a personal fit with their job by either working predominantly in-office or remotely. The third group consisted of people who experience tensions in their location choices and ways of working. These employees perceived lower levels of performance and well-being compared to the other two groups. There were large differences between the organizations regarding the proportion of these groups.

Conclusions Employers should aim to identify the diversity of perceptions on these important factors in their organization and reduce the ambivalence among employees regarding their working locations. Whatever is desired by the employer, the outcomes can only be partially influenced by policy decisions. Employers should keep other means, such as the development of the physical working environment and organizational culture, in their toolbox.

16.03

PSYCOSOCIAL WORKLOAD FACTORS IN REMOTE WORK

Virpi Ruohomäki

Finnish Institute of Occupational Health, Helsinki, Finland

Abstract

Background and aims: As remote work became more common due to COVID-19, the public began to talk about remote work as the 'new normal'. However, instead of a 'new normal', the situation today can be described more as a diversification of and increased experimentation with different ways of working. Therefore, research-based knowledge is needed to develop remote and hybrid working models, and to support decision-making for post-pandemic organizations.

Organizations should be aware of the workload factors that affect the flow of remote work and well-being of the personnel. The aim of the study was to find out what psychosocial factors affect the flow of remote work. We examined the connection between psychosocial factors related to both the work community and the remote work environment and the flow of remote work. If working remotely does not go smoothly, it may weaken the well-being of the personnel as well as the productivity of the organization.

Data and methods: The research data was collected with a Webropol survey from five expert organizations (N = 705, response rate 57 %) in Finland. The data was collected in 2021 during the COVID-19 pandemic, when employees worked from home in accordance with remote work recommendations. Employee satisfaction with remote work was assessed with one question. Satisfaction with the remote work environment was also assessed with one question. The practical progress of remote work was measured with a variable that consisted of four sections, which concerned the use of the employer's resources remotely, the tools at the workplace, the difficulty of being managed remotely, and the fact that not all work tasks can be done remotely. Access to information from the organization and colleagues in remote work, support from supervisor and colleagues, work/life balance in remote work, satisfaction with the remote work environment and the experience of isolation in relation to the progress of remote work were analyzed using log-binomial regression analysis.

Results: The results showed that the majority of the respondents were satisfied with remote work and hoped to be able to work remotely also in the future. About half of the respondents rated their remote work environment as very good.

However, almost half of the respondents experienced difficulties in maintaining work/life balance in remote work, and one in three estimated that they worked longer hours than in the office. Technology-mediated remote work was regarded as intensive, resulting in difficulties in taking breaks, or recovery during the day. A quarter of the respondents estimated that remote work was not very fluent. Loneliness and lack of community also emerged as perceived problems.

When age, gender, education and previous remote work experience were standardized, the main problems with remote work were associated with the following factors: experience of insufficient access to information from the organization or from co-workers; lack of supervisor support; difficulties in work/life balance; dissatisfaction with the remote work environment at home; and experiences of social isolation.

Conclusions: The study provides new knowledge on the factors affecting the flow of remote work. The study identified psychosocial workload factors related to remote work and the environment of remote work. It is important for employers and managers to ensure that employees receive sufficient information from the organization and colleagues, support from their supervisor, and functional tools and a working environment to ensure that remote work runs smoothly. These results can be utilized in the development and management of remote and hybrid working and the work environments as well as in supporting well-being of the personnel. In the future, hybrid working models, rather than remote working, could be a pathway to better working life in post-pandemic organizations.

16.04

PERCEPTION OF DECENT WORK AND EMPLOYEE WELL-BEING: COMPARING DIFFERENT WORK REGIMES

Maria Eduarda Soares[1], Leonor Loureiro[2]

[1]Advance, ISEG, Universidade de Lisboa, Lisboa, Portugal. [2]ISEG, Universidade de Lisboa, Lisboa, Portugal

Abstract

The aim of this study is to investigate the relationship between perceptions of decent work and employee well-being across different work regimes. Five decent work variables (safe working conditions, access to healthcare, adequate compensation, flexible working hours and organisational values) and three employee well-being variables (subjective well-being, psychological well-being and work well-being) were analysed.

The results indicate significant differences in perceptions of decent work and well-being among different demographic and professional groups. Men have a significantly higher mean than women when it comes to access to healthcare and flexible working hours. In terms of marital status, single people have a higher men in terms of adequate compensation, but it is non-single people who have the higher means of well-being at work. Employees without children have the highest mean in terms of flexible working hours and employees in managerial positions have a higher mean in terms of subjective well-being, psychological well-being and well-being at work. As for the sector, the public sector has the highest mean in terms of access to healthcare and the private sector has the highest mean in terms of adequate compensation. With regard to on-site and hybrid regimes, hybrid workers have a higher mean in terms of access to healthcare, adequate compensation and flexible working hours.

Analysis of the structural model revealed that six of the direct relationships under study were significant, confirming the importance of safe working conditions and organisational values in subjective well-being, psychological well-being, and well-being at work. The model explained 17.5% of subjective well-being, 28.3% of psychological well-being, and 33.5% of well-being at work. The multi-group analysis showed that there were only five direct relationships in both the on-site and hybrid regimes. Compared to the total sample, the non-significant relationship in the on-site regime was between organisational values and psychological well-being. In hybrid regime, it was between organisational values and subjective well-being.

16.05

THE UNBEARABLE LIGHTNESS OF HYBRID WORK? EMBODIED WORKING WORLDS IN FLUID ENVIRONMENTS

Hanne Vesala

Tampere University, Tampere, Finland

Abstract

Bauman (2000) has questioned whether the progress in information technology will eventually make physical space redundant. I will examine this question in the context of hybrid work, understood here as work conducted in multiple physical and virtual spaces. Organization researchers have increasingly called for processual and situational research approaches (Cooper, 2005; De Vaujany & Introna, 2024). Answering this call, I apply Roy Wagner's (2001) reflexive anthropology and Marilyn Strathern's (2004) theory of partial connections to examine how hybrid workers navigate and compound different life-worlds to generate mental energy necessary for their work. I draw empirically from an on-going spatial study on hybrid work within three industries in Finland: program development, graphic design and public sector psychology services. I interviewed 45 employees and nine employers and collected photographs of workspaces important to the employees.

Wagner's (2001) concept of holographic worldview illuminates the character of hybrid work. According to this theory, one sees things only in their relations to other things that acquire their character in the process of this reciprocal reflection. Strathern (2004), on the other hand, has argued that absent persons remain partially present in the awareness as these relations are carried along, sometimes with the help of concrete objects. Any momentary space and its items can thus be conceived as reflecting different worlds, and the meaning of the space emerges through the contrast of these worlds.

The hybrid workers of my study appeared not to be in a specific place while they worked at home, but rather in between spaces, with the contrasts of different relations creating another level of awareness (Strathern, 2004). The lightness of their space can be captured with the concept of set-up, used in multiple senses by the participants. The set-up could be assembled practically anywhere. It could refer concretely to one's technical equipment, being sometimes rather complex, but a set-up could equally be created simply by withdrawing to a favored place with a laptop. This was also likened to a mental space or everyday escapism. Hybrid work often does not have its own space but leans on other spaces that gleam through the set-up. In my presentation I will demonstrate, using the photo material, how set-ups were created not just with technology but also with e.g., nature, pets and items reflecting personal history.

The space is not just here and now but carries the past along (Wagner, 2001). Hybrid workers could go to office to collect stimulus and information and later work upon these as they withdrew to home or third spaces. In this movement between different worlds, the social interaction originally experienced in the workplace acquired different layers and meanings, finally leading to creative work outputs. Wagner (2001) has stated that communication tends to be too fast paced, with its meanings being formed only afterwards. This has become emphasized as the internet combines immediate interaction of vast and complex networks with rapid reaction expectations. The incongruity between communication and meaning was recognized, for example, by a program developer who found himself as if floating in information networks, or the graphic designers who looked for inspiration in sleep and dreaming. They all had to take their time to express something meaningful.

The asynchrony between communication and mental deliberation was re-synchronized through embodied action at home. Hybrid workers regulated their mental states through bodily positionings: moving, changing spaces and postures, doing little chores, or oppositely, pausing and silencing. This movement at home when working was experienced to both recuperate and "re-channel" minds. Thus, finding the right set-up was perhaps not so much a physical but a mental question. Still, it was worked upon with bodies. By bodily moving, leaving and returning (Strathern, 2004), one's situation, perspective and vision were clarified. The employees could move in more diverse and natural ways for this purpose in their private spaces. I suggest, therefore, that hybrid work is bodily more mindful than mere office work, and it can support creativity and divergent thinking. In the office, work was set up by office structures, workplace norms and rhythms. Arguably, for some workers this suited well. They were not as keen to explore the embodied side of knowledge work as others, finding working at home "foggy". Further research is needed to increase our understanding of how hybrid workers produce their subject positions, mental security and abilities to perceive potentially important things in their complex physical-virtual environments.

References

Bauman, Z. (2000). Liquid modernity. Polity Press.

Cooper, R. (2005). Peripheral vision: Relationality. Organization Studies, 26(11), 1689-1710.

de Vaujany, F.-X., & Introna, L. (2024). Becoming processual: Time to de-place managerial education. Management Learning, 55(5), 811–827.

Strathern, M. (2004). Partial connections: Updated edition. Altamira Press.

Wagner, R. (2001). An anthropology of the subject: Holographic worldview in New Guinea and its meaning and significance for the world of anthropology. University of California Press.

16.06

WORKPLACE MEETINGS IN HYBRID WORKING

Sanna Markkula[1,2], Laura Hirva[1], Saija Mauno[1,2], Pekka Isotalus[1], Anne Mäkikangas[1]

[1]Tampere Universities, Tampere, Finland. [2]University of Jyväskylä, Jyväskylä, Finland

Abstract

Aims: Hybrid working as a technology-enabled working has increased substantially following the COVID-19 pandemic, and effective ways to do hybrid working are sought in many organizations. Workplace meetings as goal-oriented work-related gatherings between employees have been significantly affected by the increase in hybrid working. It is essential to understand how employees experience different meeting modalities to combine them to enable efficient and productive work in the organizations.

The present study investigated what kind of similarities and differences employees saw between hybrid (a part of the participants is in the same room, and a part participates remotely), remote (all the participants gather remotely), and face-to-face (all the participants are in the same location) meetings, and which purposes they feel each modality to serve the best. This information can support new hybrid working policies in the organizations.

Methods: Thematic content analysis was used to analyze open-ended survey answers (n = 769) regarding the differences and similarities between hybrid, remote, and face-to-face meetings, concerning meeting arrangements, interaction, and leader and member behaviors. The same participant could describe more than one theme.

The participants were Finnish working adults from different professions. Of the participants, 56% were women, the mean age was 48, and 90% had more than 10 years of work experience. Supervisor or management positions were held by 20% of the participants, while 57% were senior specialists. Of the participants, 89% worked remotely at least part of their working hours. The participants had, on average, two meetings a day and spent three hours of their workday in meetings. Of the participants, 78% led meetings at least occasionally.

Results: Remote meetings were the most common, hybrid meetings came second, and face-to-face meetings were the rarest. More participants thought interaction was better in face-to-face meetings than in remote and hybrid meetings than the other way around. The participants described that employees participated less in remote and hybrid meetings, and the conversation did not flow naturally. In contrast, employees shared their thoughts more freely in face-to-face meetings, and the communication was experienced to be more inclusive. Using the camera in remote and hybrid meetings was seen to support better communication. The unique challenge with hybrid meetings was the difficulty of including all the participants in the discussion, and often, the remote participants were left out.

Although the interaction was experienced more difficult in remote and hybrid meetings, they were more often seen as effective than face-to-face meetings. Employees experienced remote and hybrid meetings to stay on schedule and topic better than face-to-face meetings. In addition, they offered flexibility and made collaboration easier for employees stationed in different locations. However, face-to-face meetings were more effective when new ideas were developed or cooperation was starting.

Meeting member behaviors differed somewhat between the meeting modalities. Multitasking was more frequent when meetings were participated in remotely, and it was experienced as distracting the meetings. However, other forms of counterproductive meeting behaviors, such as being late or having side discussions unrelated to the topic, were more frequent in face-to-face meetings. From the leading and arrangement perspectives, remote and hybrid meetings were more challenging to lead effectively and inclusively, and they suffered more often from technical problems than face-to-face meetings.

Although most participants described differences between the meeting modalities, a fifth saw no differences or described similar problems regarding meeting arrangements and interaction with all the modalities. In addition, some experienced that the differences between the meetings were related to other factors, such as leader behaviors, rather than the meeting modality. Difficulties in choosing the most suitable meeting modality for the given purpose were also reported.

Conclusions: All meeting modalities had pros and cons, and combining the three modalities depending on the purpose of the meeting appears to be the key to productive and efficient work in the era of hybrid working. For example, when the purpose is to form new ideas and start collaboration, face-to-face meetings could support fluent interaction and help form cooperative working relationships. On the other hand, remote meetings could be especially suitable for daily interaction between established work groups and for tracking ongoing projects. In hybrid meetings, special attention should be devoted to including the remote participants to get the full contribution of all the employees on the meeting topic. In all meeting modalities, ways to support focused attention should be explored to enable productive participation. Meeting leaders could be offered support and training in conducting meetings in different modalities to use them more effectively.

16.07

BLURRED LINES AND DISTANT COLLEAGUES: PROFESSIONALISM IN THE FLEXIBLE WORK ERA (A SOCIAL INFORMATION PROCESSING APPROACH)

Juliet Ikhide[1], **Steven Bayighomog**[2]

[1]Mount Royal University, Calgary, Canada. [2]Bournemouth University, Bournemouth, United Kingdom

Abstract

The pandemic era disrupted the world of work, prompting reconsideration of how and where work is done. Flexible work arrangement (FWA) captures this idea, and it can broadly be described as any formal or informal practice or policy that allows employees to vary in when and where they work (Shifrin & Michel, 2021). Extant literature has associated FWA with social, psychological, health, environmental and economic implications (Shifrin & Michel, 2021) from both a favourable and unfavourable standpoint. For instance, some studies consider FWA as good for work-life balance, others claim that it leads to work-life conflicts. Additionally, while technology facilitates work, enabling FWA, it paradoxically has been largely associated with professional isolation. Professional isolation encompasses beliefs about the inadequacy of professional and social contacts in the context of FWA (Cooper & Kurland, 2002). This reduced interaction with colleagues and supervisors can potentially hinder learning, knowledge sharing, and overall efficiency of professionals (Yu & Liu, 2022).

If FWAs has been associated with professional isolation, this type of work arrangement might be particularly challenging for some African cultures, who traditionally value the development of social ties, and place a strong emphasis on communal living (Ucho et al., 2022). According to Soga. et al (2022), an abundance of empirical studies examining the challenges of FWA has been identified in the global North. Whereas it is limited in developing and African context. Additionally, factors such as technological infrastructure and internet connectivity may account for the variance in FWA's adoption across contexts (Soga., et al 2022). However, internet connectivity is increasing rapidly in the African context. The rapid diffusion of digital infrastructure and internet connectivity is supporting new economic activities e.g. virtual/online work, across the continent and the number is only expected to grow in the coming years (Anwar & Graham, 2020).

FWAs is attractive and prevalent among professionals in white-collar, high-paying, and highly skilled occupations (Fana et al., 2020), given the intangibility of many professional services. While professionalism is often associated with expert knowledge of a vocation, autonomy to deploy expertise, commitment to ethics, and service for societal welfare, Noordegraaf (2016) argues that professionals' behaviour may be affected by developments that affect work pattern arrangements e.g. geographical relocation and digital dislocation. For instance, FWA allows professionals such as Information technology experts, teachers, or professional service employees to perform household or caring duties while performing work tasks remotely.

The theoretical rationale behind the proposed study is supported by Salancik and Pfeffer (1978) social information processing (SIP) theory. SIP theory avers that professionals' perceptions, behaviour and attitudes are shaped by their environment (which could be the traditional work environment or now, a remote work setting), and information in their work context. Moreso, it may be important to examine the effect of 'other' contacts in the 'new' work environment. Specifically, because social group/ networks now go beyond the formal traditional workplace and its boundaries (McAlpine, 2015). The 'other" social group such as a partner, family or kids may alter, influence or interfere with a professional's behaviour as this group may now frequent constitute the immediate social environment for most professionals working in the FWA context.

Although, the rising trend in FWAs, which blur the line between personal and professional life, there is a dearth of empirical studies that considers the role of demographical variables such as marital status, caring responsibility, family composition, gender, age etc, that may influence the mediation relationship between FWA, and professionalism through professional isolation (Sahai et al., 2021). These demographical variables have been found to correlate with isolation in a FWA context, but more research is required to fully comprehend their impact on other outcomes of professionals (Yu & Liu, 2022; Sahai et al., 2021). While there is limited evidence of the use of SIP in this study's context and model (Golden et al., 2008; Yu & Liu, 2022), this proposed study endeavours to address the gap by investigating the mediation effect of professional isolation on the relationship between FWA and professionalism of African professionals. Additionally, the study will employ a multigroup analysis to explore potential demographic differences between respondents in this relationship

These will be achieved by answering the following research questions: How do FWA (or its perception) influence professionalism? Could professionalism among certain employee demographical groups be reconfigured/redefined as a result of FWA? To accomplish this proposed study's, aim a mixed methodology, utilizing both quantitative and qualitative research methods, is intended.

16.08

PRODUCTIVITY IN REMOTE WORK: EVIDENCE AND INSIGHTS FROM IFAA RESEARCH ON HOME OFFICE PRACTICES

Sascha Stowasser

ifaa – Institute for Applied Industrial Engineering and Ergonomics, Düsseldorf, Germany

Abstract

Introduction: The shift to remote work, accelerated by the COVID-19 pandemic, has transformed the way we work, offering benefits like flexibility and reduced commuting. But with these changes come real challenges—how do we stay productive, keep teams connected, and make sure everyone is set up for success?

At the **ifaa – Institute for Applied Industrial Engineering and Ergonomics** in Düsseldorf, we've taken a close look at over **50 studies** to better understand the impact of remote work on productivity. Our findings highlight a mix of opportunities and challenges: while individual productivity often improves, teamwork and collaboration don't always follow the same trend.

By diving into key factors like autonomy, leadership, and ergonomics, we've identified practical steps organizations can take to make remote work sustainable for both their goals and their employees' well-being. For more detailed data, check out the ifaa Factsheet on Productivity in Home Office.

Research Overview: Our research looked at three big questions around remote work:

- **How does remote work affect individuals?** We explored the role of autonomy, the work environment, and time management in personal productivity.
- **What happens to teamwork?** We analyzed how remote setups impact collaboration, communication, and shared goals.
- **How do we measure success?** We found that many studies lack standardized ways to measure productivity, making it hard to compare in-office and remote work objectively.

We also dug into ergonomics—a vital but sometimes overlooked aspect of remote work. A good home office setup isn't just about comfort; it's essential for sustained performance and well-being.

Key Findings: ***Productivity Changes Over Time***: Many people find they're more productive when working remotely, especially for tasks requiring deep focus. In fact, over **50%** of respondents in reviewed studies said their productivity increased during the early stages of remote work. However, teamwork often struggles: only **30%** of respondents felt team productivity improved, with collaboration and communication being the main challenges.

The Role of Leadership: Good leadership is critical. Clear workflows, regular feedback, and strong communication can make a huge difference in how teams perform remotely. Studies like those from Fraunhofer IAO also emphasize the importance of building trust, which helps employees feel supported and engaged.

Ergonomics and Well-Being: A poor home office setup can lead to physical strain and frustration, cutting into productivity and job satisfaction. Providing employees with ergonomic tools—like adjustable desks or chairs—and guidance on how to set up their workspace properly can have a big impact on both health and performance.

Measuring Productivity: Most studies rely on self-assessments, which are helpful but not enough. There's a need for better tools to objectively measure productivity across different roles and industries. Clear benchmarks and metrics would help organizations make more informed decisions about remote work policies.

Recommendations: To make remote work successful, companies need to take a few essential steps. First, they should invest in better ways to measure productivity. These metrics need to reflect the reality of different tasks and industries—what works for a software developer won't necessarily apply to a customer service team.

Leaders also need to adapt. Trust and autonomy are the foundation of successful remote teams, but they don't happen by accident. Managers should use tools that make communication easier and focus on building connections, even when employees aren't physically together. Training for leaders can help them handle these new demands effectively.

Another important priority is ergonomics. Employers should support their teams by offering subsidies for good home office equipment and providing training on how to set up a workspace that minimizes physical strain. This investment pays off in better performance and fewer health issues.

Finally, hybrid work models—where employees split their time between home and the office—offer the best of both worlds. These setups balance the flexibility of remote work with the collaboration benefits of in-office days, creating a system that works for both employees and organizations.

Future Research Directions: There's still a lot to learn about remote work. Future research should focus on:

- **Long-term trends**: How does productivity hold up over time in hybrid models?
- **Technology and teamwork**: What tools really make a difference in remote collaboration?
- **Industry-specific impacts**: How does remote work play out differently for knowledge workers versus operational teams?
- **Mental health**: What are the long-term effects of isolation and digital fatigue, and how can we address them?

Conclusion: Remote work isn't going anywhere, but making it successful requires thoughtful planning and smart investments. The **ifaa** research shows that remote work can boost productivity when supported by good leadership, the right tools, and a focus on employee well-being.

However, there's work to be done. Standardized metrics, better ergonomic support, and hybrid models can help bridge the gaps and make remote work sustainable for everyone.

For more insights: ifaa Factsheet on Productivity in Home Office.

16.09

LEADERS´ EXPERIENCES OF THE CHALLENGES AND SOLUTIONS IN LEADING MULTILOCATIONAL KNOWLEDGE WORK

Eija Lehtonen[1], Ilmari Puhakka[1], Petri Nokelainen[1], Mervi Ruokolainen[2]

[1]Tampere University, Tampere, Finland. [2]Finnish Institute of Occupational Health, Helsinki, Finland

Abstract

Following the Covid-19 pandemic, knowledge workers have not returned to shared premises to the same extent as before, leading to a significant increase in multilocational work. In this study, multilocational work—often synonymous with hybrid work—refers to work conducted across multiple locations, such as shared premises, coworking spaces, home offices, and other remote locations.

Leading multilocational work differs from traditional face-to-face leadership and requires a new approach from leaders. Multilocational work can pose challenges for learning by reducing face-to-face encounters, which impacts the transfer of tacit knowledge and learning through informal interactions. Additionally, multilocational work affects workplace social interaction and atmosphere, including a sense of belonging and psychological safety. Another key impact, identified in previous research is on employee motivation and commitment.

Leadership quality is crucial in multilocational work, as good leadership and a sense of belonging with colleagues and leaders encourage employees to come to shared premises. Previous research suggests that leaders can contribute to realising the benefits of multilocational work and informal workplace learning. However, managing multilocation work may emphasise different leadership roles and responsibilities compared to leading face-to-face work. Based on these considerations, the research questions of the current study were formulated as follows:

- What challenges do leaders experience in leading multilocational knowledge work?
- What solutions have leaders developed to address the challenges of leading multilocational knowledge work?

The study is a part of a larger intervention study focusing on developing a training program for leaders and examining its efficacy.

The data were collected during training sessions of a leader development training intervention conducted in three organisations in 2024: two municipalities and one company providing engineering, design, and consultancy services in the field of infrastructure and construction. A total of 28 leaders participated in five training groups, which were conducted separately in each organisation. All participants led multilocational teams of knowledge workers. Each group met approximately once a month for six sessions, with each session lasting 90 minutes.

In these researcher-facilitated training sessions, individual reflection, social learning, and research-based knowledge on multilocational work were combined. Three main themes, identified in previous research, guided the sessions: (1) supporting employees' learning, (2) strengthening employees' social capital, and (3) supporting employees' engagement and motivation. The approach was solution-oriented, emphasizing goals, past successes, and existing competencies rather than problems. Additionally, especially in the first training session, leaders were encouraged to raise any leadership challenges they had encountered from any perspective. This provided insights into a broader range of leadership challenges and allowed us to assess the relevance of the themes chosen for the training.

The data for this study consist of post-it notes written by leaders during the coaching sessions (n = 99), post-it notes (n = 335) and summaries written by the researchers during and after the sessions. During the training, one researcher focused on facilitating and leading the group process, while the other documented observations. The data were analysed using theory-driven content analysis. The challenges and solutions identified in the data were categorised into the three previously mentioned main themes, and their subcategories. Subsequently, additional challenges and solutions outside these themes were examined and analysed using a data-driven approach.

The challenges and solutions identified in the study fell into the same main and subcategories, so they are presented together. The subcategories of challenges and solutions related to (1) supporting employees' learning included onboarding new employees, transfer of tacit knowledge, and the support of informal interactions that promote learning. The subcategories under (2) strengthening employees' social capital were fostering a sense of community and togetherness, as well as ensuring psychological safety. The subcategories under (3) supporting employees' engagement and motivation included awareness of motivational factors, teamwork, clear goals, positive feedback and the experience of fairness.

In addition to these theory-driven main categories, the following categories emerged from the data: monitoring and supporting well-being, meeting the individual needs of employees, co-creating ground rules for multilocational work, improving communication and interaction, refining work processes, and clarifying the leader's role. Each of these categories contained both challenges and solutions.

This study contributes to topical working life discussions by identifying supervisors' experiences of the challenges and solutions in leading multilocational work. The findings indicate which aspects of leadership are emphasised in this context. Furthermore, the results provide practical insights that leaders can apply in their work.

This research was funded by the Finnish Work Environment Fund (grant 230369).

16.10

LEADER DEVELOPMENT TRAINING INTERVENTION ON IMPROVING ABILITIES RELATED TO LEADING MULTILOCATIONAL WORK

Ilmari Puhakka[1], Eija Lehtonen[1], Petri Nokelainen[1], Mervi Ruokolainen[2]

[1]Tampere University, Tampere, Finland. [2]Finnish Institute of Occupational Health, Helsinki, Finland

Abstract

Multilocational working became a standard practice in wide areas of expert work following the cessation of Covid-19 restrictions. While providing autonomy and flexibility to employees, this change created challenges to leaders to adapt in the new situation and figure out ways to efficiently support employees and ensure functioning of their organizations. Concerns about the rise of work-related ill-being of personnel and organizations pressuring employees to return to offices underscores the need to find evidence-based solutions to these challenges and to enhance leaders abilities to lead multilocational work.

This study introduces a leader development training intervention aimed at improving leaders' abilities to lead multilocational work and examines its effects on participants' perceived leadership abilities and preparedness for leading multilocational work. The training intervention was conducted in 2024 in three organizations. This study was funded by the Finnish Work Environment Fund (grant 230369).

The training was based on previous research on the leadership challenges in remote, hybrid, and multilocational work. Accordingly, the training focused on three themes: 1) supporting employee learning and development, 2) strengthening the social capital of employees and teams, and 3) supporting employee motivation and commitment to organization. The intervention was expected to make the leaders more skilled, confident and resilient in leading multilocational work. This aligns with Social Learning Theory and the Theory of Planned Behavior. The training was designed to have an impact by combining individual reflection, social learning, and current research information through facilitation. The same two facilitators conducted all training sessions.

The training comprised six sessions (90 min per), each addressing different aspects of multilocational work: 1) introduction and identification of main challenges, 2) ways to support employees' learning, 3) ways to strengthen social capital of employees, 4) ways to support motivation and commitment of employees, 5) leaders' own strengths, 6) a focus group interview on the training and its impact. The sessions were held monthly (excluding summer break) from April to October 2024, face-to-face in organizations' spaces, and in groups of up to nine participants. Additionally, participants reported their implementations of identified solutions between the sessions.

In this study, we set four hypotheses: We expected that the training intervention would increase leaders' perceived abilities to support employees' learning (H1), to strengthen employees' social capital (H2), to support employees' motivation and commitment to organization (H3), and preparedness to handle leadership challenges in leading multilocational work (H4).

