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Resolving the 'jobs-environment-dilemma'? The case for critiques of work in sustainability research

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ABSTRACT

Modern-day work is a central reason for unsustainability, and its transformation is therefore key for sustainability. A recurring manifestation of this issue is the 'jobs-environment-dilemma', a trade-off arising due to severe ecological impacts caused by work on the one hand, and the structural constitution of modern industrial society as work-centred and work-dependent on the other. We draw on interdisciplinary literature from environmental sociology and related fields to analyse both aspects: distinct factors of ecological problems associated with modern work, and various dimensions of structural dependence on work in modern society. We find that this conflict, and the fundamental role that work plays for unsustainability, are not sufficiently addressed and remain unresolved issues in sustainability research. To change this, we propose the conceptual approach of 'postwork' or critiques of work to open up a new perspective on the work-environment problem. We introduce postwork theory and discuss different ways in which ecological postwork perspectives and arguments can contribute to understanding and resolving entrenched sustainability issues. Finally, we briefly illustrate existing postwork politics and practices. While clearly contested, there is renewed momentum for social change towards a sustainable society which would benefit from addressing work and critiques of work.

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Introduction

Modern industrial society is unsustainable given its failure to dissociate itself from existential threats such as species mass extinction, climate change, and extreme inequality. Climate change mitigation in line with the Paris Agreement and remaining carbon budgets, for example, demands complete decarbonisation of industrial societies within approximately two decades without relying on highly speculative technologies (Anderson and Peters 2016; IPCC 2018). Yet, there are no legal frameworks or policies in place to realistically achieve this. Industrial societies' dependency on fossil energy and ever-increasing resource consumption continues almost unabated, especially as industrial development continues to expand globally (Haberl et al. 2009).

Accordingly, the social-ecological transformation of industrial societies requires major changes in how these societies and their economies work. 'How they work' is meant quite literally: In historical and cultural comparison, industrial society stands out as *work-centred* and *work-dependent*. Work, primarily as gainful employment based on productivist attitudes,¹ constitutes one of the principal social relations in modern society (Applebaum 1992). To fundamentally transform society's energy and material basis as well as its

systems of production and consumption will entail profound consequences for work in all social spheres.

This central importance of work for sustainability transformations regularly becomes apparent in what is often referred to as the 'jobs-environment-dilemma' (e.g., Hyde and Vachon 2019; Räthzel and Uzzell 2011). The argument that jobs must take precedence is usually put forward to justify environmental destruction and to prevent unsustainable sectors of the economy from being transformed. There is a broad consensus that employment levels need to be kept stable and new jobs must be created, regardless which ones (Gorz 1982; Paulsen 2017). In Austria, for example, a court decision prohibiting the construction of a third runway at Vienna airport due to environmental and climate protection was countered by a debate whether to introduce a commitment to economic growth and employment as national goals into federal constitutional law, on an equal legal standing to sustainability and environmental protection (Szigetvari 2017). Similarly, in Germany a government-level 'Commission on growth, structural change and employment' was created to debate how phasing out climate-damaging lignite production may be reconciled with economic growth and employment in the affected regions (BMW 2019).

This conflict is clearly present in politics and public debates, however, the issue of work and (un)sustainability is usually neglected in sustainability research, including in environmental sociology. It is sometimes discussed in relation to the United Nations' Sustainable Development Goals (e.g., SDG 8: Decent work and economic growth), or to 'green jobs' under the 'green economy' agenda. These approaches usually focus on examples of 'green' sectors and their growth potential, which are extrapolated to a general argument about the compatibility of sustainability, job creation and industrial growth economies. Moreover, the modern cultural phenomenon 'work' is usually assumed as a natural feature of society and as an end in itself. A more fundamental perspective on how work is organised and conceptualised within the structures of modern industrial society, and how this may relate to society's unsustainability, is mostly absent (Bengtsson et al. 2018; Bowen 2012; Paus 2018; UNEP 2008).

We therefore propose to address this gap by introducing a critical focus on work in environmental sociology and sustainability research more generally. Taking up the conflict between 'jobs and the environment', we first address the ecological problems associated with work and the societal dependence on work, in order to understand what constitutes the 'dilemma' between modern-day work and the environment. We then give an overview of approaches and debates in the scientific literature on work and sustainability, and discuss their deficits. As an alternative proposal to resolve these issues and to open new perspectives for sustainability, we then introduce the concept of 'post-work' and elaborate on its ecologically beneficial implications. Finally, we briefly discuss existing postwork politics and practices. As a conceptual contribution to environmental sociology, we draw on interdisciplinary environmental social science literature. We argue that modern-day work is a central reason for industrial society's unsustainability, and that its transformation is therefore key for sustainability. We also propose that the perspective of critiques of work or postwork offers a helpful approach to transform work and resolve entrenched sustainability issues.

