# Beyond Technological determinism: revitalising labour process analyses of technology, capital and labour

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# Technological determinism: the problem that won't go away

▸ **The latest reincarnation: Automation and the 4th industrial revolution**

**Technological catastrophism and job destruction**

**AI and the age of the machines**

**The challenge: to produce political materialist accounts that balance structural pressures and strategic choices**

▸ **Why LPA has the analytical resources to do so**

▸ **But what is TD?**

▸ **refers to the assigning of causal powers and effects to technology that belong to or are mediated by institutions and agents. There are various types of technologies other than those associated with work, for example in the reproductive sphere. Determinism in the work sphere assigns technology (whether hardware or software) the decisive powers to initiate and shape work and broader economic relations**

# Foundational LPA of technology

Illustration of 'technology as a phenomenon controlled by particular people with particular interests and in particular positions of power' (Wilkinson, 1983:11-2).

Differentiation between:

Stage of innovation

Design of technology

Choice of technology

Deployment of technology


THE SHOPFLOOR POLITICS OF NEW TECHNOLOGY
BARRY WILKINSON
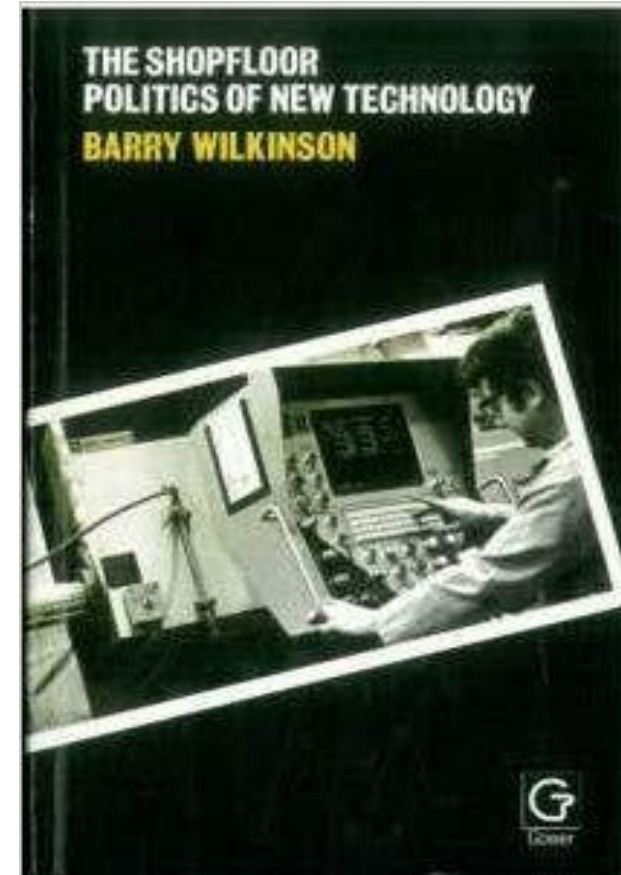
# Foundational LPA of technology con'td

**2nd wave LPA on new technology features rich case studies that focus on**

- **(i) variations in work organisation, managerial control practices, skill utilization associated with *deployment* of particular technologies; (ii) worker and managerial agency as mediating factors.**

**Popular perspective: Strategic choice (Child, 1985).**

**Anti-determinist, but management and workplace centric.**

**Corrective offered by Hall (2010): LPA technology research as a '*political materialist*' project:**

**'Politics': (I) the contested nature of technology; (II) Political interests.**

**'Materialism': Technological artefacts as 'objective characteristics' and 'decisive', but not 'determinant' or 'predictable' effects.**

**Valuable theoretical repositioning, but workplace-centric bias remains.**

# Braverman & beyond: context & content

▶ **Look beyond Braverman's empirical claims to his recovering and renewing of Marx's analysis (in *Capital Vol 1*) of the appropriation of science and technology to subordinate and degrade labour,**

> ▶ a radical rupture with Marxist orthodoxy within which science and technology were deemed to be part of a neutral forces of production and Taylorism an part of an efficient organisation of the labour process under socialism

> ▶ *"The social relations of production shape the technology of production as much as the other way around. Given different social relations, one sees different designs, different deployment. These relations are themselves shaped by larger conditions- the political-economic and cultural climate, the labour market, trade union traditions and strength, international competition and flow of investment capital. But whatever the social conditions, the technological possibilities remain". (Noble, 1979, p 50)*