The study participants were 28 leaders who led multilocational work, and they came from two public organizations (n = 12) and one private company (n = 16). Participants were on average 49.3 (SD = 8.350) years old and predominantly women (n = 18, 62.1%). They had on average 11.6 (SD = 8.212) years of leadership experience. Based on participants' schedules, five groups, comprising 3–9 participants each, were formed. There were separate training groups for each organization.

Participants completed three repeated surveys assessing their perceived abilities for supporting employee learning (3 items), strengthening social capital (3 items), supporting motivation and commitment to organization (4 items), and preparedness to handle leadership challenges in leading multilocational work (4 items). The measurement timeline included a baseline assessment in April 2024 (T1) before the training. This was followed by the first post-intervention measurement in August 2024 (T2) after the intervention phase (sessions 1.–4.). The second post-intervention measurement was conducted after the end of the training in October 2024 (T3).

The repeated measures design was used to evaluate the changes in the measured outcomes over time. Bayesian multilevel regression models were fitted using the R package brms. Control variables included organization type (public or private), age, gender, and leadership experience (years).

The results indicated credible increases in all perceived leadership abilities (i.e., support for learning, strengthening social capital, and supporting motivation and commitment) and in preparedness to handle leadership challenges in leading multilocational work immediately after the intervention (from T1 to T2), which supported our hypotheses H1-H4 and showed that the intervention worked as expected. From T1 to T3, increases were observed in perceived abilities for strengthening social capital, supporting motivation and commitment, and preparedness to handle leadership challenges in leading multilocational work, but the increase in perceived ability to support learning was not sustained. There were notable individual differences across all measured constructs.

Gender emerged as a credible predictor of perceived ability to support learning, with women consistently reporting higher levels than men. For preparedness, gender and leadership experience emerged as credible predictors: Women reported higher preparedness than men, and leadership experience had a positive effect.

The results indicated that a leader development training including both individual and social learning as well as sharing of information can improve leaders' perceived leadership abilities and preparedness to lead multilocational work. Further follow-up studies and analysis of individual differences are needed to examine benefits of leader training for organizations and personnel in multilocational work context.

16.11

THE EXPERIENCED PRACTICE OF HYBRID WORKING REGULATIONS

Ilana Nussbaum Bitran, Cora Zenz, Guido Becke

Institute Labour and Economy - University of Bremen, Bremen, Germany

Abstract

Hybrid working combines in different proportions tasks done from the working place and from other different geographical places and uses communication technologies as one of its main tools to connect these different places and workers. This new form of work, that since the Covid pandemic in 2020 has been growing and spreading into different sectors of the labour market, goes hand in hand with new forms of using the space and creating social interactions in the classical working space: the office. In Germany, company agreements between works councils and employers have emerged as a form to regulate hybrid working and protect workers from bad practices. They usually limit the allowed time spent working out of the office, include rules regarding the use of desk sharing and the needed equipment for the work done at home. But company agreements have to be experienced and put in practice by workers and their team leaders. Therefore, we ask, how the practice of these agreements emerge and how the formal rule is experienced giving way to informal rules that regulate the daily work in hybrid working teams.

In our presentation, we would follow the work of the German industrial sociologist Friedrich Weltz (1988) and his concept of "doppelte Wirklichkeit der Unternehmen" – the double reality of companies. This concept is based on the idea that formal rules and regulations at organisational level are re-enacted resp. circumvented by informal practice and / or negotiation between direct supervisors and employees, thereby creating a double reality of companies. We argue that there are two levels of regulations related to hybrid working. The first one, the formal written rule contained in the company agreements, and a second level, the experienced practice of the rule contained in the informal rules that are put into practices by workers and their team leaders. Using examples gathered through interviews and group discussions in two research projects dealing with different aspects of hybrid working in three sectors of the labour market – finances, IT and public administration – we shade lights about how the informal rules are generated and set into practice by direct supervisors and employees. In this respect, we also consider other relevant aspects of informal rules generation, e.g. employees' expectations to reconcile paid work and their private sphere. Furthermore, we investigate how their practices may influence the psychosocial health of employees.

We suggest that team leaders have a key role when it comes to put the formal rule in practice as they have a middle position between managers and workers and a role model function. By lowering the company agreements at the team level, there is the need to negotiate the formal rule with the workers. In this process the informal and experienced regulation emerges. In this sense, the idea that the team has of itself – the work-related team culture as the internal understanding of a team as a team – is as important as the leaders' role. It is in this social space that hybrid works takes place and therefore, it reshapes the social organisation of work and the informal relations between workers and the workers and their leaders. While the former sharp distinction between work life and private life is becoming even more blurred, the personal living conditions influence a role in the new work concepts. Care responsibilities, the physical distance between the working space and the residence, the kind of residence or the existence of a working room at home or not, as well as other issues such as having an outgoing or introvert personality contributes to shape the experienced practice of hybrid working regulations. Following these three lines – the role of team leaders, the work-related team culture and the personal situation of workers including their expectations to reconcile employment and private sphere – we reconstruct the formation of the experienced practice of hybrid working regulations.

16.12

HYBRID WORKERS' JOB QUALITY AND WELLBEING AT WORK

Wieteke Conen

University of Amsterdam, Amsterdam, Netherlands

Abstract

Hybrid working has quickly become a widely accepted working approach. Although hybrid work 'on average' seems to have a positive relation with satisfaction and wellbeing at work, much about this relationship is still unknown. This paper reports evidence on how the extent of hybrid work affects job quality and wellbeing at work. Various studies define hybrid work primarily in terms of 'place' (such as working from home and from the office) and this dimension is currently receiving the most attention. Following Gratton (2021), this study adopts a broader perspective by examining hybrid work across two dimensions: place and time.

While place- and/or time-independent working is generally associated with higher satisfaction across various aspects of work and well-being (Charalampous et al., 2019; Felstead, 2022; George et al., 2022; CIPD, 2023; Josten et al., 2023; De Beer & Conen, 2024), many questions remain about the factors that enhance or hinder worker well-being (Felstead & Henseke, 2017; Crawford, 2022; Hall et al., 2024). The literature highlights the importance of considering the intensity of remote work in relation to job quality and well-being (Allen et al., 2015). For instance, Choudhury et al. (2024) found that employees who spent an average of two days per week in the office reported better work-life balance, higher job satisfaction, and less isolation compared to those who were in the office more or fewer days. Notably, employees in this "intermediate hybrid condition" did not receive different performance ratings than colleagues with different office attendance patterns. Similarly, Gallup (2023) data indicates that spending two to three days per week at the workplace tends to maximize employee engagement while reducing burnout and turnover intentions. Meanwhile, Fan and Moen (2023) found that a full return to the office generally increases stress and significantly reduces the likelihood of achieving an optimal balance of low stress and high satisfaction.

In this paper, we analyse how various combinations of hybrid work—across both place and time—relate to job quality and well-being at work, as well as the role of the intensity in these relationships. Additionally, we investigate whether these effects vary based on socio-economic factors, such as gender and level of education.

To that end, we analyse representative survey data from the Dutch Value of Work Monitor 2025. This dataset includes responses from over 2,000 employed individuals and offers extensive insights into various job characteristics, including different types of hybrid work and job quality indicators, making it a valuable source for the proposed analysis.

16.13

NAVIGATING FAVORITISM IN THE REMOTE WORKPLACE

Pia Heilmann[1], Jenni Kantola[2], Juha Kinnunen[1]

[1]School of Business, University of Eastern Finland, Joensuu, Finland. [2]School of Business and Economics, University of Jyväskylä, Jyväskylä, Finland

Abstract

Favoritism in the workplace is a major issue affecting job satisfaction, work engagement, careers and collaboration in the workplace. Favoritism is defined as practices or decisions in which certain individuals receive privileges or rewards that are not based on merit or objective criteria. Favoritism can manifest in areas such as hiring, task allocation, and promotions. The phenomenon of favoritism is particularly complex because, even if it does not occur, the perception of favoritism can have negative consequences.

The effects of favoritism can be harmful to both individuals and organizations, as they can lead to experiences of unfairness, decreased job satisfaction, and reduced organizational efficiency. Previous studies have also found that the experience of

favoritism in the workplace can affect the willingness to voice opinions and conceal information important to the organization or community. Additionally, the experience of unfairness easily leads to negative comparisons within the organization, particularly reducing pay satisfaction, and can even lead to withdrawal from work and intentions to change jobs.

Studies on favoritism show that favoritism often arises from personal relationships within social networks and individuals who have closer personal ties to decision-makers are more likely to receive preferential treatment. Although remote work has revolutionized the building of social relationships and altered workplace interactions in many ways, studies on favoritism have not previously considered the changing nature of work.

The focus of this study is to discover howfavoritism manifests in remote work context. Remote work is found to challenge both leadership and collegial relationships in many ways as remote work reduces live encounters where one can make their role and work visible. Remote employees may feel forgotten or that their contributions are not as noticed as those of colleagues working in the office. Additionally, remote work requires both digital skills and an understanding of the roles of different channels, which may result in some employees receiving less attention if they are not active on digital platforms. It has also been observed that it can be more difficult to distribute tasks fairly in remote work, and some employees may receive more responsibility or more interesting projects than others. Among the many consequences of remote work is that it disrupts the traditional way collegial relationships are formed. Instead of socializing in the office, remote workers must socialize online, where interactions are very task-focused. Consequently, it has been observed that workplaces have more collegial task-based relationships rather than emotional friendships due to these changes. In addition to the changed social dynamics, maintaining transparency in remote work regarding decision-making, information flow, and situational awareness is challenging. The lack of transparency easily fuels employees' uncertainty about why decisions were made and increases rumors and speculation. Uncertainty can create perceptions of favoritism regardless of whether favoritism has actually occurred, as it is natural for people to attribute reasons to unclear actions, regardless of whether the reasons are true or false.

We explore in this study how employees perceive and make sense of favoritism in remote work environment. We will collect short stories of favoritism in remote work during March 2025 via various social media platforms and analyze data with the narrative thematic analysis method.

We will present our preliminary findings at the WORK conference.

16.14

BELONGING IN HYBRID WORK: ASSOCIATION WITH REMOTE WORK AND IN-ROLE PERFORMANCE

Jussi Tanskanen, Samu Kemppinen, Liisa Mäkelä

University of Vaasa, Vaasa, Finland

Abstract

It is argued that belongingness stemming from lasting, positive, and significant interpersonal relationships is not just a want, but a very basic need for humans that motivates our actions and is a necessity for fulfilling life. People can feel belonging in several different context and belonging in work community has been described through feeling a sense of acceptance, respect, inclusion, and support in organization. Workplace belonging has been connected with employee well-being, but empirical research on organizational outcomes, such as performance has been lacking. It is important to distinguish employees' need for belonging in work context and the actual sense of belonging to a work team and organization. This study examines the relations of belonging on remote work preferences in hybrid work settings and whether the match of need to belong and sense of belonging is related to employees in-role performance.

Belonging in hybrid work and its relationship with in-role performance was examined with a sample (n=1641) collected from several Finnish organisations of large multinational technology manufacturing corporation, where hybrid working was common. Correlation analysis and semiparametric generalized additive models were utilized in analysing the data.

Correlational results reveal that those employees who have a high need for belonging in work want to do less and actually do less remote work compared to employees with lower need for belonging. The actual sense of belonging was only weakly correlated with doing and wanting to do remote work, but the sense of belonging was positively correlated with remote work satisfaction. Furthermore, the analysis indicated that the interaction between need and sense of belonging was not

significant regarding in-role performance. In addition, the main effect of need for belonging was not significant. However, sense of belonging was positively associated with in-role performance in a curvilinear manner, where only higher levels of sense of belonging are connected with increased in-role performance.

The results of the study suggest that personal need for belonging in work partly explains preferences to do work remotely, but it is the actual sense of belonging that is more strongly connected to the remote work satisfaction. Those who are satisfied to the level of belonging in team and organization tend to be more satisfied in working remotely. Regarding performance, the match between need to belong and actual belonging is not critical, but rather that the high levels of sense of belonging are connected with high levels of in-role performance even for those who report that belonging in the workplace is not important for them. Therefore, it is advisable for organizations to foster and develop belongingness in hybrid work.

16.15

WORK LONELINESS IN HYBRID WORK: A MULTILEVEL EXAMINATION OF LEADER-MEMBER EXCHANGE, JOB PERFORMANCE AND THE PROPORTION OF REMOTE WORK

Samu Kemppinen, Jussi Tanskanen, Liisa Mäkelä

University of Vaasa, Vaasa, Finland

Abstract

Work loneliness is an important factor which affects employee wellbeing, and it has been observed to be related to many negative outcomes such as lower job performance. Social context and the quality of the relationship between supervisor and the employee (leader-member exchange, LMX) are relevant predictors of work loneliness and job performance. In the context of remote and hybrid work, the risk of experiencing work loneliness could be more significant than in office-based work which could have further negative effect on job performance. However, the theories considering work loneliness have not explicitly explained and discussed the effects of structural elements of work, such as organization around working units, where the social context has been structured around teams and teamwork. Especially in the context of hybrid work, different teams can foster different social practices and form different social contexts meaning that the effects of team-level predictors may be different between teams compared to between individual employees. Additionally, due to organizational structures and team-specific social practices, work loneliness may be more prevalent within some teams than in others.

This study provides a theoretical discussion about the possible team-level effects and definitions related to work loneliness and tests whether the team-level model is similar to the individual-level model. The data for the study was a large sample (N = 1641; L1) of hybrid workers operating in large number of teams (N = 415; L2) collected via online survey from one large multinational corporation in 2022. Confirmatory factor analysis models were separately estimated for appropriate study variables to confirm the measurement structure, and their factor scores were saved for multilevel path analysis. Multilevel path analysis with robust maximum likelihood estimator (MLR) was applied to test the hypothesized model. The latent aggregation approach was utilized to aggregate the factor scores in the multilevel path model.

The results showed that at the individual level, the associations mainly matched theory, previous research, and our hypotheses. Higher LMX was related to lower work loneliness and higher job performance, while higher work loneliness was related to lower job performance. Higher amount of remote work was related to higher job performance and, contrary to general belief and hypotheses, to lower work loneliness. At the team level, the results were different from the individual level. The higher team-level remote work proportion was related to higher team-level work loneliness. The association of remote work and work loneliness was therefore considerably different depending on the level of investigation. Additionally, higher team-level LMX was still related to lower team-level work loneliness, but there were no associations between team-level job performance due to its low team-level variance.

The results highlighted three main points for conclusions: 1) the importance of considering the team-level effects of the amount of remote working regarding work loneliness which implies that organizations should consider the proportion of remote working on an individual-level basis while considering the team-level harmony of individuals, 2) the importance of the supervisor as the maintainer of good-quality social relationships which affects the average work loneliness of the whole

team, and 3) the importance of reducing the experience of work loneliness as it was associated with lower individual-level job performance.

16.16

LEARNING NETWORK FOR DEVELOPING THE HYBRID WORK MODE: MEETING THE CHALLENGES OF COMMUNALITY, LEARNING AND INNOVATION

Tuomo Alasoini[1], Hilpi Kangas[2], Marja Känsälä[1]

[1]Finnish Institute of Occupational Health, Helsinki, Finland. [2]Turku School of Economics, Turku, Finland

Abstract

As remote work became more common due to COVID-19, the public began to talk about remote work as the 'new normal'. However, the situation today can be described more as a diversification of ways of working. Increased diversity forms a fertile ground for boosting learning from different solutions and is an important potential force contributing to the renewal of working life in the digital transformation. However, utilizing this potential requires research-based knowledge based on a systematic assessment of different solutions and forums for organization-to-organization learning.

The crucial issue is not the hybrid work mode itself, but its role as a trigger for new process flows, management practices, working hour models, and technological and workspace solutions (Alasoini et al. 2025). The hybrid work mode is a significant workplace innovation (Oeij et al. 2017) enabled by digital technologies, which contains greater potential for helping organizations improve their performance, while also boosting employee well-being, than the more conservative return-to-office policies (Bartik et al. 2024; Bloom et al. 2024; Ding & Ma 2024).

The Finnish Institute of Occupational Health and Turku School of Economics have gathered a learning network of more than 30 participants with an eye to bringing about new solutions to help Finnish organizations gain a competitive advantage from the opportunities opened by the hybrid work mode. A three-year research project will be launched in spring 2025 on the condition the project will get funding from Business Finland. A learning network is a demanding form of project implementation (Alasoini 2018), but if successful, it includes great potential for building collaborative relationships, mutual learning and shared knowledge construction between network partners, and co-developing, experimenting with and scaling up new innovative solutions.

Twenty-four companies from different industries and of different sizes, seven public organizations and two NGOs have registered in the network. Organizations can participate in different roles. Research partners form the most significant subset for the study, while they are the most important source of new research knowledge and learning opportunities for all other participants. At the outer circle are learning partners whose main form of commitment is participation in project workshops and sharing of experiences of their hybrid work models in the network. Some of the companies participate as enablers, generating technological, workspace and other solutions for the hybrid work models of other participants.

The 'macro design' of the learning network project can be described using the concept of interactive research (Ellström et al. 2020). Knowledge generation in interactive research takes place as an interaction of two circles in the research system and the practice system. The first circle results in new generalizable theories and concepts, while the latter circle generates local theories (e.g. practical manifestations of theories and concepts in specific organizational contexts). The purpose of the learning network is to create conditions for these two circles to meet with the aim of achieving both shared conceptualizations and interpretations of the research object, as well continuous opportunities for its re-conceptualization and re-interpretation. In this manner, it is a two-way form of knowledge generation, where the roles of the different parties in the process can also partly be mixed and vary during the project.

Researchers act as collectors of data, facilitators of interactive encounters between participants, elaborators of new research knowledge and network coordinators. The main research data consist of interviews, surveys and workplace analyses conducted among research partners. We also collect data for research purposes from benchmarking seminars and the Delphi process. All other measures carried out in the project serve as more general activities to increase understanding of the phenomena that are the subject of the research.

References

Alasoini, T. (2018) Learning Networks as a Vehicle for Improving the Generative Capacity of Working-life Development Programmes. Action Research 16(1), 105–122. https://doi.org/10.1177/1476750316673880

Alasoini, T., Hirvonen, S. & Känsälä, M. (2025) Hybrid Work Model as a Success Factor: Guide to the Opportunities and Challenges of Hybrid Work. Helsinki: Finnish Institute of Occupational Health. https://www.julkari.fi/handle/10024/150309

Bartik, A., Cullen, Z., Glaeser, E., Luca, M. & Stanton, C. (2024) The Rise of Remote Work Evidence on Productivity and Preferences from Firm and Worker Surveys. Journal of Economics and Management Strategy, 1–14, accepted 19 August 2024. https://doi.org/10.1111/jems.12616

Bloom, N., Han, R. & Liang, J. (2024) Hybrid Working from Home Improves Retention without Damaging Performance. Nature, published online 12 June 2024. https://doi.org/10.1038/s41586-024-07500-2

Ding, Y. & Ma, M. (2024) Return-to-Office Mandates. Available at SSRN. http://dx.doi.org/10.2139/ssrn.4675401

Ellström, P.-E., Elg, M., Wallo, A., Berglund, M. & Kock, H. (2020) Interactive Research: Concepts, Contributions and Challenges. Journal of Manufacturing Technology Management 31(8), 1517–1537. https://doi.org/10.1108/JMTM-09-2018-0304

Oeij, P.R.A., Rus, D. & Pot, F.D. (eds.) (2017) Workplace Innovation: Theory, Research and Practice. Cham: Springer.

16.17

THE LASTING IMPACT OF COVID-19 ON THE WORKPLACE: ANALYSING EFFECTS ON LABOUR MARKET ENTRANTS IN ORGANISATIONS

Dries Van Herreweghe[1], Margaux Hermant[2], Olivier Lisein[2], Ezra Dessers[1]

[1]HIVA KU Leuven, Leuven, Belgium. [2]Lentic ULiège, Liège, Belgium

Abstract

Governments worldwide implemented strict public health measures during the COVID-19 pandemic, fundamentally altering work organisation. Paid work became more flexible in time and space through online, remote, and hybrid practices, with many employees working from home for a part of their work week (Anjum et al., 2022; Hamouche, 2023). The impact of these changes on society and employee well-being remains largely unknown. For labour market entrants, these transitions may have lasting effects. New entrants have indeed been profoundly impacted by the Covid-19 Pandemic during their studies, which has affected their education, finances, relationships and well-being (Böhlich et al., 2022; Levine et al., 2024; McKee-Ryan, 2021). They may enter the workforce with a different set of expectations and concerns. Research highlights that this generation tends to value flexibility, work-life balance as well as opportunities for personal and professional development (Acheampong, 2021;). This challenges organisations to adapt their HR practices and policies to provide opportunities that meet the expectations of these young professionals. This study examines the extent to which organisations have adapted their practices to address the challenges they face regarding the professional integration of new labour market entrants as well as to foster the engagement and retention of these younger employees.

Within this research several avenues are explored: the (potentially) accelerated organisational changes in post-pandemic work environments (e.g., hybrid working); shifts in HR practices for onboarding new employees (e.g., interpersonal dynamics in virtual teams); and the evolving work and career expectations of recent and upcoming labour market entrants.

This study assesses changes in work organisation and HR-practices, considering new entrants well-being, school-to-work transitions, and early career trajectories. These insights are critical, as these shifts not only impact individual well-being but also long-term organisational performance, particularly in light of the increasing political and scientific focus on sustainable career paths. However, despite this focus, research on labour market entrants remains scarce, even though they are likely to be most affected by reduced in-person interaction and non-standard work structures in post-pandemic environments. More specifically, few studies examine how organisational practices have evolved with the arrival of a new generation in the post-pandemic workplace.

The research conducts fifteen in-depth case studies across diverse organisational contexts, aiming to achieve three key objectives: (1) identifying challenges and opportunities in recruiting, selecting, and onboarding labour market entrants post-COVID-19; (2) identifying work organisation, HR practices, and infrastructural changes (e.g., satellite offices) implemented in post-covid organisations; and (3) assessing the impact of these changes on entrants' well-being and evaluating how new entrants experience their first job.

Fieldwork follows a consistent qualitative methodology for each case study, triangulating evidence through semi-structured interviews with stakeholders involved, as well as company-specific HR documentation.

Data collection and interviews began in late 2024 and are ongoing. Preliminary findings, based on the analysis of five completed case studies, will be shared during the presentation. We will also outline the theoretical background and methodology. Additionally, we will discuss the next steps, including further data collection, analysis, and the refinement of key insights for practical application.

This research aims to provide critical insights for organisations, HR professionals, and policymakers navigating the evolving post-pandemic work environment. By examining how recruitment, onboarding, and work organisation have shifted, the study offers evidence-based guidance on fostering sustainable career paths for labour market entrants. The findings can help organisations adapt HR strategies to enhance employee integration, well-being, and long-term retention. Moreover, understanding how young professionals experience these transitions enables the development of targeted support mechanisms, ultimately improving both individual career outcomes and organisational performance.

Acknowledgement: this research is part of the WINEcovid project, funded by the Belgian Science Policy Office.

References

Acheampong, N. A. A. (2021). Reward Preferences of the Youngest Generation : Attracting, Recruiting, and Retaining Generation Z into Public Sector Organizations. Compensation & Benefits Review, 53(2), 75-97. https://doi.org/10.1177/0886368720954803

Anjum, N., Rahman, Md. M., & Rahaman, Md. S. (2022). Challenges for HR Professionals in the Post-COVID-19 Era. Journal of Business Strategy Finance and Management, 04(01), 05-11. https://doi.org/10.12944/JBSFM.04.01.02

Böhlich, S., Hindley, C., & Mueller, M. (2022). Enhancing employer attractiveness : The impact of COVID-19 on Generation Z. European Conference on Management Leadership and Governance, 18, 45-54. https://doi.org/10.34190/ecmlg.18.1.795

Hamouche, S. (2023). Human resource management and the COVID-19 crisis : Implications, challenges, opportunities, and future organizational directions. Journal of Management & Organization, 29(5), 799-814. https://doi.org/10.1017/jmo.2021.15

Levine, K., Aley, M., & Miller, V. (2024). Careers after COVID : Examining the influence of vocational anticipatory socialization on post-pandemic career values and choices of emerging adults in the United States. Journal of Education and Work, 37(1-4), 277-291. https://doi.org/10.1080/13639080.2024.2384064

McKee-Ryan, F. M. (2021). Coming of age in a global pandemic : Hrm perspectives on generation z's workforce entry. Research in Personnel and Human Resources Management, 39, 99-128. Scopus.

17.01

EMPLOYEE DIGITALIZATION READINESS FROM SENGE'S LEARNING ORGANIZATION SYSTEMS THEORY PERSPECTIVE

Jarmo Pulkkinen

University of Lapland, Rovaniemi, Finland

Abstract

Digital transformation in work-life organizations has heightened the need for continuous learning at individual and organizational levels (Gräfe et al., 2024; Oberländer et al., 2020). At the employee level, previous digitalization-related research often highlights individual skills and self-efficacy, but the broader organizational context enabling employee digitalization readiness remains understudied (Trenerry et al., 2021). This presentation addresses that gap by examining employee digitalization readiness as a systemic, complex, and context-dependent phenomenon. I define employee digitalization as an individual's ability and preparedness to utilize devices, software, digital materials, and remote work in their organization duties. I apply Senge's systems theory (Senge, 2006) to analyze the empirical data in Finland's municipal land use planning and construction supervision context.

The research question is: How does employee digitalization readiness appear in Finnish municipal technical sector service production from the perspective of Senge's learning organization systems theory? The data was collected in 2023 from 148 municipalities (339 respondents) in Finland using an online questionnaire comprising structured and open-ended questions. The sample represents about half of the municipalities in Finland.

The findings indicate that employee digitalization readiness appears to be at an excellent level in municipal land use planning and construction supervision when examined through digital competence, digital mindset, and team digital learning. For instance, peer learning of digital skills is perceived as crucial, and peer support is generally available. However, providing peer support burdens technically skilled employees. From a shared digital vision and systems thinking perspective, readiness appears only moderate nationally.

The presentation's primary contribution to the scientific discussion is applying Senge's systems theory to study employee digitalization readiness. It advances systems theoretical understanding of the organizational context in employee digitalization readiness and provides practical insights for supporting digital transformation in organizations.

Keywords: digitalization readiness; employee; systems thinking; digital competence; municipality

References

Gräfe, P., Marienfeldt, J., Wehmeier, L. M., & Kuhlmann, S. (2024). Changing tasks and changing public servants? The digitalisation and automation of public administrative work. Https://Doi.Org/10.1177/13837605241289773. https://doi.org/10.1177/13837605241289773

Oberländer, M., Beinicke, A., & Bipp, T. (2020). Digital competencies: A review of the literature and applications in the workplace. Computers and Education, 146. https://doi.org/10.1016/j.compedu.2019.103752

Senge, P. M. (2006). The Fifth Discipline: The Art and Practice of the Learning Organization: Vol. Revised edition. Doubleday/Currency.