An ecological critique of work

What is the problem with modern-day work from an environmental perspective? A number of quantitative studies have researched the correlation of working hours and environmental impacts in terms of ecological footprint, carbon footprint, greenhouse gas emissions, and energy consumption, both on micro/household and on macro/cross-national levels, and for both 'developed' and 'developing' countries (Fitzgerald, Jorgenson, and Clark 2015; Hayden and Shandra 2009; Knight, Rosa, and Schor 2013; Nässén and Larsson 2015; Rosnick and Weisbrot 2007). Based

on these findings, and going beyond them, we develop a qualitative classification of ecological impacts of work broadly (not working hours only), distinguishing four analytically distinct factors (Hoffmann 2017).

Fundamentally, all productive activity is based on material and energy throughputs within wider ecological conditions, which necessarily involves interference with the ecosphere. The appropriation and exploitation of non-human animals, land, soil, water, biomass, raw materials, the atmosphere and all other elements of the biosphere always to some extent causes pollution, degradation, and destruction. Thus, work is inherently both productive *and* destructive. However, this biophysical basis alone need not make work unsustainable, and it has not always been so (Krausmann 2017).

Contributing to its unsustainability is, firstly, the *Scale factor*: the greater the amount of work, the more 'inputs' are required and the more 'outputs' generated, which means more throughput of resources and energy, and resulting ecological impacts. In other words, the more work, the larger the size of the economy, the more demands on the biosphere (Hayden and Shandra 2009; Knight, Rosa, and Schor 2013). Obviously, there are qualitative differences between different types of work and their respective environmental impacts. Moreover, besides the evident and direct impacts, indirect impacts matter also. The tertiary/service sector is therefore not exempt from this reasoning (Hayden and Shandra 2009; Knight, Rosa, and Schor 2013), not only due to its own (often 'embodied') materiality and energy requirements, but also because it administrates and supports industrial production processes in global supply chains (Fitzgerald, Jorgenson, and Clark 2015; Haberl et al. 2009; Paech 2012).

Additionally, modern work is subject to certain integrally connected and mutually reinforcing conditions inherent in industrial economic structures, which aggravate ecological impacts by further increasing the *Scale factor*. These include the systematic *externalisation* of costs, and the use of *fossil fuels* as crucial energy basis, which combined with modern industrial *technology* enable continuously rising *labour productivity* independently of physical, spatial or temporal constraints (Malm 2013). Taken together, this leads to constantly spurred *economic growth* with a corresponding growth in material and energetic throughputs, and the creation of massive amounts of *waste*. The latter is not an adverse side-effect of modern work, but part of its purpose under the imperatives of growth, profitability, and constant innovation, as evident in phenomena such as planned obsolescence or the 'scrapping premium', serving to stimulate growth and demand, and hence, job creation (Gronemeyer 2012). These conditions and effects

tend to be neglected when 'green jobs' are promised to resolve the ecological crisis (Paus 2018), disregarding that the systematically and continuously advanced scale of work and production has grown far beyond sustainable limits (Haberl et al. 2009).

The second factor rendering modern-day work environmentally problematic is the *Time factor*. This factor concerns the ecological impacts of consumption relative to worktime, i.e. the time budgets that households or individuals take into account when making consumption decisions. Work-induced time constraints influence time-use and consumption patterns. Time scarcity encourages the consumption of time-saving products and services that usually are more energy-intensive and environmentally harmful. Conversely, ecofriendly activities are usually time-intensive and thus conflict with long working hours (Devetter and Rousseau 2011; Hayden and Shandra 2009; Knight, Rosa, and Schor 2013; Nässén and Larsson 2015). Despite complicated relationships and dependencies between time and behaviour, such as temporal rebound effects through reduced hours which may be difficult to counteract and yield overall ecologically adverse effects (UBA 2019), with more free time it is more likely and possible to reduce ecologically harmful demands for 'speed and convenience' (Schor 2005, 47; Druckman et al. 2012).

On a more fundamental level, the *Time factor* as the correlation of worktime and ecological impacts concerns the basic notions of modern-day work and time. Employed, abstract work presupposes an equally abstract, economic conception of 'industrial' time; linear, clocked and invariable (Thompson 1967). As a quantitatively valued cost factor ('time is money'), worktime is purposefully accelerated, subject to the precepts of discipline and efficiency, and oriented towards the short-term (Biesecker 1998; Rosa 2013). This logic of abstract mechanical time is essentially at odds with the diverse temporalities of the biosphere, embodied beings and processes of life, their variable time scales, paces and rhythms (Adam 2013; Biesecker 1998). The constantly expanding and accelerating 24/7 global production within the single, universalised and 'invariable time of clocks and money' (Adam 2013, 32) is effectively decoupled from ecological temporalities. It is so efficient and fast-paced that pollution and depletion are caused too rapidly for natural processes of absorption and regeneration, which may take decades, centuries or millennia.

A third, analytically distinct aspect contributing to modern-day work's unsustainability is the *Income factor*, concerning the relation between income and the ecological impacts that (final) consumption entails. These impacts are caused by energy consumption and waste generation through consumption, or indirectly through extraction, production and work processes that precede consumption and for which

demand is generated through consumption. On average, more hours of work generate more income, which usually translates into increased expenditure and consumption, inducing higher pressures on the environment (Knight, Rosa, and Schor 2013; Nässén and Larsson 2015). This link between income and consumption levels is well studied and established (Devetter and Rousseau 2011; EEA 2005). However, this factor not only pertains to the hyperconsumption of the wealthiest, but is a structural concern: modern societies sustain themselves mainly through market-based consumption financed by income-generating work. They are systematically locked into a 'work-and-spend' cycle (Schor 2005), a way of life which entails working 'standard package: full-day, every day and life-long' (Sanne 2005, 319), to earn ever-rising incomes to afford ever-increasing consumption (Gronemeyer 2012; Knight, Rosa, and Schor 2013). This close interdependence between work, money, consumption and growth is seldom addressed consistently in sustainability research.

