Change put to work

A degrowth perspective on unsustainable work, postwork alternatives and politics

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Abstract

Unsustainability is persistent despite growing awareness that the industrial way of life, its modes of production and consumption need to be transformed. In academic sustainability contexts, however, attention is rarely paid to how industrial societies basically operate and how our everyday life is implicated beyond the usual suspect: consumerism. I argue that it is work, as central social relation of modern societies and in its structural link to production and consumption, that is inherently unsustainable and accordingly a key issue for an effective and desirable socio-ecological transformation.

To analyse the connections between modern-day work and unsustainability, to explore potential alternatives, and to understand the politics of overcoming present unsustainable trajectories with respect to work, I ask the following consecutive research questions: In which ways is work socially and ecologically unsustainable?, How can work be conceptualised and organised differently?, and How is a transformation to postwork alternatives made possible or impeded? Within the conceptual framework of degrowth, I answer these questions through a qualitative, theoretical literature analysis.

I find that abstract work as employment in labour markets and the social order it implies is, historically seen, a modern invention based on specific morals and interests. Present societal concerns arise with regard to precarity, health, care, and economic growth. Ecological concerns are found regarding four distinct factors: scale, time, income, and work-induced indirect effects. Alternatives are traced by discussing 'green jobs' as logically opposed to the critique and refusal of work, and by outlining a different 'postwork' organisation and conception of productive activity, consistent with socio-ecological sustainability objectives. Finally I debate postwork politics, focussing on conditions of and constraints to change: public debate, an ecological basic income, and postwork infrastructure, versus the norms of a work-centred culture and the resistance of central actors, including trade unions.

I conclude that the indispensable profound societal change towards sustainability cannot succeed without a transformation of work and work society. Sustainable postwork alternatives exist, are meaningful and can be genuinely desirable, but are clearly contested and presently unlikely. Given more political momentum and support, they may come with generational change. However, general sustainability constraints are closely intertwined; crucial is therefore a common desire for change and collective self-limitation.

My contribution to sustainability science consists in introducing the discussion of work into the field where it has so far been neglected, and in demonstrating how sustainability science would gain from opening up to approaches critical of growth and development, thus repoliticising and reinvigorating sustainability.

Keywords: unsustainability, critique of work, postwork alternatives, politics, degrowth, sustainability science

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Acronyms

CSA	community-supported agriculture
EROI	energy return on investment
GDP	gross domestic product
GHG	greenhouse gas
POP	persistent organic pollutant
RQ	research question
UBI	unconditional basic income

On the Western shore of Luossajaure (…), there was a little Sami encampment. (…) [Swedish settlers in the area] were building the railway from Gällivare, and near Kirunavara a railway station was constructed, hotels for travellers and lots of houses for all the workers and engineers who were going to live here since ore mining had commenced well. (…) It had not taken the Sami long to get their home ready. They had neither blown anything up nor laid any bricks (…). Nor had they timbered and hewed for many days to raise solid wooden walls, had troubles with erecting and tiling roofs, neither with boarding and fitting windows, nor with doors and locks. They only had needed to drive tent poles firmly into the ground and put up canvas over them in order to have their home practically ready. (…)
The colonists on the Eastern side of the lake who worked with enormous zeal to get their houses ready before the severe winter was to begin, were surprised by the Sami, who had roamed around up here in the far North for many, many hundred years without considering the need of better protection against the cold and storms than thin tent walls. And the Sami were surprised by the colonists who bothered to work so much and so hard, when it does not require more than some reindeer and a tent for being able to live. (…) [The Swedish girl] Åsa thought they lived an awful life, and spoke her mind. "You don't know what you're talking about," said [Sami boy] Aslak. "Stay with us for just one week, and you will realise that we are the happiest people in the whole world!"

Selma Lagerlöf: *Nils Holgerssons underbara resa genom Sverige,* 1906

1 Introduction

Selma Lagerlöf aptly described how two worlds, the traditional and the industrial, collided. In the traditional way of life of the Indigenous Sami, not more than the necessary tasks were accomplished to secure livelihoods and live happy lives. Ores in the mountains were left idle, there was no need for them. In their logic, industrial development based on exploitation and hard work was irrational. In the new, entirely different world shaped by colonisation and industrialisation, endless work and endless industry were considered necessary to satisfy endless needs. The whole world was seen as resource and all resources were to be made available to secure work, growth and global expansion (Brand & Wissen, 2013). Likewise, there was no understanding for the old rationality, and until the present day, this has not fundamentally changed. While the Sami way of life has been sustainable for centuries, modern industrial society is clearly unsustainable: We are on the verge of a deep failure of reason and culture that the sixth mass extinction of life on Earth stands for (Plumwood, 2002), extending to the prerequisites for future life (including the human species) in time frames of any meaning to human comprehension.