Trenerry, B., Chng, S., Wang, Y., Suhaila, Z. S., Lim, S. S., Lu, H. Y., & Oh, P. H. (2021). Preparing Workplaces for Digital Transformation: An Integrative Review and Framework of Multi-Level Factors. In Frontiers in Psychology (Vol. 12). https://doi.org/10.3389/fpsyg.2021.620766

17.02

FOSTERING LEARNING AND ADAPTABILITY: LEADERSHIP IN THE ERA OF AI

Marianne Ekonen, Liinamaaria Hakola

Jamk University of Applied Sciences, Jyväskylä, Finland

Abstract

The evolving digital landscape has increased pressures to adopt and effectively use Artificial Intelligence (AI) in organizations as part of the larger digital transformation (Tursunbayeva & Chalutz-Ben Gal, 2024). Nevertheless, we know little about the leadership capabilities needed to successfully implement this fundamental change. Researchers have called for more studies on how leadership can support organizations in successful digital transformation, such as AI adoption and use (Gilli, Lettner & Guettel, 2024; Schiuma, Santarsiero, Carlucci & Jarrar, 2024; Tursunbayeva & Chalutz-Ben Gal, 2024). There is currently some evidence that transformational leadership style helps organizations navigate this change successfully (Schiuma et al., 2024). Previous research has also confirmed that transformational leadership is linked to organizations' innovation capabilities (Afsar & Umrani, 2020; Sarros, Cooper & Santora, 2008). As Yukl (2009, 50) has noted, "one of the greatest challenges for leadership at all levels in organizations is how to create the type of conditions that encourage, facilitate, and sustain a favorable level of innovation and collective learning."

A recent McKinsey (2025) report describes the use of AI in workplaces and its impact on leadership and management. At its best, AI is utilized strategically within the organization to obtain business benefits and competitive advantage. Using AI can even create transformative value. Technology is already highly capable and is evolving rapidly. Advances in this area demand unified and ambitious vision from senior leaders in creating strategy-led AI road map. Utilizing AI requires continuous learning, and this requires support from management within the organization. Employees need to have opportunities to develop AI skills on the job and support mechanisms need to be developed for this purpose. (McKinsey & Company, 2025).

Individual resilience refers to an individual's flexibility and adaptability to change in unpleasant situations (Stein, Rutz, Hladschik-Kermer & Dorner, 2022). In the context of AI, individual resilience is critical as employees and organizations adjust to new ways of working, learning, and innovating. AI introduces rapid shifts in creative processes, decision-making, and problem-solving, requiring individuals to develop a mindset of continuous learning and adaptability. According to recent studies, different organizational actions, such as leadership, management and culture-related- initiatives (e.g. support, practices, interactions) can contribute to supporting resilience at the individual level (Kinnunen, Puusa & Hallikainen 2024). From a managerial perspective the objective is not only to enhance organizational performance and efficiency but to consider the survival, coping, and well-being of the employees (Kinnunen et al., 2024).

This paper is based on an early-stage study and aims to explore the theoretical ground for our future empirical research. The paper aims to explore the leadership capabilities that foster an innovative and adaptable environment, enabling spaces for learning and successful integration of AI in workplaces.

References

Afsar, B., & Umrani, W.A. (2020). Transformational leadership and innovative work behavior: The role of motivation to learn, task complexity and innovation climate. European Journal of Innovation Management, 23(3), 402-428. https://doi.org/10.1108/EJIM-12-2018-0257

Gilli, K., Lettner, N., & Guettel, W.H. (2023). The future of leadership: new digital skills or old analog virtues? Journal of Business Strategy 45(1), 10-16. https://doi.org/10.1108/JBS-06-2022-0093
Kinnunen, J.P., Puusa, A. & Hallikainen, H. (2024). Individual Resilience in Organizations in the Business Context: A Conceptual and a Bibliometric Analysis. Nordic Journal of Business 73 (3), 117-151.
McKinsey & Company (2025). Superagency in the workplace: Empowering people to unlock AI's full potential. McKinsey & Company. Retrieved from https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/superagency-in-the-workplace-empowering-people-to-unlock-ais-full-potential-at-work
Sarros, J. C., Cooper, B. K., & Santora, J. C. (2008). Building a Climate for Innovation Through Transformational Leadership and Organizational Culture. Journal of Leadership & Organizational Studies, 15(2), 145-158. https://doi.org/10.1177/1548051808324100
Schiuma, G., Santarsiero, F., Carlucci, D., & Jarrarb, Y. (2024). Transformative leadership competencies for organizational digital transformation. Business Horizons 67, 425-437. https://doi.org/10.1016/j.bushor.2024.04.004.
Stein, K.V., Rutz, W., Hladschik-Kermer, B. & Dorner, T.E. (2022). Tapping the potential of resilience to support an integrated and person-centred approach to health and wellbeing—Developing a simple assessment tool for practice. International Journal of Environmental Research and Public Health, 19(5), 2679. https://doi.org/10.3390/ijerph19052679
Tursunbayeva, A., & Chaluz-Ben Gal, H. (2024). Adoption of artificial intelligence: A TOP framework-based checklist for digital leaders. Business Horizons 67, 357-368. https://doi.org/10.1016/j.bushor.2024.04.006
Yukl, G. (2009). Leading organizational learning: Reflections on theory and research. The Leadership Quarterly, 20, 49–53. https://doi.org/10.1016/j.leaqua.2008.11.006

17.03

ADDRESSING THE SKILL MISMATCH USING GENERATIVE ARTIFICIAL INTELLIGENCE

Alessia Romito, Boris Sofronic

National Institute for Public Policy Analysis (INAPP), Rome, Italy

Abstract

The Fixing the Global Skill Mismatch report (BCG 2020), based on OECD data, states that the misalignment between the skills required by the labor market and those possessed by workers affects two out of five workers - 102.4 million people in the European Union and 1.3 billion worldwide.

Technological solutions aimed at identifying and mitigating this phenomenon include Labour Market Intelligence (LMI) platforms, Big Data Analytics, and discriminative artificial intelligence (AI) based on Machine Learning (ML) (Inapp Report 2021; Cazzaniga et al. 2024). These technologies are designed to support the work of career guidance services and employment centers, analyze the effectiveness of public policies, and provide valuable insights for the design of education and vocational training programs.

In Italy, as early as 2015, a Business Intelligence (BI) platform was introduced to offer visual tools for discovering the most in-demand skills, sectors, and professions in the country. In 2024, the first platform utilizing ML algorithms to match user CV data with job postings from companies entered production.

BI and ML systems continue to prove useful in assisting scientific research as well (Singh 2023). This is particularly true in the fields of education and employment, where data quality and analysis accuracy are crucial.

In recent years, another branch of A - Generative Artificial Intelligence (GenAI) -has gained increasing prominence. GenAI models and Large Language Models (LLMs) have led to a "democratization" of AI. In November 2022, the first public version of ChatGPT was launched, reaching one hundred million active users per month within just two months, making it the fastest-growing application in history (Augenstein et al. 2023) and bringing AI to everyone's desktop.

International scientific research on LLMs has yielded mixed results. Despite exciting advancements, academic literature has also documented significant limitations. For example, factual errors (ibid.), artificial hallucinations (Alkaissi et al. 2023; Wang et al. 2023), errors caused by external data sources, and inference errors (ibid., p.5, Table 1) have been observed.

This research, therefore, focuses particularly on the quality of training data, the evaluation of LLM accuracy, and fact-checking methodologies.

The text examines potential applications of LLMs as tools for identifying skill mismatches by developing an experimental GenAI tool capable of accurately answering questions about the most in-demand skills, professions, and soft skills, the most dynamic economic sectors, the most valued qualifications and extracurricular experiences among employers in Italy, and much more.

The experiment took place in two distinct phases (in 2023 and 2025) using different AI models:

- in the first phase (2023), ChatGPT- 3.5 was used, as it was the only available model at the time. Some errors were found in its responses, sometimes critical (e.g., limited domain knowledge, outdated knowledge base, inference errors, and hallucinations);
- in the second phase (2025), the so-called Frontier Models and their new advanced tools and functionalities were used, yielding results more in line with expectations.

The conclusions present some considerations on the prospects of Agentic AI, Artificial General Intelligence (AGI), and Artificial Superintelligence (ASI).

References

Alkaissi H., McFarlane S. I. (2023), Artificial Hallucinations in ChatGPT: Implications in Scientific Writing, Cureus 15(2): e35179. doi:10.7759/cureus.35179

Augenstein, I., Baldwin, T., Cha, M., Chakraborty, T., Ciampaglia, G. L., Corney, D., ... & Zagni, G. (2023), Factuality challenges in the era of large language models, arXiv preprint arXiv:2310.05189

Boselli, R., Cesarini, M., Mercorio, F., & Mezzanzanica, M. (2017), Using machine learning for labour market intelligence, In Machine Learning and Knowledge Discovery in Databases: European Conference, ECML PKDD 2017, Skopje, Macedonia, September 18–22, 2017, Proceedings, Part III 10 (pp. 330-342). Springer International Publishing

Boston Consulting Group (2020), Fixing the Global Skill Mismatch https://on.bcg.com/3aFIzPz.

Bostrom, N. (2014), Superintelligence: Paths, Dangers, Strategies, Oxford University Press

Cazzaniga et al. (2024), Gen-AI: Artificial Intelligence and the Future of Work, IMF Staff Discussion Note SDN2024/001, International Monetary Fund, Washington, DC

IBM (2023), What is artificial superintelligence? https://bit.ly/4ic9mEz

INAPP (2021), Rapporto Inapp 2021. Lavoro, formazione e società in Italia nel passaggio all'era post Covid-19, Roma, Inapp https://oa.inapp.org/xmlui/handle/20.500.12916/3267

OpenAI Charter: https://bit.ly/3OMbK8e

Singh, C. (2023). Machine Learning in Pattern Recognition. European Journal of Engineering and Technology Research, 8(2), 63–68. https://doi.org/10.24018/ejeng.2023.8.2.3025.

Yampolskiy, R. V. (2015). Artificial superintelligence: a futuristic approach. cRc Press

Wang, C., Liu, X., Yue, Y., Tang, X., Zhang, T., Jiayang, C., ... & Zhang, Y. (2023), Survey on factuality in large language models: Knowledge, retrieval and domain-specificity, arXiv preprint arXiv:2310.07521

17.04

IS MONOLINGUAL WORKPLACE ENVIRONMENT A DETERMINANT OF EMPLOYER SUPPORT FOR MIGRANT LANGUAGE TRAINING?

Oksana Žabko

University of Latvia, Riga, Latvia

Abstract

Immerse number of migrants' lived experiences evidence that the language proficiency of the destination country is strong determinant for enhancing migrants' opportunities and position in the local labour market. In this respect, employers are powerful actors for migrant labour integration, however, their role in facilitating national language proficiency has received less interest. Moreover, existing studies rely on qualitative investigation of enterprise organisational culture and rarely use quantitative data to establish causal links between enterprise language policies (mono or multilingualism) and everyday practices to support the development of the migrant's language skills.

My contribution to filling this knowledge gap is based on a specific Latvian example – the employers' survey conducted in December 2024. The Latvian case is interesting due to high importance given to national language skills in the local labour market. Despite requirements of the national regulations to have the national language knowledge at least at a basic level for any skilled and even low-skilled occupations, which is also extended to migrants, in practice Latvian companies employs various language policies, maintaining both monolingual and multilingual work environments. Here, multilingual companies usually use English as a bridge for communication, but in certain sectors, Russian retains its role as an intermediary language. Apart from the government position, recent studies show that some Latvian companies attach high importance to maintaining a monolingual environment (based on the Latvian language), and migrant job applicants are thus required to learn the language in a relatively short time. However, the company's own policies to support migrants' language learning have so far received

little attention. The survey data presented is the paper allows to determine relationships between enterprise language policy and existence of real support measures to migrants in advancing their national language skills. The data used was collected under the research project "Reception of migrants under conditions of uncertainty: governance and local level inclusion" funded by the Latvian Council of Science (grant number: LZP-2023/1-0227).

18.01

RESOURCES FOR LEARNING OCCUPATIONAL SAFETY AND HEALTH IN FOOD DELIVERY WORK ON PLATFORMS

Laura Seppänen[1], Pia Perttula[2], Riikka Ruotsala[2]

[1]Finnish Institute of Occupational Health, Helsinki, Finland. [2]Finnish Institute of Occupational Health, Tampere, Finland

Abstract

The rise of platform-mediated work has increased the individualized approach to participating in the labor market. For example, in food delivery work, self-employed couriers perform tasks (gigs) alone and must carry much of the new and old occupational risks on their own (Schor & Tirrel, 2023). Individual workers are more connected to digital applications than to organizations (Nilsen et al., 2022). In terms of learning, this shift necessitates to reframe what workplace learning is, particularly because traditional learning theories have been focused on social aspects of organizational learning. In platform-mediated work, where traditional organizational learning processes and practices are largely missing, a question arises: what elements sustain and support learning? More specifically, what types of learning resources are available for individual workers in food delivery work? By learning resources, we mean any tools, practices or symbolic elements in couriers' everyday work that may prompt learning in practice.

In this presentation, we explore these questions of learning within the context of occupational safety and health (OSH) in food delivery work. Learning has been recognized as a critical factor in OSH. Food delivery work includes not only OSH risks involved in traffic, isolation, deskilling and precarity but also risks from algorithmic management of the platform app (Bråten et al., 2024; Perkiö et al., 2023). Therefore, the consideration of OSH in food delivery couriers' work is an important competence to be learned. The status of the self-employed, prevalent among couriers in Finland, further aggravates this challenge. Compared to normal employment, for food delivery workers there is no employer who takes care of the safety and health of their employees. A variety of tools and practices—such as risk assessments, induction processes, and safety observation procedures—serve as valuable resources for learning in typical organisations and employment. These learning resources are absent in food delivery work. We are interested in understanding how workers learn safety when OSH responsibilities are individualized to them and the platform does not carry the OSH responsibilities of an employer. To address this, deeper insights are needed into what learning encompasses, who the learners are, what is learned, how and why learning occurs (Engeström, 2001).

In our presentation we will focus on describing and analysing learning instances of food delivery work. Learning is conceptualized as changes in orientations or actions of couriers in their practical everyday work. The data coming from a European study (Occupational safety learning and management in platform work – TOPPA | Finnish Institute of Occupational Health) are qualitative interviews of food delivery workers, which are analysed with the four questions of learning (who, why, what and how). In particular, the focus is in the resources (the how-question) available for workers. Inspired by both pragmatism (e.g. Dewey, 1938/86) and activity theory (e.g. Engeström, 2001), problems and possibilities are revealed as resources for learning. Moreover, learning seems to be prompted especially by tensions or mismatches between workers' expectations and the reality of their delivery work. The expectations often come from comparing platform work with traditional employment.

The findings enable us to discuss various aspects of learning-work relations. First, as in safety research the learning at work is often associated with formal training, induction and instruction, these findings shed light on the motivational and practical-situational features of work that are indispensable, we argue, for learning. Our insights could possibly be used to make OSH preventive induction and instruction more efficient in food delivery work. Second, the outcomes of learning (the what-question) reveal that the learning of OSH is very much conditioned by platform practices such as rating systems, task-based payments, or ways of communicating. Third, the individual nature of learning is discussed. From our European consortium and literature, we will show examples of delivery workers' social initiatives that support OSH learning. Algorithmic management not only poses risks to OSH learning but also offer possibilities for it. Tools and practices enhancing OSH learning in new digitalized and fragmented work contexts are an important part of human and social sustainability.

18.02

AI COMPETENCE AND EMPLOYABILITY IN AN UNRULY LABOR MARKET: A GENERATIONAL ANALYSIS

Sabina Lissitsa, Chen Sabag Ben-Porat

Ariel University, Ariel, Israel

Abstract

The rapid proliferation of artificial intelligence (AI) is transforming the structure of work, reshaping career trajectories, and altering the very concept of employability. As AI-driven automation permeates industries, workers must continuously update their skillsets to remain competitive in an evolving labor market. This transformation raises critical questions about how different generations perceive and adapt to AI competence and how human and social capital interact to influence their employability. This study examines generational differences in the relationship between AI competence and perceived employability, analyzing the extent to which human capital (education, AI literacy) and social capital (professional networks, career support) shape career resilience among Generations X, Y, and Z.

The concept of employability is no longer static; it demands a dynamic interplay between acquired knowledge, adaptability, and access to professional networks. Traditional models of career progression have been disrupted by AI's rapid advancement, necessitating lifelong learning as a strategic imperative rather than an optional pursuit. While organizations integrate AI solutions to enhance productivity, employees must navigate the dual pressures of maintaining relevance and future-proofing their careers. This paper explores the extent to which AI competence serves as an employability asset across generational cohorts, shedding light on the mechanisms that facilitate or hinder workforce integration in an AI-driven era.

This study draws on a large-scale online survey of 723 respondents aged 18-58, representing Generations X (ages 45-58), Y (ages 29-44), and Z (ages 18-28). Employing a hierarchical regression analysis, we assess how AI competence and social capital influence perceived employability across these groups. Our findings reveal distinct generational patterns: for Generation X, professional networks play a pivotal role in sustaining employability, compensating for lower AI competence levels. Conversely, Generation Y exhibits a stronger reliance on human capital, with AI competence and formal education serving as key predictors of employability. Generation Z, despite being digital natives, faces challenges in translating their AI proficiency into tangible career advantages, relying instead on social capital to navigate early career transitions.

A critical finding of our study is the differential impact of AI competence across generations. While AI literacy is an essential skill in today's labor market, its employability benefits are not uniform. Generation X, often considered digital immigrants, demonstrates lower AI proficiency but leverages established professional networks to secure opportunities. This suggests that career longevity in an AI-driven world may not solely depend on technical skills but also on the ability to mobilize relational resources. Generation Y, positioned at a mid-career stage, benefits from AI competence as a career-enhancing asset, reflecting a hybrid model where both human and social capital contribute to employability outcomes. Meanwhile, Generation Z, despite its technological fluency, struggles to leverage AI skills effectively, suggesting that early-career professionals may require additional structural support to translate competence into job market advantages.

Our analysis further indicates that social capital remains a critical component of employability across all generations, though its function differs depending on career stage. For older workers, strong professional networks mitigate the risks associated with technological change, while for younger workers, social capital facilitates entry into the labor market. The interplay between human and social capital thus offers a nuanced understanding of employability in the AI era, demonstrating that technological adaptation alone does not guarantee career stability.

These findings carry significant implications for policymakers, educators, and employers. Organizations must recognize the diverse pathways through which employees cultivate career resilience and tailor learning and development programs to address generational needs. For older workers, reskilling initiatives should integrate social capital-building strategies, such as mentorship and peer collaboration, to ease AI adoption. For mid-career professionals, upskilling in AI competencies should be coupled with leadership development to enhance career progression. Meanwhile, for younger employees, structured career support systems—such as internship programs and professional networking opportunities—can bridge the gap between AI competence and employability outcomes.

Ultimately, our research underscores that the future of employability in an AI-dominated workforce is not solely about technical proficiency but about cultivating an adaptive career mindset. AI competence is an asset, but its impact is mediated by access to social capital and the ability to integrate technological skills into professional trajectories. Addressing these generational

disparities is key to ensuring a workforce that is resilient, adaptable, and capable of navigating the unruly terrain of AI-driven labor markets.

By situating our study within the broader discourse on AI and work, we contribute to ongoing debates on the skills economy, lifelong learning, and intergenerational workforce strategies. As the labor market continues to evolve in the face of AI advancements, understanding the varied pathways to employability will be essential in fostering an equitable and inclusive future of work.

18.03

SELF-DIRECTED LEARNING IN MOTION: EXPANDING THE CONTEXT OF WORKPLACE LEARNING IN THE TECH INDUSTRY

Omri Hadar, Yifat Ben-David Kolikant

The Hebrew University of Jerusalem, Jerusalem, Israel

Abstract

The tech industry is characterized by a high pace of change, driven, among other things, by technological advancements, globalization, and increasing competition. Therefore, employees in technological professions within this industry, such as programmers, software engineers, and others, must engage in continuous learning – both to remain relevant in the industry and to ensure the competitiveness of the organizations they work for. Previous studies have shown that tech workers predominantly rely on self-directed and informal learning, often triggered by challenges in their daily work.

While research on workplace learning in the tech industry has focused mainly on in-role development, it has rarely addressed a key characteristic of this sector – frequent job transitions, often initiated by employees themselves. To illustrate, according to the Israel Innovation Authority, in 2021, 10.1% of Israeli tech workers chose to change jobs, with most moving to other roles within the industry. The few studies that do examine job transitions in the tech sector suggest a connection between mobility and learning, aligning with findings that turnover is not always driven by dissatisfaction (Puhakka et al., 2021). However, the nature of this connection remains unclear, particularly in the context of the fast-changing tech industry.

Aiming to fill this gap, we explored the work-related learning processes of tech workers by focusing on the impact of frequent job transitions. Our research question was: How do employees in technology professions perceive and interpret the learning processes they engage in throughout their careers?

To explore this issue, we conducted a thematic analysis of semi-structured interviews with 32 Israeli tech professionals from various roles (e.g., programmers, product managers, algorithm developers) across different companies. Participants' ages ranged between 30 and 37, indicating they gained industry experience while having substantial career years ahead of them. Snowball sampling was used to obtain the sample.

All participants had changed jobs multiple times in their careers, with transitions ranging from two to eight moves. While a few were let go, the vast majority actively chose to leave. According to the participants, rapid mobility was considered the norm in the industry.

Participants cited several reasons for leaving their workplace, the most common being professional growth. All participants stated they sought roles that pushed them beyond their current skill set when choosing a new job. Their learning was driven by the need to meet the demands of a new position. Once they felt they had mastered their role and no longer faced significant challenges, they began looking for new opportunities through internal mobility or moving to another company.

Participants approached job opportunities strategically, seeking roles that would challenge them and expand their expertise. Rather than simply pursuing difficult work, they looked for positions requiring them to develop skills and knowledge they believed would be valuable in the industry. They assumed this would help them stay relevant and improve their employability. Beyond their immediate workplace, they shaped their learning processes with a broader perspective, considering not just their current position but the tech industry as a whole.

Our findings align with previous research, indicating that work-related learning among tech workers is primarily self-directed and informal, with daily work challenges serving as key drivers of these learning processes. In line with Lemmetty and Collin's (2022) conceptualization, our findings also support the idea that self-directed learning is shaped by its context rather than being merely an individual trait or action.

However, while existing literature explicitly or implicitly frames context as the current workplace, our findings suggest a more nuanced perspective. Participants perceived two distinct contextual layers guiding their learning: a "small" context – their current organization, which they viewed as easily changeable – and a "large" context – the tech industry, which they see as the primary force shaping their learning and career decisions, even within their workplace.

Our findings offer new insights into workplace learning among tech professionals, highlighting job mobility as a driver of continuous learning rather than merely a response to dissatisfaction. They also reveal how workers balance learning within their organizations while staying attuned to industry-wide trends. Beyond tech, these insights have broader implications. As digitalization accelerates, industries will face faster cycles of change, making continuous learning and career mobility increasingly essential. While tech may be at the forefront of this shift, similar patterns are likely to emerge in other fields.

Reference

Lemmetty, S., & Collin, K. (2022). Self-Direction. In V. P. Glăveanu (Ed.), The Palgrave Encyclopedia of the Possible (pp. 1456–1462). Springer International Publishing. https://doi.org/10.1007/978-3-030-90913-0_147

Puhakka, I. J. A., Nokelainen, P., & Pylväs, L. (2021). Learning or Leaving? Individual and Environmental Factors Related to Job Satisfaction and Turnover Intention. Vocations and Learning, 14(3), 481–510. https://doi.org/10.1007/s12186-021-09275-3

18.04

ENABLERS AND BARRIERS OF LEARNING THROUGH CO-CREATION IN VOCATIONAL EDUCATION ORGANIZATIONS

Laura Bordi, Sanna Nuutinen

Tampere University, Tampere, Finland

Abstract

Vocational education and training (VET) organizations are facing changes in work and operating environments that require a broadening of their collaborative development focus. For example, changes in learning environments, pedagogy and tools (e.g. digitalization), increased student diversity and stakeholder collaboration, as well as issues related to employee and student wellbeing, bring the need for co-creation to address these challenges.

Co-creation refers to collaborative development in the workplace involving at least two or more individuals, teams, or organizations. Its core principles are equal participation and free exchange of ideas. Co-creation provides different methods for continuous and systematic development. Through co-creation, individuals share experiences, tacit knowledge and skills, fostering open, ongoing dialogue and promoting collaborative learning.

In this presentation, we aim to explore the enablers and barriers of co-creation at work in the context of vocational education by exploring the experiences and views of VET staff on co-creation at work. The data was collected in four VET organizations in 2024-2025. The data include interviews, responses to open-ended survey questions, and workshop discussions. The qualitative method of inductive content analysis was applied to the research data. The findings are preliminary as data collection is ongoing.

The preliminary findings suggest that different organizational, team, and individual factors can support or hinder co-creation at work. The analysis identified five enablers of co-creation: organizational strategy and its implementation in organizational culture, enabling structures, managerial support, shared understanding of need and purpose, and trust. Barriers to co-creation fell into four main categories: inward focus, lack of resources, unclear 'big picture', and conflicting priorities and practices.

Organizational strategy was seen as the ultimate starting point for promoting co-creation, but this also requires the concrete embodiment of strategy in organizational culture, values and practices. Managerial support was described as the positive and supportive attitude of immediate managers towards co-creation and the organization of work and working time to enable participation in co-creation. Shared understanding of need and purpose was seen as a prerequisite for motivation and

commitment. Trust was described as openness to share one's ideas, views, opinions, and knowledge, and the ability to give space and listen to others. More theoretically, trust could be described as psychological safety.

Inward focus was identified as one of the main barriers to co-creation. At an individual level, this could mean that the teacher's pedagogical autonomy becomes 'pedagogical autocracy', where the teacher does not consider or care about the views of other staff. At group level, inward focus can manifest itself as too strong a team orientation, where the team works well together but is not open to outside ideas or collaboration. It can also manifest in negative attitudes towards new staff from other organizations or fields, or in a general suspicion of 'outsiders'. Lack of resources, such as overly busy and/or fragmented schedules that do not support participation, can also hinder co-creation. An unclear 'big picture' was described as a difficulty in seeing the broader context of the organization or the VET field and one's own role in it. This can also make it difficult to understand the importance and role of co-creation in one's own work, which can hinder motivation and commitment. Finally, conflicting priorities and practices between individuals or groups were also mentioned as factors that make co-creation difficult.

In conclusion, co-creation holds significant potential for organizational development and collaborative learning in the workplace. However, various organizational, team, and individual factors can either support or hinder this process. Therefore, it is beneficial for organizations to assess and identify the factors that promote and facilitate co-creation, as well as the structures, conventions, practices, and mindsets that may impede it. Enhancing co-creation appears to be more of a strategic and cultural endeavor rather than merely adopting specific work methods.

18.05

LEADING HYBRID AND DIVERSE PROJECT TEAMS: THE ROLE OF PROJECT MANAGERS' TRANSVERSAL COMPETENCIES (POSTER)

Mervi Varhelahti[1], Valentina Vigato[2], Laiho Maarit[1]

[1]Turku University of Applied Sciences, Turku, Finland. [2]Turku University of Applied Sciences, turku, Finland

Abstract

In modern project management, international and diverse teams have become increasingly common, as organizations strive to recruit the most skilled professionals from around the world. The integration of individuals from various cultural and professional backgrounds enriches project teams with diverse perspectives. Concurrently, the rise of virtual and hybrid work models has accelerated due to the need for efficiency, reducing travel costs, and optimizing time management. Additionally, diversity in project teams extends beyond cultural backgrounds, encompassing factors such as gender, age, and professional experience.

Effective project leadership in diverse teams necessitates an adaptive approach that emphasizes transversal skills. Transversal skills are skills that are not usually viewed as specifically related to a specific work or area of expertise, but as skills that can be applied in diverse situations and work environments e.g. effective communication, respect for diversity, and inclusivity. However, project managers often lack the necessary transversal skills to manage diverse teams effectively, despite the recognition of these skills in project competence frameworks such as the IPMA ICB (Individual Competence Baseline for Project Management). The ICB highlights competencies such as respecting others and acknowledging ethnic and cultural diversity as essential for project success. Nevertheless, project management continues to be primarily associated with technical and operational expertise, often overlooking the significance of transversal skills that are critical for addressing the complexity of diverse projects. Although organizations recognize the strategic importance of DEIB (Diversity, Equity, Inclusion, and Belonging) and transversal competencies, they frequently fail to implement effective diversity strategies in practice, resulting in a gap between required and existing competencies.