Fourthly, the factor *Work-induced Mobility, Infrastructure, and Consumption* concerns ecological impacts that work induces structurally, independently of the labour process itself. *Work-induced Mobility* comprises phenomena such as commuter traffic or business travel; mobility that only exists because work necessitates it. Notably, it needs to be fast, i.e. energy-intensive, owing to business-people's busyness and employees' time constraints (Feenberg 1999). *Work-induced Infrastructure* includes built infrastructure such as office buildings, factories, warehouses and industrial estates, their water, power and heating/cooling supply, ancillary power plants, roads, tracks and parking sites, as well as technical and supportive service infrastructure. This infrastructure is built and maintained only for the purpose of allowing abstract work to 'take place', which is ecologically problematic due to its land, resource and energy consumption (Torisson 2017). *Work-induced Consumption* entails purchases of goods and services like work clothing, second cars, or daycare centres; consumption that would be needed considerably less if work was reduced. It also includes compensatory consumption to recompense for stressful, meaningless, alienating, or 'bullshit' work (Graeber 2018; Gronemeyer 2012). The additional employment generated for the provision of all these goods and services (Graeber 2018) may be described as *work-induced work*, with all the ecological impacts as described.

The societal dependence on work

If work is associated with environmental pressures in at least four different ways, why do we have to maintain it at constant or increased levels? We hold that in industrial society four distinct levels of structural and

cultural dependency on work may be discerned. These are to be understood as broad analytical categories which in reality comprise and cross individual and structural levels in various ways, and are all interdependent.

Personal dependence. A first aspect is individual or personal dependence on work: Work as regular, gainful employment constitutes one of the central social relations in modern 'work society' and is a central point of reference in people's lives. As a principal source of income, waged work fulfils the existential function of providing livelihoods and social security. It is constructed to secure basic social rights, social integration, recognition, status, and personal identity (Frayne 2015b; Weeks 2011). This is probably why 'social' is so often equated with 'work'.

State dependence. Secondly, dependence on work pertains to the modern welfare state: the revenues and economic growth generated through work contribute substantially to the financing of social security systems. Affording welfare is therefore a main argument for creating jobs. Wage labour is thus a dominating tool for redistribution; through wages, taxes on wages and on the consumption that production generates, almost all distribution takes place. Hence, what the job is, and what is being produced, is of secondary importance (Paulsen 2017). Work is moreover a convenient instrument of control that structures and disciplines society, and 'renders populations at once productive and governable' (Weeks 2011, 54; Gorz 1982; Lafargue 2014 [1883]). Specifically, the dominant neoliberal ideology, its condemnation of laziness and idealisation of 'hard-working people' has intensified the 'moral fortification of work'. Accordingly, the neoliberal 'workfare' reforms have focused on job creation and the relentless activation for the labour market, effectively 'enforcing work (...) as a key function of the state' (Frayne 2015b, 16).

Economic dependence. Thirdly, besides the economic imperative for individuals to 'earn a living' and pay off debt, modern economies are dependent on work in terms of an industrious labour force, long working hours for increasing economic output under the imperatives of capital accumulation, growth and competition, and rising incomes for increasing purchasing power and demand. Creating or preserving jobs constitutes the standard argument for economic growth. In turn, work as one basic factor of production creates growth. However, the relation between growth and employment is conditioned, amongst other factors, primarily by constantly pursued labour productivity: for employment to rise or stay stable, the economy must grow at a sufficiently high rate to exceed productivity gains, in order to offset job losses and avoid 'jobless growth'. Moreover, faltering expansion triggers a spiral of recession which not only affects economic stability but results in societal crises as a whole (Jackson 2009; Paech 2012). However, besides being

unsustainable and insatiable, growth is also increasingly unlikely to continue at the rates required for economic stability (Kallis et al. 2018; IMF 2015). The individual and structural economic dependence on work and economic growth therefore implies profound vulnerability as livelihoods and political stability are fatefully exposed to global competition and the capitalist imperative of capital accumulation, and constrained by 'systemically relevant' job and growth creating companies, industries and global (financial) markets (Gronemeyer 2012; Paech 2012).

