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Benegiamo, Maura; Guillibert, Paul; Villa, Matteo

Published in:

Sociologia del Lavoro : analisi e documenti

DOI:

[10.3280/sl2023-165001oa](https://doi.org/10.3280/sl2023-165001oa)

Publication date:

2023

Document Version

Publisher's PDF, also known as Version of record

[Link to publication](#)

Citation for published version (HARVARD):

Benegiamo, M, Guillibert, P & Villa, M 2023, 'Work and welfare transformations in the climate crisis: A research pathway towards an ecological, just transition', *Sociologia del Lavoro : analisi e documenti*, no. 165, pp. 9-29. <https://doi.org/10.3280/sl2023-165001oa>

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Work and welfare transformations in the climate crisis: A research pathway towards an ecological, just transition

Maura Benegiamo*, Paul Guillibert**, Matteo Villa***

In this introduction to the special issue of *Sociologia del lavoro*, devoted to labour transformations and welfare policies in the context of the ecological crisis, the authors review the state of the debate, focusing on three emerging concepts: climate justice, just transition and sustainable welfare. They provide an analysis of the academic and non-academic contexts in which these concepts have emerged and the kinds of programmatic questions that they raise for the study of labour transformations, social movements and welfare policies. After discussing how the collected contributions operationalise the three concepts in different empirical and research contexts, the article outlines some critical gaps that warrant being addressed or explored further and propose a few methodological and analytical pointers that are useful for the continuation of the debate and, thus, the growth of a field of analysis that is destined to occupy a major space in the sociology of labour.

Keywords: work and welfare, climate justice, social movements, more than human politics, eco-social paradigm

1. Situating work and welfare in the ecological transition debate

The last two decades have been marked by the so-called double crisis of Western work and welfare systems (Emmenegger *et al.*, 2012; Taylor-Gooby, 2013). On the one hand, demands for social protection have increased due to the changing configuration of classical or old social risks and the emergence of new ones, including the dualisation and flexibilisation of the labour market. On the other hand, the fiscal crisis resulting from states' responses

* University of Pisa, E-mail: maura.benegiamo@unipi.it

** Université de Namur, E-mail: paulguillibert@gmail.com

*** University of Pisa, E-mail: matteo.villa@unipi.it



Sociologia del lavoro, n. 165/2023. ISSN 0392-5048. ISSNe 1972-554X.
DOI: 10.3280/SL2023-165001oa

to the 2008 economic downturn in the wake of the austerity doctrine has reduced the room for manoeuvre of public policy. These two contradictory dynamics spiralled into each other, imposing complicated political dilemmas, which have been responded to in different ways across countries and policy domains, through strategies of expansion or – more frequently – recalibration and retrenchment (Häusermann, 2012).

However, the design and application of such strategies have remained mostly entrenched in neo-Keynesian and above all neoliberal ideas of welfare capitalism that have characterised the forms of accumulation and social protection in the past decades, thereby deepening and revealing the further contradiction and massive dilemma of a development model dependent on an environmentally destructive economic growth screwed into a dynamic of severely worsening ecological crisis (Martinez-Alier, 2021).

The ongoing ecological crisis and the recent acceleration of climate change are increasingly affecting our socio-economic organisation in many facets, fuelling new ideas, demands and attempts at change to counter the increasingly dangerous environmental conditions and social consequences. Climate change is operating as «an aggravator of existing social risks, such as risks to health, poverty, inequality and human security» (Ipcc, 2014, cited in Johansson *et al.*, 2016, p.100). The poorest and most vulnerable communities and territories are those most exposed to these dangers, which can lead to forced displacement and increased environmental injustice (Bettini, 2017). Besides, especially in presence of weak anticipation, mitigation and conservation policies, climate change may become the major driver of emerging, novel social risks. Accordingly, the severe effects of the ecological crisis on the natural and artificial resources on which societies depend (e.g. water, food, energy, infrastructure) as well as their economies and the employment-insurance regime on which their welfare systems are based (Johansson *et al.*, 2016) are spurring new social instabilities that articulate differentially with other structural changes.

