

## **Hybrid work: rethinking current digitalization agendas**

Position paper for the NordiCHI 2022 workshop on “Work of the future”

Tone Bratteteig, Johanne Oskarsen, Guri Verne

Department of Informatics, University of Oslo tone / johansos / guribv @ifi.uio.no

The COVID pandemic forced a whole world to convert to digital work and speeded digitalization efforts. Having to work from home made many people lonely and isolated. However, the pandemic also gave people the experience of having more time, a better work-life balance as well as more time for hobbies and spending time outdoors. After the pandemic, some of these experiences have lasted as an increased interest in outdoor activities and slow living, including reduced work hours. The main effect of the pandemic is, however, that people are more aware of the value of meeting other people: the social aspects of both work and leisure is more appreciated. People want to go to work even if they can work from home – some say even more efficiently.

Media like Financial Times and the New Yorker report slow living as a trend changing work and work life after the pandemic. Work life will be hybrid as workers and employers want to utilize the flexibility and efficiency of the home office. However, there is still a need for workplaces where one can meet colleagues and calibrate and enhance one’s professional skills. In this position paper we are interested in exploring the workplace as a place that can complement the efficient digital home office for both office workers and employers.

A quick look at the pandemic reports suggests that the trends are responses to a work life that are not healthy for workers. Work life has emphasized efficiency since Taylor’s studies of time management, making us value quantity more than quality. Many people seek simple living (less things, closer to nature) as a contrast to an increasingly complex life. Digitalization contributes to abstraction of almost anything, moving our contact with the world to digital representations rather than the concrete phenomena represented. We suggest that the future of work will have to address and support these movements: from quantity to quality, from abstract to concrete and from complex to simple.

We will refer to earlier research that has addressed these dilemmas. The emphasis on quality rather than quantity was seen in a case study of the Tax Authorities in Norway, where the Tax Information Call Center (TICC) originally instructed their advisors to ask the callers to use the web pages instead of the phone, suggesting that they should advice the callers how to do that instead of just answer the inquiry. Moreover, they were to spend 3 minutes on each call. In her study of the TICC, Guri Verne shows that the advisors often helped callers with their problems enabling them to move on. The 3 minutes limit was also removed as it turned out that callers who did not get a good answer called again, hence it turned out to be more efficient to spend the time it takes to solve the problem. This resembles experiences from other areas, a well-known example is hospital stays where minimizing the stay need to be balances as a too short stay make patients come back.

A well-known paper by Bowers et al. about a new system for a printshop illustrate the question about abstraction and concreteness. The new printshop system organized the work according to the accounting needs, so that each job was easily identified. The old system allowed the workers to utilize the machines better – actually enabling the printshop to be more efficient – but the accounting was less efficient. The utilization of the machines by dividing and sharing the concrete print jobs was easily organized by the workers operating the machines. This also illustrate that simplicity and complexity depend on the perspective or competence, and that quite complex work arrangements (like the one on the printshop floor) are simple if the workers can control the arrangement and maintain an overview of their work (i.e., the utilization of their machines). A parallel can be the difference between the organizing of nurses as primary care: a small group of nurses follow a patient over time rather than organizing the patients according to the hospital organization, risking that the patient meets new nurses all the time.

The difference between the concrete and the abstract can also be seen in a case study of the social service workers' handling of citizens needing welfare support. Johanne Oskarsen has studied how the social service advisors meet citizens and work to represent the citizen as a case. The advisor talks with the citizen and together they find out which welfare services are right for individual. The work to make a case is important as the case is handed over to a case handler, who is the one who makes the decision about the actual social service that the citizen can claim. The social service in Norway has divided the case handling in two: those who talk with the citizen and those who make the decision about social support based on the rules and regulations. This division is supposed to make the decisions more similar and avoid bias of the advisor, who might develop a relation to the citizen. Oskarsen studies how making a case that results in the right social support is a skill and depends on knowledge about the rules and regulations as well as how the documentation and criteria for support are interpreted by the case handlers. The advisors sometimes spends a lot of time collecting the "right" information and documentation to secure the right decision. We have earlier characterized digital public services as work-like chores for citizens also contributing to blurring the difference between work and leisure (and the work-ife balance) (Verne & Bratteteig).

The study of the advisors in the social service administration confirms the study of the tax advisors in that the relation to their clients enable them to carry out good services that adhere to the purpose of the welfare state rather than the rules.

For some time, we have been interested in exploring discretion as a professional skill. Discretion is necessary in areas where the rules are underspecified in order to secure that the rules can be applied in many different situations. Discretion is a professional skill developed through experience, similar to the notion of a practitioner: a good practitioner applies and adjusts general knowledge to the situation at hand (Schmidt). Work that requires exercising discretion strengthens the human aspects of work. Discretion can be exercised at several points in a case handling: preparing the case (or the data), processing and evaluating the case, and evaluating the outcome of the case (Verne et al., Bowker & Star). We suggest exploring the notions of discretion, skill and professional vision (Goodwin) as important parts of work relating to humans and human development rather than correct following rules.

Rules and routines are tempting to automate, although rules often need to be interpreted to be represented in a program. Earlier research (quite old in fact) concludes that if you automate too much you risk making the human operators unable to handle crises because they do not know enough about the normal routine situation (Bainbridge). Our studies of chatbot conversations with citizens confirm that human interpretation of humans-in-context provides better responses to inquiries than a chatbot following rules is able to.

For this workshop we also suggest doing research on work as a social phenomenon. With the printshop paper in mind, we suggest focusing on various ways of arranging work and workflows so that the workers' competence can be utilized in the planning part of the articulation work (what Schmidt labels type 1) minimizing the articulation work needed for

repairing non-functioning workflows (what Schmidt labels type 2). The printshop example shows that different logics result in different ways of organizing work and cooperative work. In addition, we suggest exploring how the sharing of knowledge between workers as well as the development of individual competencies and skill. Orr studied Xerox copy machine repair workers working alone and remotely and showed that the sharing of knowledge about repair experiences (problems and solutions) were crucial for developing competence as well as maintaining a community of practice.

The pandemic and “the new normal” gives us a chance to stop and reflect about the purpose and effects of the IT systems we design. Technologies are mostly developed to save time and money, to increase efficiency. Technologists are often interested in expanding the technical possibilities, but we should take care to not only design IT systems that are possible, but also wanted. We should not automate processes just because it is possible, just because it is easy; the automation should also be wanted (Bainbridge). If we automate based on an “inside” understanding of the activities where the automation is to be part, we may end up not automating everything possible but selecting what should be manual and automatic so that the activity maintains meaningful for the human (Verne; Bratteteig & Verne). Meaningful tasks and environments for humans may not confirm to a simplistic version of efficiency and technical novelty but may lead to better quality in the short and long run for both users and clients.

Scandinavia has a long tradition of emphasizing a healthy work environment: in the 1970s the legislation in Norway, Denmark and Sweden was updated to not only secure workers from physical harm but also increase their psycho-social wellbeing and health. We think that the pandemic has made the principles and aims grounded in this tradition more actual and suggest research aimed at modernizing the principles and making concrete suggestions for how a work life emphasizing the social, the individual growth, slow living and wellbeing. These values challenge the current agenda for digitalization in both private and public sector. We should use the notion of hybrid work as an opportunity to rethink “digitalization”.

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