Cultural dependence. A fourth aspect concerns cultural dependence: The 'work ethic' is the specific morality described by Max Weber (1992[1905]) as constitutive of modern industrial culture,² and determining for all its subjects as shared 'common senses' about how work is valued and understood. It means an ingrained moral compulsion to gainful work and time-saving, manifested in the common ideals of productivity, achievement and entrepreneurship, in the feeling of guilt when time is 'wasted', in personal identification with one's 'calling', in observations of busyness, even burnout as a 'badge of honour' (Paulsen 2014), and in descriptions of a culture that has lost the 'capacity to relax in the old, uninhibited ways' (Thompson 1967, 91). Even for those who do not share such attitudes towards work, in a work-centred culture it is *normal* to (seek) work. It is so commonsensical that it seems impractical to question it, and it continues to be normalised through socialisation and schooling. Consequently, people become limited in their imagination of alternatives, the prospect of losing one's job usually causes heartfelt fear (Standing 2011). For a work society that 'does no longer know of those other higher and more meaningful activities for the sake of which this freedom would deserve to be won', there can be nothing worse than the cessation of work (Hannah Arendt, cited in Gorz 1989, 7–8).

The wage relation based on the commodity labour is, in other words, an essential functional feature of the industrial-capitalist system, and the exaltation of work remains its social ethic. For modern industrial society work is 'both its chief means and its ultimate goal' (Gorz 1989, 13; Weber 1992 [1905]; Weeks 2011); it is centred and structurally dependent on work, despite work's environmentally adverse implications. This constellation constitutes the dilemma between work and the environment, and it is why we argue that work is absolutely central to present-day unsustainability and should accordingly be dealt with in sustainability research.

Conventional approaches in the work and environment debate

How is this dilemma usually being addressed? In the following we give an overview of current approaches in the scientific literature on work and sustainability,

with special regard to environmental sociology and closely related fields.

In sustainability research and interdisciplinary environmental social sciences, little attention is devoted to and little understanding has been achieved on the relation between work and the environment. In sociology specifically, environmental sociology and environmental studies usually treat work quite marginally, while work sociology and labour studies in turn still disregard environmental concerns (Barth, Jochum, and Littig 2016; Räthzel and Uzzell 2013). The few exceptions, empirical studies focusing on working hours and ecological impacts in general terms, have been introduced above (e.g., Knight, Rosa, and Schor 2013). The greater part of contemporary sustainability research does not even address work. It addresses individual consumption and ‘consumerism’, usually singled out as major drivers of environmental pressures under the implicit assumption that private consumption is directly environmentally harmful (e.g., Bengtsson et al. 2018; Devetter and Rousseau 2011; Gore 2015; Reisch et al. 2016).

However, it is mostly through work and production (including extraction) that direct ecological impacts are caused. Final consumption is, apart from energy and waste issues, rather indirectly ecologically problematic and in ecological terms of secondary importance relative to work/production/extraction. Furthermore, a considerable share of work and production is not for individual consumers’ final consumption, but for institutional or public procurement, or traded as intermediate products and services between firms (‘business-to-business’) (Djankov, Islam, and Saliola 2016; Sandhusen 2008). Final consumption by private consumers makes up a relatively small share of overall economic activity. A certain share of final consumption goods is moreover thrown away or purposefully destroyed *before* they could have been consumed (FAO 2019; FAZ 2018). These aspects exemplify that an isolated consumption approach is insufficient when dealing with systemic economic unsustainability, and that work, production, and consumption should be dealt with in conjunction (Lodziak 2002; Schor 2005). Interestingly, even sustainability research on *work* often tackles consumption alone, e.g. by focusing on the effects of employees’ time use and consumption choices in relation to working hours (Buhl and Acosta 2016; Devetter and Rousseau 2011; Frayne 2016), rather than looking at the *direct* ecological effects of work or worktime reduction (Frey 2019).

Apart from research focusing on final consumption, there are strands in sustainability research that integrate, or put more emphasis on, the production side. This is often covered under the concepts of ‘sustainable production’, ‘cleaner production’, or taken together in the formula ‘sustainable consumption and production’ (SCP). These research areas have

their origins in the UN context since the late 1980s as part of the global development agenda, most recently appearing in SDG 12 and the Paris Agreement. Partly overlapping, in sustainability-oriented economics a number of approaches focus on economic activity, production processes and firms more comprehensively. Examples of concepts and frameworks include corporate social responsibility, green supply chain management, industrial ecology, eco-efficiency, production standards, life cycle assessment, circular economy, cradle-to-cradle, product eco-design, eco-certification, green marketing, or sustainable procurement (Bengtsson et al. 2018; Petry et al. 2011; Reisch et al. 2016; Vergragt, Akenji, and Dewick 2014).

Cleaner production and better management are important, and the approaches subsumed under SCP partly make an effort to tackle the whole production chain and broader cultural, institutional and structural/systemic issues (Bengtsson et al. 2018; Petry et al. 2011; Vergragt, Akenji, and Dewick 2014). However, they are mostly still only concerned with technology, efficiency, growth, or the individual consumer, despite all the established evidence of shortcomings of such approaches. They also base their analyses on existing organisations/firms/industries, the fossil fuel dependent industrial-capitalist production process, or the idea that final consumption steers production (Bengtsson et al. 2018; Petry et al. 2011; Reisch et al. 2016). None of these approaches deal with the central role work plays in systems of production and consumption, in firms, labour markets and the workings of the economy as a whole.

