

Bodies and Machines at Work

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1. The photographic survey that accompanies this text focuses on work as its field of study, understood here as human action within organisational systems dominated by machinery. This research perspective, which follows a line of anthropological analysis on technique, owes a great deal to the observations of Günther Anders, who as far back as the 1950s asserted that “it would be important to get to know the dynamics of transformation of the human and the body within the processes of the technical upgrading of the whole world.”¹ According to this outlook, technique and along with it the system of machinery “is no longer a means available to man, but rather it’s the environment,”² the world in which man lives, and which he believes to be his own. Any analysis on human action within organisational systems characterised by a vast and widespread use of new technologies thus entails, in Foucault’s words, research into the “mystique of the everyday,”³ into how human behaviour adapts to machines, i.e. how machines ‘adapt’ us to their use.

2. In the globalised world, also following the recent economic and financial crises, enterprise seems to have maintained its organisational, economic and political centrality on the Emilian territory, and it is therefore as part of the company organisational system that it was decided to carry out this photographic survey. In advanced economies, digital technological development and its organisational-productive framework (the algorithm) attain to decision-making processes determined by economic forces to be reckoned with on the global marketplace. Even though the planning decisions concerning technological choices are taken at a higher level, it is at the company level that we may best observe the development achieved by technology in its ‘rational operation’. Industrial digitalisation and scientific research applied to industry find their application in companies,⁴ which thus still represent the place of choice for an analysis of the transformation of labour in relation to machines and technology, as well as to the ‘unacknowledged skills’ of a given territory.

3. In the early ’90s, the shift from the twentieth-century factory towards the new economy represented an opportunity for photography to reflect on visibility and the representability of technique in the digital era. In the wake of analyses on the so-called progress of contemporary civilisation carried out by radical thinkers such as Baudrillard, Virilio and Deleuze, who had underlined the derealisation of experience and the acorporeal, a lot of the research photography from the 1990s right up to contemporary contributions took steps to underline the immaterial dimension of labour, if not indeed its complete disappearance from advanced industrial systems, thus giving credit to the mainstream narratives of neo-liberalism. According to a different documentary photographic culture, on the other hand, the physical dimension of work has never disappeared, but rather has been moved to other parts of the planet, as was shown at the time by Allan Sekula and his analyses on the globalisation of the naval transport of goods.⁵ According to

¹ G. Anders, *L’uomo è antiquato. I. Considerazioni sull’anima nell’epoca della seconda rivoluzione industriale (The Obsolescence of Humankind)*, Bollati Boringhieri, Turin, 2003. In this regard, see the useful review provided by U. Fadini in *Sviluppo tecnologico e identità personale, Linee di antropologia della tecnica*, Dedalo, Bari, 2000, pp. 25–31.

² U. Galimberti, *L’uomo nell’età della tecnica*, AlboVersorio, Milan, 2011, p. 50.

³ M. Foucault, *Discipline and Punish. The Birth of Prison*, Pantheon Books, New York, 1977.

⁴ In this regard, see D. Fontana, *Digitalizzazione industriale. Un’inchiesta sulle condizioni di lavoro e salute*, Franco Angeli, Milan, 2021, pp. 22–23.

⁵ A. Sekula, *Fish Story*, Richter Verlag, Dusseldorf, 1995.

Sekula, the globalised economy does not revolve around computers but around containers,⁶ and the supposed dematerialisation of the digital economy is based on the large-scale shipping of goods. Thus, the material dimension of labour is in actual fact very much present in advanced economies, albeit in less conspicuous ways than those of the twentieth-century factory. Indeed, sometimes even within the same company, a stratification of different organisational and productive systems remains, from the Fordist to the post-Fordist through to that of Industry 4.0. In actual fact, technological innovation has never been universalist, but “keeps a whole series of different and sometimes anachronistic models alive.”⁷

4. In ‘cognitive capitalism’, according to a definition provided by a number of economists,⁸ the skills required of the worker involve the full range of his/her human faculties, as expressed in the ‘valorised’ individual. The so-called ‘soft’ skills, i.e. the ability to think, to know and to feel in a certain way, are very difficult to teach or to alter insofar as they belong to the ‘human capital’ of the individual: they thus appear to represent the otherwise unacknowledged reserves, the ‘minor skills’ inherent to knowledge and experience that a given territory has developed over the years.⁹ In the knowledge-based economy, that of ‘cognitive capitalism’, the value incorporated in the goods would appear to be made up more than ever of ‘immaterial’ productive factors and ‘soft’ skills. Human capital has been awarded a major role in the understanding of entire geographical areas of the planet compared to areas where such development has yet to take place. In given areas of northern Italy, for example, soft skills in the past were closely bound up with the stratification of craft knowledge, for which the creation of ‘artisan parks’ per was of key importance in the 1950s.¹⁰