# What the academic debate missed

- Braverman inspired close readings and detailed accounts of technology and work, from the theoretical (Rosenberg) to the empirical (Richard Edwards) and both (Noble).
    - Noble's book The Forces of Production (1979) was detailed and authoritative account of science and technology produced within early LPA. Part of his empirical claims rested on the case of the strategic choices made by employers in the interaction of computer numerical control systems.
- Braverman was not alone. There were earlier and parallel new understandings of the forces and relations of production - the operaist tradition in Italy, Gorz in France etc
- Taken together, these traditions provided the impetus for the extensive work on technology and the labour process in the Radical Science journal, in the Conference of Socialist Economists and by the worker-intellectual Mike Colley, the architect for the Lucas Plan for alternative production.

# Vidal's critique of LPA & technology

**Two main criticisms made of LPA:**

- no 'compelling' account or recognition of the trend towards upskilling and empowerment
- LPA (Noble etc) is 'obsessed' with managerial control of the labour process at the expense of a focus on valorisation

**We would query the first claim , but it is more important for what it reveals.**

- Post-Fordist labour processes are indicative of long-run technological progress and the 'productive socialisation of the labour force' in education and the workplace. These advances are held back or 'fettered' by management and workforce 'contradictions'.
- We are back to the kind of Marxism critiqued by Braverman and others were neutral, determinant productive forces (notably technology) are 'fettered' by the relations of production (capital is ownership and control).

**As a consequence:**

- Given that technological change is driven by efficiency-based structural forces, there is little scope for strategic choice;.
- The capacity to be critical of the design and deployment of science and technology significantly diminishes' There is no single or linear trend towards progressive development of the productive forces.

# Response and revisions

- LPA authors were trying to establish that employers and managers made choices over design and deployment of technology that were not based on perceived efficiency criteria *alone*. In addition. they wanted to highlight possibilities of alternative ways of organising work. Both motives are valid, but relative efficiency claims are hard to make and establish.

- Workplace-centric analyses are problematic. Control is means not motive for capital, the latter may be for other agents. The question is not *whether* science and technology are used to control and discipline labour, but of sequence and drivers.

- Technological innovations with respect to the world of work arises through interactions between corporate, state and scientific-professional domains

- 'Materiality' when they become embedded in business models of lead firms, initially often within a specific sector or sectors.

- Managerial agents at firm or workplace level are working within the constraints of first-order strategic choices concerning adoption of technological systems, often on a sector basis

- At the stage of deployment, second-order strategic choices become available at the level of detailed control or specific configurations of the division of labour

**Accumulation regime**  **Regulatory regime**  **Control Regime**

**Circuits of capital
Development of forces  &
relations of production
Market concentration
Conditions of
competition
Elite power. Class
fractions**

⟷

**State strategies,
Labour market and other
regulatory norms/institutions
shaping  employment
supply and conditions, and
social reproduction  of
labour power**

⟷

**Conversion of embodied
labour power; application of
value logic in bus. model;
Control mechanisms,
contractual relations, internal
labour markets
Labour agency, structural &
associational power**
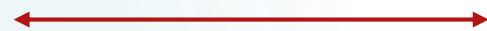
⟷ **First order
strategic choice**

⟷ **Second order
strategic choice**

**Technological
capabilities; general
level of incorporation of
science and technology
into  business models
within and across sectors**

**Framework of incentives and
constraints for investment in
and  influence on new
technologies**

**Deployment  of  socio-
technical systems ; capacity
of workplace agents,
notably labour to constrain
and shape technological
alternatives**

# Call Centre

## First order strategic choices

Emerging SVC; Growth service economy; 360 Pc; Online computing systems; optical-fibre technologies; telecom digitalisation technologies;

↔

De/Re-Regulation of financial market; Wider Marketization; Strong links between tech. Engin., financial org. and state

↔

Marketing & Lending to households; Re-organisation & Rationalization; Adoption: Midland's First Direct as branchless bank 1989; Diffusion of VDU, ACD devises > CCs in fin. Economy and beyond 1990s.

## Second order strategic choices

Integration of VDU/ACD in mass customer service model: hybrid control:'assembly line in the head', 'low discretion-high commitment'; Non-career jobs; Low pay; VDU/ACD integration in relationship management strategies: Better employment and work conditions.
Voice; Exit; Misbehaviour.