The majority of current sustainability endeavours contributes little to changing this prospect. Early accounts of overshoot of planetary limits and possible socio-ecological collapse (Meadows et al., 1972) have largely been ignored, ever more studies on our times' countless 'crises' are issued only to promote the same flawed techno-managerial solutions (IPCC, 2014; EEA, 2015; TEEB, 2010; UNDP, 2015b; Steffen et al., 2015) while the harm that a certain minority of humanity is causing is almost proudly referred to as the Anthropocene (Baskin, 2015). Late-industrial societies thus seem to build

on a tacit, depoliticised consensus of unsustainability, further normalising and sustaining what is known to be unsustainable (Blühdorn, 2009; Barry, 2012; Swyngedouw, 2013; Leggewie & Welzer, 2009).

A serious attempt at a solution should therefore take into account how industrial societies are basically constituted and how their core drivers of unsustainability operate. I argue that these are inherent in industrialism itself: the specific industrial socio-ecological regime that, compared to earlier stages of human civilisation, requires vast and ever rising amounts of (fossil) energy and matter (Haberl et al., 2009) as all efforts are put in its further expansion (not least to 'under-developed' parts of the world) under conditions of exponential growth which implies multiplying pressures in ever-shorter time frames. The devastation of Earth and the harm to all, including human life thus are the results of a certain mode of production and way of life (Gorz, 2009). Consequently, it is this specific industrial mode of living and producing that should find critical attention, and more concretely, it is *work* as such that is an integral part of the problem, not only in its structural link to production and consumption, but also as one of the principal social relations in modern industrial or work societies[1] around which a powerful ideology has evolved (Weeks, 2011).

Work, however, rarely finds consideration in sustainability science. In public discourse on sustainability, by contrast, attention seems to gradually shift towards this issue. Specifically in academic approaches being critical of growth, work figures prominently as a key issue in finding a sustainable way of life, in asking what we produce and how we thereby relate to the natural world, how we spend a considerable amount of our lifetimes, and why this might be one of the greatest impediments for us to count among "the happiest people in the world".

1.1 Research questions and structure of argument

I argue—and it is the thesis of this study—that *modern-day work is inherently unsustainable and accordingly for the indispensable socio-ecological transformation of our societies to be reasonable, effective, and desirable, major changes in the sphere of work, in its conception and organisation need to be agreed upon*. My argument to consolidate and elaborate this claim (and thus also this paper's basic structure) consists of three parts, each of which is led by a distinct but consecutive research question:

1 Note the close linguistic relatedness between industry and work: 'industry' etymologically first denoted diligence, sedulity, zeal, busyness(!), activity, only later coming to mean the entirety of manufacture/production, systematised work, trade, business (Kluge, 2002). In modern English 'industry'/ 'industrial'/ 'industrious' still carry the older semantics besides meaning 'work-related' in general (e.g. industrial action/ dispute, industrial injury).

- *RQ 1. In which ways is work socially and ecologically unsustainable?*

I will first give a historically informed account of work: how our modern understanding of work, our work ethic, and our relation to time have evolved historically until we arrived at a state that sociology terms 'work society', where for the first time in human history abstract work is the predominant social relationship. I will then inquire into the present problems with work, addressing both societal and ecological concerns. As work is usually exclusively debated in social or economic terms, I will focus on ecological aspects and ascertain forms and causes of destructive, harmful, unsustainable work.

- *RQ 2. How can work be conceptualised and organised differently?*

Having analysed the problems related to work, I will discuss the alternatives and concepts as they are being debated in the wider degrowth and postgrowth literature, and assess common ground for what I will call postwork alternatives. By drawing on concepts from the context of critiques of growth I intend to go beyond 'green economy' ideas of 'green jobs' for 'green growth' which do not offer genuine solutions but perpetuate unsustainability.