This study explores the perceptions of project team members and managers´ in virtual environments, investigating which transversal skills are essential for project managers to lead diverse teams successfully in virtual settings.

A mixed-method approach was employed, analyzing responses from an online survey shared across Europe and completed by 90 respondents using the following languages Spanish (48.9%), Finnish (25.5%), English (25.6%). The data was collected between January and February 2024 and analyzed using SPSS. The quantitative analysis included descriptive statistics, Spearman's correlation coefficient, the Mann-Whitney U test, and the Kruskal-Wallis test. Non-parametric tests were chosen due to their applicability to non-normally distributed data. The qualitative data obtained from open-ended questions of the

survey were examined using thematic content analysis and quantification. Majority of respondents were women (58.9%), while men constituted 37.8%, and 3.3% preferred not to disclose their gender. Regarding age, respondents were evenly distributed across three age groups: 34.4% were aged 40 or younger, 36.7% were between 41 and 50 years old, and 28.9% were over 50 years old. Of the respondents 49% reported to have a managerial position in the projects.

The results of the study show that the most common transversal skills required from the project managers were self-management, followed by language proficiency and empathy. Skills related to equality considerations, such as ethnic equality awareness and cultural understanding, were less frequently acknowledged. The least commonly reported competencies pertained to considerations of sexual orientation, age, and professional equality. The comparative analysis between managers and other respondents revealed minor differences in perceived importance. Managers assigned slightly higher importance to self-management skills, whereas non-managers emphasized language skills and empathy. These findings suggest that managers and non-managers have slightly diverse opinions on the transversal competencies required for leading diverse project teams in virtual or hybrid settings.

Furthermore, an analysis of open-ended responses about project managers' competences identified five thematic categories: innovation and thinking, communication, socialization, empathy, and other skills. Innovation and cognitive flexibility were most frequently highlighted as essential competencies in leading diverse virtual project teams. Notably, project managers were more likely than other team members to view these skills as crucial and advantageous.

These findings underscore the necessity of developing transversal skills alongside technical expertise in project management. The results also reinforce the notion that diversity alone does not inherently enhance project efficiency. Instead, harnessing diversity as a team asset requires effective leadership that emphasises the different elements of human interaction and encounter.

As such, higher education institutions and organizations must invest in training that equips project managers with the necessary transversal skills to foster inclusive, innovative, and high-performing teams. Future research should further investigate the long-term impact of transversal competencies on project outcomes, as well as effective strategies for embedding these skills into organizational leadership development programs.

18.06

ROLE OF PART-SCOPE SIMULATOR IN BUILDING PROFESSIONAL COMPETENCE ON COMPLEX PROCESS CONTROL WORK

Satu Pakarinen[1], Jari Laarni[2], Hanna Koskinen[2], Tomi Passi[1], Tuisku-Tuuli Salonen[2]

[1]Finnish Institute of Occupational Health, Helsinki, Finland. [2]VTT Technical Research Centre of Finland Ltd, Espoo, Finland

Abstract

In energy production, such as in the nuclear industry, the systems are extremely complex. Building and maintaining professional skills and competence plays a critical role in ensuring efficient production and safety. In nuclear power plants (NPPs), a major part of the training takes place in very close connection to the actual work, mainly at the workplace. In this empirical study, we examined the prospects of a part-scope simulator in training NPP main control room (MCR) operator candidates.

The NPP main control room operators' training starts with classroom training. An essential part of training is, however, conducted 'hands-on' in full-scope training simulators, mandated by Finnish law and Regulatory Guides on nuclear safety (YVL guides). Also, to maintain their license, the MCR operators are required to train annually in the simulator. However, there are some challenges related to training in full-scope simulators, as the simulators are expensive and often fully booked. More importantly, practicing in these simulators requires considerable expertise in the entire plant systems and processes, making them not very suitable for beginning learners.

One solution to provide more easily approachable training opportunities for complex systems is by means of part-scope simulators. Part-scope simulators typically represent only a certain part of the complex system and can be operated on a laptop or a PC. In this study, we examined the opportunities to use part-scope simulators in the nuclear industry. To be more specific, we investigated the suitability of part-scope simulator training for skill development in basic operator training. Further, we identified the types of tasks it is especially appropriate for.

The study was conducted in two phases. In the first phase, we gave a demonstration of the part-scope simulator to six operator trainees who were in the early stage of their training. The part-scope simulator was installed on a laptop PC and operated with a mouse and a keyboard. An external, larger 24" screen presented the relevant section of the control room panel, and the smaller 15" laptop screen was used to present, e.g., trends of the main process parameters. After the demonstrations, we interviewed the trainees about their views on the user interface and the applicability of the simulator in their training. In the second phase, a year later, the same operator candidates (at this time, only four of them were available) tested the part-scope simulator. After the test session, they were interviewed on their experiences, the usability and the applicability of the part scope simulator.

On the first occasion, the trainees were quite positive about the prospects of the simulator. The user interface elicited some criticism as it was operated by a mouse instead of the analog interface that is used in the actual plant. In the second interview, the trainees were more critical. On the one hand, the part-scope simulator was considered especially suitable for self-learning as part of system training. On the other hand, this was seen as a challenge, as the part-scope simulation training was seen as relevant for a brief period only. In addition, it was pointed out that there are not many systems that can be appropriately simulated. Such systems should be complex enough to require simulator training and independent enough from other systems to allow realistic simulation.

The most significant potential benefits were seen in the part scope simulators' greater availability compared to the full-scope simulator and in the possibility to test operations or even system modifications before actually implementing them in the plant. It was also seen that the part scope simulator would be useful for the seasoned operators to test some rare or demanding operations before actually conducting them in the actual plant.

In conclusion, part-scope simulators were considered to have the potential for developing operator competence. They were considered particularly suitable for self-learning, provided that they are simple enough to use without external help from the trainer. Also, they were seen as useful for licensed operators for testing some seldom occurring process conditions or maneuvers before actually implementing those in the plant. Direct feedback, either from the simulator or from a trainer, was seen as supporting learning, but also to help in situations where the operator felt stuck and did not know how to proceed. Importantly, to be most useful, the part-scope simulator training should be carefully planned and fitted to the curriculum. The learner should have the necessary skills to be able to train in the simulator but on the other hand, not be too advanced for the training to be trivial. Clearly, the part-scope simulators can be beneficial in developing and maintaining competence, complementing the other, more conventional forms of training, such as classroom training, full-scope simulator training, and reading training material.

18.07

VIRTUAL-REALITY TRAINING FOR SPECIALISED SAFETY-CRITICAL PROCESS CONTROL TASKS

Tomi Passi[1], Pakarinen Satu[1], Koskinen Hanna[2], Jari Laarni[2], Tuisku-Tuuli Salonen[2], Kristian Lukander[1]

[1]Finnish Institute of Occupational Health, Helsinki, Finland. [2]VTT Technical Research Centre of Finland Ltd., Espoo, Finland

Abstract

Virtual reality (VR) offers new occupational training and competence management opportunities. In highly specialized fields, such as energy production, one of the biggest obstacles to their implementation has been the lack of appropriate training content. Also, the evaluation of VR learning environments for energy industry has for a long time focused on technical details and usability, often lacking the assessment of the actual goal, i.e., the learning outcome (Pakarinen et al., 2024). However, this evaluation is crucial for justifying the costs of developing VR training systems and designing the learning curriculum to best support the learning process. Here, we describe a series of studies aiming at participatory development of VR training for nuclear power plant (NPP) field operators (FOs), as well as future plans to evaluate the learning outcomes in these training environments.

FOs perform operations in vast and complex facilities, making it difficult to simulate their work tasks in conventional, physically matching full-scope simulators. However, VR, without the limitations of a physical environment, provides a convenient opportunity to realistically model and train in vast environments and on variety of work tasks. In our recent review, we explored existing VR solutions for FO training and their utilization in developing skills and expertise (Pakarinen et al., 2024). VR training was found to have advantages over conventional classroom- or simulator-based training, particularly in learning operating procedures. Furthermore, VR solutions that allowed active participant involvement and provided more guidance — by the trainer or the VR system itself — were perceived to enhance learning. For VR training to be effective, it should align with set

training goals and learning tasks and then be performed just as in conventional training. Similarly, a realistic and user-friendly VR implementation was suggested as essential for effective learning.

To explore the VR training opportunities in the Finnish nuclear industry, we conducted an interview study (Koskinen et al., 2022). The main aims were to examine how FO training is currently arranged and how FOs foresee the potential of VR technologies in their training. It was found that the FOs have an opportunity to partake in the main control room (MCR) operators' training activities in a full-scope MCR simulator. However, as the work environment of the FO cannot be physically simulated, their participation consists of primarily observing the simulator run. Hence, they lack active, hands-on participation, which is considered to be the most efficient learning method by the FOs. VR was perceived as a potential solution: it could allow the FOs to realistically practice operation and collaboration with the MCR operators. In addition, the FOs thought that VR could be utilized for learning to operate new equipment and training certain demanding tasks, particularly those that cannot be practiced during normal plant operation (Koskinen et al., 2022).

One way to ensure that the training content aligns with the training curriculum and supports motivation is to utilize a participatory development process of VR environments, in which technical developers collaborate with educational experts, trainers, and end-users. Our subsequent studies examined how VR is applied in Finnish NPPs (Pakarinen et al., 2023) as well as the participatory development process of VR training for FOs (Koskinen et al., 2024). In the experiment, FOs participated in an MCR operator simulator training (Pakarinen et al., 2023). The training began in the MCR simulator, but as part of the scenario, the FOs were sent to conduct a valve operation outside the MCR in a VR environment (Pakarinen et al., 2023). The VR environment was found suitable and effective for training this type of operation. Furthermore, it was experienced as intuitive, predictable, and easy to use, requiring only a brief familiarization. Based on the end-user's feedback the usability of a spanner used in the valve operation was gradually improved over the testing sessions. Interestingly, these improvements enhanced the sense of presence even in aspects beyond the primary task. Yet, as observed in our recent interview study (Koskinen et al., 2024), while the potential of VR-based training in the nuclear industry has been widely acknowledged, its broader adoption as a training method in NPPs is still underway. The main challenges in this regard include concerns about cost-effectiveness, VR's added value over traditional training methods, usability issues, and end-users' mixed perceptions of VR (Koskinen et al., 2024).

In conclusion, VR applications have yet to establish themselves as an integral part of the training curriculum at NPPs. Even though development efforts have shown promise, and end-users have recognized the potential of VR for developing their skills, technical and pedagogical aspects of VR still require further development. To improve their effectiveness as a training method and to support wider adoption, participatory development seems a promising method. In our future studies, we will continue this line of research focusing on, e.g., evaluating the effectiveness of VR training compared to the traditional FO training methods.

18.08

CULTURALLY AND LINGUISTICALLY DIVERSE (CALD) FUTURE HEALTH CARE PROFESSIONALS' CAPABILITIES TO WORK IN THE FINNISH HEALTH CARE SECTOR

Sini Hämäläinen, Emilia Laapio-Rapi, Marjut Louhelainen

LAB University of Applied Sciences, Lappeenranta, Finland

Abstract

Background: The amount of culturally and linguistically diverse (CALD) health care professionals with a Finnish nursing degree is growing steadily in Finland. Most of the graduates are planning a future in the Finnish working life. Still, their potential as future health care professionals as well as possible their previous expertise is often underestimated in the field.

Aim: The study explores supervising nurses' and nursing teachers' views of the potential and future of CALD health care students working in the field.

Method: The data was collected using a thematic interview from one wellbeing service county's health care staff members and one university of applied sciences teachers (=8). Qualitative data were analyzed using inductive analysis method.

Results: The nursing supervisor's positive experience of guiding CALD nursing students had a major influence in envisioning the future career of the student and they could be seen as future colleagues. Often their potential and expertise was questioned due to insufficient language skills. This led to low integration and the students' migrating to other regions. The internship supervisors who had knowledge and understanding about the students' background and position in the Finnish society were better aware of the potential of CALD nursing students and thus could see them as their future colleagues. The supervisors wish to gain more knowledge about cultural, linguistic and societal factors when guiding CALD nursing students and thus helping them to integrate in the Finnish society and work life.

Conclusion: The recruiters and management of clinical training units should consider the positive experience of clinical supervisors and support their skills in linguistic, cultural and societal matters for enabling CALD nursing students' training and employment in the unit. The students' potential should be better recognized and utilized in the health care field and their language proficiency supported while working. The growing amount of CALD health care students challenges the workplaces on demand of workforce and on facilitating good learning opportunities for all future health care workers to tackle the growing shortage of health care staff in Finland. More research is needed on the readiness of workplaces to welcome diverse students and employees to the field.

18.09

IMPROVING NURSES' LOWER EXTREMITY HEALTH THROUGH AN ONLINE COURSE IN AN ELECTRONIC LEARNING ENVIRONMENT – RESULTS FROM A QUASI-EXPERIMENTAL STUDY (POSTER)

Jaana Peltonen[1], Jenni Sipilä[1], Marita Koivunen[1,2], Johanna Sirkka[1], Eliisa Löyttyniemi[3,4], Juha Liira[5], Riitta Suhonen[1,4,6], Minna Stolt[1,2]

[1]University of Turku, Department of Nursing Science, Turku, Finland. [2]Wellbeing Services County of Satakunta, Pori, Finland. [3]University of Turku, Department of Biostatistics, Turku, Finland. [4]Turku University Hospital, Turku, Finland. [5]University of Turku, Department of Clinical Medicine, Turku, Finland. [6]Wellbeing Services County of Southwest Finland, Turku, Finland

Abstract

Background: Nursing is a physically demanding profession, causing stress and overload, particularly to lower extremity health. Despite the importance of lower extremity health among nurses, interventions to support lower extremity health among the working-age population are scarce. This study aimed to develop and test a lower extremity health intervention (Foot@Work) for nurses.

Methods: A quasi-experimental study design was applied. First, the Foot@Work intervention was developed in co-creation with nurses (n=10) through a workshop. Foot@Work is an online course built on the Moodle platform, designed for self-directed learning. It provides guidance on foot and lower extremity self-care through tips, instructional content, and practical exercises. The intervention includes text, photos, videos, and functional activities. Second, Foot@Work was tested with a purposive sample of nurses (n=50) working in surgical, internal medicine, and older people care settings. The primary outcome was knowledge in foot self-care, and the secondary outcomes were lower extremity health and work wellbeing. Third, nurses' experiences of Foot@Work were collected through open-ended questions. The data were analyzed with content analysis and statistically.

Results: The co-creation process with the nurses was smooth, and they identified key content areas for the intervention while also brainstorming functional strategies to enhance participation. The Foot@Work intervention improved nurses' knowledge of foot self-care, and they perceived the content to be appropriate. However, nurses felt that the layout and structure of the intervention could have been more engaging, as Foot@Work contains a large variety of foot-related materials.

Conclusions: Nurses' lower extremity health can be promoted through an electronic learning environment. Developing such an intervention requires continuous communication with end-users. There is a need for interventions specifically designed for nurses, particularly those focused on promoting lower extremity health. These types of interventions can support nurses' work well-being and functional health.

18.10

IMPORTANCE OF COMPETENCE AMONG OCCUPATIONAL HEALTH NURSES IN SUPPORTING WORK ABILITY IN INDOOR AIR RELATED HEALTH CONCERNS (POSTER)

Selja Riikonen[1], Johanna Sirkka[1], Riitta Suhonen[1,2,3], Minna Stolt[1,4]

[1]University of Turku, Department of Nursing Science, Turku, Finland. [2]Turku University Hospital, Turku, Finland. [3]Wellbeing Services County of Southwest Finland, Turku, Finland. [4]Wellbeing Services County of Satakunta, Pori, Finland

Abstract

Background and purpose: The responsibility of occupational health nurses (OHNs) is to act as health experts in work related health problems and to promote health and well-being at work. Indoor air (IA) associated health problems are a common, yet complex work environmental concern. A significant proportion of the Finnish population has experienced IA related symptoms at work. Accordingly, these are often treated in occupational health care (OH). The OHNs require knowledge of the practices and obligations related to the care of IA issues, while meeting the care needs of a person with IA associated health concerns. However, previous research on OHNs' knowledge of IA is still scarce. The purpose of the study was to describe OHNs' level of knowledge in the care of a client with IA associated symptoms (hereinafter IA knowledge), and factors connected to it.

Design, methods and participants: The study applied a descriptive, cross-sectional questionnaire survey design where data were collected with a knowledge test. A total of 50 items with yes/no/I don't know scaling were divided into 5 subscales (environmental health, assessment of indoor air situations, legislation, symptoms, care). The questionnaire was systematically developed for this study. The level of knowledge was examined in percentages, with the best result being 100 % correct. Using a total sampling method, the OHNs were recruited to participate in the study through the membership register of the Finnish Association of Occupational Health Nurses. The survey link was sent to 1034 members. The data were collected electronically in March 2023 and analysed using statistical methods.

Results: OHNs' levels of knowledge (n=83) varied. As a total score, on average, slightly over half of the items were answered correctly. Regarding the individual sum variables, OHNs had better knowledge in the areas of environmental health, symptoms and legislation. Instead, there were more gaps in IA knowledge in the assessment of IA situations and care. Range in all sum variables was large. Factors associated with the level of IA knowledge were age and self-assessed level of IA knowledge. Regular work with IA issues seemed to be linked with better results in the care sum variable. Additional training in IA issues was associated with better total score and better score in the care. The majority felt that they needed more information about the management of IA problems.

Conclusions: Based on the results, the level of OHNs' IA knowledge varied. The results indicate also some level of uncertainty. It is important to strengthen the knowledge base of OHNs in IA issues in general but specifically concerning the care and assessment of IA situations. Attention should be paid in ensuring that OHNs would have equal access to diverse and up-to-date IA training and organizational support for participation. Both the objective evaluation and OHNs' subjective assessment of the IA knowledge support the importance of and need for continuing education in IA issues, but it is important to develop training that is considered relevant to the needs of working life. OHNs' IA knowledge is valuable in preventing IA related work disability and possible loss of workforce and in supporting employees' functional ability in IA related health concerns. Purposeful training and thus well-informed OHNs could increase commitment to quality in IA related care which is essential in corresponding employees' care needs. Therefore, it is crucial that OHNs' IA knowledge and its assessment are strengthened in the future.

Selja Riikonen, Doctoral Researcher, MNSc, RN, PHN, University of Turku, Department of Nursing Science, Finland
Johanna Sirkka, Doctoral Researcher, MNSc, RN, University of Turku, Department of Nursing Science, Finland
Riitta Suhonen RN, PhD, Professor, FEANS, MAE, University of Turku, Department of Nursing Science and Director of Nursing, Turku University Hospital, Wellbeing Services County of Southwest Finland
Minna Stolt, PhD, professor (acting), Department of Nursing Science, University of Turku, Finland, Wellbeing Services County of Satakunta

18.11

STUDENT WORKERS: 'EARNING WHILE LEARNING' AND THE PRODUCTION OF CONSENT

Kim Allen[1], Rachel Cohen[2], Kirsty Finn[3], Kate Hardy[1], Lilith Brouwers[1], Cassie Kill[4], Mia Zhong[1]

[1]University of Leeds, Leeds, United Kingdom. [2]City St George's, University of London, London, United Kingdom. [3]University of Manchester, Manchester, United Kingdom. [4]University of Sheffield, Sheffield, United Kingdom

Abstract

Student employment – or 'earning while learning' (hereafter EwL) - has become increasingly commonplace globally. In the UK, most young people in full-time education engage in paid employment alongside their studies; due to labour market fragmentation, increased demand for part-time labour (Mizen et al. 1999), rising education costs and the global cost-of-living crisis. This includes both school students, the majority of whom will have done some form of paid work by the time they leave school (Hobbs et al. 2007), and students in Higher or Further Education. In this presentation, we interrogate data on women's earliest experiences of EwL in England to consider the extent to which these are fundamental to the production of consent to poor pay and working conditions.

Current considerations of EWL - both in wider policy discourse and academic literature - typically presents this experience in binary terms; either as positive for developing young people's labour market experience and 'employability', or as hindering students' ability to fully engage in their studies and academic work. The latter identifies and emphasises the negative impacts of work on student engagement, achievement and completion, with research and debate positioning work as instrumental, incidental or detrimental to movement into 'proper' careers' (Williams 2014).

As a particular and distinct aspect of 'learning-work relations', extant understandings of EWL have been hampered by such binary thinking which often glosses over the actual content and nature of work that is not officially considered as 'labour market entry'. If, conversely, we understand student work as a significant early stage in the working-life-course, we are better able to identify ways in which EWL is important sociologically. This includes how consent is produced among student workers in their very earliest experiences of the labour market. To do this, this presentation draws on findings from a major ESRC-funded mixed-methods study in England exploring young women's earliest experiences of work (http://www.ywworking.co.uk). The study comprises analysis of national data sets (including the Labour Force Survey) and focus group interviews with 83 young women students (aged 14-23) in schools, colleges and universities across England. Participants engaged in a novel 'emoji elicitation' task through which they were asked to reflect on their experiences of EWL and their hopes and aspirations for their future working lives.

We first trace the prevalence of poor pay and working conditions among student workers, including abuse and harassment, exploitation, exhaustion and feelings of disposability. Given these conditions we ask: 'Why do student workers consent to undertake such poor quality - badly paid often abusive - work? We suggest that the designation of student work as 'proto-work' - work that is temporary, incidental and occurring before young people's 'real' jobs - is central to the production of consent. Drawing on Burawoy's (1979) classic text, Manufacturing Consent, we identify two ways in which hegemonic legitimation of and consent to extremely poor-quality work among student workers is produced: 1) the role of 'experience' and 2) labour mobility as resistance, manifest in student workers' strategies of 'quitting'. We argue however that 'just quitting' only reproduces the very conditions it seeks to contest.

18.12

FOSTERING BELONGING IN THE WORKPLACE THROUGH COLLECTIVE INTERVENTIONS

Laura Urrila

University of Vaasa, Vaasa, Finland

Abstract

This research explores how "collective interventions" that support sustainable learning and active participation in evolving work environments can foster a sense of belonging in the workplace through social connection and shared purpose among employees, thereby enhancing professional competence development, informal learning, and well-being at work.

In the workplace, the need for belonging is fulfilled when an individual feels connected, respected, trusted, and socially supported within the work community, experiences a sense of membership, and fosters connectedness with both peers and supervisors (Urrila, Siiriäinen, Mäkelä, & Kangas, 2025). An integrative review by Gilbert, Foulk, and Bono (2018) highlights how organizational interventions can affect individuals, coworkers and followers and influence team processes and states, thereby building not only personal but collective resources. However, many organizations struggle to create environments where employees feel valued and included.

This study reviews structured collective interventions including social sharing and capitalization (e.g., Gable, Reis, Impett, & Asher, 2004; Reis et al., 2010), gratitude, kindness and compassion interventions (e.g., San Román-Niaves et al., 2024), peer development and coaching (e.g., Hagen, Bialek, & Peterson, 2017; Parker, 2008; Terekhin & Aurora, 2025) and collective, team and leader mindfulness interventions (e.g., Holm & Islam, 2024; Yu & Zellmer-Bruhn, 2018), all of which can contribute to strengthening workplace relationships. One key intervention discussed is mindfulness for leaders, which has been shown to improve self- and social awareness, perspective-taking, and empathic concern (e.g., Urrila & Mäkelä, 2024; for a review see Urrila, 2022). When leaders develop these skills, they have better personal resources to create inclusive environments where employees feel heard and appreciated. Mindfulness interventions can also help leaders shift toward an other-oriented approach, which encourages them to genuinely consider the well-being, development and growth of their followers and teams rather than solely focusing on productivity or maintaining their personal resources (Urrila & Eva, 2024). Moreover, as demonstrated by Urrila & Eva (2024), mindfulness interventions create a trickle-down effect when leaders actively engage followers in mindfulness and prosocial behaviors, even if they are not directly involved in the mindfulness program.

This research shows how, by utilizing mindfulness and other collective interventions, organizations can create workplaces where employees feel a strong sense of belonging. This research discusses the practical relevance of collective interventions for organizations and outlines a future research agenda.

References

Gable, S. L., Reis, H. T., Impett, E. A., & Asher, E. R. (2004). What do you do when things go right? The intrapersonal and interpersonal benefits of sharing positive events. Journal of Personality and Social Psychology, 87, 228–245. https://doi.org/10.1037/0022-3514.87.2.228

Gilbert, E., Foulk, T., & Bono, J. 2018. Building personal resources through interventions: An integrative review. Journal of Organizational Behavior, 39: 214–228.

Hagen, M. S., Bialek, T. K., & Peterson, S. L. (2017). The nature of peer coaching: definitions, goals, processes and outcomes. European Journal of Training and Development, 41(6), 540–558.

Holm, M., & Islam, G. (2024). Peace of our mind: Managerial interventions and the search for collective mindfulness. Academy of Management Learning and Education, 23(1), 128–157.

Parker, P. (2008). Peer coaching: A relational process for accelerating career learning. Academy of Management Learning & Education, 7(4), 487–503.

Reis, H. T., Smith, S. M., Carmichael, C. L., Caprariello, P. A., Tsai, F. F., Rodrigues, A., & Maniaci, M. R. (2010). Are you happy for me? How sharing positive events with others provides personal and interpersonal benefits. Journal of Personality and Social Psychology, 99, 311–329.

San Román-Niaves, M., Vasquez, C.A., Coo, C., Nielsen, K., Llorens, S., & Salanova, M. (2024). Effectiveness of compassion-based interventions at work: a systematic literature review and meta-analysis considering process evaluation and training transfer. Current Psychology, 43, 22238–22258.

Terekhin, R., & Aurora, S. R. (2025). Unveiling the nature of peer development groups: A systematic review, conceptual framework, and research pathways. Journal of Organizational Behavior, 46(2), 314–332.

Urrila, L. I. (2022). From personal wellbeing to relationships: A systematic review on the impact of mindfulness interventions and practices on leaders. Human Resource Management Review, 32: 100837.

Urrila, L., & Eva, N. (2024). Developing oneself to serve others? Servant leadership practices of mindfulness-trained leaders. Journal of Business Research, 183, Article 114858.

Urrila, L. I., & Mäkelä, L. (2024). Be(com)ing other-oriented: Mindfulness-trained leaders' experiences of their enhanced social awareness. Management Learning, 55: 273–304.

Urrila, L., Siiriäinen, A., Mäkelä, L., & Kangas, H. (2025). Sense of belonging in hybrid work settings. Journal of Vocational Behavior, 157, 104096.

Yu, L., & Zellmer-Bruhn, M. (2018). Introducing team mindfulness and considering its safeguard role against conflict transformation and social undermining. Academy of Management Journal, 61(1): 324–347.

18.13

MULTI-GENERATIONAL LEARNING AT WORK: A SCOPING REVIEW

Kaija Collin, Susanna Paloniemi, Panu Forsman, Laura Jouhkimo

University of Jyväskylä, Jyväskylä, Finland

Abstract

The generational diversity in working life is broader than ever before (Burke, 2015). Due to the demographic changes in work organizations (e.g. aging of the workforce, increasing retirement exit, diminishing age cohorts entering the labor force, and decrease of meaningfulness of work), a better understanding of multi-generational learning is urgently needed. However, despite research on the characteristics of single generations and inter-generational relationships, we lack rigorous understanding and conceptualization of the conditions and consequences of how generations learn together and from each other during everyday work. For example, the complexity of the inter-generational gap has been found to be connected to different meanings of work in life and the values related to it (Manor & Holland, 2023). In terms of professional development at work, workplace age stereotypes have been found to play a central role in professional learning practices (Froehlich et al., 2023). These age-related stereotypes are often institutionalized in work practices in organizations (Ropes, 2013). Learning in the context of work and organizations have rarely been elaborated in inter-generational research (Kyndt et al., 2018; Ropes, 2013; Sprinkle & Urick, 2017) but has mainly focused on formal education (Ropes, 2013; Urick et al., 2017).