5. The spread of IT terminals throughout the working environment has led to digital labour, in direct contact with the computer. Interconnection and miniaturisation have made it possible to develop reticular forms of organisation based on communication and cooperation. A number of economists sustain that “we have passed from mechanical-repetitive technologies to linguistic-relational technologies, from static to dynamic technologies, which simultaneously conjugate manual and cerebral-relational activities.”¹¹ This new type of labour organisation, not classifiable in traditional terms, would appear to create a new kind of ‘widespread knowledge’ which Marxist economists used to call ‘general intellect’. This knowledge, as a driving force behind the accumulation of capital, would however appear to have been expropriated by the so-called collective ‘live work’, thanks to the company’s intellectual property rights.

6. Industry 4.0, characterised by a close connection between the planning and production sides of the company, brings together the world of machine tools with that of computers, and the world of customers with that of producers. M2M (Machine to Machine) and the IoT (Internet of Things) are

⁶ S. Edwards, “Allan Sekula’s Chronotopes: Uneven & Combined Capitalism” in H. Van Gelder (ed.) *Allan Sekula. Ship of Fools / The Dockers’ Museum*, Leuven University Press, Leuven, 2015, pp. 31–41.

⁷ P. Virno, *Grammatica della moltitudine. Per un’analisi delle forme di vita contemporanee*, DeriveApprodi, Rome, 2002, p. 104. In Emilia-Romagna, for example, where production is largely export oriented, only 10% of companies may be classed as Industry 4.0, despite being the region that lays claim to the highest number of companies classifiable as belonging to the medium / high technology sector. In this regard, see P. G. Ardeni and M. Morini (eds.) *Il lavoro nel futuro dell’industria a Bologna e in Emilia-Romagna*, Pendragon, Bologna, 2019.

⁸ See A. Fumagalli, *Bioeconomia e capitalismo cognitivo. Verso un nuovo paradigma di accumulazione*, Carocci, Rome, 2007.

⁹ See the research carried out by Aldo Bonomi for the Aaster consortium in Milan.

¹⁰ See A. Frongia, “Biografia di un quartiere industriale,” In W. Guerrieri, *Il Villaggio*, Linea di Confine, Rubiera, 2009.

¹¹ A. Fumagalli, *Economia politica del comune. Sfruttamento e sussunzione nel capitalismo bio-cognitivo*, DeriveApprodi, Rome, 2007, p. 58.

the technologies underpinning such organisational principles, both inside and outside the sphere of production. The anthill, with its frequent replacement of the entire colony of ants yet which accumulates experience as it grows older, even when individual ants die, seems to be the real underlying model of 'widespread knowledge' that characterises the modern connection.¹² This means that the new functions of I 4.0 call upon the workers to perform a common task, but that the 'widespread knowledge' produced means that the operator is often isolated in his/her interaction with the machines, and networks are easily replaceable: an unprecedented working condition up until only a few years ago, in which – in order to overcome the natural limitations of the human body (meant in terms of physical or psychological performance) – the robotised guidance of movements seems to prevail, within the context of "downgraded human interaction"¹³ in the face of the machines' ever-growing capabilities.

7. That the body of the individual is closely linked to his/her cognitive faculties should be out of the question. Only a highly superficial analysis of the new forms of labour may conclude that the body of the individual is not involved in such processes, even when physical fatigue in the traditional sense is absent. Bodily gestures are considered to be a meaningful unit showing the behaviour of humans and a manifestation of their presence in the world.¹⁴ Habit, for example, is "a knowledge that lies in the hands, the legs, a skill entrusted exclusively to the body space."¹⁵ Even attention itself, one of the most characteristic features of human consciousness and already studied at great length in the pedagogical field, however much it might not seem to involve the body, is in actual fact "an essentially motorial phenomenon, as may be seen from facial and body movements, as well as changes to breathing patterns."¹⁶ In digital labour, in the supervision of machine control systems and also in immaterial labour, the body is therefore home to the cognitive-relational faculties and a sort of interface between the individual and the organisational system in which s/he operates.

8. At a certain point, the very evolution of AI and robots had to be endowed with sensorial apparatus, placing it in communication with the environment. In human thought, the articulation of the unsaid, which provides the backdrop to every relationship of the body with the environment, is considered an endless process which produces so-called 'common sense'. Human intelligence is holistic and situational, while computers cannot be 'situated' insofar as they are bodiless entities. In the light of these considerations, starting from the 1980s, in studies on AI and robotics, the focus began to shift from the computational to the 'embodied' model: robots were then designed as situated cognitive agents and embodied in a physical environment. The real weakness of AI, currently deemed to be an insuperable limit, is that although it features a capacity for calculation vastly superior to that of humans, it does not possess that which distinguishes human intelligence, i.e. 'common sense': that "background of previous knowledge and beliefs in which our concrete relationship with the world is embodied."¹⁷

¹² In this regard, see M. Temporelli, F. Colorni & B. Gamucci, *4 punto 0. Fabbriche, professionisti e prodotti della Quarta rivoluzione industriale*, Hoepli, Milan, 2017, p. 69.