Mitigation and adaptation policies can also trigger unintended negative social implications; for example, by inducing regressive fiscal effects (e.g. due to carbon taxes), exacerbating «fiscal competition between welfare and environmental demands» (Gough, 2017, pp. 58-9) or due to the decline and transformation of specific production processes and local economies, ensuing in job losses, deteriorating working conditions and skills imbalances. At the same time, transition processes can foster the creation of new jobs and/or a more sustainable reorganisation of employment, income and protection systems, depending on many factors that need to be analysed along with those underpinning the aforementioned new and growing social

risks (Alberio and Arcidiacono 2020; Beblavý *et al.* 2014; Lawn 2016; Korhonen *et al.* 2018).

Against this backdrop, the analysis of the transformations induced by the ecological and climate crisis and their related transition strategies requires a greater awareness of the interaction between socio-economic and environmental systems. It also requires an in-depth examination of the scientific, political, and even cultural paradigms underlying the understanding of the socio-ecological threats and root causes of the current climate disruption. While economic sociology and welfare and labour studies have traditionally only marginally dealt with this topic, recent years have seen a growing focus on socio-environmental issues, influenced by work on ecological economic and ecological-distributive conflicts (Martinez-Alier and Muradian, 2015; Spash, 2017), political ecology (Robbins, 2004), as well as more recent fields of research such as sustainable welfare (Schoyen *et al.*, 2022) and environmental labour studies (Räthzel *et al.*, 2021).¹

In line with such approaches new research programmes have sought to develop a more integrated scientific understanding of the relationships between ecological crisis labour and welfare transformations from different perspectives (Barca, 2020; Benegiamo, 2022; Benegiamo and Leonardi, 2021; Hansson and Knutsen, 2010; Fritz and Koch, 2019; Keyßer and Lenzen, 2021; Leonardi, 2019; Pellizzoni, 2022; Villa, 2020). Here, concepts such as just transition, sustainable welfare and climate justice are – among others – affirmed to define innovative fields of analysis that have already produced promising results (e.g. Fitzpatrick, 2011; Gough, 2017; ILO, 2015; Koch and Mont, 2016; Laurent, 2021; Jacobsen, 2018; Morena *et al.*, 2020; Räthzel *et al.*, 2021), while highlighting some key needs for further research and new avenues for policy action.

These reflections have guided the preparation of this special issue of *Sociologia del lavoro*, which is animated by the interest in deepening the analytical understanding and empirical study of the transformations of labour and welfare systems in the ecological and climate crisis and in relation to ecological transition policies, as well as the risks of further growing inequalities and social threats related to these processes.

The next section (§2) will explore the framework that has guided our work. §3 introduces the contributions of this special issue, focusing on how they articulated the three research concepts in their respective contexts of

¹ Environmental labour studies design a flourishing field of analysis of the relationship between nature and labour from the perspective of workers as social actors. Sustainable welfare studies leverage on an approach to welfare as a system aimed at satisfying human needs within ecological limits, in an intergenerational and global perspective.

investigation. §4 briefly discusses the main commonalities and gaps that emerge from this collection, while the conclusion aims to figure out some directions for further research.

2. Just transition, sustainable welfare and climate justice: Three guiding concepts

Taken together, the concepts of climate justice, sustainable welfare and just transition constitute an analytical lens which moves from the perspective that reducing inequalities and making work and welfare ecologically sustainable are two inseparable goals. Accordingly, authors who engage with this framework claim the need to: 1) interrogate the role of labour and social policies in the climate crisis and spur a sustainable socio-ecological transition; 2) understand how to implement and evaluate both top-down and bottom-up eco-social policies and initiatives that combine comprehensive environmental and social justice objectives; 3) understand how to foster the decarbonisation of labour and welfare systems; and 4) identify and operationalise alternatives to the growth paradigm.

Below, we provide a brief description of these concepts, before expanding on how the authors who contributed to this special issue have engaged with them.

