

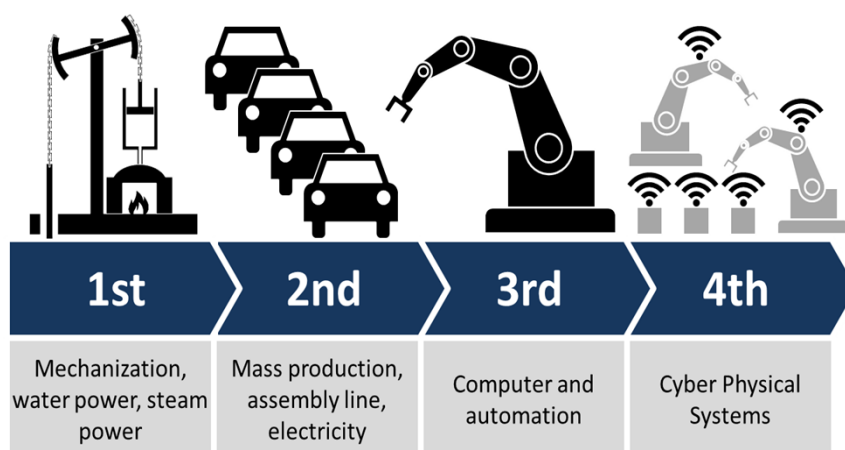
From Contingencies to Affordances

- Technology in Management and Organization Studies

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Technological change



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The Society and the Economy is Changing...

Macro transformations

- Information society (Castells 1996)
- Knowledge economy (Stewart 1997)
- Employability (Bartlett&Ghoshal 2002)
- Temps (Garsten 2007)
- On-call employees (Stoone 2006)

Organizations change...

Meso transformations

- The Knowledge Organization /Knowledge Intensive Firm (Sveiby&Risling 1986, Starbuck 1992)
- Professional Service Firms /PSF (Greenwood)
- Virtual organizations (Byrne 1993)
- Imaginary organizations (Hedberg et al 2002)
- Network organizations (Powell 1990)
- Bounderyless organizations (Arthur and Rousseau 1996)
- Lean organization (Womac et al 1990)

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Work organizations change...

Micro level transformations

- Intensification
- Individualistic, but also more
- Team oriented
- Increasingly interorganizational
- Work is underorganized
- Increasingly self-organized
- Stress and psycho-social problems more than physical

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Emirical modifications and alternative understanding of the consequences of technological development

- *Reduction of jobs and unemployment – a consequence of activities and tasks not jobs and occupations (task-based models: replace, rest and new tasks)*
- *Change consume resources: management, training, technology experts etc. (including social perceptiveness and recognition of human emotion, for example, negotiation, persuasion and care)*
- *New jobs and occupations is created by changes in work and technology. (New work that needs to be done, which seems to be increasing exponentially in high-tech sectors).*
- *Strategic choice: technological leader or follower*
- *Organizational choice: alternative ways to organize*



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Theoretical understandings of the consequences of technological development

- **Economics** - "...when automation or computerization makes some steps in a work process more reliable, cheaper, or faster, this increases the value of the remaining links in the production chain" *"Economic growth and societal change can't be understood from general theories of technological development (or any other cause of transformation)"* (Autor 2015:6)
- **Economic History** - *Longue durée* – path dependence and institutional changes
- **Critical Management Theory (CMT)** - Conflicting interests between workers and managers, struggles for control and power.
- **Org. theory** *"Organizations do not respond to their environments like billiard balls struck by a cue stick: nor do they mindlessly await their fate like members of a species suddenly subjected to climate change"* (Pfeffer 1982)

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Technology analysis in Management and Organization Studies - Contingencies

- **Management/ organizational design**
 - Scientific-Management (Taylor 1911)
 - Human-Relations (Mayo 1934)
 - Socio-technical design (Trist et al 1963)
- **Structural variation:**
 - Dependences –coordination (Thompson 1967)
 - Tasks (Perrow 1967)
 - Production process (Woodward 1968)
 - Institutional differencies (Child et al 1990)
- **Process and structuration**

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Technology analysis in Management and Organization Studies - Affordances

- **Agencies:**
 - **Cognition** (Löwstedt 1985, 1993, Walsh&Ungson 1991)
 - **Socio-technical design** (Trist et al 1963, Docherty, Forslin & Shani 2002)
 - **Affordance** (Leonardi 2011) (Siegert & Löwstedt 2019)
- **Process:**
 - Structuration (DeSanctis & Poole 1994, Orlikowski & Yates 1994)
 - **Imbrication** (Leonardi 2011)
 - Embeddedness (Volkoff & Strong 2007, Klaassen&Löwstedt 2020)

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Conceptual understanding of technological change

- Technological imperative – one given consequence of a technological change
- Contingency – consequences are dependent on a certain factor or the way to act is dependent on the situation
- Technological agency?
- Agency – a capacity for action (Giddens Structuration theory)
- Technologies have properties that affords different possibilities for action (Gibson 1986)
- Human vs material agency?
- An interweaving process of human and material agency – imbrication

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Emperical studies:

- CAD in Industrial Firms
 - case studies in 3 Swedish leading Industries
 - significant differencies in change/adjustments in the work organization of engineers
- Explanaiton: Cognitive differencies among change agents
 - organizing frameworks (Löwstedt 1989, 1993)
- Information technology in the Service Sector
 - 2 cases in 3 industries in 6 European countres
 - Banks, Retail Stores and Hospital Laboratories
 - Sweden, UK, Belgium, Italy, Germany, France
 - different use of technology and desgn of work organization
- Explanaiton: instiutional differencies: occupational structures, regulationand laws (Child & Res. Ass. 1990)

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Empirical studies cont.

- Social media in NGO
 - the use of Facebook and Twitter among NGO employees
 - differentiated effects of worklife balance
- Explanation: Affordances
 - the technologies influence the relationship and boundaries between work and non-work (increasing visibility and reducing individual privacy).
 - Boundary work tactics aiming to protect private life from both public and professional scrutiny, in prohibitive, reactive or active ways. (Siegert & Löwstedt 2019)

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Selected publications from the presented studies

- Siegert, S. & Löwstedt, J. (2019) On-line Work Tactics: An affordance perspective, *New Technology Work & Employment* p 18-36.
- Löwstedt, J., Stendahl, E. & Yahklef, A. (2019) Artefacts as *control-with-abilities* in HQ-subsidary relations: The case of a new platform. *Academy of Management Proceedings, Academy of Management Meeting Boston August 2019*
- Löwstedt, J. (1993) Organizing Frameworks in Emerging Organizations. A Cognitive Approach to the analysis of change. *Human Relations*, Vol 46. No 4:501-526.
- Child, J., Loveridge R., & M.E.S.S International Research Team. (1990) *Information Technology in European Services. Towards a Microelectronic Future*. Oxford: Blackwells.
- Löwstedt, J. (1989) *Föreställningar, Ny teknik och Förändring. Tre Organiseringsprocesser ur ett kognitivt aktörsperspektiv*. Doktorsavhandling. Lund: DOXA.
- Löwstedt, J. (1988) Predjudices and Wishfull Thinking about Computer Aided Design *New Technology, Work and Employment*. Vol 3: 30-37.
- Stymne, B., Löwstedt, J. & Fleenor, P. (1986) A Model for Relation Technology, Organization and Employment Level. *New Technology, Work and Employment* Vol 1:113-126.
- Löwstedt, J. (1985) Contingencies or Cognitions? Two Paths for Research on Organization and Technology. *Scandinavian Journal of Management*, Vol 1:207-225

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