This is also true for the ‘treadmill of production’ theory, which analyses how changed mechanisms and dynamics of capitalist growth in the second half of the 20th century led to accelerated environmental degradation (Gould, Pellow, and Schnaiberg 2004; Lewis 2019). Despite explicitly giving precedence to production over consumption and addressing the systemic role of organised labour, it still does not sufficiently consider the unsustainable organisation and conception of work itself.

Beyond consumption and production, there is a comparatively small number of areas within sustainability research that focus explicitly on work and environment or sustainability. However, problem definitions and proposed ways forward are contested.

Approaches under the notions of ‘sustainable work’, ‘decent work’, or ‘green jobs’, lately often as part of a ‘Green New Deal’, mostly follow the political agenda of continued economic growth, industrial development, and (labour) market expansion worldwide, under the guiding principles of development and the ‘green economy’ (ILO 2012, ILO 2015; UNDP 2015; UNEP 2008). These notions regard work and rising labour productivity as ends in themselves. They usually focus on ‘green jobs’ in certain sectors and their ‘green

growth' prospects, while taking the compatibility of sustainability, job creation, and technologically advanced industrial growth economies for granted (Bowen 2012).

Other (yet related) approaches are normatively motivated in a more subtle manner. Two cases in point are environmental labour studies and the debate on 'Just Transition'. Environmental labour studies focus on work and environment from the perspective of labour organisations and their relation to 'nature' also under the global green economy agenda, but partly with a critical stance towards the latter (e.g., Barca 2019; Barth, Jochum, and Littig 2016; Hyde and Vachon 2019; Lundström, Rätzzel, and Uzzell 2015; Rätzzel and Uzzell 2013; Rosemberg 2010; Stevis, Uzzell, and Rätzzel 2018). Through their common ideological grounding in Marxist theory – disregarding Marx' famous discussion of the 'realm of freedom' beyond labour and the necessity to shorten the working-day – work is taken for granted in the Marxist notion of work as an 'eternal natural necessity' and as something inherently good to be secured and expanded (an interpretation predominating in the Marxist and socialist tradition).³ Accordingly, it needs to be reconciled with ecological concerns, but not be questioned as a potential part of the problem. The debates on 'Just Transition' for example are selective about who deserves justice and on what grounds, and the priority lies clearly with the industries and workers immediately affected (Hyde and Vachon 2019). Contributions like these also underrate the scale of ecological challenges by focusing on certain 'green' sectors and too often disregarding, or disproportionately downplaying, the sectors that cannot be 'greened' and need to be reduced or discontinued entirely (ILO 2012).

This latter aspect is explicitly discussed as 'selective degrowth' (Latouche 2009) in the degrowth literature, where work figures prominently, usually focusing on questions or policies such as worktime reduction and work-sharing, job guarantee, basic income, the (under-)valuation of care, or alternative economic organisation. Drawing on feminist debates, arguments are also often made for extending the notion of work to include any human activity (e.g., Jackson 2009; Kallis et al. 2018). While these contributions mostly provide valuable elements to build on, a comprehensive focus on work is often lacking. They are largely inconsistent in their stance towards work, partly criticising, partly embracing it, or oscillating in between. Although, as Weeks (2011, 109) aptly puts it, work is the 'necessary center of social existence, moral duty, ontological essence, and time and energy' in modern societies, even approaches that step up to radically transform these societies usually do not address work in this dominating and culturally peculiar social role, its present unsustainable organisation, or any of its

associated institutions, e.g. the labour market or the modern work ethic.

Overall, the approaches covered in this brief review mostly contribute important questions and findings on partial aspects. However, they seldom consider work substantially and consistently, including how it is implicated in the problem of persistent unsustainability, and how work itself might have to be transformed.

What is postwork?

How can a 'postwork' approach contribute to resolving these issues? The notions *critique of work* (Frayne 2015a, 2015b) or *postwork* (Weeks 2011) have emerged in recent years in social science research and popular culture, building on a long intellectual tradition of (autonomist and neo-)Marxist, anarchist, and feminist theory (Seyferth 2019; Weeks 2011). The critique of work targets work in a fundamental sense, not only its conditions or exploitation. It is aimed at the centrality of work in modern 'work society' as a pivotal point for the provision of livelihoods through monetary income, the granting of social security, social inclusion, and personal identity construction, on which grounds unemployed persons and unpaid activities are excluded from recognition, welfare provision and trade union support. Moreover, the crucial role of waged work in the functioning of the welfare state and the modern industrialised economy is part of this critique (Chamberlain 2018; Frayne 2015b; Paulsen 2017). Although commonly taken as naturally given, this kind of societal order and its institutions such as the wage relation, labour markets, unemployment, or abstract time are historically and culturally exceptional modes of human coexistence (Applebaum 1992; Graeber 2018; Gorz 1989; Polanyi 2001 [1944]; Thompson 1967). This critique of the structures and social relations of work society is accompanied by the critique of its cultural foundation, the work ethic; an ideological commitment to work and productivism as ends in themselves, moral obligations, and as intrinsically good, regardless of what is done and at what cost (Gorz 1982; Weber 1992 [1905]; Weeks 2001).