2.1 Just transition

Just transition is a central concept in contemporary climate discussions and one of the watchwords of many international organisations and trade unions. The expression most likely made its first “official” appearance in the early-1990s in the proposal formulated by North American trade unionist Tony Mazzocchi of a Workers' Superfund (Mazzocchi, 1993; quoted in Galgóczi, 2018) for financial and higher education support to workers displaced by environmental protection policies. This claim is rooted in turn in the activist campaigns conducted for the North American Oil, Chemical and Atomic Workers' Union trade union movement in which Mazzocchi had been active since the 1960s. Particularly relevant was the national mobilisation and educational campaign that led to the passage of the Occupational Safety and Health Act of 1970. In this context, the question of the just transition was mainly framed by concerns related to the safety and health of workers and industrialised territories. As Morena *et al.* (2020)

explain, for Mazzocchi the problem of safety at work could not only be addressed through an increase in safety devices, but required a rethinking of work itself and the relationship between the factory and the territory (Feltrin and Sacchetto, 2021). Workers and their communities were called upon to play a leading role in this rethinking, based on the dual principle of the 'right to know' and the 'right to act.'

After the begin of the 1990s, the idea of just transition started to circulate more consistently in the North American context and subsequently – in the early-2000s – in the European context. The International Trade Union Confederation included it in its statement to the Kyoto conference in 1997, and the European Trade Union Confederation adopted the concept in its Rio+20 resolution (see Galgóczi, 2018). However, just transition only became affirmed as a widespread concept with a reference narrative with its inclusion in the Paris Agreement resulting from COP21 held in 2015. This also has helped a debate on the diverse analytical meanings and normative approaches attached to the idea of just transition (García-García *et al.*, 2020). In the context of climate governance, the concept – also recently recalled in the Sharm-el-Sheikh Implementation Plan (COP27) – has been principally framed with the idea that the transition to a climate-neutral economy must simultaneously secure the future and livelihoods of workers and their communities (see also ILO, 2015). However, with respect to how to pursue such goals, debate and research remain at an early stage (Morena *et al.*, 2020; Guillibert *et al.*, 2022). As for the academic debate, probably one of the main obstacles is that research on sustainability, labour and welfare has been developed mainly within parallel and loosely connected paths. The same can be said about social, environmental and climate justice (see below) and industrial relations research approaches, where very different concepts of 'just transition' are used. For this reason, more integrated efforts to design and improve this research field are needed (Galgóczi, 2021; see also Tomassetti, 2020).

The concept of just transition seeks to overcome the potential contradiction between labor and the environment, namely the alleged need to choose between either protecting the planet or protecting workers and the economies that sustain people. Indeed, for some – especially governments and a handful of unions and corporations – efforts to protect the environment should not take precedence over economic growth and job protection and creation. On the other hand, within the climate camp, some actors believe that the destruction of jobs and – above all – high-impact jobs is the unfortunate price to pay if we are to prevent catastrophic climate change.

Hence, the problem raised by the just transition concept is how to simultaneously support the most ambitious ecological transition objectives in a way that is fair to workers and their communities, including those who are already suffering the climate change effects. This is crucial when we consider that the risk that inequalities rooted in the past – and possibly growing in the near future – may hamper any prospect of a successful transition strategy at the local, national and global levels. For instance, global value chain capitalism leads to a recomposition of the international division of labour (Baglioni *et al.*, 2019). It accentuates the socio-spatial specialisation of the economy and unequal ecological exchange (Hornborg, 2013).

In this context, the just transition concept may contribute to the emergence of a variety of approaches and strategies to implement effective, practical processes on the ground, attuned to the diversified socio-economic, technical, institutional and ecological context. According to the literature, there is no catch-all solution for a just transition, so that the variety of strategies may reflect the variety of situations in which the common goal of decarbonisation is pursued (Galgoczy, 2021). Finally, processes of just transition do not occur in isolation but are integrated in many ways with other transformation processes of work, whether of an economic, technological, institutional, organisational or market-induced nature. Therefore, it becomes crucial for research to distinguish and deepen the understanding of causal factors and their complex circularity, while developing hypotheses and policy recommendations capable of a more integrated vision of work and policy responses.

2.2 Sustainable welfare

The concept of sustainable welfare mainly arose from the hypothesis that reducing the welfare dependence on growth is necessary and that retrenchment measures may be critical for this purpose. However, it is not merely neoliberal retrenchment but combinations of recalibration, spending reductions and deeper transformative governance and policy changes towards post-growth socio-economic models. Indeed, scholars in this field dismiss the idea of a social policy based on unlimited service provision while emphasising that – beyond certain levels – economic growth brings neither well-being nor happiness. Hence, they look towards notions of sufficiency, efficiency and substitution (Schaffrin 2014, p. 7-8), as well as a welfare system designed to meet current and future fundamental human needs

(Gough, 2017; Max-Neef, 1991) within ecological limits and achievable within the framework of a steady-state economy (Daly, 2007).