- *RQ 3. How is a transformation to postwork alternatives made possible or impeded?*

After having located problems and alternatives, I will identify and analyse concrete actors, possibilities, prerequisites, and barriers, in short: conditions and constraints for a transformation, summarised as postwork politics.[2] Important to note is that I am not concerned with the execution of precast ideas, but acknowledging that the future is and should be inherently open, I will explore the scope of potentialities under conditions of diverging norms and interests in order to politicise and reveal lines of conflict between visions of sustainable work and business-as-usual.

1.2 Contribution to sustainability science

Researching work as a socio-ecological phenomenon including its potential for future social change and thus applying both critical and problem-solving thought (Jerneck et al., 2011), my study is grounded in sustainability science which is concerned with human-environment interactions, explicitly normative and action-oriented, transdisciplinary, as well as sensitive to time and urgency (Kates, 2011; Clark & Dickson, 2006; Ziegler & Ott, 2011). However, tensions might arise from sustainability science' traditional bias towards the 'paradigm' of sustainable development, lacking systematic reflection or incorporation of more critical understandings of sustainability, despite their long tradition

2 Term adapted from Kathie Weeks (2011).

in the history of sustainability discourses (Paech, 2006; Hornborg, 2003). As a ‘science of sustainable development’ it rarely questions growth, development, anthropocentrism, and other problematic definitions, conceptualisations, and research preoccupations (Clark & Dickson, 2006; Kates et al., 2001; Bettencourt & Kaur, 2011). Thus sustainability science appears most fruitful at its margins, where it is genuinely critical, emancipatory, and reflects different notions of sustainability.[3]

Therefore, complementary to addressing the research questions as outlined, my aim with this thesis is threefold: Firstly, I will introduce the discussion of work to sustainability science where it has been strangely absent, secondly, analyse the connections between modern-day work and (un)sustainability, and thirdly, understand the politics of overcoming present unsustainable trajectories with regard to work. I will thus both enhance the scope of sustainability science and advance degrowth theories, and further demonstrate how sustainability science would gain from opening up to approaches critical of growth and development.[4]

2 Methodology and theoretical approach

2.1 Considerations on philosophy of science

I position my study within the tradition of Critical Realism, the consolidation of ontological realism and epistemological interpretivism. It holds that there is a reality existing independently of human cognition, discerned in different strata, while also embracing the constructivist tenet that social reality is socially constructed. Yet, the human-social world is no less real than biophysical reality; both human societies and the ecosphere are intervowen, interdependent, and in principle indivisible, just as humans are embedded and embodied beings (Sayer, 2000; Benton & Craib, 2010).[5]

Socially constructed as a part of human reality, science is a fallible social practice, scientific knowledge a socio-historical product. Primarily, science is concerned with uncovering layers and deceptive ‘surface’ appearances to discover deeper, underlying mechanisms, structures, their generative causes and determining conditions, including shared meanings and interpretations. Adopting these perspectives, I see my approach in accordance with the critical realist method described by Sayer (2000) as intensive research: Assuming that ‘work’ is only a surface appearance, I seek to identify the historical preconditions, key relationships, forces and forgotten meanings that lie

3 Some have pointed out that sustainability science would be well-advised to be continuously self-reflective in order to avoid dogmatism (Ziegler & Ott, 2011), especially as it is such a young field of studies.

4 Asara et al. (2015) also point to the benefit for sustainability science to embrace degrowth, combined with an even sharper critique of sustainability science than formulated above.

5 This view contradicts Roy Bhaskar's position of ontologically distinct ‘natural’ and ‘social’ realities (Benton & Craib, 2010). An investigation on this issue is beyond the scope of this study.

beneath, as well as the future constraining and enabling contexts, mechanisms, causal powers, and shared meanings that need to change for the actual/empirical appearance 'work' to change.

Moreover in line with my study is the proposition that critical realist scientific knowledge should be made use of for emancipatory, critical purposes: Assuming social structures are reproduced, but may also be transformed through shared meanings and activities, Bhaskarian 'explanatory critique' seeks to understand phenomena deeply and thus generate arguments for a transformation of certain structures and social relations by showing that they cause avoidable harm. It is accordingly a critical realist tradition to demonstrate that different, preferable forms of social organisation are possible. To achieve this, it is both necessary and valid to build rational arguments on moral claims and value judgements about the causes of phenomena; there is no clear division between facts and values, science ought to be explicitly normative, disclosing its standpoint from which explanation and critique are formulated (Sayer, 2000; Benton & Craib, 2010). I fully embrace this demand for science to be emancipatory and seek to justify and illustrate desirable social change. Furthermore I do not claim to be neutral towards my subject matter nor will I refrain from normative, judgemental assertions, but explicitly disclose my values and standpoints when appropriate.

