Modern times: the digital logic of paid work and its impact

Bettina-Johanna Krings

50th anniversary of the

Institute for Employment Research (IAB)

Berlin, 5–6 April 2017

Agenda

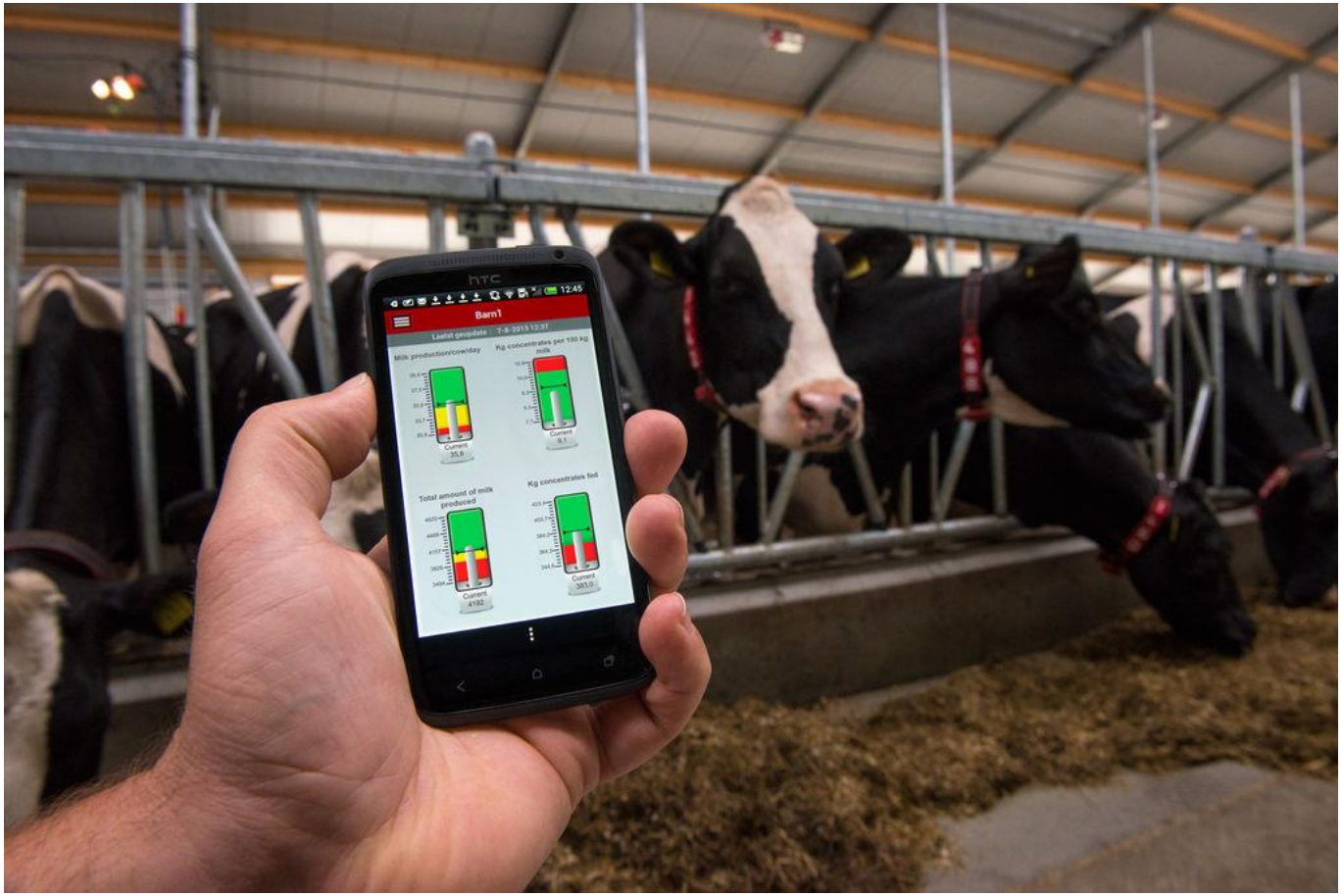
1 Digitalization of labour as a societal transformation process

2 Informatisation & logic of paid work

3 Empirical example: digitalization in *health care*

4 Digitalization as enabler for future working models?

1 Digitalization of labour as a societal transformation process



1 Digitalization of labour as a societal transformation process

- Digitalization encompasses all forms of operational use of information technology (IT) (BMBF 2016, IAB 2015):

- IT as work equipment
- Use of IT for organisational design
- Use of IT as a shapeable medium of communication

➢ Change factors include the "**championing of digitalized information as a strategic economic resource**, which is not a genuinely new phenomenon ("networked society", "knowledge-based economy"). What is new, however, is the massive growth in the **volume of digitalized information** available and the vastly improved performance of **data processing and modelling software**" (Valenduc, Vendramin 2016:17).

