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## Abstracts

### INTRODUCTION

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Leonello Tronti

Technological innovation not only enables processes and products that were previously impossible, but also profoundly influences the nature, values, and organisation of work. However, although technology is an enabler of productive innovation, it is not enough to ensure that it actually occurs or to precisely determine its direction. In other words, technologies make innovation possible, but only organisational models that can foster learning as a systemic continuous process and collective interaction between work, organisation, and technology make it possible to exploit its potential, as well as to furtherly progress along the path of technological innovation. It is therefore learning as a widespread phenomenon inherent to the new forms of work, as the foundation of direct participation in production processes (cognitive participation), that constitutes the backbone of the new season of work transformation that replaces the “story of merits and needs” (Trentin) with a new project of emancipation of human work in terms of skills and rights. In the perspective already outlined by Giuseppe Di Vittorio, and more recently by Jacques Delors, it is learning as a collective, social phenomenon, that outlines the boundaries of the new process for strengthening and spreading freedom, meant as emancipation of those, in the world of work and in society, who are subject to the domain of production digitisation and to the governance of algorithms and big data: “a unique opportunity to restore in the person the conditions to feel fulfilled, ‘governing’ his/her work”. This essay ends with a presentation of the group “TO-MI Innovation and Work” and of the four essays – by, respectively, Bartezzaghi, Della Rocca, Pero, and Stark and Pais (all of whom belong to it) – that constitute the monographic section of the present issue of this journal.

*Keywords:* knowledge economy, learning society, technological innovation, organisational change, cognitive participation.

## PARTICIPATION, ORGANISATION, AND TECHNOLOGY

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Emilio Bartezzaghi

The paper discusses direct participation and its relationships with institutionalised forms of participation, from representative to economic participation. There is a plurality of practices of direct participation, which must be distinguished from mere managerial involvement. The evolution of participation, the prevalence of one type of participation over the others, as well as the interaction between the different types, depend on the socio-economic context, the industrial relations system, and the transformation of organisational models. In more recent times, direct participation has regained interest, albeit at an operational level and not as a decision-making input at the highest level. The various forms of participation, in particular the direct one, as well as for the management of current activities and for continuous improvement, can play a fundamental role for technological innovation projects. Participation is an essential contribution to the recovery after the pandemic and to cope with the acceleration of technological innovation and ecological transition processes. However, appropriate initiatives are needed, at a contractual and/or legislative level, which link the possible forms of direct participation to the institutionalised ones. Another fundamental prerequisite is the training of both workers and their representatives, and of management and entrepreneurs.

*Keywords:* direct participation, organisational theories, organisational change, technological innovation.

## THE MISSING PLUG: RESULT-BASED EVALUATION OF PUBLIC ORGANISATIONS

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Giuseppe Della Rocca

The text highlights what, to date, can be considered the greatest difficulty in making public service action transparent: the evaluation of its performance results. This orientation has been adopted by several reforms in Italy from 1990 until now, but has not been fully implemented yet. The text recalls this process, from legitimacy and administrative controls to the performance evaluation of results – a dimension accepted only in the context of individuals, employees and managers. The analysis of this experience shows that, without a verification of administrative organisational results, the individual evaluation – in particular for managers – encounters serious limits in terms of non-compliance with the applicable legislation or of dispersion in relation to the solutions adopted.

*Keywords:* performance, measurability, individual evaluation, organisational evaluation, administrative checks.

## JOB CLASSIFICATION SYSTEM FOR METALWORKERS AND LONG-TERM ORGANISATIONAL CHANGES

Luciano Pero

The job classification of the metalworking sector, defined in 1973 in the National Collective Bargaining Agreement, which in our country concerns about 1.6 million workers, remained almost unchanged for about 50 years, until the recent agreement of 2021. This is a turning-point agreement that aims to support significant innovation in the Italian manufacturing system through various interventions. What are the reasons for such a long duration of the 1973 job classification? What are the innovations of the new 2021 framework? This paper seeks an answer to these two questions by proposing a long-term analysis (from 1973 to today) of the main variables that affect the professional system: technological development, organisational models, work systems, workers' skills, industrial relations. The analysis shows that, while new technologies and work organisation evolve in parallel and rapidly, generating new production systems, the evolution of professional roles is instead slower, and reflects both the inertia of the social conception of professions, and the slowness with which the new systems spread among companies. Furthermore, the regulation of industrial relations does not directly follow the new production systems and new jobs, but rather develops according to variable patterns, linked to the cultural and political orientations of social actors.

*Keywords:* job classification, technological innovation, organisational change, industrial relations, new digital technologies.

## ALGORITHMIC MANAGEMENT IN THE PLATFORM ECONOMY

David Stark, Ivana Pais

The platform model is the distinguishing organisational form of the early decades of the 21<sup>st</sup> century. Whereas actors in markets *contract*, hierarchies *command*, and networks *collaborate*, platforms *co-opt* assets, resources, and activities that are not part of the firm. As a distinctive organisational form, the platform model confronts a distinctive managerial challenge: how to manage value-creating activities that are undertaken on the platform but not in the firm? In a triangular geometry, platform owners co-opt the behaviour of providers and users, enrolling them in the practices of algorithmic management without managerial authority having been delegated to them. Acting on their own behalf, the ratings and other activities of providers and consumers are algorithmically translated into rankings and other calculating devices that circulate through feedback loops that are twisted rather than circular. Algorithmic management involves a peculiar kind of cybernetic control because, at each fold of the feedback loop, accountability can be deflected and denied. Whereas scientific management in the early 20<sup>th</sup> century offered a legitimating principle for the growth of a new managerial class, algorithmic management in the early 21<sup>st</sup> century is reshaping the managerial class. Its power asymmetries at the organisational level are related to coalitions at the regulatory level in which platform owner and investors are in alliance with platform consumers.