The common goal of these approaches is to «re-embed production and consumption patterns into planetary limits through a decrease in material and energy throughputs, particularly in rich countries» (Hirvilammi and Koch, 2020). Several recent papers based on the sustainable welfare perspective therefore insist on the need for a fundamental reorientation of social and labour policies and the economic systems in which they are embedded (Koch and Buch-Hansen, 2020; Laurent, 2021). For this purpose, researchers identify some main strategies: (1) investing in preventive social policy (education, healthcare, urban planning); (2) promoting economic equality through minimum and maximum income caps, time-banking and shifting the tax base of welfare states from work towards capital, financial transactions as well as ecologically-damaging goods; (3) meeting citizens' basic needs through universal basic services and universal basic income as well as work-time reduction; and (4) developing green employment through sectoral shifts, sustainable workers' rights, and climate insurance. These strategies should also entail co-benefits such as improved gender equality, work-life balance, community building, and reductions in material footprint.

While advocating the importance of decoupling welfare from growth, scholars identify several dilemmas (e.g. labour and wages distribution, welfare funding and costs, structural, behavioural and political barriers and dependencies), and stress the need for more macroeconomic research (Corlet Walker *et al.*, 2021). For instance, Jackson (2002) emphasises that while beyond certain levels growth and consumption do not bring increases in well-being and happiness, unemployment and poverty certainly bring the opposite, and concerns in this regard convey resistance and opposition. Moreover, simple appeals to a more sober and healthier lifestyle are unlikely to be effective in the absence of viable, understandable and positively testable alternatives. Finally, retrenchment strategies can contribute to many types of “schismogenic” or “out-of-control” processes and hence unpredictable leaps in risk levels for the most fragile individuals and communities.

On the other hand, researchers in this area devote growing attention to the lessons that can be learned from the increasingly widespread initiatives of local self-organised economies that follow ideas of low-impact consumption and production, community mobilisation in renewable energy supply and alternative work contents and organisations (green jobs) as well as lifestyles. Scholars identify in these initiatives many possible positive examples highlighting the importance of the spatial-environmental dimension, the role of non-institutional resources and mobilisation, and the emergence of

possible paradigm shifts towards non-productivistic models of welfare and well-being (Azzati *et al.*, 2020).

Such lessons may hold particular importance to deal with a kind of contradiction generated by the ecological challenge in relation to welfare and labour issues. According to some literature contributions and ongoing projects (Bonetti in this special issue; Villa, 2023), the ecological transition – in unravelling its effects on the territory and the labour market – takes the form of an intermittent and adaptive process, rather than a real and sudden paradigm shift. In this scenario, the application of political strategies and regulations can easily lead to the emergence of complex trade-offs and conflicts between different actors, interests and expectations, as well as between change hypotheses, forms of path-dependencies, and specific technological lock-ins. In fact, the ecological crisis and possible transition present a profoundly diversified and unequal challenge that can hardly be achieved with a universalist and merely top-down approach. For this reason, the theme of work and welfare transformation must also necessarily be observed from a bottom-up perspective.

2.3 Climate justice

Climate justice has emerged in recent years as a concept for analysing the root causes of the climate crisis and as a radical demand of social movements. Beyond the specific declinations that it may take on in different territorial contexts, the idea of climate justice addresses the issues of climate responsibility and debt as well as the unequal distribution of privileges and risks related to climate change. At the basis of the concept is the claim that is not possible nor fair to evenly distribute the responsibility for climate disaster, which also implies that those who have benefited most from the activities that cause climate change should be the ones who principally bear the costs of the transition.