1 Informatisation of labour as a societal transformation process

Since 1960, shift to “postfordistic” production models: “**information society**” (Machlup 1962, Drucker 1969, Touraine 1971, Bell 1973, Masuda 1980), “**network society**” (Wellman 1973, Castells 1996) “**knowledge society**” (Reich 1991, Stehr 1994, Foray 2000, etc.).

Five features of **information technologies** account for the structural transformation of social and economic life (Soete 2001, Baukrowitz et al. 2006, Huws et al. 2011, Schulz-Schaeffer, Funken 2008, Walwei 2016)

- Capacity of ITs to store, process and disseminate information at minimal cost,
  ⇒ **wide use of IT applications**

- Capacity to codify and quantify formal / tacit knowledge, working processes
  ⇒ **standardisation of work processes**

- Digital convergence between IT and computer technologies renders any combination of communication forms feasible and creates possibilities for networking, interaction and communication among multiple actors
  ⇒ **new business models**

1 Informatisation of labour as a societal transformation process

Since 1960, shift to “postfordistic” production models: “**information society**” (Machlup 1962, Drucker 1969, Touraine 1971, Bell 1973, Masuda 1980), “**network society**” (Wellman 1973, Castells 1996) “**knowledge society**” (Reich 1991, Stehr 1994, Foray 2000, Bechmann 2009, etc.).

Five features of **IT** account for the structural transformation of social and economic life (Schmiede 1996, Soete 2001, Baukrowitz et al. 2006, Huws et al. 2011, Schulz-Schaeffer, Funken 2008, Walwei 2016):

- Rapid growth of global digital networking makes IT the first real “global” technology
  - ⇒ **restructuring of value chains (privatisation, outsourcing, insourcing, etc.)**

- Access to and establishment of public digital infrastructure
  - ⇒ **blurring of boundaries of work (work-life balances, subjective character of work)**

2 Informatisation & logic of paid work

2 Informatisation and logic of paid work

"*Businesses are broken down into separate 'trades' or 'branches' which are in turn subdivided into 'operations' which may in turn be carried out by different specialist 'hands' (or workers) using specific labour processes.*

The more specialist this division of labour is, and the more it can be automated, the greater is the value that is added in any given 'operation'."

(in: Huws et al. 2009:12 ff., based on **David Ricardo** 1817, Chapter 7)

2 Informatisation and logic of paid work

Informatisation of labour (e.g. Kleemann et al. 2002; Schulz-Schäfer, Funken 2008)**:**

(1) The concept of the "**informatisation of labour**" is deeply embedded in the modern working world and basically involves the process of labour rationalisation started in capitalism.

(2) It becomes possible to automate the **control of operational processes** by means of IT and **to define the required process structures** on the basis of action options.

(3) The use of IT helps **to standardize work processes** and at the same time **to integrate individual work activities in a process-oriented manner**. Work is split into formalisable, logical-mathematical parameters and reassembled in the production process.

2 Informatisation and logic of paid work

Application and social developments:

- The application of digital (socio-technical) systems is **facilitating the flow of goods, knowledge and capital** by "systematically" connecting businesses in different countries to a transnational system of production (e.g. Hirsch-Kreinsen 2010; Morgan 2005; Castells 2001; Altvater, Mahnkopf 1997; Hirsch 1995; Varoufakis 2013; Picketty 2014; Valenduc, Vendramin 2016)

  ⇒ digital economy **("the winner gets all")**

- IT systems allow further **processing of time and space**, which has accelerated work flows in all sectors and branches

  ⇒ **speeding up processes (i.e. intensification of work)**

- Increasing fragmentation of work processes; affects also semi- and high-skilled labour (e.g. software development, research & development, health care)

- Creation of new occupations, new skills and qualifications

  ⇒ **new models of work organisation (i.e decentralised work, "crowd work", etc.)**

2 Informatisation and logic of paid work

- The “networking company” (Flecker, Kirschenhofer 2007) goes hand in hand with the demand for “*flexible men*” (Sennett 1998)

  >> flexibilisation of work (institutional level, organisational level, individual workplace level).

- Difference between “core” and “periphery” work (regions, branches, social security systems) of labour, (Walwei 2016))

  >> increasingly “insecure” working conditions; institutional framework does not cover “hidden” (Krings, Nierling 2012) effects of social and organisational shifts.

3 Empirical example: digitalization in health care

3 Empirical example: digitalization in health care

Care: (intensive inpatient care, cf. Manzei 2007, 2009, Manzei/Schmiede 2014, Hülsken-Giesler 2008; Hülsken-Giesler, Krings 2015)

Standardisation of knowledge and action (e.g. transition to “digital” patient records):

- Patient data management systems (PDMS): can be “viewed” from anywhere; access to all work organisation activities (laboratories, x-ray, surgeries, times, etc.)
- “Monitoring” of patients’ vital data (e.g. pulse, blood pressure, temperature); the data are transferred to the ward and can be viewed from anywhere ⇒ graphical or numerical representation
- Linking ward-specific and hospital-wide management processes (hospital management information system, MIS): ward personnel planning programs, accounting systems, performance systems, etc.