The aim of our scoping review is to map the current research on multi-generational learning at work. We ask: How is multi-generational learning at work approached in working life studies? The Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) protocol will be utilized as a methodological tool to find relevant data for deeper thematic analysis. A scoping review can support documenting, mapping, and synthesizing all relevant research themes and conceptual associations on a particular topic (Brown et al., 2019). It helps identify gaps in the existing body of knowledge. The relevant databased (such as WoS and Scopus) are utilized. Thematic analysis of the identified and relevant studies will be adopted to elaborate the different themes that characterize the nature of multi-generational learning at work. The preliminary findings will be presented, discussed, and further research suggestions offered in the WORK2025 conference.

We expect our findings to indicate that the generational relations at work are challenged by major transformations (e.g. digitalization) that may not necessarily influence different generations in an equal manner (Zechner & Sihto, 2024). Work organizations need individuals, teams and communities who can see and reflect the environment and its changes from each generation's representative's perspectives and understand that their perspective is naturally limited to and by their history and experiences. With the help of broadened understanding gained from the review the further research can be focused on organizations' learning practices to develop better circumstances for all generations. The findings can also support the political and societal decision-making aiming to sustain all generations' motivation, engagement, and well-being in future working life.

References

Brown, T. C., O'Kane, P., Mazumdar, B., & McCracken, M. (2019). Performance management: A scoping review of the literature and an agenda for future research. Human Resource Development Review, 18(1), 47–82. https://doi.org/10.1177/1534484318798533

Froehlich, D.E., Raemdonck, I. & Beausaert, S. (2023). Resources to Increase Older Workers' Motivation and Intention to Learn. Vocations and Learning, 16, 47–71. https://doi.org/10.1007/s12186-022-09304-9

Kyndt, E., Govaerts, N., Smet, K., & Dochy, F. (2018). Antecedents of informal workplace learning. In G. Messman, M. Segers, & F. Dochy, Informal Learning at Work. Triggers, Antecedents and Consequences (pp. 12–31). Routledge.

Manor, S., & Holland, R. (2023). Ageism and intergenerational gaps between senior physicians and young residents in the healthcare system. Journal of Intergenerational Relationships, 22(2), 169–183. https://doi.org/10.1080/15350770.2023.2166639

Ropes, D. (2013). Intergenerational learning in organizations. European Journal of Training and Development, 37(8), 713-727. https://doi.org/10.1108/EJTD-11-2012-0081

Resource Development International, 15(4), 399–415. https://doi.org/10.1080/13678868.2012.707529

Sprinkle, A., & Urick, M.J. (2017). Three generational issues in organizational learning: Knowledge management, perspectives on training and "low-stakes" development. The Learning Organization, 25(2), 102-112. https://doi.org/10.1108/TLO-02-2017-0021

Urick, M. (2017). Adapting training to meet the preferred learning styles of different generations. International Journal of Training and Development, 21(1), 53-59. https://doi.org/10.1111/ijtd.12093

Zechner, M., & Sihto, T. (2024). The concept of generational contract: A systematic literature review. International Journal of Social Welfare, 33(3), 710–723. https://doi.org/10.1111/ijsw.12636

18.14

M&M FILES - A COLLECTIVE LEARNING APPROACH TOWARDS SOCIALLY CONSTRUCTED WORK MEANINGFULNESS

Suvi-Jonna Martikainen

LUT University, Lahti, Finland

Abstract

Meaningful work is one of the most topical issues in work-life studies, as well as broadly sought after by professionals and within organizations due to its many benefits. However, meaningful work is a complex phenomenon to develop, as it touches upon several dimensions, such as subjective, existential, and personal experiences as well as more objective elements, such as decent conditions and norms of work. Hence, research has stated that despite good intentions, initiatives to promote meaningfulness for others may backfire. (Lips-Wiersma & Morris, 2009.)

Recently, meaningful work has been increasingly discussed as a socially constructing phenomenon. Relational social processes are seen as bridging the "cognitive-emotional subjective and moral-ethical objective dimensions" of meaningful work phenomenon (Yeoman, 2023, 406). Experiences of meaningful work strengthen or diminish via social cues between employees, discussions about work-related experiences, and feedback amongst the working community as well as through discourses about one's contributions to others (Lysova et al., 2023; Bailey et al., 2024). Social construction also means that meaningful work needs to qualify as not only individually meaningful, but also 'meaningful to others' and socially valuable (Yeoman, 2023, 405; Graeber, 2018). Also, social phenomena, such as experienced recognition and respect significantly construct meaningfulness (Laaser & Bolton, 2022).

This branch of research also introduces novel approaches to supporting meaningful work as a collective, organization-wide learning opportunity. We suggest that meaningful work provides possibilities for collective work-related learning when organized as collective meaning making. Collective meaning making activities offer a space of awareness where social perceptions of meaningful – and meaningless – work may be consciously constructed. Collective meaning making and co-construction around experiences of meaningful work may support a sense of meaningfulness in themselves, and, additionally, provide empowering possibilities for co-creating work communities. Discussions around the topic often present ideas that inform desired work designs. (Yeoman, 2023.) In the era of rapid technological transformation and virtual work, activities that emphasize collective action are also critically important for social wellbeing.

However, both employees and organizations need practices and renewed abilities to enable collective meaning-making as they are scarcely reached within pressurized work environments (ibid., 2023). This presentation introduces "M&M files", that is a card deck designed as a discourse-based practice for collective work-related learning around experiences of meaningful and meaningless work.

M&M Files was created in a research project that involved employees from the education and health care sectors in a co-operative research process inquiring about meaningful and meaningless work experiences. One of the central findings in the project was that meaningful work is rarely discussed at workplaces, but employees both yearn and would benefit from such collective discussions (Oikarinen et al, 2023). However, meaningful work is not an easy topic to reach as discussions amongst working communities are often exceedingly task focused. M&M Files were created to facilitate community-oriented discussions about meaningful and meaningless work in a gamified way.

M&M Files utilize presentational, practical, propositional, and experiential modes of knowledge drawn from the co-operative inquiry methodology (Heron & Reason, 2008). Thus, it includes knowledge based on theories, research findings, and data about employee experiences of meaningful work. It also applies arts-based and creative activities to tap into experiential and presentational knowledge. Modes of knowledge allow different mind sets to reach the work-related experiences of meaningfulness and meaninglessness and deepen the understanding about them. Collective learning as deepening the social understanding around experiences of meaningful and meaningless work facilitates change towards organizational cultures that support meaningfulness as central work life quality.

References

Bailey, C., Madden, A., & Lips-Wiersma, M. (2024). Experiencing meaningful work through worthwhile contributions: A critical discourse analysis. Human Relations, 0(0). https://doi.org/10.1177/00187267241255581

Graeber, D. (2018). Bullshit Jobs – A Theory. New York: Simon and Schuster.

Heron, J. and Reason, P. (2008). Extending Epistemology within a Co-operative Inquiry. In Reason, P., and Bradbury, H. (Eds.), Handbook of action research: participative inquiry and practice. London: Sage.
Laaser, K., & Bolton, S. (2022). Absolute autonomy, respectful recognition and derived dignity: Towards a typology of meaningful work. International Journal of Management Reviews, 24(3), 373-393.
Lips-Wiersma, M., & Morris, L. (2009). Discriminating between 'meaningful work'and the 'management of meaning'. Journal of business ethics, 88, 491-511.
Lysova, E. I., Fletcher, L., & El Baroudi, S. (2023). What enables us to better experience our work as meaningful? The importance of awareness and the social context. Human Relations, 76(8), 1226-1255.
Oikarinen, T., Martikainen, S.-J., Hyypiä, M., & Parjanen, S. (2023). Työn m & m – merkityksellisyyden ja merkityksettömyyden kokemuksia, konteksteja, mittaamista ja käytännön implikaatioita. Loppuraportti. Lappeenranta-Lahti University of Technology LUT. LUT Scientific and Expertise Publications 157.
Yeoman, R. (2023). The contribution of meaningfulness to the work of democratic will formation. Journal of Classical Sociology, 23(3), 401-416.

18.15

KNOWING AND LEARNING IN DIGITAL WORK PRACTICES ON CROWDWORK PLATFORMS: THE ROLE OF HUMAN KNOWING IN A TECH-RELATED WORLD

Karen Schwien

Helmut-Schmidt-University, Hamburg, Germany

Abstract

Working and knowing are changing in relation to the digital transformation, and the automation of tasks and changing job requirements lead to a growing demand for learning activities at work (Pfeiffer 2024; Gamberini und Pluchino 2024). However, it is far from clear "what it means to be digitally competent" (Rêgo et al. 2024, S. 337). This study aims to shed light on knowing and learning in digital work practices using crowdwork as an example for a highly digitalised work environment. Crowdwork describes the completion of paid online tasks which are mediated through platforms (Durward et al. 2020). It represents trends related to digital technologies such as flexibilization, individualisation, and the dissolution of boundaries (Ashford et al. 2018). While this kind of work is labelled as "digital taylorism" (Altenried 2017, S. 175) and deskilling (Kittur et al. 2013) due to its repetitive nature and minimal qualification requirements, it also has been identified as "learning-intensive" (Margaryan 2016, S. 1; Cedefop 2020). To investigate the complexities of digital knowing and learning this study takes a praxeological perspective on the following questions:

- How is knowing and learning incorporated in work practices in crowdwork as an example of highly digitalised work?
- What does this teach us about human knowing and learning in a tech-related world?

Practices consist of activities which are rooted in a shared knowledge base (Schatzki 2001). Despite diverse praxeological perspectives they share the idea of knowing incorporated in practical doings (Orlikowski 2002), drawing upon the theory of "knowing-in-action" (Schön 1983b, p. 54), which posits that experts think while they act, and situated cognition, which states that all knowing is contextual (Brown et al. 1989). From a practice-based perspective knowing and learning cannot be fully differentiated as the knowing is (re-)defined in any action performed. Additionally, the knowing is socially shared and recognised (Gherardi 2008) and encompasses mental doings such as "perceiving, judging, anticipating, thinking and acting" (Neuweg 2015, S. 113). It builds on past experiences (Böhle 2020, Neuweg 2020).

The study is based on an ethnographic approach, an iterative methodology oscillating between data generation and analysis to produce a deep understanding of practices (Beer und König 2020; Breidenstein et al. 2020). It encompasses two case studies on a testing and a freelancing platform including 24 crowdworkers, who participated in a voice messaging diary study and episodic online interviews. Diary studies enable access to everyday experiences while voice messaging collects "a type of observational data" (Kozinets 2020, S. 267). Episodic online interviews stimulate narratives of knowing in specific situations (Flick 2021). After an ethnographic exploration a pilot and a main study were conducted in 2022 and 2023. The resulting verbal and visual data was analysed based on qualitative content analysis by Kuckartz (2016).

The findings indicate that crowdwork practices comprise of multi-layered arrangements of contextual activities beyond "digital taylorism" (Altenried 2017, S. 175). The knowing incorporated in the crowdwork practices becomes particularly evident in activities such as navigating the digitally mediated cultural space, relating to involved parties, artefacts, and objects, evaluating digital information, using flexible patterns, and learning in the doing. Crowdworkers with technological experience

can interpret digital information effectively, use flexible patterns and their trained senses to emerge themselves into situations and technologies. They think while they act and consider situational information like social indices. Inexperienced crowdworkers can be overwhelmed by the complex environments and are often not able to interpret digital information effectively. The findings emphasise the significance of experience in crowdwork practices, aligning with the concept of experiential knowing proposed by Böhle and Sauer (2017). Furthermore, aspects of "situated cognition" (Brown et al. 1989) and "knowing-in-action" (Schön 1983a, S. 54) become evident, which cannot be directly translated into code (Böhle 2020), thereby hindering a full automation of crowdwork tasks. Crowdworkers contribute both experiences from outside crowdwork and gain experiences through the tasks in accordance with Margaryan (2016). However, the acquisition of experience is limited due to a lack of social exchange, which is vital for workplace learning (Eraut 2004). In conclusion digital work practices in crowdwork are more complex than the standardised tasks suggest and rely on the knowing and learning of crowdworkers and their ability to think while acting as well as contextually emerging themselves. These aspects of human knowing in a tech-related world are not programmable.

The study's limitations are due to the limited number of cases and a potential bias due to the voluntary participation of crowdworkers. Additionally, the theoretical vocabulary on intuitive, practice-based knowing is still limited. Future research should focus on other digital work contexts and develop the theoretical vocabulary further. Practice-based studies on working, knowing and learning have the potential to uncover the complexities of digital work, which can be crucial when it comes to understanding what it means to be "digitally competent" (Rêgo et al. 2024, S. 337).

19.02

AI-EXPERT SYMBIOSIS – TRUSTWORTHY COLLABORATION OR DEATH OF EXPERTISE?

Saara Luovanranta

Tampere University, Tampere, Finland

Abstract

The development and implementation of novel artificial intelligence (AI) applications are becoming increasingly prevalent in knowledge-intensive professional fields, such as recruitment and accounting. In this context, domain expertise plays a critical role, as system developers often lack an in-depth understanding of the work practices and tasks specific to these professions. Consequently, domain expertise is necessary for designing AI technologies that are both effective and contextually appropriate. Moreover, domain expertise is essential for refining AI systems, as well as for evaluating and justifying the outcomes they produce, especially when AI is used for augmenting domain expertise.

In practice, domain experts, as the primary end-users of AI technologies, contribute their knowledge to machine-learning applications. These advanced AI systems function as repositories of domain expertise, ideally supporting professionals in their work. This process also offers an opportunity to enhance the accessibility and transferability of expert knowledge, thereby reducing the traditional "gatekeeping" of information. However, this dynamic also presents potential risks to professional expertise: the core asset of domain experts is their specialized knowledge, which is often highly situational or client-specific. Each AI system, therefore, constructs its distinct knowledge base through iterative interactions with domain experts. Furthermore, due to their capacity for continuous learning, machine-learning systems can refine and evolve this knowledge over time, further challenging the issues of transparency and explainability.

This paper seeks to raise discussion on the role and value of human expertise in an AI-driven work environment: the findings from three qualitative case studies on using AI in expert work emphasize the importance of domain expertise both in AI development and use, but it is questionable, what happens to expertise in the long run as AI systems become more and more efficient and fine-tuned. Some domain experts, presumably so-called "early adopters", might take this as an advantage, possibly deepening the division between traditional experts and modern "AI-augmented experts". Some indicators for this are already seen in the case studies.

Furthermore, As AI systems become more deeply integrated into professional practice, they might foster a symbiotic relationship between AI and experts, progressively blurring the distinction between human and machine expertise. Currently, trustworthy AI refers to system qualities: AI that is considered, e.g., reliable, ethical, and safe. Domain experts, based on their expertise on the matter or task at hand, evaluate the AI performance and carry the responsibility for the AI outcomes. Already novel AI applications require domain experts to adopt new work practices and skills, for instance, in technical matters. When

AI becomes increasingly embedded within expert work and intertwined with domain knowledge, trustworthiness may shift to encompass the quality of the collaboration between experts and AI systems: how reliable, safe, and ethical the system use is, not only the system itself. Even though the future applications of AI would remain capable of conducting only certain professional tasks (as currently is the state of art), its role in expert work should be further discussed.

19.03

HANDS-ON WITH DIGITAL AUTOMATION – A SIMULATOR TEST IN A NUCLEAR POWER PLANT TRAINING SIMULATOR

Jari Laarni[1], Satu Pakarinen[2], Hanna Koskinen[1], Tomi Passi[2], Kristian Lukander[2], Marja Liinasuo[1]

[1]VTT Technical Research Centre of Finland, Espoo, Finland. [2]Finnish Institute of Occupational Health, Helsinki, Finland

Abstract

Monitoring and control of nuclear power process plays a key role in ensuring safety and efficiency of energy production in the nuclear industry. Since the plant is operated from the main control room (MCR), it can be considered some kind of nerve centre for the entire power production in a nuclear power plant (NPP). Over the years of nuclear power operation, the control room environments have evolved, as the design of instrumentation and control systems has developed toward digital instrumentation and control, introducing the modern computer technology in the MCRs. The evolution of CRs has progressed through several distinctive generations of control room systems.

Nowadays, most of the operative plants have process computers as part of the CR information system. Even though the use of modern digital technologies brings about significant benefits, the large-scale use of computers may create new kind human factors challenges. For example, CR operators may have problems to cope with the increasing complexity of digital systems. Problems that have been often reported include the keyhole-effect, problems in maintaining situation awareness and increased demands for verbal communication. Moreover, with the introduction of more complex automation systems there is the risk of insufficient understanding of the functioning of process automation systems, especially if only basics are included in operator training. Although there are operating experiences of digital CRs in other safety-critical domains, the use of advanced digital technologies in NPP main control rooms is still poorly understood. Therefore, there is a need for a more systematic investigation of operating experiences related to challenges in the operation of fully digital CRs.

We conducted a large-scale simulator study in an advanced nuclear training simulator. Our aim is to promote understanding and analysis of current operating practices, including a description of the challenges and possibilities that are experienced in operative work. Results can be used to demonstrate that the new CR system supports safe and efficient operator work. They can also be used a reference for possible future modifications.

Seven operating crews, 28 operators in total participated in the study. Each team included a reactor operator (RO), a turbine operator (TO), a shift supervisor (SS) and an auxiliary operator (AO). The simulator run was divided into three incidents and accidents that included an automation-related failure, loss of feedwater due to a leakage and loss of the process information and control system.

Operator performance data was registered both by quantitative physiological (e.g., registration of bio-signals and eye movements) and subjective and behavioural (e.g., observations, interviews, and surveys) methods. The methods were fine-tuned in order to be better suitable for the specific focus areas of the study. Scenario runs were video-recorded by a videorecording system. Three operators worn a GoPro camera to record their scenes during the simulator run. Communication was classified online by three observers during the simulator run. Crew and operator performance were evaluated with an expert evaluation rating scale. A priori estimate of stress and workload during different phases of scenarios were obtained from simulator trainers. Team performance was measured with Team Workload Assessment Scale. Operator's self-evaluated performance was measured with NASA-TLX and KSS Stress scale. Attitudes towards automation were measured with a scale developed by the authors. Two interviews were conducted after the simulation run. First, we conducted a process tracing –group interview to reconstruct the simulator run by asking operators to describe what has happened in the run; second, a semi-structed individual interview was carried out in which the questions were related to topics such as building situation awareness in a digital control room, digital automation as a team member and use of procedures.

The data analysis is still in progress. The collected test data is analysed from different vantage points (e.g., user experience, workload, and situation awareness). A special attention will be given to the use of digital automation and computer- vs. paper-based procedures in incident situations.

Even though all operator crews were able to complete successfully the simulator run, comprising three incidents, there were some differences in performance among crews in the automation-related failure, e.g., in understanding the possible effects of the malfunction and in troubleshooting. According to the expert evaluation of crew performance, the simulator trainers were more consistent with their evaluation of dimensions of operator performance than of dimensions of technical performance. With regard to task load, mean scores are higher for the SS than for other operator roles, and mean scores on mental demand are higher than those on other dimensions for all operator roles. The findings are understandable, because the SS has a critical role, e.g., in overseeing the crew's behaviour and communicating with external stakeholders. Higher scores on mental demand reflect the cognitive burden of the operator work in simulated incident situations.

19.04

GENAI-ASSISTED PERSONALISED CARE PATHWAY AFTER CORONARY ANGIOPLASTY

Manu Setälä[1], Riina Peltonen[2], Laura-Maria Peltonen[3]

[1]Solita Oy, Tampere, Finland. [2]Tampere University, Tampere, Finland. [3]University of Eastern Finland, Kuopio, Finland

Abstract

Introduction: The ageing European population creates significant resource challenges for healthcare in welfare states, increasing the need to optimise care. Novel technologies, like Generative AI provide ample opportunities to support care delivery and professionals' work. This abstract reports on an approach to facilitate the recovery from a cardiac procedure using an artificial intelligence (AI) -supported personalised care plan. The main research question is "How can a mobile app combined with a personalised care plan help a patient's recovery after a coronary procedure?" The care plan is implemented using generative AI and it can be updated based on individual recovery progress. This update can be done using data from measurement devices and follow-up appointments that are part of the treatment plan. The generative AI system provides baseline data on current care recommendations in Finland and the recovery guidelines for coronary artery disease (CAD). In addition, patient-specific data is imported as background data using a retrieval-augmented generation (RAG) approach. This information is combined to generate a preliminary personalised plan, the progress of which can be monitored, discussed with a health professional and redefined by the convalescent/patient via a mobile phone app.

Cardiovascular diseases are the leading cause of death and morbidity worldwide, making its effective treatment crucial.[https://doi.org/10.1093/eurheartj/ehad656] Coronary angioplasty is increasingly used for symptomatic coronary artery disease, offering faster recovery than bypass surgery. After hospital treatment, recovery focuses on taking medication and maintaining a healthy lifestyle. [https://www.kaypahoito.fi/hoi50102] To support this, the application helps patients manage their self-care.

Theoretical background: This study aims to develop and test an AI-assisted system to support personalised care plans for patients recovering from coronary angioplasty.

Although care pathways vary based on individual needs, they generally include one to three follow-up appointments during the first year after the procedure. Unfortunately, there is a risk of interruption in care continuity when the responsibility shifts from specialised to primary healthcare and the responsibility for booking all needed follow-up appointments becomes the responsibility of the patient. A personalised AI augmented system could recommend an optimal timeframe for booking the appointments needed based on individualised needs to support care continuity.

Methodology: This research is a multi-stage process. The first phase will be a feasibility study of the technology. The actual testing and evaluation with end-users will be carried out in the next phase.

The final outcome of the technological process will be a prototype that can produce personalised care plans. The actual software capability will be assessed in the first phase on the basis of expert judgement. The aim is to test the model with about 20 different patient datasets and personalised care pathways. The results will be verified using professionals: pathways are evaluated both in terms of content and functionality with end users.

The project consists mainly of programming work to implement software using Google's Gemini Flash LLM model. The Finnish current care recommendations for cardiac patients, as well as the recommendations of the health region or the special care unit, will be imported into the LLM model. In addition to these general guidelines, the model receives input on the patient's characteristics, the complexity of the angioplasty operation and the doctor's recovery assessment. Based on this information, LLM generates two different plan formats: a printable document for medical staff verification and a second format for the mobile application. The patient can use the application anytime to report their condition or check if their sensations are expected during the recovery. The frequent and repetitive questions ensure reliable answers.

Results, findings and further research: At the time of writing, the study is still in progress. Currently, our results have shown that an LLM is excellent at capturing patient background information and a disease profile and using discharge summary data. However, the development of the stepwise care pathway has not been tested on authentic data. The research prototype should reach a sufficient level of maturity for this in April 2025, and the first actual data on the effectiveness of the innovation will be available in May.

In the follow-up phase of the study, the aim is to reach patient-specific testing with a small number of interested patients in late 2025.

19.05

COMBINING GENERATIVE AI AND SPEECH-BASED SOLUTIONS TO SUPPORT NURSES

Manu Setälä[1], Irzum Jafri[2], Laura-Maria Peltonen[3]

[1]Solita Oy, Tampere, Finland. [2]Tampere University, Tampere, Finland. [3]University of Eastern Finland, Kuopio, Finland

Abstract

Introduction: Managing nurses' workload and ensuring patient safety are key to efficient care. Effective solutions for managing and sharing clinical information are essential for nurses to provide the best possible care. Nurses need fast and practical access to essential patient information without manual retrieval, particularly in urgent situations and changing environments. This research aims to develop an innovative, hands-free voice interface that combines the ability of generative artificial intelligence (AI) with voice-based information retrieval to support nurses' work.

Background and motivation for the research: In current hospital information systems, patient information is often scattered across different views, making data retrieval time-consuming and cumbersome. Nurses have limited time to care for patients, and manual data searches are time-consuming and can distract nurses from focusing on what matters most: the patient's immediate care. In addition, searching for information can be physically difficult in urgent situations or when nurses are occupied. This is why new, intelligent solutions are needed to provide quick and easy access to patient information.

Methods: Our solution combines two key innovations: (1) a speech-based conversational interface that enables a hands-free user interface for the nurse and (2) generative AI to analyse and summarise health data from different sources. The solution provides the nurse with all needed information about the patient's condition, previous diagnoses and necessary interventions, for example through an earpiece device, without having to read or manually retrieve the information separately. The system should be real-time enough and adaptable to the carer's needs. Implementation of the study: An Android prototype was built supported by a server for catering AI requests and responses. The mobile UI has a hands-free implementation, so it can be used stand-alone with a headset. This is useful in hospital settings, where the nurse can talk to the patient, as well as the AI, for quick and easy access to information, in addition to documenting care.

The implemented software is built using Kotlin, making it a native Android application that allows it to perform faster and have better speech recognition. The backend is built on python using Ollama, which allows running open-source LLMs easily. The AI model that manages tasks and responses is a Gemma2:2b base model, trained on a Finnish chat dataset, to act as a bilingual conversational agent so it can perform its duties friendlier as a supporting nurse. The model is trained using Unsloth and Google Colab, which reduces any additional cost that might have gone into development, making it easier to retrain and reproduce over different use cases. All of this is compiled into a mobile application, which is qualitatively tested for this study, with multiple current and former nursing staff, together with expert designers. The pilot study involves finding improvements, checking its feasibility, and also evaluating how well it may perform in actual settings with nurses using it. The results will be used to further improve the performance of the algorithms and their user-friendliness. After the pilot studies, the system will be extended and rolled out in clinical practice.

The implemented prototype can be found at: https://github.com/irzumjafri/pulse

Results: The idea of the solution is based on AI-assisted data management, where a generative model analyses and organises care data from multiple hospital IT systems. The implemented research demo uses Solita Oy's Pulse system and synthetically generated patient data. At the same time, a speech-based interface acts as an interface for the nurse, enabling interactive data retrieval using natural language. The AI continuously learns about nurse's behaviour and information needs, improving the accuracy and usefulness of the system over time.

Conclusions: The benefits of this innovation have the potential to: (1) improve nurse efficiency, as the information needed is immediately available without the need for a separate search; (2) improved patient safety, as treatment decisions are made based on up-to-date and summarised information. However, further research is needed to evaluate the effectiveness and impact of these technologies on clinical workflow and patient outcomes.

Summary: This project offers an idea for a technological solution to support nurses' workflow by combining generative AI and speech-based interaction. Such solutions can potentially improve the efficiency of hospital work and the quality of patient care more broadly. Based on the usability testing, the developed software could provide added value. Further work is needed to develop the user interaction with the solution. Running the background system on an office computer also leads to performance problems. Flexible use requires a significantly more optimised solution, more powerful hardware or partial use of cloud capacity. Future research is needed to understand how an intelligent and intuitive system can be implemented into nurses' workflows and to measure the impact of these technologies on nurses' work and patient care.

19.06

CHATBOTS AS LANGUAGE LEARNING TOOLS: CO-DESIGN FOR SPOKEN WORK-LIFE COMMUNICATION IN HEALTHCARE AND SERVICES

Hilkka Lydén[1,2], Aurora Piirto[3], Berenice Rivera-Macias[1]

[1]Laurea University of Applied Sciences, Vantaa, Finland. [2]University of Lapland, Rovaniemi, Finland. [3]Lingsoft Oy, Turku, Finland

Abstract

We present a case study of a work life oriented co-design process of a series of chatbots that use speech recognition and AI for professional language acquisition. Conducted within a funded project, the project team first explored the various language related difficulties within different professional fields and contexts. We focused our work on the service sectors and nursing.