This assertion thus conveys the rejection of neo-Malthusian readings of environmental degradation, and underlines instead how the poorest and most disadvantaged populations are often those who pay the highest price for climate change, remaining largely excluded from decision-making processes regarding responses to the problem. Indeed, besides the issue of responsibility and distribution of costs and privileges – including intragenerational and intergenerational redistribution – the idea of climate justice also includes dimensions of non-distributive justice, such as the recognition and inclusion of alternative valuation and valorisation practices

to those of the capitalist market, as well as multiple ways of understanding the relationship between climate and society (Escobar, 2018). For the same reason, the climate justice movement is part of the global debate on the need for a decolonial and intersectional vision of emancipatory dynamics that includes both an intergenerational justice dimension and a global and historical vision of capitalist dynamics.²

As previously mentioned, the concept has been developing in parallel both within the academic debate and in the context of social movements, where it was first used with the anti-globalisation cycle of struggles, also referred to as the no-global movement. The very expression climate justice was indeed coined in 1999 in a text circulated on the eve of the Seattle uprising, where social movements aimed to emphasise «the ethical and political dimension of global warming», conceived of as a «not purely environmental or climatic issue».

In this context, the idea of climate justice acknowledges and expands on the claims made by the global movement for environmental justice (Martinez-Alier *et al.*, 2016), shifting this demand to the level of global climate governance and becoming the principal element of the re-politicisation of climate negotiations. One example is the creation in 2007 of the Climate Justice Now! network formed in Bali during the 14th Conference of the Parties, which played a central role in spreading the concept and making the climate change debate more explicitly political.

However, it should be emphasised how – at least up until the Copenhagen Cop 15 in 2009 – the global justice movements established a constitutively ambiguous relationship with this form of governance: on the one hand, the Kyoto Protocol (which was generally welcomed) was emphasised as a legally binding treaty with an anti-negationist function; while on the other hand, there was a certain inability to move away from the market-based approach of the Protocol. After the December 2015 mobilisations linked to Cop 21 in Paris, a fundamental turn happened at the December 2018 Cop 24 in Katowice, (Poland) where Greta Thunberg – speaking on behalf of Climate Justice Now! – explicitly delegitimised the entire negotiating framework. Subsequently, 2019 attested an escalation of environmental mobilisations, especially with the four oceanic global climate strikes (Pellizzoni *et al.*, 2022).

It is in this context that the attempt to articulate the denunciation of global inequality (particularly in its North-South aspect) at the heart of climate injustice emerges most strongly, with the question of social inequality within

² See e.g. Greta Thunberg at Glasgow Cop26: <https://talkeurope.org/2021/11/05/greta-thunberg-full-speech-glasgow-cop26/>, last access 07/02/2023.

the territories themselves. This shift has led to a greater connection between climate movements and social and labour struggles, particularly regarding the politics of ecological transition (Feltrin and Leonardi, 2022). One example is the yellow vest movement in France, which started as a protest by French commuter workers against rising fuel taxes as part of the French energy transition programme, and very quickly included the issue of climate justice at its core by promoting alliances with youth climate movements (Chédikian *et al.*, 2020). Emblematic in this sense is the slogan «end of the world, end of the month: same fight!» that stood out on 15th and 16th March 2019, when the 18th demonstration day of the yellow vests coincided with the global climate strike promoted by the Fridays for the Future movement initiated by the young activist Greta Thunberg.

It holds considerable interest that the climate justice movement – essentially comprising young and very young people from all countries of the globe, and inclusive of multiple cultural, economic and environmental diversities – has entered into a relationship with labour and social rights movements, including both the main trade unions and grassroots organisations and other spontaneous workers’ organisations. In particular, this conjuncture favours the emergence of the specificity of the crisis, its transversality in the social systems and the possible lessons emerging from diversified experiences, rooted in both the classical industrial relations systems as well as lesser known or just silenced contexts characterized by indigenous and territorially embedded culture, organisational patterns, lifestyles and work.

3. Operationalisation and empirical development: The contributions of the special issue

According to the research perspectives expressed so far, the aim of this special issue of *Sociologia del lavoro* was twofold. First, to explore the role of social and labour policies in the context of the crisis and ecological transition and against the risks of a further growth of inequalities. Second, to test the operability of the framework outlined in §2, namely to advance the conceptual understanding of labour and welfare transformations from a just transition, sustainable welfare and climate justice perspective, either as notions taken individually or in combined form. This implies a focus that is not limited to the critique of transition policies and the associated social risks, but includes innovative and proactive dynamics. An example are bottom-up “eco-social” policies or initiatives that combine environmental and social

justice goals, including work and welfare decarbonization processes and prefigurative experimentation extending beyond the growth paradigm.