3 Empirical example: digitalization in health care

- **Impact**:

- Nursing and (medical) work have come under severe economic pressure ⇒ **business control and pressure to make decisions.**

- Increasing workload for nursing staff; workflows are decided upon based on the data recorded; “typical” and time-consuming care routines such as interactive day-to-day work are not recorded in the system ⇒ **intensification of work, high time pressure.**

- Promoting evidence-based medicine (digitalization), which has taken on a new quality (doctor-patient relationship) ⇒ **nurse-patient relationship is changing.**

3 Empirical example: digitalization in health care

- **Impact:**

- Introduction of a controlling system based on performance comparison of the different hospital wards; cuts in "**nursing minutes**" (as objective indicators) can/should be negotiated internally ⇒ system of competition *and* self-responsibility in service provision.

- Recording of medical-scientific data, nursing processes are not documented ⇒ high discrepancy between "documentation and what is really happening in the ward" (Manzei 2014).

⇒ Nursing work as "**interactive work and care activity**" becomes as a "residual category" (Kleeman, Matuschek, Voss 2002) of informal work.

4 Digitalization as enabler for future working models?

4 Digitalization as enabler for future working models?

Hypotheses:

- Digital technologies allow for a differentiated use of IT in all areas of work (service, communication, monitoring, control, etc.) ⇒ no standard functions ⇒ **need for case studies!**

- Economic pressure *and* technological innovations (digital technologies) lead to a reorganisation of global value chains with visible effects on the working modes ⇒ **shift in perspective**!

- Technical innovations create new modes of human-technology interaction in many working fields ⇒ increasingly **systemic character of socio-technical working environments!**

4 Digitalization as enabler for future working models?

Hypotheses:

- Research focuses on promoting production processes; there is **a lack of research from the perspective of labour assessment:** agency, control, social innovation, future orientation ⇒ **human centred work organisation // environment as normative orientation!**

- Opening up new fields of technology and work ⇒ the technical dimension of digitalization is embedded into far-reaching decisions and action processes ⇒ the transformation potential towards **"sustainable work" is yet to be explored!**

- Meaning of work > new debates on meaning of work in "**technical civilization**" (Blumenberg 2014);

  "….there is still a strong expectation that work should provide a decent income, secure employment, meaningful activity and social bonds ⇒ does digital economy will be up to this tasks?" (Valenduc, Vendramin 2016:43).

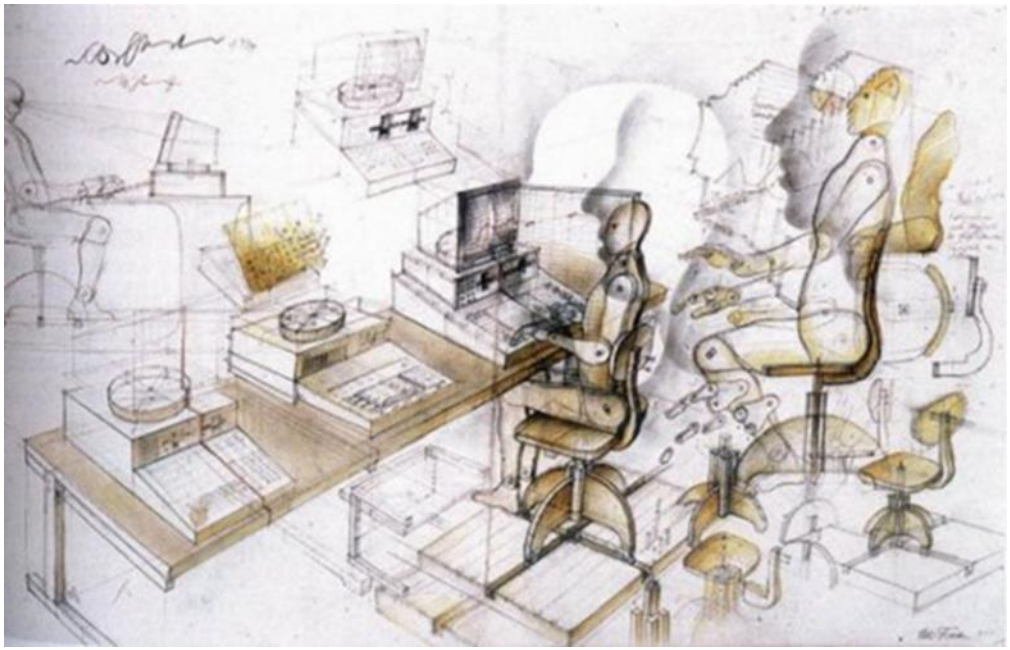
4 Digitalization as enabler for future working models?

*“It is not the articles made, but **how** they are made, and **by what instruments**, that enables us to distinguish different economic epochs.*

Instruments of labour not only supply a standard of the degree of development to which human labour has attained,

*but they are all **indicators of the social conditions** under which labour is carried on*.”

(Marx 1969a: 194-195, Capital Volume One, Part III: The Production of Absolute Surplus-Value)



***Thank you very much for your attention*!**

Bettina-Johanna.Krings@kit.edu