Postwork, however, is not only a critical stance. Criticising work and work society, *aware of their historical contingency*, implies the potential for an emancipatory transformation of industrial society. The focus is thereby not necessarily on abolishing work *tout-court*, but rather on pointing out and questioning its relentless centrality and asking what a more desirable, free and sustainable society might look like; a society in which work is no longer the pivotal point of social organisation and ideological orientation, including all questions and debates around this objective (Chamberlain 2018; Frayne 2015a; Weeks 2011).

As a relatively new and dynamically developing approach, postwork is, despite similar political claims, not uniform in its reasoning. Some, drawing on the classical 'end-of-work' argument (Frayne 2016), assume an imminent technology-induced massive rise in unemployment. This is welcomed as an opportunity to reduce and ultimately abolish work to liberate humankind (Srnicek and Williams 2015). Others emphasise the remarkable fact that throughout the past two centuries technological development has *not* challenged the centrality of work in modern lives, despite the prospect that technological change would allow for much shorter working hours (e.g., Keynes 1930). This has not materialised due to the requirements of a work-centred, work-dependent society. On the contrary, work has become more central to modern societies. These deeper structural and cultural aspects and dependencies seem to remain unaffected by technological trends (Paulsen 2017; Weeks 2011).

The ecological case for postwork

The perspective of postwork/critiques of work may enrich sustainability debates in many ways; here, our focus is again on ecological concerns. First, postwork offers a much needed *change in focus* in sustainability debates, away from narrow critiques of individual consumption and the overemphasis on 'green jobs', towards understanding work as one central cause of sustained societal unsustainability. Postwork directs the focus towards crucial overlooked issues, e.g. the ways in which work is ecologically harmful, or which problems arise due to the social and cultural significance of modern-day work, including existential dependencies on it. Postwork seeks to re-politicise work, recognising that its conception and societal organisation are social constructs and therefore political, and must accordingly be open to debate (Weeks 2011). This *opens conceptual space* and enables open-minded debates about the meaning, value and purpose of work: what kind of work is, for individuals, society and the biosphere as a whole, meaningful, pointless, or outright harmful (Graeber 2018)?

Such debates and enhanced understanding about the means and ends of work, and the range of problems associated with it, would be important in several regards. In ecological regard it facilitates the ecologically necessary, substantial *reduction* of work, production and consumption (Frey 2019; Haberl et al. 2009). Reducing work/working hours is one of the key premises of postwork, aiming at de-centring and denormalising work, and releasing time, energy and creativity for purposes other than work (Coote 2013). From an ecological perspective, reducing the amount of work would reduce the dependency on a commodity-intensive mode of living, and allow space for more sustainable practices (Frayne 2016). Reducing work

would also help mitigate all other work-induced environmental pressures described above, especially the 'Scale factor' (Knight, Rosa, and Schor 2013), i.e. the amount of resources and energy consumed, and waste, including emissions, created through work. A postwork approach facilitates debate on the politics of ecological work reduction which entails difficult questions: for example, which industries and fields of employment are to be phased out? Which fields will need to be favoured and upon what grounds? Which kinds of work in which sectors are socially important and should therefore be organised differently, especially when altering the energy basis of work due to climate change mitigation which implies decentralised, locally specific, intermittent and less concentrated energy sources (Malm 2013)? These questions are decisive for future (un-)sustainability, and yet serious attempts at a solution are presently forestalled by the unquestioned sanctity that work, 'jobs' or 'full employment' enjoy (Frayne 2015b).

Postwork is also conducive to rethinking the *organisation* of work. There are plausible arguments in favour of new institutions of democratic control over the economy, i.e. economic democracy (Johanisova and Wolf 2012). This is urgent and necessary to distribute a *very* tight remaining carbon budget fairly and wisely (IPCC 2018), to keep economic power in check, and to gain public sovereignty over fundamental economic decisions that are pivotal for (un-)sustainable trajectories (Gould, Pellow, and Schnaiberg 2004). An obstacle to this is one institution in particular which is rarely under close scrutiny: the labour market, a social construct linked to the advent of modern work in form of the commodity of labour (Applebaum 1992). It is an undemocratic mechanism, usually characterised by high levels of unfreedom and coercion (Anderson 2017; Graeber 2018; Paulsen 2015) that allocates waged work in a competitive mode as an artificially scarce, 'fictitious' commodity (Polanyi 2001 [1944]).⁴ It does so according to availability of money and motives of gain on the part of employers, and appears therefore inappropriate for distributing labour according to sustainability criteria and related societal needs. As long as unsustainable and/or unnecessary jobs are profitable and/or (well-)paid, they will continue to exist (Gorz 1989), just as 'green jobs' must follow these same criteria in order to be created. An ecological postwork perspective allows to question this on ecological grounds, and it links to debates on different modes of organising socially necessary work, production and provisioning in a de-commodified, democratic and sustainable mode.