*Keywords:* algorithmic management, platforms, Taylorism, rankings, organisational forms.

## DIGITAL TECHNOLOGIES AND BLUE-COLLAR WORKER EMPLOYMENT IN A MANUFACTURING SYSTEM OF SMALL AND MEDIUM-SIZED ENTERPRISES

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Bruno Anastasia, Giancarlo Corò, Monica Plechero

The impact of the latest digital technologies on employment and job profiles has been under research for a long time. However, little is known about the relationship between 4.0 technologies and changes in blue-collar workforce in small and medium-sized manufacturing firms. Thanks to the integration of Uniocamere and Veneto Lavoro datasets, the study shows how the composition of the working class in manufacturing firms has changed over time following the introduction of different types of digital technologies. The results discussed in this article show ambiguous effects. Despite increases in Industry 4.0 technology adoption relate to increases in employment, we also observe the share of specialised workers shrinking, and routine jobs growing. These results put forward the need to build labour policies aimed at strengthening the development of digital as well as cognitive and creative competences of the labour force.

*Keywords:* Industry 4.0, blue-collar workforce, manufacturing operations.

## INSTITUTIONS, NEEDS, AND DIRECTIONS OF CHANGE

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Giovanni Bonifati

Can institutions orient the emergence of new needs, and, through their action, orient the economic system so as to meet such needs? In order to answer this question, the essay proposes a theoretical framework grounded on two elements: the notion of institutions as different types of entities organised around different systems of rules, and the notion of needs as the expression of awareness of what people consider important to build new life plans. The emergence of such awareness is linked to knowledge-generating processes. The resulting policy implications focus on the idea that social policies should follow two complementary directions: contributing to build the minimum conditions to design life plans, and widening the possibilities of active participation in knowledge-generating processes.

*Keywords:* institutions, new needs, social policies, knowledge generation.

## THE SYSTEMIC DIMENSION OF SUCCESS (OR FAILURE?) IN THE USE OF DATA AND AI DURING THE COVID-19 PANDEMIC. A CROSS-COUNTRY COMPARISON ON CONTACT TRACING APPS

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Margherita Russo, Claudia Cardinale Ciccotti, Fabrizio De Alexandris, Antonela Gjinaj, Giovanni Romaniello, Antonio Scatorchia, Giorgio Terranova

During the Covid-19 pandemic, public attention turned to contact tracing apps as a possible solution to the spread of the virus. Many countries have moved in this direction, thereby adopting contact tracing apps while respecting personal data protection. EU countries also adhered to a number of fundamental principles: voluntariness, interoperability, regulatory coverage, purpose specification, minimisation, transparency, protection, security, and timeliness. In spite of timely public policy efforts, tracking apps have not been a success in many countries, and it seems appropriate to open a reflection on the unsuccessfulness of a public policy that has resolutely supported the use of digital technologies for public utility purposes.

This paper proposes a comparative analysis of nine OECD countries: Australia, France, Germany, Ireland, Italy, New Zealand, Russia, South Korea, and Spain. It outlines the specific factors in each country's public policy that made the use of tracking apps possible. In terms of policy design, it deals with: objectives, instruments, public procurement selection criteria, resources, and the context in which the policy was implemented. The paper focuses on three lessons learned from the comparative analysis: the privacy paradox, the choice of a public interest technology, and the systemic interweaving that the implementation of a public policy must consider to enhance the effectiveness of a public interest action.

*Keywords:* STI policy, big data, Covid-19, privacy, app, information, users, contact tracing, developers, Australia, France, Germany, Ireland, Italy, New Zealand, Russia, South Korea, Spain.

## *QUO VADIS, EUROPA. A CRITICAL ASSESSMENT IN THREE AND A HALF MOVEMENTS*

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Riccardo Bellofiore, Francesco Garibaldo

The essay presents a theoretically oriented survey of three interpretative perspectives about the European development and crisis, proposed by different authors (Halevi, Celi-Ginzburg-Guarascio-Simonazzi, and Saraceno). We highlight their richness and in many respects their complementarity, but we also reveal internal tensions and some limits. In contrast, a unitary discourse will emerge, sometimes thanks to the arguments we will borrow from these authors, sometimes in dialogue with them. Ours is a deliberately partial perspective providing a sympathetic “critique” that will extract the “internal truth” contained in the works reviewed, showing how they enlighten today’s challenges. In conclusion, we will argue that the coronavirus pandemic may shift the discussion, and open new perspectives in terms of economic policy and social intervention, or, more simply but more substantially, of political challenge and urgent tasks for action.

*Keywords:* optimum currency areas, trustified capitalism, value chains, centralisation without concentration, consumer debt, social production economy, Industry 4.0, privatised Keynesianism, ordoliberalism, pandemic, industrial policies, socialisation of investment.