2.2 Methods

To address my research questions, I will conduct a *qualitative, exploratory, theoretical* analysis. An exploratory approach is best suited as my questions (specifically RQ1 and RQ3) are new and literally unexplored (in the way I comprehensively frame them within a degrowth approach to sustainability science), as well as intrinsically open-ended. Overall I intend to gain and generate new insights, orientation, and concepts (or develop existing ones further), and yield ideas on future research issues (Hesse-Biber & Leavy, 2011).

Due to the the study's essentially theoretical, conceptual nature, I will mainly conduct desk work, drawing on academic literature predominantly from the fields of (critical) industrial and environmental sociology, ecological economics, as well as degrowth/critiques of growth. Where necessary, this will be supplemented by grey literature and, corresponding to the new character of my subject matter, also popular sources if appropriate.

While this procedure is common for all parts, my approach will differ slightly in each section: My approach to RQ1 is historic-descriptive as well as informed by both qualitative and quantitative research, resulting in a well-grounded, systematised overview. RQ2 will be addressed by a solely qualitative discussion of degrowth- and related literature on work. Answers to the last question (RQ3) will be constructed based on previous findings and insights from the literature.

2.3 Theoretical frame

As I have indicated previously, I see my thesis rooted in those ‘subversive’ yet constructive areas of sustainability science that allow for applying *sustainable degrowth* as overarching conceptual frame. Degrowth is a relatively young but flourishing field of research, a theoretical approach as well as a political proposal or project, concerned with both critique and political change towards a fundamental transformation of society (Muraca, 2013; Schneider, Kallis, & Martínez-Alier, 2010). As a conceptual frame it encompasses diverse demands and strands of thought (Kallis, 2011); it is unorthodox and open, yet not arbitrary but internally consistent (Demaria et al., 2013) and altogether distinct from other contemporary critiques of the globalised, industrial-capitalist economy and its cultural foundations (Latouche, 2010).[6]

Degrowth holds as one foundational proposition that a significant physical reduction of the global economy's size is needed, i.e. that the grossly unsustainable levels of energy and material throughput concomitant with excessive production and consumption in industrial societies must be downscaled drastically (Trainer, 2012; Schneider et al., 2010) which would obviously entail a decline in GDP. Degrowth is opposed to ideas of ‘green’ or ‘sustainable’ growth (including sustainable development, ecological modernisation and logically related concepts) as it argues that decoupling economic expansion from ecological destruction is unrealistic if not impossible (due to the rebound effect and other correlations) on the scale required to respect human-social and environmental limits and justice (Jackson, 2009; Paech, 2012; Kallis, Demaria, & D'Alisa, 2015).

However, degrowth does not signify an economic recession, it is not ‘negative growth’ under the same growth-dictating conditions (Kallis et al., 2015). Its twin basic proposition to economic downscaling is the fundamental critique of the ideology of growth, calling for “the abandonment of a religion: the religion of the economy, growth, progress and development” (Latouche, 2010).[7] These modern myths are seen as deeply rooted in the mental structures of industrial societies and their subjects, a mindset of infinite expansion and ascent, self-referential and ultimately empty (Welzer, 2011). Closely related is the critique of development as originating in the ideological assumptions, discourses and practices of colonialism, still regarding the industrialised North as universal development model, justifying ecological destruction, furthering the uniformisation of cultures, and creating destitution among the colonised (Escobar, 2015a). Therefore, degrowth stands for a

6 Degrowth in the tradition of *décroissance*, further conceptualised by the Romanic (French, Spanish, Italian) ‘schools’ or research communities, constitutes the most coherent framework, while the German and Anglo-American postgrowth discourses (Paech, Welzer, Seidl/Zahrnt, Rosa et al., Jackson, Barry, Schor, etc.) are comparably less consistent; however, all these approaches share certain core ideas. Thus, I will focus on degrowth and incorporate consistent aspects of the wider postgrowth debates, embracing their pluralism.