Together with different work teams we identified the most pressing language use situations where the focus was on spoken language and the more passive ways of language learning, such as listening, reading and writing, are not best suited. The aim of the chatbots was to allow language learners to practice spoken work life language use independently. Speech recognition was used in order to allow the learners to practice speaking with the bot.

The co-design partners of the process were recruited from four large companies and one trust, four in the healthcare field and one in the cleaning sector. The qualitative data informing the co-design of the chatbot prompts was gathered through online meetings, face-to-face semi-structured interviews, and focus groups with staff in the companies that collaborated with the project. Participants included managerial staff in the recruitment departments, team leaders, and staff of migrant background working directly with customers. The most comprehensive identified need was that of effective communication, which crosscuts from recruitment processes, to everyday work life communication with colleagues and with customers.

The solutions co-designed in the project were very practical and based on real language use situations at work. The learners practised authentic interaction within their workplace, such as professional phone discussions, customer service and communication with colleagues.

For example one bot acts as a hotel guest and asks the language learner questions about the hotel, its services and the surrounding city. Another bot simulated a situation, where the learner answers questions about the wellbeing of the bot's "mother" who lives in the care home where the learner works as a nurse. One bot helped the learners practice calling the

emergency line about a fallen patient. This bot was trained in collaboration with the emergency services in Finland for safety and accuracy. The bots were used also for practicing writing in the case of writing a treatment plan for a patient.

The solutions around spoken language and phone discussions were estimated as useful, because both early stage interviews and the testing phase of the co-design emphasised the difficulty of spoken language. Most learners participating in the co-design process had received at least a few formal Finnish language courses which they found to be useful, but also lacking in the possibilities of practising speaking and listening. Also the context of the classroom, with several observers present, inhibited the relaxed atmosphere necessary for learning, according to the learners.

19.07

COMPREHENSIBILITY, MANAGEABILITY, AND MEANINGFULNESS: AI´S IMPACT ON HR WORK

Anna Launberg, Eva Lindell

Mälardalen University, Västerås, Sweden

Abstract

The integration of AI into work processes is associated with psychosocial and organizational risks for workers(OSHA.europa.eu, 2024). Aiming to examine such risks in HRM work, an area claimed to particularly benefit from AI tools, this study explores how HR professionals experience AI tools in relation to their work. This is done through the lens of Antonovsky's Sense of Coherence (SOC) theory (1987), a salutogenic model that focuses on what makes people healthy or healthier, rather than on what creates illness.

The pillars of SOC are the concepts of comprehensibility, manageability, and meaningfulness. Comprehensibility refers to how individuals perceive their world: as ordered and predictable, or chaotic and random. A person with a high sense of comprehensibility perceives stimuli as predictable, or, if they come as a surprise, at least possible to organize and explain. Manageability refers to the resources individuals perceive they have at their disposal to handle the stimuli they encounter, such as medical care, a supportive partner, or financial resources. Meaningfulness is about experiencing the demands we face as worth investing energy in to meet the challenge. The model's three components are interconnected; e.g., a high level of manageability generally presupposes a high level of comprehensibility, as a lack of understanding of one's situation makes it more difficult to see what resources are needed to manage the situation. According to Antonovsky, meaningfulness is likely the most important component, as a person who feels motivation and engagement can strive to understand the world and obtain the necessary resources. SOC has been widely used in occupational health research, primarily quantitatively, to investigate well-being in workplaces to better understand deficiencies and success factors in the work environment. In our study, SOC has served as a theoretical framework to understand and qualitatively analyze the experience of the work environment, rather than as a tool to establish causal relationships between SOC and health, which is what Antonovskyoriginally developed the model for. Yet, he encouraged the use of other methods to gain further understanding of the relationship between SOC and health and the model has been used in qualitative research with various empirical focuses.

The use of specifically developed AI tools within HR is still significantly limited in Sweden. However, AI is integrated into many of the tools used in daily office work, such as search engines and social media. For this study, 31 interviews with 37 HR directors, managers and professionals were executed. Questions were asked about the (limited) use of AI tools today, and about expectations for future AI use and on how such use might affect the content of HR work and their work environment. The use of Antonovsky's theory in our analysis came from our reading of the empirical material where initial themes were identified that could be related to the components of meaningfulness, comprehensibility, and manageability. In other words, an inductive reading of the material led us to SOC, which was then used deductively in a second reading, coded under the three components. In the next step, 40 themes were identified, which we grouped into seven empirical categories. These themes, and thus the seven categories, spanned the entire SOC model, in the sense that each category contained themes that related to more than one of the components. For example, the category "The Irreplaceable Human" in our material relates to comprehensibility through the theme of employees' perception of the unique human understanding of context; to manageability through the theme of employees' perception of the unique human ability to handle human complexity, make interpretations, and understand context; and to meaningfulness through employees' perception of the value of human emotions and judgment in decision-making.

In this way, our study illustrates how HR employees' experiences of, and expectations about, AI in the workplace relate to comprehensibility, manageability, and meaningfulness, i.e., their SOC at work, as well as the SOC they expect to experience when

AI is more extensively integrated. We do not directly evaluate whether comprehensibility, manageability, and meaningfulness are high or low, but by qualitatively analyzing how SOC is expressed, the study explores how employees perceive their current and future work environment in which AI is a part. The results show a justified concern about how HR work may be affected by increased use of AI. There is a risk of reduced space for collaboration in the form of dialogue between different parties when AI-generated materials are viewed as definitive rather than as bases for discussion. Combined with the risk of HR losing influence when tasks are taken over by AI tools, our data show that HR employees' sense of meaningfulness, comprehensibility, and manageability are likely to be affected.

References

Antonovsky, A. (1987) Unraveling the mystery of health: how people manage stress and stay well. Calif. Jossey-Bass

---

19.08

SHARED LEADERSHIP IN PROJECT TEAMS: THE EMERGENCE, DEVELOPMENT AND CONSEQUENCES

Marion Karppi

Turku University of Applied Sciences, Turku, Finland. University of Turku, Turku, Finland

Abstract

Shared leadership is a dynamic and emerging team phenomenon, in which leadership roles are shared amongst team members as a consequence of changing situations and needs in teams. Shared leadership changes along the team lifespan, and may occur in specific teams at various levels, and in specific times. Shared leadership has been studied in the field of team research for three decades, and multiple antecedents and consequences have been identified. However, the majority of the shared leadership research has been conducted in working groups, and less is known about shared leadership in project teams. Projects as temporal organizations within permanent organizations embed several characteristics, which distinguish projects from other types of working groups. Projects are set for a specific period of time, teams are composed of team members from different expertise and backgrounds, the tasks are often complex and interdependent, and projects operate in uncertain and concurrently changing environments.

There is vast research grounds on the antecedents of shared leadership. These antecedents can be explored from individual, team and organizational levels. First, team members willingness to take over leadership responsibilities, team member humility and proactive behavior foster shared leadership. Team members' expertise, experience and competences are identified as antecedents of shared leadership, and those characteristics have been found to support the emergence of shared leadership in project teams. At the team level, internal team environment and team heterogeneity are identified as supporting shared leadership, and teams' internal social support, team members' involvement in decision-making, and shared goals of the work facilitate shared leadership. Additionally, trust in the team and interdependence of the assigned tasks moderate the relations between shared leadership and team outcomes. A team leader's transformational leadership style, empowerment, and leader-member exchange (LMX) behavior facilitate the development of shared leadership. Vertical leadership practices, that support leadership sharing, such as encouraging, empowering and coaching leadership practices promote shared leadership both in team and larger organizational contexts. Other organizational antecedents are specific organizational characteristics such as design, structure, culture, values, and norms, which encourage both project managers and team members to engage in shared leadership practices.

Unlike the vast body of antecedents, detailed exploration of the development of shared leadership in project teams remains scarce. Some findings show, that shared leadership develops rapidly in the beginning of the project lifespan, peaking in the midpoint and declining towards the end. Longitudinal research on the development of shared leadership is currently lacking in the project organizing research.

Besides antecedents, research has found several positive outcomes of shared leadership. Many empirical studies have concluded that shared leadership is associated with improved team performance, team effectiveness, creativity, innovation and team satisfaction. These positive outcomes are found from studies which evaluated shared leadership by team-members self-reported performance measures and performance evaluated by supervisors. Shared leadership in teams has also been connected to lower levels of conflict and stress, and improved ratings in team member satisfaction. Some research has found connections between shared leadership and team members learning and skills development.

Projects are contextual and temporal constructs, which aim to change, they are composed of specialists from different backgrounds and diverging motivations and goals. Project leaders operate on complex and dynamic environments, and they face

challenges in establishing and maintaining mutual commitment and in creating motivating, empowering and flexible working environments. Therefore, leading projects is more than managing the project tasks towards the end. Project management has largely focused on project managers traits such as charisma, emotional intelligence, trustworthiness, or on different leadership styles such as transformative or authentic leadership. In recent years the interest on share leadership has increased in project management, however the body of research remains scarce.

The purpose of this PhD-research is to explore and bring new insights on shared leadership in project teams. The three main research questions are: 1) How does shared leadership emerge in the project teams? 2) How does shared leadership develop over time in project teams? and 3) What kind of consequences of does shared leadership brings for project team members?

The research data to answer these questions comprises both interviews and survey data. Altogether 31 interviews were conducted in six large organizations which all conducted project work as their daily business endeavors. Additionally, a longitudinal survey was conducted with four time points to explore the development of shared leadership in one year follow-up. The preliminary findings show that project work as such embeds many events in their daily life, which trigger the emergence of shared leadership. Regarding the development of shared leadership over time, we found that the variance of shared leadership was not significant. However, these are still the preliminary findings, which will be complemented as the research progresses. This thesis contributes to shared leadership and project leadership research by bringing new insights on emergence, development and consequences of shared leadership in project context.

19.09

STRONGER CO-PARTNERSHIP. THE PERSONNEL REPRESENTATION IN THE COMPANY ADMINISTRATION

Maria Jauhiainen

Teollisuuden Palkansaajat TP ry, Helsinki, Finland. Insinööriliitto IL ry, Helsinki, Finland

Abstract

The personnel representation in company administration was included in the Finnish Cooperation Act in 2022. Before that these matters were found in their own law from 1990 with rather little recognition. The law is applied to companies with at least 150 workers and the law is also now undergoing a possible law review for further changes. The change in 2022 meant more seats for the personnel in the company administration while many of them are still missing or organised in the wrong places in the companies. One of these so-called wrong places being extended executive group established only for this purpose, when the real place in the company would be the normal operational executive group or the board of directors. The Finnish system differs from the other Nordic board-level representation models in specific ways such as being based on an agreement and rather flexible.

The survey analysis is based on 748 replies from employee representatives in Finland and it deals with the perceived pros and cons of the system, how the legal rights are fulfilled in reality and how and where the actual systems are established in the companies. The outcome gives a fresh viewpoint to a very specific Finnish employee representation system and how it´s working in reality.

19.10

LEAN THINKING AND EFFICIENCY MEASURES IN THE CHANGING MEDIA INDUSTRY

Meri Kotamäki

Turun yliopisto, Turku, Finland

Abstract

The media industry is undergoing a major digital transformation, with AI and other technological advancements rapidly changing how work is organized, content is produced, and revenue is generated. At the same time, the Finnish media sector is facing significant structural changes, including ongoing organizational restructuring and adaptation efforts. To stay competitive and improve efficiency, media companies are adopting different management approaches, such as Lean thinking, which focuses on simplifying processes and making better use of resources.

This presentation is based on a case study conducted in three different units of a large media organization as part of the LeanTieto project (2023–2025), funded by the Finnish Work Environment Fund. A thematic content analysis of the interview data (N=21) examines how Lean thinking and practices are constructed within knowledge work in the media industry and how employees perceive the successes and challenges of Lean implementation.

The results indicate that applying Lean to knowledge work requires a balance between so-called soft and hard Lean approaches, as well as strengthening the organization's ability to implement change. Specifically, goals, performance indicators, and reward systems should support continuous improvement and flexible adaptation to ensure the successful integration of Lean into daily organizational practices. As the media industry undergoes rapid change and structural adjustments, it is essential to understand which efficiency strategies help organizations stay resilient and maintain smooth work processes in an evolving environment.

19.11

"THE INDUSTRIAL RELATIONS OF TECHNOLOGY IMPLEMENTATION" – A CASE OF IMPLEMENTING A SCHOOL-ADMINISTRATION SYSTEM IN NORWEGIAN UPPER SECONDARY SCHOOLS

Lisbeth Øyum, Siw Olsen Fjørtoft

SINTEF Digital, Dept. of technology management, Trondheim, Norway

Abstract

The Norwegian model of industrial relations is grounded in democratic principles of employee participation and -autonomy, institutionalized in collective agreements between trade unions and employers to collaborate on enterprise development concurrently with an improved working environment. A mutual interest forming the collective agreements has been that democratizing workplaces not only can be ensured by political decision-making processes but must be put into practice within managerial- and work processes arrangements on enterprise level. In line with Frega's (2021) concept of 'inclusive authority', those being affected by a decision influencing ones work situation must have the power to take part in the decision-making process.

Implementation of technology in general, has been and still is, a source of enterprise development which produce changes in work arrangements, public and private sector alike. During the 1970'ies the private industrial sector included in their collective agreement an amendment called "The framework agreement concerning computer-based systems" to ensure that the implementation of technology should take place based on principles of law, democracy and job quality. As a result of this amendment several workplaces in the Norwegian industry developed a new worker-representative role, "shop-stewards for implementation of computer-based technology". The collective agreements in the public sector do not specify technology implementation, although including it as a perspective of organisational change.

Within this context we have studied the process of implementation of a digital system for administering the planning and scheduling of teaching activities and staffing of teachers in upper secondary schools. The administrative system has been implemented in upper secondary schools on a national basis, a decision originating from a governmental concern over whether the pupils were given the legislative amount of teaching hours.

Our study has included five county municipalities and 12 schools. For this abstract we report on the findings related which way the implementation process of the new digital system has been on the agenda in the union-management dialogue, and to what degree teachers have been involved in the process. The empirical data is interviews with 16 union representatives on county municipality level, 14 school managers, 8 shop-floor stewards on school level, and 15 teachers.

The system's modules of reporting teaching hours within- and across teaching subjects have resulted in that the teaching timetable cannot be preplanned for the entire year, but now varies on a weekly basis, for the teachers and pupils alike due to public holidays, social activities for inclusion and cultural events, as well as work practice in vocational subjects. The teachers report both positive and negative effects from shifting from static to dynamic teaching timetables. Positive effects involve that registration of each teaching hour demonstrates whether the pupils have been given their legislative number of hours within one curriculum subject, as well as the working hours for the teachers. A concern not yet solved in some schools, however, is how to "count" activities related to for instance sport arrangements, cultural events, and social inclusion. Should such activities count as teaching in for instance the subject of the Norwegian language-, sport, -mathematics, or -social science? In solving this possible conflict of bargaining over approved teaching hours among the teachers, we find that they trust school management to keep track of which hours should be linked to which subject in a manner for both the pupils to be offered the correct number of teaching hours in each subject, and for the teachers to uphold the working hours decided in their collective agreements. Consequently, teachers' involvement is realized by their trust in managerial decisions, knowing that management and union representatives practice close collaboration on institutionalized arenas for dialogue.

Overall, we find that on county municipality level the teacher's union was not involved in the decision-making process over whether to implement the system or not. Although they report that this has not produced difficulties in the implementation process on school-level, the lack of involvement has partly reduced the amount of trust in the school authorities. On school level, shoop-floor stewards and teachers alike report that the role of shop-floor steward mainly has been to ensure that technical problems generated by the system-logic is solved by management, and also to ensure that the working hours for teachers are registered correctly in order for a teacher not to be registered "in minus". Finally, the union representatives argue for the need to put 'the process of implementation' on the employee-management agenda. The system is not quite implemented when launched, their argue, but when teachers and school management trust the system to be fair for pupils and teachers alike.

19.12

IMPACTS OF A GREEN HYDROGEN VALUE CHAIN ON THE LABOR MARKET IN GERMANY

Alexander Schur[1], Linus Ronsiek[2], Johanna Zenk[3]

[1]Federal Institute for Vocational Education and Training (BIBB), Bonn, Germany. [2]Institute of Economic Structures Research (GWS), Osnabrück, Germany. [3]Institute for Employment Research (IAB), Nürnberg, Germany

Abstract

Hydrogen produced via electrolysis from renewable energies, commonly referred to as green hydrogen, has the potential to play a key role in the energy transition. It can contribute to decarbonize the industry, transport or heating sector and to achieve the national climate targets. In this context, with its updated National Hydrogen Strategy, the Federal Government aims to make green hydrogen competitive, expand its production and use, develop the necessary transport and distribution infrastructure, and reduce dependence on fossil fuel supplier countries beyond climate policy (BMWK 2023). Hence, establishing a green hydrogen value chain raises the question of how the German economy as a whole and the labor market will be affected.

Our study analyses the impact of a green hydrogen value chain on GDP, employment, occupations and qualifications in Germany until 2045. It is embedded within the inter-institutional «QuBe project» conducted by the BIBB (Federal Institute for Vocational Education and Training) and the IAB (Institute for Employment Research) in collaboration with the GWS (Institute of Economic Structures Research). The project provides a long-term overview of the expected development of labor demand and supply in terms of qualifications and occupations (Maier et al. 2022).

The results are based on demographic and economic modelling in conjunction with the scenario technique. For the economic modelling, several assumptions for future technological and economic developments are made and integrated into the QINFORGE (Qualification and Occupation in the INterindustry FORecasting GErmany) analytical tool. The economic core of the QINFORGE model is a macroeconomic input-output model. QINFORGE enables econometric forecasting and simulation as the model is disaggregated according to economic sectors and groups of goods (Zika et al. 2023). The data consists, among others, on the German Microcensus and the German national accounts.

To identify the economic and labor market effects of a green hydrogen value chain, two scenarios are computed. The first scenario is a baseline projection which extrapolates past trends and behaviors in the economy and the labor market neglecting the development of a green hydrogen value chain. The second, alternative scenario assumes the development of a green hydrogen value chain according to assumptions derived from a broad literature review. Thus, differences in the results lead to direct, indirect, and induced overall impacts to the economy and labor market entailed by the development of a green hydrogen value chain (Mönnig et al. 2019, Becker et al. 2022).

The scenario analysis shows that establishing a green hydrogen value chain will lead to an overall higher level of employment in Germany. Yet, effects differ across economic sectors and occupation groups. Direct positive effects are especially pronounced in the construction and engineering sector and their related occupations due to an additional expansion of renewable energies needed for green hydrogen production. However, in individual occupation groups in which skilled-labor shortages already exist, scarcities might be amplified. Additionally, the results for GDP are ambiguous. The additional investments in construction and facilities lead to a higher GDP level, whereas the imports are also rising due to the comparatively higher price for hydrogen than for the substituted fossil fuels (Ronsiek et al. 2024).

Literature

Becker, L.; Bernardt, F.; Bieritz, L.; Mönnig, A.; Parton, F.; Ulrich, P.; Wolter, M.I. (2022): INFORGE in a Pocket. GWS-Kurzmitteilungen 2022/02.

BMWK (Federal Ministry for Economic Affairs and Climate Action) (2023): National Hydrogen Strategy Update. NHS 2023. Berlin. URL: https://www.bmwk.de/Redaktion/EN/Publikationen/Energie/national-hydrogen-strategy-update.pdf?__blob=publicationFile&v=2

Maier, T.; Kalinowski, M.; Zika, G.; Schneemann, C.; Mönnig, A.; Wolter, M.I. (2022): Es wird knapp. Ergebnisse der siebten Welle der BIBB-IAB-Qualifikations- und Berufsprojektion bis zum Jahr 2040. BIBB Report 3. Bonn.

Mönnig, A.; Schneemann, C.; Weber, E.; Zika, G.; Helmrich, R. (2019): Electromobility 2035 – Economic and labor market effects through the electrification of powertrains in passenger cars. IAB-Discussion Paper 8|2019.

Ronsiek, L.; Schnemann, C.; Mönnig, A.; Samray, D.; Schroer, J.; Schur, A.; Zenk, J. (2024): – Arbeitskräftebedarf und Arbeitskräfteangebot entlang der Wertschöpfungskette Wasserstoff: Szenario-v2.1. IAB-Forschungsbericht 7|2024.

Zika, G.; Hummel, M.; Maier, T.; Wolter, M.I. (2023): Das QuBe-Projekt: Modelle, Module, Methoden. IAB-Bibliothek 374. Nürnberg.

19.13

THE CHARACTERISTICS OF WORKING-CLASS YOUTH IN THE LABOR MARKET

Ari-Matti Näätänen

SAK ry, Helsinki, Finland

Abstract

Working-class youth, meaning young employees in the industrial, service, and construction sectors, face unique challenges and opportunities in the labor market compared to older workers. Research indicates that their working conditions, wage development, and job stability differ significantly from those of more experienced employees. For example, according to Statistics Finland's labor force surveys, over 40% of workers under 30 are employed on temporary contracts, while the corresponding share among workers over 50 is less than 10%.

What is the working life of young employees in SAK-affiliated sectors like compared to older workers? What factors connect, and conversely, differentiate workers under 30 from older age groups in terms of working conditions? Does an employee's age, for instance, influence the treatment they receive from their employer?

These questions are explored in the latest SAK Working Conditions Barometer. For the barometer's data collection, Verian conducted telephone interviews with 1,203 employed members of SAK-affiliated unions in February–March 2024. The dataset represents the working members of SAK unions in terms of industry, gender, and age. The research questions are addressed using linear regression analysis and descriptive statistical methods.

According to the study, 37% of workers under 30 would like to change jobs if possible. The willingness to change jobs clearly decreases with age. One possible explanation is that about one in four (24%) employees under 35 find their tasks monotonous, whereas in older age groups, the corresponding share is only 10–16%. The results highlight the importance of giving young workers more responsibility. If an employer commits to an employee, the employee is more likely to commit to their job in the long term.

The study also reveals many positive aspects of young people's working life. Employees under 30 typically express a desire to increase their workload and earn accordingly more. They also perceive their health status to be better on average than older workers and feel that their employers provide them with more support for learning. Moreover, they more frequently experience their work as involving opportunities for learning new skills.

Based on the study, there is no indication that the efficiencydemands of working life exceed the resources of young workers more than average. Among workers under 30, only 17% believe that their employer prioritizes efficiency over everything else, while this perception is more common among older age groups. Additionally, the mental workload of work does not statistically differ between age groups, according to the study.

In public discussions, the well-being of young employees often emerges as a challenge. However, the research shows that work also includes elements that support well-being. While there are areas for improvement in the working life of young employees, work not only provides a salary but also skills and good opportunities for professional growth. Furthermore, management's expectations regarding efficiency appear to be slightly lower for younger workers compared to older employees.

19.14

BUY OR DO IT YOURSELF? ON THE FUTURE OF THE ACADEMIC PUBLISHING SYSTEM IN VOCATIONAL EDUCATION AND TRAINING RESEARCH

Bodo Rödel

Federal Institute for Vocational Education and Training (BIBB), Cologne, Germany

Abstract

Science has sold itself to the large scientific publishers - this also applies to some extent to vocational education and training research. The scientific publication system was originally a system in which researchers informed each other directly. Monetary aspects did not play a role; it was more a matter of exchanging the latest findings quickly. The first scientific journals founded in 1665, 'Philosophical Transactions' and 'Le Journal des scavans', were also in the hands of scientific societies - in other words, in the hands of science itself.

Today, the situation is very different. A few large scientific publishers, above all Elsevier, Sage, Springer-Nature, Taylor & Francis and Wiley, dominate the scientific journal market. They have developed mechanisms that make their journals appear indispensable. If researchers do not publish in these journals, they have to fear disadvantages in their academic and professional careers. If a researcher aspires to an academic career, they are virtually forced to publish in these journals. Pseudo indicators, such as the journal impact factor, suggest a high reputation of the journal. In reality, however, they only have very limited significance. The peer review process is seen as a guarantee of quality, but is itself very problematic. In addition, the reviewers act as unpaid free labourers for the scientific publishers.

In recent decades, academic publishers have been able to use their quasi-monopoly position to keep raising the prices of their journals in order to generate enormous profits. Although attempts have been made to counter this development with the Open Access movement, publishers have now adapted to this: The cost of Article Processing Charges (APC), for example, continues to rise and publishers are demanding money for other services, such as colour charges, etc. Finally, the scientific publishers have also positioned themselves as players who, like the social media platforms, systematically collect and utilise data about authors.

As a result of these developments, considerable financial resources are spent by authors and the institutions that employ them in order to publish research results and make them accessible. In other words, taxpayers' money is being used to make the results of research, which is also financed by taxpayers' money, accessible! Of course, this also means that researchers who do not have these financial resources at their disposal have fewer opportunities to publish and access research literature.

The paper first describes the above-mentioned development and the status quo. It refers to empirical studies on open access, peer review and the journal impact factor. It then outlines a possible solution: as in the early days of scientific publishing, this consists of the scientific community itself providing publication venues. This is commonly referred to as Diamond Open Access. This means that research institutions themselves set up an infrastructure to publish research results. In this case, access to and publication of scientific publications is free of charge. However, this approach is also associated with various challenges, which are discussed in the paper.

Finally, an initiative of the Federal Institute for Vocational Education and Training (BIBB) will be presented. BIBB has been building up a repository for several years - the so-called VET Repository. Until now, it has only functioned as a publication platform for BIBB employees, but it is now also possible for external researchers to publish via the VET Repository free of charge and with legal protection. Researchers can use this service to make their publications accessible to the research community.

References

Getz, L., Langenkamp, K., Rödel, B., Taufenbach, K., & Weiland, M. (2020). Open access in vocational education and training research: Results from four structured group discussions. Empirical Research in Vocational Education and Training, 12 (2020), H. Art. 15, pp. 1-24. https://doi.org/10.1186/s40461-020-00101-z

Getz, L., Langenkamp, K., Rödel, B., Taufenbach, K., & Weiland, M. (2021). How researchers use the academic publication system for research communication - results from the research project "Open Access in Vocational Education and Training Research". Trends in vocational education and training research. Volume 4, Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET) / Christof Nägele, Natasha Kersh, Barbara E. Stalder [Hrsg.], pp. 73-80.

Rödel, B. (2018). Open access case study: How is the situation in vet research in Germany? : questions and perspectives. Fachbeiträge im Internet urn:nbn:de:hbz:5:2-174529

Rödel, B. (2024). Reputation, Quality, Exclusivity: Peer Review in Vocational Education and Training research. k. A: Zenodo. DOI 10.5281/zenodo.1375686

Suber, P., & Rödel, B. (2022). "Open Access helps both: Authors and readers" : Peter Suber in an interview with Bodo Rödel (24 June 2022). Offene Zusammenhänge : Open Access in der Berufsbildungsforschung /Hubert Ertl [Hrsg.]; Bodo Rödel [Hrsg.], pp. Seite 339-345.

19.15

CITY EMPLOYEES AS FACILITATORS OF CITIZEN PARTICIPATION IN SMART CITY DEVELOPMENT

Sari Yli-Kauhaluoma[1], Meri Jalonen[2]

[1]Kajaani University of Applied Sciences, Kajaani, Finland. [2]LAB University of Applied Sciences, Lahti, Finland

Abstract

A growing number of cities worldwide are aspiring to become 'smart' to solve urban problems by collecting data and utilizing up-to-date technologies while advancing quality of life for residents and creating attractive locations for companies (Karvonen et al., 2019). In their smart city strategies and projects, cities typically promote one or more focus areas of smartness, identified by Giffinger et al. (2007): competitiveness (smart economy), transport and ICT (smart mobility), natural resources (smart environment), social and human capital (smart people), participation (smart governance), or quality of life (smart living). Whereas much of the previous research on smart city development has focused on discerning the visions and discourses of different cities through the analysis of strategies or policies, we follow the stream of studies exploring the role of citizens in the smart city development (e.g., Cardullo & Kitchin, 2019), and the importance of facilitation work to provide opportunities for different participants to act and collaborate (Hakkarainen & Hyysalo, 2016).