All the articles we received point in this direction and are striking both for the heterogeneity of the cases and contexts analysed and for the approaches and research profiles, including a strong presence of young scholars, which testifies the emergence of an innovative field of debate and analysis in the sociology of work.

The special issue opens with a contribution by Dominique Méda reviewing the European debate on labour and ecological transition. Drawing in particular on the French example, Méda explores different transition scenarios related to work, showing the complexity of forecasting exercises and the different variables at play, as well as the need to imagine different welfare institutions than those that accompanied the great labour transitions at the end of the 1960s. Méda's article concludes with a proposal to assume the space of transition as a space for rethinking classical industrial relations inside and outside the labour space.

As the just transition demands a rethinking of work contents and organisation, this cannot be separated from a rethinking of the welfare state according to Méda, which is also the thesis of the article by Bela Galgóczi and Philippe Pochet. They investigate in detail what implications the prospect of an 'eco-social state' untied from the growth paradigm would entail. However, they notice, the issue of labour still appears as the most fragmented and least discussed – according to their analysis of this debate, including the discussion around the main European strategies so far – attesting a major challenge in the re-design of distinct public institutions, diverse from the classical Fordist ones, and capable of supporting a radical paradigm shift.

This is clearly evidenced by Marta Bonetti's article, which allows us to confront an empirical case. Through analysing the restructuring and reconversion programme for the transition to the electric sector by a multinational automotive company in the Tuscany region, Bonetti shows how a barrier – in terms of social justice and workers' protection – lies in the persistence of a classic pattern of industrial relations in which production objectives and the role of workers and the territory seem to be excluded from the debate involving government institutions, trade unions and experts. It is argued that it is precisely this dynamic that in turn hinders more transformative and structural approaches of just transition, preventing the specific situation from being addressed by more widely rethinking social protection structures.

The possibility of holding together labour and ecological crisis within a

structural rethinking of the forms of welfare and social justice is at the centre of the proposal put forward by Irina Aguiari and Federica Guardigli, who reinterpret the concept of ‘ecoprecarity.’ The latter is reframed in the double valence of an analytical concept aimed at showing how the precarisation of the environment is constitutive of labour and reproductive precariousness (and vice versa), and as a tool for discourse analysis to assess the relationship between the different dimensions of labour, reproduction, the environment and the way in which this relationship is made explicit or not in the claims allowing or preventing the construction of extended alliances, and to discursively link labour and ecological struggles at large. The context of the work struggles in Italy – of agricultural workers and Amazon warehouse workers – during the first period of the Covid-19 pandemic constitutes the empirical framework in which to make this proposal operational.

The idea of a double and deeply connected process of work and environment degradation is also at stake in the contribution by Andreas Vavvos and Stefanos Prassos. The article reflects about the dual conceptualisation – formulated by the Greek trade union Labour Solidarity – of the phase-out of lignite as precarisation of work and environmental degradation as a way for politicising the energy transition in the context of Western Macedonia. It shows how it was precisely the focus on the social and environmental implications of the transition that made it possible to envisage emancipatory alliances between the union and the environmentalist social movements most concerned with issues of climate justice.

It is at the convergence between environmentalists and workers' movements that the relationship between just transition and climate justice claims is opening up promising encounters and spaces for a radical rethinking of the organisation of production and the relationship between the environment and labour.

In this context, the idea of just transition is beginning to be re-appropriated from below, escaping the institutional framework of recent years to re-focus the debate on what Mazzocchi named ‘the right to know’ and ‘the right to act’ on the part of workers and their communities. This is particularly evident in the case of the GKN factory in Campi Bisenzio (Tuscany) discussed in the contribution by Massimiliano Andretta, Federica Guardigli and Paola Imperatore. The mobilisation of the Factory Collective has opened a transversal space for discussion in the Italian context, calling for a convergence of movements that aims to shift the ‘problem’ from the factory to the system as a whole, to re-embed the factory into society, problematising the one and the other, and reinforce democratic linkages with the territories in which the productive process is located.