7 In French, *décroissance* captures this double meaning, denoting both literally ‘degrowth’ and a pun with the words for ‘faith’ or ‘to believe’ (*croyance; croire*) (Latouche, 2010).

genuinely different, sustainable and just society, based on a 'decolonised' social imaginary,[8] a different logic and different values liberated from growth and economism (Muraca, 2013; Fournier, 2008; Kallis, 2011). It is not *one* alternative, "but a matrix of alternatives which re-opens a space for creativity by raising the heavy blanket of economic totalitarianism" (Latouche, 2010).

From the proposition that growth is unsustainable it does not follow, however, that degrowth is necessarily sustainable. Quite the opposite: modern growth societies rest on the principle of dynamic stabilisation; they are systematically geared towards escalation to reproduce their status quo and therefore unstable unless they expand and accelerate. Yet, even continued growth increasingly becomes socially dysfunctional, additionally to its ecologically destructive potential (Dörre, Lessenich, & Rosa, 2010; Schmelzer & Passadakis, 2011). *Sustainable* de-growth in the sense of a "prosperous way down" (Odum & Odum, 2006) thus implies that basic societal institutions have to be redesigned to make them independent from growth and its implications (Jackson, 2009; Kallis, 2011).

Based on these core premises, a variety of concrete concepts and themes has developed, drawing on the rich intellectual legacy of degrowth.[9] For my purposes, I will focus on three such themes, which I perceive as central to both degrowth and my subject matter.

(Re-)Politicisation. Degrowth has been put forward as 'missile word', to provoke debates and challenge the contemporary depoliticised consensus of the growth economy, the allegedly inevitable technocratic-managerial 'market-compliant' determinism 'without any alternatives'. Against this post-political or post-democratic condition, degrowth demands the repoliticisation of questions of principal importance to social coexistence; first and foremost to repoliticise the economy (and de-economise politics), environmentalism and sustainability (which, again, implies to oppose sustainable development as purposefully apolitical consensus that has aggravated unsustainability). By reclaiming the political, degrowth addresses the citizen instead of the consumer. It fosters critique, confronts the existing order, takes sides, and formulates alternative visions of a desirable future society, both through debate and new practices (Swyngedouw, 2015; Fournier, 2008; Asara et al., 2015; Martínez-Alier et al., 2010).

Autonomy. Following Castoriadis, autonomy is the ability of a society to determine, question and change its laws, norms and institutions, and notably, to be explicitly aware of this 'self-institution'. Autonomy is thus literally understood as self-regulation or self-limitation, both in human-social and ecological terms, whereby limits are a matter of sovereign social choice and not of absolute

8 The social imaginary is, following Cornelius Castoriadis, the foundation of a society's deeply held beliefs and established values which give meaning to practices and institutions (Muraca, 2013).

9 Key degrowth thinkers include André Gorz, Ivan Illich, Cornelius Castoriadis, Nicholas Georgescu-Roegen, Ernst Friedrich Schumacher, Karl Polanyi, or Jacques Ellul, besides other scholars in the fields of (mainly) social and political ecology, ecological economics, philosophy, anthropology, post-development and post-colonial thought, radical environmentalism and notably also activist groups, since the 1970s and occasionally even earlier (Martínez-Alier et al., 2010; Demaria et al., 2013; Muraca, 2013; Kallis & March, 2015).

external constraint. Hence, autonomy is the epitome of genuine democracy and freedom,[10] through more direct, political and participatory forms of democracy, and through the liberation from the dependence on heteronomous institutions, e.g. markets, wage labour, or centralised, highly complex technologies. Conducive to this reading of autonomy (and central for most de-/postgrowth conceptions) are limited spatial scales, i.e. the reinstitution of vital economic and political relations and activities on scales where they are more immediately tangible, which implies a different approach to technology and the reappropriation of essential practical skills and tools (emphasised by Illich and Gorz). Heteronomous institutions, technological or other systems are thus no longer distant and abstract, but directly political and democratically controllable (Asara, Profumi, & Kallis, 2013; Cattaneo et al., 2012; Deriu, 2015a; Muraca, 2013; Kallis et al., 2015; Fournier, 2008).