This study examines how employees of city organisations encourage active participation of citizens in smart city development. It analyses the work of city employees in two organisations in the City of Helsinki: the central library and the innovation company of the city. The empirical material collected at the central library consists of staff, management, and public library expert interviews, participation in public workshops and talks at the library as well as analysis of websites, video recordings and studies on library work in general and at the central library in particular. The ethnographically collected empirical material in the innovation company of the city consists of interviews with facilitators, company representatives, and residents participating in the novel service concept experimentation programme, field notes from meetings and workshops as well as documents, studies and media reports about different projects.

The results show that city employees conduct both mundane and strategic activities as they strive to encourage citizen participation in smart city development. The study elaborates the ways how city employees provide opportunities for participation, bring different actors together, and negotiate between them as well as adapt technologies and services for different user needs. However, it is a continuous struggle for city employees to improve the inclusiveness of the smart initiatives and the meaningfulness of engagement to citizens. This calls for constant reflection concerning the role of city organizations,

as well as continuous learning and the development of novel competencies by city employees to advance inclusive smart city development.

References

Cardullo, P., & Kitchin, R. (2019). Being a 'citizen' in the smart city: up and down the scaffold of smart citizen participation in Dublin, Ireland. GeoJournal, 84(1), 1–13.

Giffinger, R., Fertner, C., Kramar, H., Kalasek, R., Pichler-Milanovic N., & Meijers, E. (2007). Smart cities: Ranking of European medium-sized cities. Centre of Regional Science, Vienna University of Technology, Vienna, Austria.

Hyysalo, V., & Hyysalo, S. (2018). The mundane and strategic work in collaborative design. Design Issues, 34(3), 42-58.

Karvonen, A., Cugurullo, F., & Caprotti, F. (2019). Introduction: Situating smart cities. In A. Karvonen, F. Cugurullo, & F. Caprotti (Eds.), Inside Smart Cities: Place, Politics and Urban Innovation (pp. 1–12). London and New York: Routledge.

19.16

"WE BRING THEM TO LIFE" - SERVICE ROBOTS AND EMOTIONAL LABOR AMONG FRONTLINE EMPLOYEES IN THE SERVICE SECTOR

Carin Håkansta[1], Calle Rosengren[2], Kristina Palm[3]

[1]Karolinska Institutet, Stockholm, Sweden. [2]Högskolan Kristianstad, Kristianstad, Sweden. [3]Karlstad University, Karlstad, Sweden

Abstract

Purpose: The aim of the study was to enhance the understanding of how humanoid and zoomorphic service robots affect frontline employees' emotional labor.

Design: A case study design was applied, and multiple methods were used; semi-structured interviews, observations, and document analysis. The participants in the study represent voices from frontline employees, managers, and HR officers.

Findings: The study shows that frontline work is emotionally affected by robots both on stage and backstage. On stage, the frontline employees must put on an act and manage their emotions. Since the robots take more of the backstage work, the frontline employees are more on stage than before and have less time where they do not have to put on an act. The study also showed that the acting was not directed by managers, but rather by company values.

Originality: The study is original in two ways. First, its empirical focus on employees that do have experience of working with robots. Second, by adopting a working environment perspective when studying emotions in work.

19.17

HOW DOES DIGITALIZATION IMPACT PSYCHOSOCIA SAFETY AT WORK?

Nina Savela[1], Reetta Oksa[2]

[1]LUT University, Lappeenranta, Finland. [2]Tampere University, Tampere, Finland

Abstract

Psychological safety and psychosocial safety climate have been argued to prevent and buffer employee illbeing (Amoadu et al., 2023; Drayton, 2021). Psychological safety refers to a shared belief that it is safe to take social risks within a group (Edmondson & Lei, 2014), while psychosocial safety climate highlights the perceived organizational priority and commitment to ensure employees' psychological safety (Dollard & Bakker, 2010). Based on prior literature, psychosocial safety supported by the organisation and built in the interactions within the work community is linked to not only employee well-being but also to the productivity and success of the organization (Amoadu et al., 2023; Edmondson & Bransby, 2023). However, due to

the digitalization of workplaces, and the remote and hybrid work arrangements becoming more common, social interaction within work communities has become increasingly technology-mediated. Thus, more research is needed on the building and maintenance of psychosocial safety in the era of digital interaction (Edmondson & Bransby, 2023).

This presentation outlines the research done in a project funded by the Finnish Cultural Foundation, in which we examine the role of technology-mediated interaction in the psychosocial safety of the work community. As data collection methods, we used a systematic literature review, interviews and a survey which included an experimental design. As analysis methods we used content analysis, descriptive statistics, and multivariate models. For this presentation, we compiled the results of our studies on the potential threats or benefits of technology-mediated interaction to the psychosocial safety of the work community.

Based on our findings, building psychosocial safety digitally requires more time and conscious investment than face-to-face interaction. Mutually shared and clear rules and norms are even more vital for the psychosocial safety of the work community when interacting digitally. In addition to the mechanisms of psychosocial safety, more research data is needed on the significance of different technologies and their features. Our research results provide topical evidence on the challenges and benefits of technology-mediated and hybrid working from the perspective of psychosocial safety. Research findings can be used to minimise negative consequences and make better use of aspects that promote psychosocial safety in multilocal and digital work environments.

Keywords: psychosocial safety, digital interaction, work community

References

Amoadu, M., Ansah, E. W., & Sarfo, J. O. (2023). Influence of psychosocial safety climate on occupational health and safety: a scoping review. BMC Public Health, 23(1), Article 1344. https://doi.org/10.1186/s12889-023-16246-x

Dollard, M. F., & Bakker, A. B. (2010). Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement. Journal of Occupational and Organizational Psychology, 83(3), 579–599. https://doi.org/10.1348/096317909X470690

Drayton, M. (2021). Anti-Burnout: how to create a psychologically safe and high-performance organisation. Routledge.

Edmondson, A. C., & Bransby, D. P. (2023). Psychological safety comes of age: Observed themes in an established literature. Annual Review of Organizational Psychology and Organizational Behavior, 10, 55–78. https://doi.org/10.1146/annurev-orgpsych-120920-055217

Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. Annual Review of Organizational Psychology and Organizational Behavior, 1(1), 23–43. https://doi.org/10.1146/annurev-orgpsych-031413-091305

19.18

DOES THE MEANING OF WORK AND WORKPLACE PSYCHOLOGICAL SAFETY IMPROVE WORK ENGAGEMENT? -CASE OF SOFTWARE ENGINEERS IN JAPAN AND FINLAND-

Hideki Shimizu-Tanaka[1], Katsutoshi Furuta[2]

[1]Doshisha University, Kyoto, Japan. [2]Risumeikan University, Osaka, Japan

Abstract

Objective: This study examined whether Meaning of Work (MOW) and Psychological Safety (PS) in the workplace improve software engineers' Work Engagement (WE). Specifically, the impact of MOW and PS on WE was analysed using software engineers' data in Japan (N=1,559) and Finland (N=2,399).

Background: Meaningful work is a positive psychological state in which people feel they are making a positive and important contribution to a worthy cause (Albercht, 2013). For meaningful work, the meaning of the work is determined not only by how the individual feels about it but also by the possible significance of the work given by the organisation. In other words, meaningful work may be defined by the exchange relationship with the organisation, i.e. management, according to social exchange theory (Blau, 1964) and others. Regarding Perceived Organisational Support (POS), allocating meaningful work as part of POS should also be considered.

In examining the effects of meaningful work, which can also be a POS, the framework of the Job Demand-Resource Model (Bakker & Demerouti, 2007; 2008) is practical: the JD-R model shows that job resources and personal resources have a direct impact on job While it has been shown to have a direct impact on engagement, it has been noted that there remain many unexplored reasons and mechanisms by which the provision and experience of work resources can lead to increased

engagement (Albrecht, 2010b; Bakker et al. ., 2011, etc.). Therefore, the present analysis focuses on the meaning of work as a work resource. In other words, we will examine whether a sense of meaning in work improves work engagement.

High psychological safety is important in the context of the work context. However, although previous research has examined the effects of psychological safety on health issues in the JD-R model (Dollard &Bakker, 2010), the impact on work engagement is still under investigation. A high level of psychological safety ensures an environment where opinions can be freely exchanged, which is important for engineers, who are strongly required to exchange knowledge. The high level of psychological safety can also be a POS, which may improve the work engagement of software engineers. Therefore, this study examines how psychological safety affects the work engagement of software engineers in Japan and Finland. In addition, we also examine the impact of the intersection of job meaning and psychological safety on work engagement.

Method: We surveyed software engineers from two different cultural backgrounds. The Japanese dataset was collected from employees of a significant software development company (Company A Group) and received 1,559 responses. The Finnish dataset was collected from software engineers' union members and received 2,399 responses. As a prerequisite for the analysis, a mean comparison was conducted to determine whether there are differences in MOW and PS between Japan and Finland. The relationship between MOW, PS and WE was then analysed using multiple regression analysis.

Result: First, the results of the mean comparison of MOW and PS were as follows: for MOW, the mean MOW score of the Japanese software engineers was 3.31, and the mean score of the Finnish software engineers was 3.82 (on a five-point scale), with the MOW score being statistically significantly higher for the Finnish software engineers. The mean PS of the Japanese software engineers was 3.63, and that of the Finnish software engineers was 4.27. The PS of the Finnish software engineers was also statistically significantly higher than that of the Japanese software engineers.

The results of multiple regression analysis with WE as the explained variable showed that for MOW, both Japan ($\beta = .650$, $p < .001$) and Finland ($\beta = .560$, $p < .001$) had a positive effect on the WE of software engineers. Psychological safety also had a significant positive effect on the WE of software engineers in both Japan ($\beta = .149$, $p < .001$) and Finland ($\beta = .282$, $p < .001$). On the other hand, the cross-term between MOW and PS showed a significantly positive effect on the WE of software engineers in Japan ($\beta = .059$, $p < .01$) but not for software engineers in Finland.

Conclusion: This study examined the effects of MOW and PS on the WE of software engineers in Japan and Finland. The analysis showed that MOW and PS positively affected the WE of software engineers in Japan and Finland, while the cross term of MOW and PS only improved the WE of software engineers in Japan.

References

Albrecht, S. L. (2013). Work engagement and the positive power of meaningful work. in Advances in positive organisational psychology (pp. 237-260). Emerald Group Publishing Limited.

Dollard, M. F., & Bakker, A. B. (2010). Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement. Journal of occupational and organisational psychology, 83(3), 579-599.

19.19

FROM STABILITY TO BECOMING: A PROCESSUAL AND COMPLEXITY-BASED REINTERPRETATION OF ORGANIZATIONAL RESILIENCE

Mikko Aro

University of Vaasa, Vaasa, Finland

Abstract

Organizations are increasingly facing complex problems, multifaceted issues, and external shocks that are often difficult to define or challenging to properly solve due to their inherent uncertainty and unpredictable nature. Examples of what types of forces create these problems include climate change, social inequality, growing workforce and skills shortages, knowledge workers' mental-health decline, globalization, pandemics, wars, rapid technological innovation like AI, and economic fluctuations.

These types of challenges have created significant instability across the world resulting in many national economies diving into recession, causing challenging rates and forecasts for global unemployment, and unfilled vacancies in advanced economies. In times like these, many firms are forced to cut costs including labour, some firms go bankrupt despite putting significant effort

in surviving and adapting, while others might thrive. The ongoing economic uncertainty alone creates intensifying debates on what should be done in firms to survive and stay competitive and resilient.

Against this backdrop, Organizational Resilience (OR) has become a critical area of research within management and organizational studies, yet existing conceptualizations remain fragmented and limited in their ability to account for the dynamic, emergent, and multi-level nature of resilience. Dominant perspectives tend to frame OR as a static capability or an outcome resulting from predefined resources and managerial interventions. However, such views fail to capture the complex, nonlinear, and processual dynamics through which organizations navigate disruption, adapt to uncertainty, respond to shocks, and maintain competitiveness.

This conceptual paper addresses these limitations by developing a more holistic and theoretically robust understanding of OR through the integration of Process Philosophy and Complexity Theory (CAS – Complex Adaptive Systems). Drawing on processual ontologies, this paper reconceptualizes OR not as a set of predefined traits but as an ongoing, emergent process of becoming, shaped by continuous interactions between social and material forces, and relational dynamics across multiple organizational levels.

Building upon Complexity Theory, this paper further develops a framework in which OR emerges from nonlinear interactions, feedback loops, and self-organizing processes within complex adaptive systems. This approach illustrates that resilience is not a return to equilibrium ("bouncing back") but rather an ongoing process of transformation and renewal ("bouncing forward"). Importantly, this paper positions OR as a relational and systemic phenomenon, where resilience is co-constructed through the dynamic interplay of individuals, teams, and organizational structures rather than residing solely at one level of analysis.

Strategic Human Resource Management (SHRM) and Human Resource Management (HRM) practices have significant potential in affecting OR, because of their role in enabling and shaping behavior, interactions, and culture that can promote resilience, and because HRM usually can affect different levels in organizations. Despite this potential, the extant HRM research in the context of external shocks and uncertainty, mostly focuses on workforce reduction strategies rather than conceptualizing HRM as enabler and amplifier of OR, . From a SHRM perspective, the processual and complexity-informed view of OR has significant implications. Rather than focusing exclusively on individual adaptability or structural preparedness, SHRM in this paper is conceptualized as a facilitator of emergent resilience by fostering adaptive capacities, sensemaking processes, enabling adaptation of technologies like AI, and social connectivity across organizational levels. This frames SHRM as enabling the conditions for OR to emerge.

In addressing the identified research gaps, this paper answers to the research question:

> "How can Process Philosophy and Complexity Theory improve our conceptualization of Organizational Resilience in the context of SHRM and how could this be advanced in a future research agenda?"

Doing this, this paper advances the literature on OR by offering (1) a refined theoretical synthesis that integrates fragmented conceptualizations, (2) a novel framework positioning resilience as an emergent, dynamic, and non-linear process, and (3) a research agenda for future research in OR and HRM studies that apply complexity-informed methodologies.

19.20

PLAYFULNESS IN THE WORKPLACE

Anna-Kaisa Jarkko[1], Marjaana Kangas[1], Katriina Heljakka[2]

[1]University of Lapland, Rovaniemi, Finland. [2]University of Turku, Turku, Finland

Abstract

Children play and adults work. This is the way the world has been seen for a long time due to traditional societal norms and cultural perceptions that categorize activities into those that are serious, productive, and obligation-driven (work) versus those that are fun, recreational, and chosen freely (play) (Bateson & Martin, 2013). However, recent shifts in perspective have recognized the value of playfulness in the workplace, not only for enhancing well-being but also for fostering creativity, learning, and productivity.

The purpose of the study is to synthesize the current state of knowledge about playfulness in the workplace. Earlier research indicates that playfulness positively influences work outcomes such as job satisfaction and innovative behaviour among employees (Yu et al., 2007). The study is grounded in Positive Organizational Scholarship (POS). Positive organizational

scholarship is an emerging field of study that focuses on investigating positive phenomena within organizations (Cameron et al., 2003). Its aim is to understand positive states, like playfulness, as well as the dynamics and outcomes of those states (Cameron et al., 2003).

This study focuses on exploring the various manifestations of playfulness in the workplace, examining these aspects at the levels of individual employees, teams, and the organization and how playfulness is seen as a part of workplace practices and dynamics. This study aims to answer the following question: How does playfulness manifest in the workplace within employees, teams and organization?

The method employed in this study is a systematic literature review (SLR), designed to provide a comprehensive overview of the current state of knowledge on playfulness in the workplace (Page et al., 2021). A systematic literature review (SLR) was conducted using three electronic databases, Web of Science, Scopus, and EBSCO, focusing on peer-reviewed articles published between 2014-2024. Following the PRISMA -guidelines for identification, screening, eligibility and inclusion, 34 papers were selected and evaluated thoroughly. Thematic analysis was employed to analyze and synthesize the data.

The systematic literature review identifies diverse manifestations of playfulness in the workplace, categorized into independent play, playing together, organizational play, and playing with technology. Independent play involves self-initiated activities that promote personal enjoyment and challenge, such as mind-wandering and entertaining "what-if" scenarios. Key concept of independent play is Playful Work Design (PWD), characterized by two main dimensions: ludic play and agonistic play. Playing together emphasizes social interactions and shared experiences, occurring in "playspaces" where employees engage in activities like games and storytelling. Key concept of social play is Social Ludic Activities (SLAs), a distinct form of workplace playfulness characterized by spontaneous, voluntary, playful behaviors employees utilize to address work-related concerns within a psychologically safe environment. Organizational play strategically integrates playful activities into work processes, fostering collaboration and creativity through concepts like Leisure-at-Work (LAW) and playfulness climate. Playing with technology involves employees engaging with technology playfully, blurring the lines between work and play, and enhancing collaboration and idea development through virtual platforms.

These manifestations highlight the multifaceted nature of playfulness. The results can be applied to understand the significance and variety of playfulness, providing a new perspective for examining work and advancing the field of POS. The findings provide valuable insights for organizations seeking to recognize positive phenomena in the workplace, possibly contributing to individual well-being, team dynamics, and organizational outcomes. The results are in line with the goal of POS which is to understand how organizations and individuals can succeed while promoting positive behaviors, cultures, and practices.

Keywords: playfulness, workplace, play at work, Positive Organizational Scholarship, working life

---

19.21

ARE WE ON TIME? QUALITY FACTORS IMPACTING MEETING SATISFACTION, ENGAGEMENT AND STRAIN

Laura Hirva[1], Anne Mäkikangas[2], Sanna Markkula[1], Saija Mauno[1], Pekka Isotalus[3]

[1]Faculty of Social Sciences, Tampere University, Tampere, Finland. [2]Work Research Centre, Faculty of Social Sciences, Tampere University, Tampere, Finland. [3]Faculty of Information Technology and Communication Sciences, Tampere University, Tampere, Finland

Abstract

Introduction: Workplace meetings are integral to modern work environments. Meeting research literature indicates that meeting time has increased, particularly with the rise of virtual and remote work, yet many meetings are perceived as ineffective by attendees. Ineffective meetings can increase the employees' mental load and negatively impact their work engagement and productivity. Following earlier research on meeting success factors, we investigated how six meeting quality indicators (preparation, time management, participatory leadership, attendee role relevance, action planning and meeting development) impact the attendees' meeting satisfaction, meeting engagement and meeting strain. We also compared the associations between different groups. Suggestions on reviewing organizations' meeting practices are introduced.

Methods: Structural equation modelling with Mplus8 software was used to examine associations between meeting quality indicators and proximal meeting outcomes. Group differences were analyzed using multigroup SEM, with meeting frequency and size, frequency of leading meetings, professional status, remote work, and industry as grouping variables. Our sample

(n=1240) consisted of Finnish working adults from various professions taking part in a cross-sectional online survey. Most respondents (47%) participated in two to three meetings daily, while 18% attended four or more. Six to ten attendees was reported as the most common meeting size (47%). 61% reported to lead some meetings themselves. 12% of our respondents held a managerial or leadership position in their organization. Information and communications sector, followed by retail, transportation and services, were the largest industries represented. 57% worked remotely most of the time.

Results: Among the six meeting quality factors, time management in meetings was most strongly associated with both meeting satisfaction and reduced meeting strain. Other associations were found with action planning, that had a small but significant association with both satisfaction and engagement; and participatory meeting leadership, that associated with reduced meeting strain.

For frequent meeting attendees, as well as frequent meeting leaders, developing meeting practices was positively associated with meeting satisfaction and meeting engagement. In contrast, for those attending fewer meetings, participatory leadership and goal-oriented preparation were crucial for meeting satisfaction. Remote and hybrid workers also highlighted participatory leadership and preparation. For frequent meeting leaders, attendee role relevance (having the right people attend meetings) was strongly associated with meeting engagement. Some industry-specific associations were also observed. For example, with health and education workers there was a strong association between action planning and meeting satisfaction.

Between-groups difference testing showed that leaders and managers had a stronger association between meeting preparation and satisfaction than employees. Other group characteristics did not produce significant differences.

Conclusions: This study highlights the critical role of meeting quality factors in employee meeting satisfaction, engagement, and meeting-related strain. The results underline the importance of effective time management in meetings, which emerged as the most significant overall factor. Notably, good time management (i.e., starting and ending meetings on time and making efficient use of meeting time) reduced meeting strain, regardless of the number of meetings per day or per week.

The study also identified group-specific associations based on participants' responsibilities in and outside of meetings. Meeting satisfaction increased among those who frequently led meetings if they felt their organization invested in meeting development. Remote workers emphasized the importance of the meeting leader's participatory actions and good preparation, highlighting the need to develop meeting leadership skills and clear meeting practices, especially with the increase in remote work.

Our data showed that the supervisor role was not strongly correlated with leading meetings frequently, suggesting that meeting leadership should be examined as a separate background variable. Of the significant associations, only being a leader or manager led to a significant difference between meeting preparation and satisfaction. For those in official supervisory and management roles, it was particularly important that meetings have a clear purpose and that attendees come prepared.

Based on some of the findings from the study, it would be useful to examine industry-specific meeting practices in more detail. Overall, the results suggest that organizations should prioritize refining their meeting practices to improve employee experiences and outcomes, especially as good meetings have been found to have broader implications to work engagement, well-being, and team performance.

19.22

WELL-BEING, DEMANDS AND OPPORTUNITIES IN DIGITALIZED WORK IN FINANCIAL ADMINISTRATION SERVICES

Katriina Tapanila, Arja Haapakorpi, Pasi Pyöriä, Päivi Korvajärvi, Antti Saloniemi, Tiia Kekola

Tampere University, Tampere, Finland

Abstract

There has been a rapid digitalization process in the field of financial administration services in the last few decades and it has changed the work of the professionals working in the field. Routine tasks have been automized, the client service process has become mediated by digital systems shared with the clients, and remote work has increased. These changes have influenced the well-being at work of the financial administration professionals.

Digitalization changes the work in the financial administration services: The traditional manual processes are being replaced by employees working with technology, since human work is still needed to apply and maintain digital systems. These competences can be conceptualized by the notion of digital competences which comprise, for instance, information management, communication and sharing, evaluation and problem solving and technical operations (Ferrari 2012; van Laar et al 2017).

Our research focuses on the digitalization of the financial administration services. We ask, 1) what kind of demands does digitalization place and what opportunities does it create for employees? and 2) how do these demands and opportunities affect employees' well-being at work? In this study, well-being at work is understood as satisfaction of the basic psychological needs, namely autonomy (i.e., a sense of volition), competence (i.e., the ability to use one's skills and capabilities), and relatedness (i.e., a sense of social belonging) (Ryan & Deci 2000, 2017).

Our data consist of 17 thematic interviews collected in eight companies providing financial services. 10 of the interviews were individual and 7 were group interviews with 2-3 interviewees. We interviewed altogether 13 employees (11 women and 2 men) and 12 managers (6 women and 6 men). The data were analyzed by qualitative content analysis.

Our preliminary analysis of the data implies that digitalization has increased the demands of continuous learning at work. The needs of the clients have become more diverse and the employees need to master many software applications used by their clients. They have to keep up with the development of the software and learn how to solve problems emerging during the service process. Some of the employees are pleased with the increased learning opportunities and challenges at work while others find them burdening. Also the automatization of the routine tasks makes the work more demanding and thus more burdening to some employees.

Digital systems allow for more flexibility in the time and the place of working. The possibilities of remote work have increased the autonomy at work and therefore contributed positively to the wellbeing at work. The digital systems seemed to have supported distant collaboration with the colleagues quite well in most cases. According to some of the interviewees, it was even easier to ask for a advice from a colleague via digital system. However, some of the interviewees thought that the sense of relatedness in the work community may suffer from remote work. To maintain the social cohesion of the work community, regular face-to-face meetings among colleagues were needed.

The managers expect the employees to work efficiently with the digital systems. However, the employees found it difficult to meet these requirements because of technical problems, repair work needed for the deficiencies of the digital systems and fragmentation of the work due to diversity of clients.

19.23

JOB DEMANDS, JOB RESOURCES, AND PERSONAL RESOURCES IN RELATION TO WORK- AND HEALTH-RELATED OUTCOMES IN A MILITARY CONTEXT

Emma Oskarsson[1], Petra Lindfors[1], Jennifer Hobbins[2], Daniel Bergh[3], Magnus Sverke[1]

[1]Department of Psychology, Stockholm, Sweden. [2]Department of Ledarship and Command & Control, Karlstad, Sweden. [3]Department of Education and Special Education, Gothenburg, Sweden

Abstract

Background: The Job Demands-Resources (JD-R) model describes how job demands and resources associate with work- and health-related outcomes. Job demands refer to those aspects of work that require sustained physical and mental effort (e.g. high workload and time pressure) and that can lead to exhaustion and burnout. Job resources refer to all the aspects of work that can contribute to achieving work-related goals, reducing work demands and stimulating personal development (e.g. control and social support).

The role of personal resources is commonly examined as part of the JD-R model and has been shown to positively relate to work engagement and negatively relate to burnout. Personal resources are individual factors such as boundary setting strategies and self-efficacy that can help individuals to cope successfully with their environment. Thus, personal resources are not job resources but are aspects that can be beneficial in the associations of demands and resources at work with various work- and health-related outcomes.

Still, little is known of the military context. This includes the current situation in the Swedish Armed Forces (SAF) where the increased focus on national and collective defense can lead to new conditions regarding job demands. In particular, the ongoing organizational change and expansion highlight the need to attract other groups than men and to retain qualified personnel.

Purpose: The aim of the present study is to investigate the work situation for military officers and specialist officers in the SAF by examining how job demands, job resources, and personal resources relate to work- and health-related outcomes. More specifically, the study examines to what extent qualitative and quantitative job demands, control and social support, and boundary setting strategies and self-efficacy can predict job satisfaction, organizational commitment, burnout, depression, and well-being.

Method: A cross-sectional survey including questions about the psychosocial work environment, personal resources, work-related attitudes and behaviors, and health is currently being administered to officers and specialist officers in the SAF. So far, 375 responses have been received. Data will be analyzed using hierarchical multiple regression models where demographic variables, job demands, job resources, and personal resources will be entered in separate steps and related to the different work- and health-related outcomes.

Results: Preliminary results show that job demands (qualitative and quantitative) are negatively related to job satisfaction, organizational commitment, and well-being and positively related to burnout and depression. Job resources (control and social support) are positively related to job satisfaction, organization commitment, and well-being, and negatively related to burnout and depression. Furthermore, boundary setting strategies and self-efficacy are positively related to job satisfaction, organizational commitment, and well-being, and negatively related to burnout and depression.

Implications: This study adds to the literature by describing how job demands and resources are experienced by employees in the SAF in times of new strategic directions and organizational growth. In addition to describing levels, this study contributes to the understanding of how job demands, job resources, and personal resources associate with work-related attitudes, behaviors, and health in a military context. This can be used to improve the work situation and work-related health and well-being of employees in the SAF and make the defense sector an attractive and sustainable workplace.

19.24

TRANSFORMING WORK: PROFILES OF BURNOUT AND EMOTIONAL INTELLIGENCE IN ON-SITE AND REMOTE WORK

Taina Hintsa[1], Petri Karkkola[1], Sampsa Puttonen[2]

[1]University of Eastern Finland, Joensuu, Finland. [2]Tampere University, Tampere, Finland

Abstract

Background. The Covid-19 pandemic transformed work permanently. Digitalisation and related increase in work demands and pace have led to additional pressures on employees and experiences of stress. Prolonged exposure to stress can lead to burnout. Previously emotional intelligence has been related to lower stress and burnout. However, information about whether there are different burnout profiles in on-site and remotely working employees and how emotional intelligence is related to these profiles is still sparse. The aim of the present study was to identify groups of employees with different burnout profiles and study how these profiles relate to emotional intelligence in on-site and remotely working employees.

