Report on the Conference 'Change in Work through Digitalisation = Change in Gender Relations?'

Ines Entgelmeier

How does the digitalisation of work change gender relations? And how can digitalisation create new opportunities for more gender justice? These are the questions that were addressed at the conference 'Wandel der Arbeit durch Digitalisierung = Wandel der Geschlechterverhältnisse?' ('Change in Work through Digitalisation = Change in Gender Relations?'), which was organised by the 'Network for Labour Research NRW' as a joint event of the Düsseldorf Research Institute for Social Development and the Dortmund Social Research Centre on 19 May 2019 in Dortmund. The organisers, Dr Saskia Freye and Ellen Hilf, welcomed over 100 guests at the Erich Brost House in Dortmund. Speakers from different scholarly fields, politicians, and trade unionists discussed how 'Work 4.0' can be made more gender equitable.

Prof. Dr Nicole Mayer-Ahuja (University Göttingen and Sociological Research Institute SOFI) opened the event with her talk 'Frauen – Arbeit – 4.0? Ein Blick zurück nach vorn auf Veränderungen weiblicher Erwerbsarbeit' (Women – Work – 4.0? A Retrospective Look at Changes in Female Employment) offering an introduction to the topic of the conference. Mayer-Ahuja started with a brief discussion of media, which highlighted people's fears about job losses caused by new technologies in the past and today. So far, however, predictions of factories with no workers have not been fulfilled. According to Mayer-Ahuja, the reason for this is that there is no one digitalisation or one kind of digital work, and instead digitalisation manifests itself in very different ways, each of which has different ramifications for employees. She also argued that the impact of technologies on employees does not depend on their mere existence, but on their design in companies, political regulations, and the power of interest groups. She pointed out that the existence of technologies does not necessarily lead to their use and that digitalisation not only makes occupations replaceable but also creates new ones.

Nevertheless, if new technologies take over human activities, Mayer-Ahuja predicted that the prospects for women on the labour market would not be good, and she gave three reasons for this. First, history shows that women are the first to lose their jobs if there is a shortage of work. Second, women in particular tend to work in the sectors in which jobs are being reduced or where there are new precarious types of jobs emerging, such as crowd working. In both cases there are no adequate working standards and rights in place. Third, good working conditions need strong

employee representation. But women are less organised in companies and trade unions than men.

The topic of the substitutability of occupations through digitalisation was explored more deeply in the presentation given by Dr Britta Matthes (Institute of Labour Market and Occupational Research Nürnberg). Matthes presented an indicator that she and Dr Katharina Dengler developed which calculates the potential substitutability of job activities by digital technologies. Matthes does not believe that occupations will disappear completely, but rather that certain activities within occupations will be performed by technologies instead. The indicator is based on a review of 8,000 activities examining their potential to be automated. Results show that on average men are more likely than women to work in occupations with a high potential for this kind of substitution. Matthes and Dengler found that for the year 2013, on average, 33% of women's activities and 42% of men's activities could be automated. For 2016, they found that the proportion of activities for women had increased to 45% on average and to 53% for men. However, Matthes pointed out that these results vary according to profession. For example, in occupations in the areas of management and organisation, women are, on average, more strongly affected by substitutability than men. Matthes emphasised, however, that a high potential for substitutability does not necessarily mean that substitution will occur. She explained that 'the use of technologies is not determined solely by what is technically feasible, but depends in particular on economic considerations.'

Britta Matthes noted overall that these results do not indicate more gender equality on the labour market. If the cost of the substitution of work done by men are higher than the cost of the substitution of work done by women, it is more likely that the activities that women perform are that ones that will be replaced. In addition, new jobs created by digitalisation are more likely to be carried out by men. Therefore, Matthes came to the conclusion that, as long as there are no changes in the gender-specific segregation of labour market, digitalisation will exacerbate rather than improve gender equality.