Conviviality. Closer to its literal than its popular meaning, conviviality signifies sustainable and meaningful ways of 'living together' and 'being-in-common' endorsing different social ideals and values beyond the dominant culture of productivism, consumerism, competition and time-thrift based on economic and instrumental rationality, commodified relations, and a narrow conception of the human being as atomised and solely utility-maximising (Muraca, 2013; Martínez-Alier et al., 2010; Demaria et al., 2013). Such a change in orientation requires to reconsider the (ancient philosophical) question of *eudaimonia* or 'the good life', which is eroded in industrial societies whose only goal, perpetual growth in so-called wealth, becomes meaningless and detrimental when pursued beyond a certain level as end in itself. As alternative guiding principle, conviviality promises enhanced quality, meaning, and enjoyment of life through convivial values of caring, sharing, reciprocity, mutual consideration, fairness, diversity, and joyfulness, which enable richer, more sincere, trustful and fulfilling relationships (Deriu, 2015b; Demaria et al., 2013), not only between human beings but also in relation to non-human beings and the biosphere as a whole.[11] Put more generally, following Illich (1973) conviviality denotes "individual freedom realized in personal interdependence". The ideas of autonomy and conviviality thus complement each other (Deriu, 2015a).

Altogether, degrowth appears highly plausible for the study and pursuit of a socio-ecological transformation based on an understanding of sustainability that goes beyond the basic assumptions of sustainable development (and its more recent versions of ecological modernisation or 'green' capitalism), which, I argue, are inappropriate or even detrimental to the cause of overcoming the severe concerns of unsustainability. For a concise discussion of a different approach to sustainability in conjunction with ecocentrism and degrowth, see appendix.

10 Important to stress is that autonomous freedom is understood in a social, collective, and even ecological sense as *inter*dependence, not as (liberal/negative) individual, independent freedom (Deriu, 2015a).

11 An interesting and relatively recent example for this kind of thought is the 'Convivialist Manifesto, Declaration of Interdependence', signed by renowned scholars, translated in many languages, and object of broader academic and popular reception (http://www.lesconvivialistes.org/).

3 The unsustainability of modern-day work

3.1 Historical perspectives

In order to assess the unsustainability of present-day work, it is first necessary to establish a historically informed understanding of work, to define and analytically dissect it as object of inquiry according to its *conception* and its *organisation*.

Work as a purposeful activity that everyone should most of their adult life diligently engage in to 'earn a living' and (ideally) develop their human potential, which we today assume as 'natural' and universal, is historically a relatively recent phenomenon, a product of the European societal development since early modernity and specifically of the 19th century (Conze, 1972; Lipset, 1990). Earlier in European history since antiquity, more often than not (physical) labour was regarded with contempt and attributed to bondage and slavery, while at times in specific cultures or milieus certain kinds of work were valued positively; likewise the meanings of 'work' and 'labour' have long been ambiguous.[12] Whether positively or negatively connoted: work in pre-modern times has always been understood as duty, service, or means, never as an end in itself (Conze, 1972). The great majority of 'traditional' work was land- and household-based, embedded in a great variety of social relations regarding the degree of (un)freedom, entitlement to (common) land and resources, modes of production, or ways of life (Osterhammel, 2009). Work was not anything abstract but an integral part of life and definite in its aim, mainly concerned with the production for use value. Irregular, intermittent or seasonal in character, annually overall shorter hours have been worked and a high number of holidays celebrated. With few notable exceptions, work was unintensive and sparing of labour-power with relatively little surplus production; low productivity and underproduction were generally not perceived as problems (Sahlins, 1972; Thompson, 1967).

All this began to change substantially in early modernity with a new *conception* of work. Weber (1992 [1905]) famously traced its advent to the 16th and 17th century, when certain Protestant denominations introduced a doctrine according to which only those could be certain of their predestination who were committed to a methodical, austere, and disciplined conduct of life through restless professional work and incessant systematic self-control. Leisure and enjoyment became morally reprehensible, idleness and waste of time the ultimate sin; persistent industriousness and work were taught to be the sole purpose of life. Earning of money and goods through (profitable) work was explicitly favourable, surplus was to be reinvested or retained, not wasted. This initially religiously justified work ethic has over time become secularised and its 'spirit' adopted in general