Methods. Longitudinal data based on working population was collected in 2023 and 2024 (n=1015). We used the first timepoint to examine latent profiles of burnout and levels of emotional skills in on-site (n=645) and remotely working employees (n=370). Burnout was measured with Burnout Assessment Tool (BAT) and emotional skills with Wong and Law Emotional Intelligence Scale (WLEIS). The data was analyzed with Latent Profile Analysis in Mplus. Number of latent burnout profiles was determined separately in the subgroups (on-site and remote work) based on entropy, information criteria, the Lo-Mendell-Rubin adjusted Likelihood Ratio Test, and interpretability.

Results. We found three profiles of burnout in on-site employees: lack of burnout (47%), moderate burnout (39%), and high burnout (14%). In remotely working employees, we found four profiles: lack of burnout (40%), moderate burnout with low emotional impairment (27%), high burnout (26%), and very high burnout (8%). Employees in the lack of burnout profile had higher emotional intelligence among both on-site and remote work compared to employees in the profiles of high and very

high burnout. Remotely working employees in the very high burnout profile seemed to report especially high emotional impairment at work.

Conclusions. Employees with more beneficial burnout profiles report higher emotional intelligence. It seems that emotional intelligence and especially its' subscale regulation of emotion are lower among employees in profiles of more severe burnout regardless of whether they work on-site or remotely. Regulation of emotion can be trained and emotional intelligence may decrease the risk of burnout which should be taken into account in prevention of burnout in transforming work and in developing new on-site work practices.

19.25

THE RELATIONSHIP BETWEEN SOFTWARE ENGINEERS' CREATIVE PROCESS ENGAGEMENT, FUTURE WORK SELF, AND WORK MEANING: A COMPARISON OF FINLAND AND JAPAN (POSTER)

Katsutoshi Furuta[1], **Hideki Tanaka**[2]

[1]Ritsumeikan University, Osaka, Japan. [2]Doshisha University, Kyoto, Japan

Abstract

Background and Purpose: Creative process engagement (CPE) is a critical determinant in shaping how software engineers perceive meaning in their work (MOW). However, the extent to which this relationship is influenced by future work self (FWS) remains unclear. FWS refers to an individual's cognitive representation of their future professional identity, encompassing aspirations and career-related goals. The more clearly defined and accessible this self-concept is, the more prominently it influences career-related decision-making and behavior. Given that a salient future work self enhances proactive career behaviors, it is plausible that FWS strengthens the impact of CPE on MOW by aligning present creative efforts with future aspirations.

This study builds on Future Work Self Theory (Strauss, Griffin, & Parker, 2012) and Self-Determination Theory (Deci & Ryan, 2000). Future Work Self Theory suggests that individuals with a clear and vivid image of their future professional selves are more likely to engage in behaviors that facilitate career progression. This implies that FWS may act as a motivational catalyst, reinforcing the positive effect of CPE on MOW. Self-Determination Theory further supports this notion by emphasizing intrinsic motivation's role in fostering engagement and meaningful work experiences. Employees who perceive their creative engagement as contributing to their future careers likely experience a stronger sense of purpose in their work.

Recognizing potential cultural differences in career orientation and work perception, this study compares software engineers in Finland and Japan. By examining these variations, we provide insights into how different sociocultural contexts influence the interplay between CPE, FWS, and MOW.

Methods: We conducted a survey targeting software engineers in two distinct cultural contexts. The Japanese dataset was collected from employees of a major software development company (Company A Group), with 1,559 respondents. The Finnish dataset was gathered from members of a software engineers' union, yielding 2,399 responses. To analyze the relationships between CPE, FWS, and MOW, we employed multiple regression analysis using SPSS. Specifically, we examined the direct effect of CPE on MOW and tested the moderating effect of FWS on this relationship.

Results: Our findings revealed significant cross-cultural differences. In the Finnish sample, FWS moderated the relationship between CPE and MOW negatively ($\beta = -0.046$, $p < .05$). This suggests that for Finnish software engineers, having a strong FWS weakened CPE's positive effect on MOW. No significant moderation effect was found in the Japanese sample. However, both CPE and FWS independently had a positive impact on MOW. In Japan, FWS ($\beta = 0.392$, $p < .01$) and CPE ($\beta = 0.284$, $p < .01$) positively influenced MOW. Likewise, in Finland, FWS ($\beta = 0.408$, $p < .01$) and CPE ($\beta = 0.269$, $p < .01$) exhibited similar effects, indicating a consistent pattern across cultures.

Discussion and Implications: The findings highlight key cultural distinctions in how software engineers derive meaning from work. In Finland, where work-life balance and autonomy are highly valued, envisioning a future professional self may lead

individuals to reassess their current work's meaning, diminishing CPE's positive impact. This suggests that Finnish software engineers with a strong FWS may prioritize long-term career growth over immediate creative contributions.

In contrast, the Japanese results align with a collectivist work culture, where both CPE and career aspirations independently enhance work meaning. The emphasis on collective harmony and group-oriented success in Japan may contribute to this outcome, as individuals derive motivation from both their professional creativity and alignment with long-term career development expectations within organizations. This underscores the importance of social and organizational frameworks in shaping employees' work perceptions.

These insights have important implications for organizational strategies. In Finland, companies should foster career development opportunities aligning with employees' future aspirations while ensuring current work remains engaging and meaningful. In Japan, organizations may benefit from supporting both creative engagement and career development initiatives, as both contribute positively to MOW. Furthermore, global software companies operating across different cultural contexts should tailor talent development and motivation strategies to accommodate cultural variations.

Conclusion: This study highlights FWS's role in shaping the relationship between CPE and MOW among software engineers in Finland and Japan. While CPE enhances MOW, its effect varies by cultural context. Future research should examine additional factors, such as organizational culture and leadership styles, to deepen understanding of how software engineers derive meaning from work globally.

References

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. Psychological Inquiry, 11(4), 227–268.

Strauss, K., Griffin, M. A., & Parker, S. K. (2012). Future work selves: How salient hoped-for identities motivate proactive career behaviors. Journal of Applied Psychology, 97(3), 580–598.

19.26

THE POWER OF PRIDE: TRANSFORMING PUBLIC VALUE INTO ORGANIZATIONAL COMMITMENT

René Schmoll

Heinrich-Heine-Universität Düsseldorf, Düsseldorf, Germany

Abstract

Relevance and Objective: Employee retention is crucial for organizational effectiveness in the public sector and for achieving societal goals. To ensure this, public organizations need to understand which factors determine employees' emotional attachment (affective commitment) to them. While much of the research on organizational commitment in the public sector has focused on job security or financial incentives (Hur & Abner 2024), recent studies suggest that intrinsic factors, such as perceived organizational pride and public value, may play a significant role in fostering commitment. However, the relationships between public value, organizational pride, and organizational commitment remain unclear. Against this background, this study aims to analyze the mediating role of organizational pride on the relationship between public value and organizational commitment in the public sector.

Theory and Hypotheses: Using Affective Events Theory (Weiss & Cropanzano 1996), it is argued that organizational pride mediates the relationship between public value and organizational commitment. Public sector employees are exposed to "affective events" that reflect the public value of their organization. These events could be related to successful policy implementations, recognition for social impact, or achievements that reflect the mission of serving society. They may elicit feelings of pride as an "emotional response". When employees perceive that their organization is contributing positively to the public good or serving societal needs effectively, they may feel proud to be associated with it. As Affective Events Theory suggests, emotions have a profound influence on work-related attitudes. Thus, it is likely that the emotional response of organizational pride increases employees' organizational commitment. It is argued that employees who feel proud of their organization's role in creating public value are more likely to feel emotionally connected to the organization, increasing their organizational commitment.

H1: Public value is positively related to organizational pride.
H2: Organizational pride is positively related to organizational commitment.

H3: Organizational pride mediates the relationship between public value and organizational commitment.

Methods: Four main studies will be conducted in the public sector in Germany. (1) At first, a large-scale survey (n > 1000) was run with public sector employees from a wide range of organizations. (2) Second, the study was replicated in a local government. This was done to enhance the generalizability of the findings. To test the causal chain of the proposed mediating mechanism two vignette-based experiments will be conducted. (3) In the first one, public value will be manipulated. (3) In the second experiment, there will be a manipulation of organizational pride. Of course, all measures were drawn from validated scales (e.g., Gouthier & Rhein 2011; Klein et al. 2014; Meynhardt/Jasinenko 2021).

Results: Results of studies 1 and 2 support the hypotheses and propose that organizational pride fully mediates the relationship between public value and organizational commitment. Currently, two pilot studies are conducted to validate the written vignettes. After that, the two vignette-based experiments (study 3 and 4) will be performed. The final results could be presented at the WORK 2025.

Conclusion: Preliminary results underscore the pivotal role of public value in shaping organizational commitment, mediated through organizational pride. The findings contribute to the literature by revealing that public value alone may not directly enhance commitment; instead, it fosters a sense of pride among employees. The study extends the applicability of the Affective Events Theory to the public sector by demonstrating that public value acts as an "affective event" that elicits organizational pride and, in turn, organizational commitment. Thereby, the study provides a richer understanding of emotional dynamics in public organizations. From a practical point of view, study results also emphasize the need for public sector organizations to prioritize creating and communicating public value to cultivate both pride and organizational commitment.

Literature (selection)

Gouthier, Matthias H.J./Rhein, Miriam (2011): Organizational pride and its positive effects on employee behavior. In: Journal of Service Management 22 (5), 633–649.

Hur, Hyunkang/Abner, Gordon (2024): What makes public employees want to leave their job? A meta-analysis of turnover intention predictors among public sector employees. In: Public Administration Review 84 (1), 115–142.

Klein, Howard J./Cooper, Joseph T./Molloy, Janice C./Swanson, Jacqueline A. (2014): The assessment of commitment: advantages of a unidimensional, target-free approach. In: The Journal of Applied Psychology 99 (2), 222–238

Meynhardt, Timo/Jasinenko, Anna (2021): Measuring public value: scale development and construct validation. In: International Public Management Journal 24 (2), 222–249.

Pereira, Leandro/Patrício, Vânia/Sempiterno, Mariana/da Costa, Renato Lopes/Dias, Álvaro/António, Nélson (2021): How to Build Pride in the Workplace? In: Social Sciences 10 (3)

Weiss, Howard/Cropanzano, Russell (1996): Affective Events Theory: A Theoretical Discussion of The Structure, Cause and Consequences of Affective Experiences at Work. In: Research in Organizational Behavior 18, 1–74.

19.27

TOWARDS INTEGRATED AND INTELLIGENTLY SUMMARIZED HEALTH DATA

Sari Kaari[1], Tuomas Granlund[1,2], Risto Kaikkonen[1,3,4]

[1]Solita Oy, Tampere, Finland. [2]Tampere University, Tampere, Finland. [3]Helsinki University, Helsinki, Finland. [4]National Institute for Health and Welfare, Helsinki, Finland

Abstract

Fragmented health data hinders effective home care, especially post-cardiac events. This paper presents a privacy-preserving system integrating diverse data sources into a holistic patient view. Leveraging Generative AI and an on-premises LLM RAG system, the solution delivers concise patient record summaries, enhancing decision-making and streamlining home care delivery through improved data integration.

Introduction: Post-cardiac event home care is significantly challenged by fragmented health data, including valuable information from consumer devices. This siloed data prevents a complete and holistic patient overview, hindering coordinated care and informed decision-making regarding ongoing needs. Stringent privacy regulations, necessary for protecting sensitive health information, further complicate data sharing between providers. The lack of interoperability among existing systems traps critical details within individual platforms, preventing healthcare professionals from accessing the comprehensive patient data required for effective and efficient care delivery.

This paper presents a secure and privacy-preserving system integrating diverse home care data, including information from both modern and legacy devices, and leverages Generative AI to provide a holistic view of patient information, enabling more informed and contextualised healthcare decisions. The system has been developed as part of the ITEA project Secur-e-Health.

Method: This research employed Design Science Research (DSR) to address the challenge of fragmented patient data hindering effective home care, as identified by the Secur-e-Health project. Following the DSR principles, we iteratively developed and evaluated the system through cycles of requirements gathering, design, implementation, and testing. Objectives included: (1) developing a platform to integrate patient data from diverse sources (IoT and non-IoT); (2) ensuring patient privacy through on-premises processing and access controls; and (3) enabling a holistic view of patient information through AI-driven summarisation. We designed and developed the secure system to meet practical needs, leveraging Generative AI for enhanced decision-making through LLM-based summarisation and contextualised information retrieval.

Results: A novel software system was developed as a concrete artefact of the DSR. The solutions consist of two key components: integration platform and intelligent health data summariser.

In the home care ecosystem, the integration platform plays a critical role by collecting data from a variety of sources, including but not limited to EMR systems, ECG devices, consumer wearables, and wellbeing technology. Furthermore, our solution incorporates a machine vision component that extracts data from non-IoT devices, expanding the range of information that can be integrated. This comprehensive data integration, including data from both modern and legacy devices, facilitates the creation of a holistic patient view and enables the application of diverse data analysis tools.

Another key feature of the overall solution is a privacy-preserving, context-aware information retrieval and summarisation engine, implemented with an on-premises Large Language Model (LLM) Retrieval-Augmented Generation (RAG) system. This on-premises approach is particularly valuable in home care settings, ensuring data privacy and security by restricting model outputs to authorized data sources within the local environment. LLMs provide powerful tools that simplify the process of summarising key elements of patients' health records, leveraging advanced natural language processing techniques to distill complex information into concise summaries. This makes it easier for healthcare professionals to access and interpret critical data, providing accurate and contextually relevant information derived from the patient's authorized data. Furthermore, this robust system exemplifies a strong approach to managing sensitive health data, ensuring that LLM-generated outputs are strictly confined to authorized data and maintaining patient privacy. By combining the capabilities of LLMs with stringent data governance protocols, the system can effectively create AI-driven insights while safeguarding patient confidentiality.

Discussion: This study demonstrates the potential of integrating diverse data sources and leveraging LLMs within a secure, localised RAG system to enhance home care. Integrating data from various sources, including legacy systems via machine vision, improves health information system interoperability, leading to more informed, personalised care and enhanced operational efficiency. LLM-driven insights and simplified record interpretation empower healthcare providers to focus on direct patient care. This holistic approach underscores the importance of innovative solutions for modern healthcare delivery, contributing to improved care quality and resource allocation. In addition to home care, the solution also enables various high-performance sports use cases.

Future research could explore the long-term impact of such systems on patient outcomes and cost-effectiveness.

Conclusions: This study demonstrates the feasibility of a novel system integrating diverse home care data sources, including legacy systems via machine vision, with Large Language Models (LLMs) and a secure, on-premises RAG system. The resulting solution directly addresses the challenges of fragmented patient information by providing healthcare professionals with a holistic and readily accessible view of patient data. This integrated approach, prioritising patient privacy through localised processing, facilitates more informed and timely clinical decisions. Future work will focus on evaluating the system's impact on specific patient outcomes and quantifying its potential for cost-effective, personalised home care delivery.

19.28

HOW CAN THE DIGITAL TECHNOLOGY "TRULY" ACT AS A TRIGGER OF SELF-ORGANISATION FOR A NEW RESILIENT SYSTEM OF HEALTH COMMUNITY?

Mu-Jeong Kho

University College London, London, United Kingdom

Abstract

In contemporary capitalism, deepening the various socio-economic inequalities, it is expected inevitable to make significant and major 'adaptations' referred to as 'self-organising changes'. The key (fundamental) 'challenge' we face must be institutional, as the established institutions are inadequate, so a demanding greater period of 'experimentation' (as a 'driver of self-organising change') for new forms of 'social' protection is necessary. This is why we should look at the basics (foundations) of institutional theory, particularly in Post-Keynesian (as Marx and Keynes) traditions (exploring the social-economic nexus), of which public policy looking outside of the ruling (prevailing) neoliberal consensus. However, a truly deeper concern, which puts this literature (albeit in an extremely affluent capacity) vulnerable in challenging the ruling consensus, is the weak connection to radical theory, particularly the ideas of Veblen and Polanyi, on the crucial issue: in this crisis, how can the digital technology (including artificial intelligence) act as a trigger (as 'catalyst') to self-organise a new resilient system of health community? This overarching question leads to several sub-questions: 1. How does the capitalist system of health get to organisation and structuration in the 'real-world' (objectivity)? (addressing on the truly deeper issue 'microfoundation of structuration' including institution-technology, social-physical, and value-material nexus), 2. What is its 'truly deeper originator' of the crisis? 3. In this crisis, how a digital technology (including artificial intelligence) acts as a trigger for self-organisation? 4. Whether it 'truly' acts as a 'trigger' to self-organise a new resilient system of health community, in philosophical value 'justice' and history; 5. if it does 'not truly,' what are the normative solutions, addressing the current political landscapes of possibilities, particularly in the context of duality between reformism versus radicalism; and 6. Which social agency can effectively act as a 'true ruler' to advance the new 'public' agendas? This paper, which respectively defines (1) the term 'self-organisation' as an 'institutional (as 'social') process of change characterised by the struggles to reorganise, reconstitute, and restructurate an order out of disorder,' (2) the term 'capital' as 'the results of laws and institutions deeply (fundamentally) based on the structurated relations-of-production,' (3) the structure as 'order,' (4) evolution as a form and process of 'self-organising change for survival', aims to critically reflect on these questions with the institutional matrix of self-organisation structurated by the dualistic dichotomies of (1) market versus non-market on the one hand; on the other (2) pro-capital vs. anti-capital, through a deeper understanding of radical theory, particularly of the works of Veblen and Polanyi, and applies this theoretical framework to an empirical case study (with quantitative data analysis) on Korea and the health system over the past decade. By doing so, this paper argues: beyond the superficial issues and debates of market versus State, and Keynesianism versus neoliberalism in a 'public policy' (as 'systems management') literature, there are deeper issues of 'structuration' within capitalist systems of health in Korea. Most institutional theories in Post-Keynesian (as Marx and Keynes) tradition have well addressed these deeper issues, and have suggested that a digital technology (including artificial intelligence) can serve and act as a trigger for self-organisation. However, these arguments in turn can 'be valid' ('hold true'), only when they are truly connected to radical theory, particularly of the ideas of Veblen and Polanyi, of which perspectives connects 'digital technology (including artificial intelligence)' with reconfiguring long-term 'new' (as 'novel') vision for innovative and inclusive social protection mechanisms beyond the confines of a capitalistic system.

AUTHOR INDEX

Author name	Programme code
Kaari, Sari	19.27
Kaikkonen, Risto	19.27, 7.14
Kamp, Annette	7.02
Kangas, Hilpi	16.16, 5.02
Kangas, Marjaana	19.20
Kannisto, Henriikka	6.01
Kantola, Jenni	16.13
Karjalainen, Kirsi	8.01
Karkkola, Petri	19.24
Karppi, Marion	19.08
Kauhanen, Merja	4.02
Kekola, Tiia	19.22, 5.01
Kemppinen, Samu	16.14, 16.15
Kerr, Willia	11.03
Kettunen, Lauri	2.01
Kho, Mu-Jeong	19.28
Khovanskaya, Vera	2.03
Kill, Cassie	18.11
Kilponen, Kiia	8.03
Kinnunen, Juha	16.13
Klegr, Tereza	1.11
Knudsen, Mikkel	6.06
Koivunen, Marita	18.09
Koivunen, Tuija	12.04
Korvajärvi, Päivi	19.22, 5.01
Koski, Heli	11.03
Koskinen, Hanna	18.06, 18.07, 19.03
Kotamäki, Meri	19.10
Kowalik, Zuzanna	16.01
Krebsbach, Jennifer	4.05
Kristensen, Dorthe Brogård	3.04
Kuula, Markku	16.02
Kuurne, Aija	8.01
Kuusi, Tero	11.03
Känsälä, Marja	16.16, 5.02
Laapio-Rapi, Emilia	18.08
Laarni, Jari	18.06, 18.07, 19.03
Laine, Mia	9.03
Lange, Jeppe	8.02
Larsson, Christoffer	6.09
Launberg, Anna	19.07
Le Couteur, Amanda	10.03, 10.04, 9.09
Leach, Jason	3.08
Leblanc, Elisabeth	4.06
Leckner, Sara	2.09
Lee, Jane	4.05
Lehmus, Markku	11.03
Lehto, Iiris	2.06
Lehtonen, Eija	16.09, 16.10
Lenaerts, Karolien	5.05
Liinasuo, Marja	19.03
Liira, Juha	18.09, 7.09
Lillie, Nathan	11.02
Lindell, Eva	19.07
Lindfors, Petra	10.02, 19.23
Lisein, Olivier	16.17
Lissitsa, Sabina	18.02
Louhelainen, Marjut	18.08
Loureiro, Leonor	16.04
Lukander, Kristian	18.07, 19.03
Luovanranta, Saara	19.02
Lydén, Hilkka	19.06
Lyytimäki, Jari	14.01
Löyttyniemi, Eliisa	18.09
Løken, Therese Dwyer	7.05
Maarit, Laiho	18.05
Maffie, Mike	1.05
Magin, Linda	9.04
Malo, Miguel Ángel	10.06
Malve-Ahlroth, Sara	14.01
Markkula, Sanna	16.06, 19.21, 8.03
Martikainen, Suvi-Jonna	18.14
Mauno, Saija	16.06, 19.21
Maury, Olivia	1.12
Mayberry, Kalie	1.05
Mercier, Eric	10.03, 10.04, 9.09
Mervaala, Erkki	14.01
Mickelsson, Sini	6.03
Mielismäki, Hanna	7.11
Miheludaki, Elisabet	2.04
Miscevic, Danka	7.12
Mussida, Chiara	10.06
Mäkelä, Liisa	16.14, 16.15
Mäkikangas, Anne	16.06, 19.21
Möhring, Katja	9.07
Nemeth, Edit	5.04
Nepponen, Soili	2.08
Nevalainen, Pasi	11.02
Nicot, Anne-Marie	4.06
Niemistö, Charlotta	9.01
Nokelainen, Petri	16.09, 16.10
Norris, Deborah	9.05
Nurmi, Akseli	6.01, 8.01
Nussbaum Bitran, Ilana	16.11
Nuutinen, Maaria	3.07
Nuutinen, Sanna	18.04
Nyhlén, Sara	7.07
Näätänen, Ari-Matti	19.13
Okkonen, Jussi	9.03
Oksa, Reetta	19.17, 9.03
Oksanen, Atte	5.06
Olbertz-Siitonen, Margarethe	2.02
Orfao, Guillermo	10.06
Oskarsson, Emma	19.23
Paavola, Sami	1.02
Pakarinen, Satu	18.06, 18.07, 19.03
Palm, Kristina	19.16
Paloniemi, Susanna	18.13
Parviainen, Henni	1.01, 6.07
Passi, Tomi	18.06, 18.07, 19.03
Peltonen, Jaana	18.09
Peltonen, Laura-Maria	19.04, 19.05
Peltonen, Riina	19.04
Pender, John	7.04
Peo, Jeffrey	6.08
Persson, Marcus	7.10
Perttula, Pia	18.01
Petrini, Ella	14.03

Author name	Programme code
Pettigrew, Rachael	15.02
Piirto, Aurora	19.06
Poutanen, Seppo	2.10
Priftis, Athanasios	1.03
Prix, Irene	10.01
Puhakka, Ilmari	16.09, 16.10
Pulkkinen, Jarmo	17.01
Puttonen, Sampsa	19.24
Pyöriä, Pasi	19.22, 5.01
Pääkkönen, Taina	8.01
Quartey, Dilys Sharona	5.03
Raappana, Mitra	2.02
Rafnsdóttir, Guðbjörg Linda	5.03
Ratinen, Ilkka	14.01
Raunio, Sonja	15.01
Rausch-Berhie, Friederike	14.02
Reid, Nathalie	9.05
Reme-Harnay, Petronille	4.06
Rettagliata, Giorgio	6.02
Riegraf, Birgit	15.03
Riekhoff, Aart-Jan	12.01
Riikonen, Selja	18.10
Rivera-Macias, Berenice	19.06
Rolandsson, Bertil	2.09
Romito, Alessia	17.03
Rondan Vasquez, Luis	4.07
Ronsiek, Linus	19.12
Rosengren, Calle	19.16
Rosin, Annika	1.01
Ruben, Duygun	1.08
Ruohomäki, Virpi	16.03
Ruokolainen, Mervi	16.09, 16.10
Ruotsala, Riikka	18.01
Ruuska, Ronja	1.02
Rydzik, Agnieszka	4.03
Räty, Paavo	2.01
Rödel, Bodo	19.14
Saari, Eveliina	8.01
Sabag Ben-Porat, Chen	18.02
Saljo, Roger	7.13
Salonen, Tuisku-Tuuli	18.06, 18.07
Saloniemi, Antti	19.22, 5.01
Sandiford, Peter	9.04
Sarkar, Subhashri	4.01
Savela, Nina	19.17
Savolainen, Iina	5.06
Schmoll, René	19.26
Schur, Alexander	19.12
Schwien, Karen	18.15
Seppänen, Laura	1.02, 18.01
Setälä, Manu	19.04, 19.05
Share, Perry	7.04
Shimizu-Tanaka, Hideki	19.18
Sipilä, Jenni	18.09
Sippola, Markku	12.02
Sirkka, Johanna	18.09, 18.10, 7.09
Soares, Maria Eduarda	16.04
Sofronic, Boris	17.03
Song, Jun	6.10
Sotto, Rehna	2.02
Sten-Gahmberg, Susanna	12.01
Stolt, Minna	18.09, 18.10, 7.09
Stowasser, Sascha	16.08
Suhonen, Riitta	18.09, 18.10, 7.09
Suvi, Karhu	12.03
Svensson, Jakob	2.09
Sverke, Magnus	19.23
Swedenmark, Sara	7.07
Söderlund, Kati	5.02
Takalo, Tuomas	11.03
Tam-Seto, Linna	9.05
Tammelin, Mia	9.01
Tanaka, Hideki	19.25
Tanskanen, Jussi	16.14, 16.15
Tapanila, Katriina	19.22, 5.01
Teperi, Anna-Maria	14.01, 14.05
Thakur, Arti	4.05
Thatcher, Andrew	14.01
Thunman, Elin	7.10
Tiikkaja, Maria	6.01, 8.01
Tornberg, Sarah	11.02
Tubaro, Paola	3.03
Urrila, Laura	18.12
Van Herreweghe, Dries	16.17, 5.05
Van Hootegem, Geert	11.01
Van't Klooster, Jan-Willem	6.02
Varhelahti, Mervi	18.05
Vereycken, Yennef	5.05
Vesala, Hanne	16.05
Vigato, Valentina	18.05
Villman, Tero	6.06
Virkkunen, Sanna	7.14
Vultur, Mircea	1.07
Vuorenmaa, Hertta	12.04
Vuoriainen, Antti	2.01
Vuorinen, Jukka	2.07
Waldrep, Carolyn	9.02
Wallenius, Kaisa	14.05
Wallin, Arto	3.07
Wang, Jules	6.04
Weber, Lena	15.03
Wiig, Astrid Camilla	7.13
Wolff, Jan	8.02
Worth, Nancy	4.04
Yli-Kaitala, Kirsi	6.05
Yli-Kauhaluoma, Sari	19.15
Zeck, Steven	4.05
Zenk, Johanna	19.12
Zenz, Cora	16.11
Zhong, Mia	18.11
Øyum, Lisbeth	19.11
Žabko, Oksana	17.04