Finally, postwork is helpful for ecological reasons because it criticises the cultural glorification of 'hard work', merit and productivism, and the moral assumption that laziness and inaction are intrinsically bad, regardless the circumstances. Postwork is about

a different *mindset* which problematises prevailing productivist attitudes and allows the idea that being lazy or unproductive can be something inherently valuable. Idleness is conducive to an ecological agenda as nothing is evidently more carbon-neutral and environment-sparing than being absolutely unproductive. As time-use studies indicate, leisure, recreation and socialising have very low ecological impacts, with rest and sleep having virtually none (Druckman et al. 2012). Apart from humans, the biosphere also needs idle time for regeneration. In this sense, laziness or ‘ecological leisure’, ideally sleep, can be regarded as supremely ecofriendly states of being that would help mitigate ecological pressures. Moreover, as postwork traces which changes in attitudes towards time, efficiency and laziness have brought modern work culture and modern time regimes into being in the first place and have dominated ever since (Thompson 1967; Weber 1992 [1905]), it provides crucial knowledge for understanding and potentially changing this historically peculiar construction. It can thereby take inspiration from longstanding traditions throughout human history, where leisure has usually been a high social ideal and regarded as vital for realising genuine freedom and quality of life (Applebaum 1992; Gorz 1989).

Conclusions: postwork politics and practices

We argued that modern-day work is a central cause for unsustainability, and should therefore be transformed to advance towards sustainability. We have contributed to this field of research, firstly, by developing a systematisation of the ecological harms associated with work – comprising the factors Scale, Time, Income, and Work-induced Mobility, Infrastructure, and Consumption – taking those studies one step further which investigate the ecological impacts of working hours quantitatively. One of the analytical advantages of this approach is that it avoids the mystification of work through indirect measures of economic activity (such as per capita GDP), as in the numerous analyses of the conflict between sustainability and economic growth in general. Our second substantial contribution consists in combining these ecological impacts of work with an analysis of the various structural dependencies on work in modern society, which spells out clearly what the recurring jobs-environment-dilemma actually implies, and why it is so difficult to overcome. While this dilemma is often vaguely referred to, this has been the first more detailed analysis of the different dimensions that essentially constitute it. Reviewing the literature in environmental sociology and sustainability research more generally, we also found the work-environment-dilemma and the role of work itself are not sufficiently addressed and remain major unresolved issues.

We proposed the field would benefit from taking up the long intellectual tradition of problematising modern-day work, through the approach of postwork or critiques of work. While the described problems of unsustainability and entrenched dependencies cannot easily be resolved, we discussed how postwork arguments can contribute to pointing out and understanding them, and to opening up new perspectives to advance sustainability debates. A third contribution is therefore to have introduced the concept of postwork/critiques of work into sustainability research and the work-environment debate, and to have conducted an initial analysis of the ways in which postwork may be helpful for tackling ecological problems. Besides being ecologically beneficial, it may also serve emancipatory purposes to ‘raise broader questions about the place of work in our lives and spark the imagination of a life no longer so subordinate to it’ (Weeks 2011, 33). In order to inspire such ‘postwork imagination’ (Weeks 2011, 35, 110) and show that postwork ideas are not as detached from reality as they may sound, in this last section we briefly outline examples of existing postwork politics and practices.

The most obvious example is the reduction of working hours during the 19th and 20th centuries. These reforms were essential to the early labour movement, and the notion that increasing productivity entails shorter working hours has never been nearly as ‘radical’ as today (Paulsen 2017). As concerns about climate change are rising, there is also renewed awareness about the ecological benefits of worktime reduction, besides a whole range of other social and economic advantages (Coote 2013; Frey 2019).

Worktime reduction is usually taken up positively in public debate. Carlsson (2015, 184) sees a ‘growing minority of people’ who engage in practices other than waged work to support themselves and make meaningful contributions to society. Frayne (2015b) describes the practical refusal of work by average people who wish to live more independently of the treadmill of work. Across society, the disaffection with work is no marginal phenomenon (Graeber 2018; Cederström and Fleming 2012; Paulsen 2014, 2015; Weeks 2011); many start to realise the ‘dissonance between the mythical sanctity of work on the one hand, and the troubling realities of people’s actual experiences on the other’ (Frayne 2015b, 228). Public debates are therefore increasingly receptive to issues such as industries’ responsibility for climate change, coercive ‘workfare’ policies, meaningless ‘bullshit jobs’, or ‘work-life-balance’, shorter hours, overwork and burnout; topics ‘that will not go away’ (Coote 2013, xix) and question the organisation of work society more fundamentally.⁵

The debate about an unconditional basic income (UBI) will also remain. UBI would break the existential

dependency of livelihoods on paid work and serve as a new kind of social contract to entitle people to social security regardless of paid economic activity. In addition to countless models in theory, examples of UBI schemes exist in practice, either currently implemented or planned as ‘experiments’ (Srnicek and Williams 2015).

The critique and refusal of work also takes place both within the sphere of wage labour and outside it. Within, the notions of absenteeism, tardiness, shirking, theft, or sabotage (Pouget 1913 [1898]; Seyferth 2019) have a long tradition, dating back to early struggles against work and industrialisation (Thompson 1967), and common until today (Paulsen 2014). The idea of such deliberate ‘workplace resistance’ is that the ability to resist meaningless work and the internalised norms of work society, and be idle and useless while at work, can be recognised and successfully practised (Campagna 2013; Scott 2012). Similarly, there is a growing interest in productive practices, social relations, and the commons outside the sphere of wage labour and market relations, for example in community-supported agriculture. This initiates ways of organising work and the economy to satisfy material needs otherwise than by means of commodity consumption (Chamberlain 2018; Helfrich and Bollier 2015).