These attempts – as Andretta, Guardigli and Imperatore show – are innovative but not barely new: they build on the historical experience that workers' movements have had of the ecological question, always presented as insurmountable blackmail, and from the historical (and conflictual) refusal of this blackmail. This is also partly the thesis that animates Emanuele Leonardi's article, which retraces the tragic case of the ILVA plant in Taranto. In recounting the various phases of the factory mobilisation and its relations with the environmentalist movements of Taranto, Leonardi focuses on what he indicates as a return to salience for 'workers' ecologies' in the public arena. It is argued that the possibility of theorising social and ecological issues as mutually constitutive – therefore neither necessarily in conflict nor subordinate to each other – is also built on the ashes of the failure of the green economy as an attempt to reconcile economic growth and environmental protection.

Completing the issue is Andrea Ghelfi's contribution, which sheds light on a scenario often overlooked in the sociology of labour (an important exception is Borghi and Zamponi, 2013), namely that of agrarian and peasant labour. The ecological transition has in fact affected the forms of agricultural work since the early-2000s, somehow in advance and as a laboratory of other forms of industrial conversion (Benegiamo, 2022). Agricultural movements have reacted to these dynamics, as Ghelfi argues in his analysis of the experience of Genuino Clandestino movement (Italy), especially through the experimentation and theorisation of labour practices that seem to take a step towards the exit from the impasse of modernity, with its constitutive separation between society and nature, human and non-human, towards more integrated forms of care, ecology and work.

4. Research perspectives for just transition: what is here and what is missing?

Taken as a whole, the collected articles indicate the presence of an emerging debate that intends to register the difficulty that the ecological and climate crises pose to the transition and transformation of labour and welfare. Therefore, testifying to the persuasiveness of the research theme proposed by the special issue, and outlining a path that mostly has yet to be explored and already reveals its relevance for the economic sociology of work, and organisation in the years to come. After all, the lesson of Polanyi (1977) has been only partially taken up by economic sociologists in recent decades,

often overlooking how his idea of substantive economy – i.e. the institutionalised interaction of human beings with their fellows and the natural environment - refers directly to the basic organisation of societies and the way in which the economy is integrated into the sphere of needs and social reproduction.

Engaging seriously with this assumption (see Spash, 2017) seems not only necessary but almost overdue given the current crisis scenarios.

In line with these considerations, the research studies collected in this special issue make an effort to extend beyond the classical approaches to the analysis of labour and welfare systems, with the aim of overcoming the impasses that a system centred on the paradigm of infinite growth poses. Although we are not yet faced with a systematic and well-defined field of investigation, the contributions strive to overcome the classical disciplinary and theoretical-methodological barriers, moving from different perspectives to discuss issues – such as sustainability, labour and environmental governance, welfare systems and industrial organisation – that tend to be addressed separately. In this sense, the assumption – in almost all the contributions – of a directly ‘eco-social’ or ‘more than human’ perspective in the understanding of contradictory adaptation processes between social systems and the natural environment, is deeply relevant (Villa, forthcoming). In particular, all contributions clearly show how environmental harmfulness and work organisation emerge and are defined as two inseparable factors, while at the same time the sustainability of social reproduction depends on and affects the environmental sustainability of the productive system.

In analysing these issues, the collected contributions also attest to the emergence of a series of questions and themes on which future research could further engage, primarily the problem of the changing role of welfare systems, their (in)actuality, their possible obsolescence and the need for transformation induced by the inclusion of environmental dimensions and ecological limits in the understanding of new social risks and needs. Yet, more empirical work is needed in the face of a conceptual frame of reference undergoing strong consolidation, particularly regarding the emergence of new forms of exclusion, linked to both the ecological crisis and transition policies, as well as the way in which these influence labour policies. Similarly, the analysis of labour transformations has held together macro scenario insights on both the production system and specific sectors, case studies at the *meso* level and reflections on innovative practices and experiences at the micro level. Nonetheless, here again there is a need to multiply investigations and empirical data on the changing forms of production and employment, inspired also by the remarkable development

that organisational studies have undergone around the theme of sustainability since the 1990s (e.g. Stead and Stead, 1994).