As well as changes in the employment structure, possible changes in the evaluation of occupations were also discussed. Dr Edelgard Kutzner (Dortmund Technical University, Social Research Centre), presented empirical results from her quantitative research project 'Gender Relations and the Digitalisation of Work', which she worked on together with Dr Victoria Schnier. They explored the impact of digitalisation on work in industrial production ('Einfacharbeit') with a focus on gender. Kutzner could see that levels of automation differ greatly between companies. These different developments do not necessarily depend on the sector, and even within one sector she found divergent paths. Kutzner identified three patterns of development in relation to gender. First, the introduction of new technologies and work organisations can

upgrade women's work because these technologies are often come with more demanding activities. Therefore, women could benefit from increased wages when their jobs are reassessed. Second, women's work may be devalued. Women carry out the kinds of activities that cannot yet be performed by machines or that would be too costly to replace with automation. Kutzner called this 'women as stopgaps in technological development'. And third, there is the pattern of stabilisation. The introduction of new technologies does not change the segregation of work along gender lines. Gender stereotypes are still used to justify the filling of a job position. According to Kutzner, for more gender-equal work, technical changes must be accompanied by changes in the way work is organised and in the division of labour. Furthermore, technical changes must entail a reassessment of jobs and women and men have to be involved in the design of work and technology.

In addition to the influence of digitalisation on the occupational activities of women and men, the conference also dealt with interactions between the different areas of life. Dr Tanja Carstensen (Ludwig-Maximilians University Munich) reported on her current research project on the digitalisation of office work. One of her interests here was the connection between flexible working arrangements and the possibilities of reconciling work and family life. She evaluated her interviews with a focus on new gender arrangements and changes in the division of paid and unpaid work. Carstensen pointed out that work and technology have always been strongly gendered. But at the same time, technical change has the potential to lead to social upheavals. So far, research has indicated that 'home office' work can exacerbate gender inequality, as women use the flexibility for care work while men use it for overtime work. Also, Carstensen's findings are in line with these results. She found no evidence of a renegotiation of work and family life between women and men. However, Carstensen noted that technology could help people to better manage the double burden. On the one hand, this could be an advantage for women who still have more responsibility for the family as well as doing gainful work. On the other hand, Carstensen underlines the danger of hidden overtime and stress for women, because while technologies may help to integrate more activities into daily life, they also tend to make associated burdens and inequalities less visible.

Carstensen summed up by saying that digitalisation does not promote new gender arrangements, because the division between paid and unpaid work remains unquestioned. More important than technologies themselves are their design and usage in companies and the society.

After the previous speakers had focused on the social conditions of digitalisation and gender, Prof. Dr Corinna Bath (Technical University Braunschweig and Ostfalia University of Applied Sciences) turned her attention to the technical side and what it means for gender-equitable work. Bath summed up that digitalisation is still a gender-

neutral project. This is evident, on the one hand, in the small share of women in technical professions and courses of study and, on the other, in the fact that they are hardly represented in the media and in political and scientific discourses on this topic. Bath pointed out that technology is not deterministic and that, within certain limits, it can be shaped. Therefore, she referred to the concept of participatory design, which was aimed at involving the users of a technology in its design. The idea was to integrate users not only into the application of technologies but also into the process of development. This must also be taken into account in the development of algorithms. The way algorithms have worked to now is that they learn from data from the past; these data are, however, characterised by gender-specific discrimination. Bath argued: 'We need to think about how we can generate "better" data sets from which the AI systems can "learn"'. Automated decision-making systems need to be discussed, as they can reinforce stereotypes and social injustices. In order to achieve responsible digitalisation, it is necessary for Bath to make complex technical processes visible and understandable for everyone.

Finally, the conference closed with a discussion about gender-equal Work 4.0. Participants were Anke Bössow (Union of Food and Catering Workers), Romy Stühmeier (Competence Centre for Technology – Diversity – Equality]), Prof. Dr Ute Klammer (University of Duisburg - Essen, Institute for Work and Qualification), Dr Wiebke Lange (Ministry of Labour, Health and Social Affairs NRW), and Dr Edelgard Kutzner (TU Dortmund, Social Research Centre). Despite different perspectives on the topic, the participants agreed that digitalisation opens up opportunities for gender-equitable work, but only for a limited time. That is why the discourse must be strengthened now, especially with regard to its significance for women. Furthermore, the qualification and participation of employees were discussed as central conditions for a gender-equal Work 4.0. This requires the transparent usage of digital applications and employees must therefore learn how to handle data and to understand the underlying processes. Women in particular should be more involved in the development of technologies. In addition, knowledge about gender-specific inequalities should be taken into account. In the view of the discussants, another important condition for gender-equitable Work 4.0 is the dismantling of institutionalised and formalised gender stereotypes. The impending digitalisation of business processes, in administration, for example, must be critically questioned and redesigned with regard to its gender aspects.