For such modes of organising productive social relations in more varied ways, inspiration could be drawn from the forms of ‘work’ that are prevalent in the global South in the so-called informal sector and in non-industrial crafts and peasantry, neither of which resemble the cultural phenomenon of modern-day work with its origins in the colonial North (Comaroff and Comaroff 1987; Thompson 1967). This, however, contradicts the global development paradigm, under which industrialisation, ‘economic upgrading’, global (labour) market integration and ‘structural transformation’ are pursued. Modern work, especially industrial factory jobs and ideally in cities, is supposed to help ‘the poor’ to escape their misery (Banerjee and Duflo 2012; UNDP 2015). Many of these other forms of livelihood provisioning and associated ways of life are thus disregarded, denigrated or destroyed as underdeveloped, backward, poor, and lazy (Thompson 1967), and drawn into the formal system of waged work as cheap labour in capitalist markets and global supply chains – ‘improved living conditions’ as measured in formal pecuniary income (Rosling 2018; Comaroff and Comaroff 1987). There are indications that these transformations create structural poverty, highly vulnerable jobs and an imposed dependence on wage labour (while few viable wage labour structures exist) (Hickel 2017; Srnicek and Williams 2015). There is also clear evidence of numerous struggles against capitalist development and for traditional livelihood protection and environmental justice (Anguelovski 2015). These are aspects where a postwork orientation is relevant

beyond the industrialised societies of the global North, as it puts a focus on the modern phenomenon ‘work’ itself and the conditions that led to its predominance, as it questions the common narrative that ‘jobs’ are an end in themselves and justify all kinds of problematic development, and as it allows to ask which alternative, postcolonial critiques and conceptualisations of ‘work’ exist and should be preserved.

To conclude, we clearly find traces of postwork organisation and politics in the present. However, these ideas are contested; they concern the roots of modern culture, society and industrial-capitalist economies. Waged work continues to be normalised, alternatives beyond niches appear quite impractical for generalisation. Powerful economic interests, including trade unions, seek to perpetuate the status-quo (Lundström, Rätzl, and Uzzell 2015). Job creation and (global) labour market integration (regardless of what kind) are central policy goals of all political parties, and presently popular progressive debates on a Green New Deal tend to exhibit a rather productivist stance.

There is one particular aspect that appears hopeful: the present socio-economic system is unsustainable in the literal sense that it is physically impossible to be sustained in the long run. It was Weber (1992[1905]) who predicted that the powerful cosmos of the modern economic order will be determining with overwhelming force *until the last bit of fossil fuel is burnt* – and exactly this needs to happen soon to avert catastrophic climate change.⁶ This is the battlefield of sustainability, and lately there has been renewed urgency and momentum for more profound social change, where it might be realised that a different societal trajectory beyond work and productivism for their own sake is more sustainable and desirable for the future.

Notes

1. More precisely, work is defined in its modern meaning as an abstract economic activity based on abstract time, mainly commodified as gainful employment within the structures and institutions of modern, industrial society. Underpinning this social organisation of work is the modern work ethic which regards productive activity as an end in itself, a moral obligation, and of outstanding importance to human development. Despite all differences in concrete social forms, it is these elements that are characteristic of industrial societies, and as such are established in countries of the global South as they ‘industrialise’ (Applebaum 1992; Gorz 1989; Thompson 1967; Weber 1992 [1905]).
2. Note the close linguistic relatedness between industry and work: ‘industry’ etymologically first denoted diligence, zeal, busyness, activity, only later coming to mean the entirety of manufacture, production, trade and business. In modern English, industry/industrious

still carry the older semantics besides meaning 'work-related' in general.

3. Marx himself was ambivalent and partly contradictory in his stance towards work, and there are very different, often ambiguous and contradictory positions within the broad field of Marxist interpretation, too. Weeks (2011, 81ff.) distinguishes different conflicting strands within the Marxist tradition regarding their position towards the nature, value, and role of work; 'socialist modernisation' (concerned with the liberation of work from exploitation and the unhindered development of the productive forces) and 'socialist humanism' (concerned with realising work's dignity in non-alienated form as an essential part of human nature) as strands of Marxism with a clear commitment to productivism and capitalist work values, as opposed to the antiproductivist autonomist Marxist tradition with its notion of the 'refusal of work'. Beyond autonomist Marxism, other neo-Marxists formulating critiques of work were, for example, André Gorz, Herbert Marcuse, or E.P. Thompson.
4. Artificial scarcity and competition imply unemployment, which in work society means social exclusion, loss of recognition, and existential risks for the persons affected.
5. Additionally, as experienced during the Corona-induced economic shutdown, extensive worktime reduction in socially non-essential sectors and discussions about the varying societal value of different kinds of work ('care or cars'), are within the realm of the possible.
6. Similar arguments about the fundamental dependence of capitalism and industrial growth on fossil energy are made by Malm (2013) and Haberl et al. (2009).

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