Value capture: Lean; Cost reduction; Exploitation of customer database & Cross selling; 'Collectivisation of effort and decollectivisation of risk'

# Platform working

**First order strategic choices**

**On-line platform technologies** ←——→ **Intermediation business models** ←——→ **Value proposition**

**Second order strategic choices**

**Virtual point of production**
**Formally independent contractors**
**Algorithmic controls: allocate, direct, evaluate and discipline labour**
**Hybrid techno-normative mechanisms : core role of reputational rankings and reward-effort targets**
**New forms of labour organisation, legal challenge to contractual status; mobility/exit; transparency**

**Value capture**
**Access to workers' revenue stream**
**Shift of risk and cost to labour**
**Extracting value from sociability of labour power**

# Main References

- Braverman, H. (1974). Labor and monopoly capital: the degradation of work in the twentieth century, Monthly Review Press.

- Booth, A. (2004). "Technical change in branch banking at the Midland Bank, 1945–75." Accounting, Business & Financial History 14(3): 277-300.

- Child, J. (1985). "The introduction of new technologies: managerial initiative and union response in British banks." Industrial Relations Journal 16(3): 19-33.

- Cressey, P. and P. Scott (1992). "Employment, technology and industrial relations in the UK clearing banks: is the honeymoon over?" New Technology, Work and Employment 7(2): 83-96.

- Gandini A. (2017) *Labour process theory and the gig economy. Human Relations. Forthcoming.*

- Graham, M., Hjorth, I. and Lehdonvirta, V., 2017. Digital labour and development: impacts of global digital labour platforms and the gig economy on worker livelihoods. *Transfer: European Review of Labour and Research*,23(2), pp.135-162.

- Gorz, André. 1976. "Technology, technicians and class struggle." Pp. 159-189 in *The Division of Labour: The Labour Process and Class Struggle in Modern Capitalism*, edited by A. Gorz. Sussex: The Harvester Press.

- Edwards, R. 1979. Contested Terrain: The Transformation of the Workplace in the Twentieth Century. London: Heinemann.

- Ellis, V. and P. Taylor (2006). "'You don't know what you've got till it's gone': re-contextualising the origins, development and impact of the call centre." New Technology, Work and Employment 21(2): 107-122.

- Greenbaum, J (1976) Labor in the Computer Field. Monthly review.

- Rosenberg, N (1976) *Marx* as a Student of *Technology. Monthly review. July/August , 56=77.*

- Hall, R (2010) Renewing and Revising the Engagement between Labour Process Theory and Technology. In:Smith, C and Thompson, P. Working Life, 159-181.

- Halford, S., M. Savage, et al. (1997). Gender, Careers and Organisations: Current Developments in Banking, Nursing and Local Government, Macmillan.

# References II

- Laaser, K. (2016), 'If you are Having a go at me, I am Going to Have a go at You': The Changing Nature of Social Relationships of Bank Work Under Performance Management', *Work, Employment and Society* **30**, 6, 1000–1016.

- Leyshon, A. and N. Thrift (1993). "The restructuring of the U.K. financial services industry in the 1990s: a reversal of fortune?" Journal of Rural Studies 9(3): 223-241.

- Mason, P. (2015) *PostCapitalism: A Guide to our Future.* London: Allen Lane.

- Marx, K [1867] 1990. *Capital, Vol. 1*. Translated by B. Fowkes. London: Penguin.

- Noble, D.F. (1984) Forces of Production: A Social History of Industrial Automation. New York: Alfred A. Knopf

- Thompson, P. (2013) 'Financialization and the Workplace: Extending and Applying the Disconnected Capitalism Thesis', *Work, Employment and Society*, 27/3: 472-88.

- Thompson, P., 2010. The capitalist labour process: Concepts and connections. *Capital & Class*, *34*(1), pp.7-14.

- Thompson, P. (1983, 1989). The Nature of Work: An Introduction to Debates on the Labour Process, Palgrave Macmillan.

- Vidal, M (Accepted for publication) Contradictions of the labour process, worker empowerment and capitalist inefficiency. In: Historical Materialism.

- Wilkinson, B (1983) The *ShopFloor Politics* of New Technology. Heinemann Educational Book.

- Taylor, P. and P. Bain (1999). "'An assembly line in the head': work and employee relations in the call centre." Industrial Relations Journal 30(2): 101-117.