The actors' playgrounds, practices and roles, the concreteness of socio-political dynamics of transition, the emerging trade-offs, conflicts and related governance issues are instead at the heart of many of these articles and reveal some interesting results of a research effort trespassing customary analytical boundaries holding together the labour-environment conflict, industrial relations, social movements, productive, reproductive and ecological work, technological innovation and sustainability, social, environmental and climate justice. Indeed, with its inescapable systemic properties, the ecological question necessarily challenges analytical categories developed according to dualistic and positive paradigms typical of the very outlook of modernity. The socio-environmental conflicts that also run through the world of work are a very relevant indication of this, to which the authors of the papers have shown a specific ability to grasp the multiple nuances of their occurrence. Such research thus represents an opportunity to enrich the way in which we understand what just transition, sustainable well-being and climate justice can mean and translate on the ground.

Nonetheless, further effort is required, including regarding these latter aspects. For example, it is significant that even in the collected contributions, similarly to the more general debate, there is a strong inclination to focus on the social effects, costs and trade-offs of transition processes and policies. By contrast, the issue of the ecological crisis itself – as an important factor of high social risk (whether in the aspect of disaster or slow emergency), which also threatens the very feasibility of transition policies – remains almost completely neglected. It therefore seems difficult to discuss transition without a careful analysis of the crises and their complex interconnected loops of causation, for which a more general capacity for ecological understanding (Bateson, 1972) seems as necessary as it is not replaceable by a simple attempt to update the assumptions, methods and practices of past research. Indeed, this is a research agenda that seems to be all in flux.

These considerations are particularly relevant for the welfare-labour nexus, which still appears to be a weakness in this framework, e.g. in the study of combined labour and welfare regimes and their responsiveness to the effects of the ecological crisis and transition, both at the macro level and in local case studies. Regarding the changing labour market scenarios (sectors, employment, mismatches, qualifications, quality, work content and organisation) some analytical hypotheses (Pochet), scenarios and ongoing dynamics from a national case (Méda) as well as some sector-specific and/or local aspects emerge in most contributions (Bonetti; Aguiari and Guardigli;

Vavvos and Prassos; Andretta, Guardigli and Imperatore; Leonardi; Ghelfi). However, there is a need for both broad and in-depth analyses of these dynamics in the wake of the peculiarities of the ecological challenge, comparing the capacities of national regimes and local systems to respond and deploy different strategies of just transition (e.g. more or less tilted towards the status quo or transformative change; see Bonetti in this special issue). Finally, there is an even greater need to better explore the nexus between welfare and social movements to grasp participatory and bottom-up initiatives that bring out interesting integration capacities at the local level.

5. Six insights for future research

As a whole, while moving within a complicated landscape, the special issue shows a potentially highly fruitful domain as well as some challenges that further research may address, taking inspiration precisely from the works published here.

First, the issue of integrating different fields of investigation without reproducing the separation that in science – as well as in policy and the social realm – has long shaped systems of ideas, practices, policies and institutionalised processes.

Second, moving *out-of-the-box*, striving to construct frameworks that are able to outline possible paradigm shifts. Some courses undertaken precisely in the fields of social-ecological economics and political ecology but also complexity sciences, cybernetics and pragmatism (Centemeri, 2015; Ison, 2017) and ecological philosophy (Iofrida, 2019), as well as – of course – the sociology of the environment (Pellizzoni, 2015) may serve as examples.

Third, adopting interdisciplinary approaches and mixed methods, starting from the assumption that we cannot identify any criteria of sustainability without understanding together the economic-social, environmental and technological dimensions and the way in which they interact within variously activated institutional processes.

Fourth, embracing the centrality of labour in the ecological crisis and transition, including its productive, reproductive and ecological forms (Guardigli and Aguiari in this special issue), namely moving out of its exclusively commodified understanding (Gorz, 1999).

Fifth, assuming the dimension of uncertainty by being open to discuss the disputed political choices, the unpredictable dynamics of crisis, and the contested social and technological innovations and far from obvious implications in more or less prepared social contexts.

Sixth, dismissing a Eurocentric view, inadequate to address a global crisis that moves from the dynamics of geological-biological-climatic and astronomical planetary systems and interacts with – and develops across – global value chains and divisions of labour.

In short, the issue of labour in the ecological transition seems to require an effort to overcome obsolete ideas that belong to a previous era and are part of the same problem that needs to be addressed. The present special issue represents a step in this direction that hopefully will be followed by many more.

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