¹³ E. Sadin, *La siliconizzazione del mondo. L'irresistibile espansione del liberismo digitale*, Einaudi, Turin, 2018, p. 79. See also D. Fontana, op. cit., p. 26.

¹⁴ See J. LeBoulch, *Verso una scienza del movimento umano. Introduzione alla psicocinetica*, Armando, Rome, 1975. See also R. Esposito, *Le persone e le cose*, Einaudi, Turin, 2014.

¹⁵ U. Galimberti, *Il corpo*, Feltrinelli, Milan, 1983, p. 129.

¹⁶ A. Valeriani, *Il nostro corpo come comunicazione. Linee per una pedagogia del corporeo umano*, La Scuola editrice, Brescia, 1964, p. 54.

¹⁷ See G. Fornero, "Intelligenza artificiale e filosofia", in *Filosofia. Storia parole temi*, Utet, Milan, 2013, p. 171.

9. The famous philosopher Byung-Chul Han maintains that Foucault's biopolitics is a governing technique typical of the disciplinary society and which does not appear adequate for the control of individuals in the neoliberal regime, which largely exploits their psyche,¹⁸ inducing them towards the 'can-do' outlook. Nevertheless, Han admits that in the neoliberal regime, which he defines as "an achievement society," "the achievement-subject remains disciplined,"¹⁹ thus admitting a relationship of continuity between the can-do (that of the achievement society) leading on from the should-do attitude (that of the disciplinary society). Therefore, I am of the belief that, as Foucault said, it is with the "mystique of the everyday," the discipline of the minuscule, that the coercion of power may reach the bodies, in view of greater economic and technical rationality, "forcing them to inhabit that single space and that single time that power has decided for everyone."²⁰ With a view to analysing human behaviour within organisational systems dominated by machines and technique, in keeping with a consolidated tradition of anthropological research,²¹ this photographic survey thus adopts the photographic sequence as a means by which to observe the movements of the human body in an analytical fashion.

10. The theme of alienation, with a technological acceleration which has modified the rhythm of individuals' lives,²² has returned to the heart of the cultural debate and the arts. While in the Fordist organisational model, alienation was described as the expropriation of one's labour by those who control the means of production, in 'cognitive capitalism' alienation concerns the expropriation of one's own intellectual activity by those who automatically acquire the rights to it. According to this perspective of analysis, "the alienation of labour takes place more on the existential level than the economic-material one, and it takes the form of interior conflict and subjective frustration."²³ From a number of recent studies on the subjectivity of labour, it has emerged furthermore that digital labour, "those work forms based on virtual offices, [...] require such a great effort of concentration as to make people forget where they are – spatially and physically – and reduce the perception of even having a body."²⁴ A new aspect that emerges in the analysis of the transformation of the human being within the processes of technicalisation of the world is therefore the theme of new forms of fatigue, ones which are not always recognisable as such, of new experiences of the body at work, of sufferance and its representability.

¹⁸ B.-C. Han, *Psychopolitics*, Verso, New York, 2017.

¹⁹ B.-C. Han, *The Burnout Society*, Stanford University Press, Stanford, 2015.

²⁰ U. Galimberti, op. cit., 1983, p. 449. We might also add that like in Brecht's theatre, bodies and gestures grapple here with history, politics, power and subjugation. In this regard, see G. Didi-Huberman, *The Eye of History: When Images Take Positions*, MIT Press, Cambridge (MA), 2018.

²¹ See A. Russo, *Storia culturale della fotografia italiana. Dal Neorealismo al Postmoderno*, Einaudi, Turin, 2011.

²² See H. Rosa, *Accelerazione e alienazione. Per una teoria critica del tempo nella tarda modernità*, Einaudi, Turin, 2015.

²³ A. Fumagalli, op. cit., 2007, p. 166.

²⁴ S. Burchi, "Senza corpo. Il lavoro della conoscenza e gli effetti di smaterializzazione dell'esperienza," in *Corpi al lavoro*, A. Casellato & G. Zazzara (eds.), Edizioni Ca' Foscari Digital Publishing, Venice, 2015, p. 118. Among recent research into the subjectivity of workers who experience the consequences of the use of technology in I 4.0 on their own bodies, see also D. Fontana, op. cit.