12 Which pertains to the respective words in all European (ancient and modern) languages (Conze, 1972).

morality, especially in nascent bourgeois morals which already tended to economic-rational, utilitarian, entrepreneurial conduct and the esteem of bourgeois virtues such as achievement, diligence, thrift and punctuality (Weber, 1992; Conze, 1972). During the 18th century this new appreciation of work and industriousness became more widespread. Work was positively associated with technology, assigned the functional value of upward mobility,[13] and favourably judged by enlightenment and especially liberal philosophy. Emergent economic theorising conceptualised and economised work as an isolated factor of production and the principal source of 'national wealth' through economic growth, with 'free labour' as commodity, priced, waged, and regulated by free contracts in labour markets, which effectively meant the institution of the economic, modern concept of work (Conze, 1972). Considering additional factors, the general societal and economic dynamisation throughout the 18th century has later been termed industri*ous* revolution (preceding the industr*ial* revolution) as a fundamental conversion of attitudes towards work (Osterhammel, 2009). By the 19th century, a new cult around work had evolved; work was exalted and glorified as an abstract goal, virtue, and end in itself, as that which essentially constitutes 'man' and sets him apart from nonhuman animals and less industrious, 'inferior' nations, his ultimate purpose (Conze, 1972; Engels, 1970 [1876]).

This change in conception of work was paralleled by a change in relation to time. Traditionally, the perception of time was related to concrete work-situations embedded in their 'natural' rhythms;[14] time was task-oriented, working habits and working days/weeks/years intrinsically irregular. From the 14th century on, changes in perception and measurement of time appeared, clocks started to spread (Thompson, 1967). It has, again, mainly been attributed to new Protestant ethics in the 16th and 17th century that time was increasingly perceived as something abstract, scarce and immensely valuable as people were faced with probation through incessant work and self-control. Accordingly, time became subject to discipline and thrift, which later culminated in Benjamin Franklin's famous precept that 'time is money' and every minute one 'has' must be 'saved' or 'spent' dutifully. This attitude, as re-presented by Protestant moralists and mercantilists in the 17th and 18th century for reasons of piety or workforce acquisition (or both), had its historic adversary in traditionalism.[15] Time-discipline, an understanding of work as self-purpose, and the resulting order thus were tenaciously opposed and only enforced in far-reaching struggles through a process of 'education'[16] and an assault on old habits,

13 Which points to the social and political significance 'new work' had for the break with traditional estates-based society and the emergence of a new social order, in which bourgeois meritocracy was aspired to while the ruling estates were seen as unproductive and unprofitable (which in conjunction with questions of property was prominently formulated during the French revolution). Also through the new social roles of labourer and entrepreneur incipient stages of a new social stratification (at least theoretically) appeared (Conze, 1972).

14 Compare the identical words for time and weather in many languages; e.g., temps, tempo, tiempo, idő, время, vrijeme (Geißler, 2014). Similarly, note the words for specific natural phenomena; e.g. tide, tidvatten, Gezeiten.

15 Traditionalism according to Weber (1992) stands for an attitude according to which the human being by nature does not aspire to earn a lot of money and always want more, but rather to live as accustomed a life of leisure, ease and pleasure, and earn or work just as much as necessary to be able to do so. Judged from this point of view, the idea of abstract time, of money and work as ends in themselves is utterly irrational.

16 Of great importance in this regard became schools (or workhouses for orphans and poor children) to teach and inculcate

holidays, popular customs, and (crucially) means of subsistence,[17] until people had accepted certain premises and would fight “not against time, but about it” (Thompson, 1967; Weber, 1992). Both internalisation and external pressures reached further intensity in the 18th century when time-measurement in emerging manufactories served to effectively harness and control labour, and changes in manufacturing technology to machinery conditioned a certain pace of work and the synchronisation of labour. The 19th century then brought large-scale machine-powered industry in factories which involved a new quality of mechanical, standardised production, internal division of labour, and high degrees of regularity, systematisation and discipline. Workers used to task-oriented peasant or craft work, indifferent to hours or even days, were now subjected to abstract, measured time in industrial operations calculated down to minutes and seconds, geared towards maximal efficiency (Thompson, 1967; Osterhammel, 2009). Rising economic competition made effective labour exploitation and productivity all-important, but first the steam engine, as it could be activated and speeded at will, made unprecedented intensification and productivity of labour possible. In fact, the steam engine was mainly adopted to gain sovereign control over labour in the new factory system, as coal-fired machinery allowed for continuous production independent of space and time (Malm, 2013).[18] Within the general process of acceleration in modernity, this intentional technological acceleration of production constitutes a central factor (Rosa, 2013). Eventually, the industrial time-regime was not only imposed in factories and workshops, but spilled over to social and domestic life as factory work demanded greater accuracy in time-routines in society, new habits were internalised, and the long tradition of preachings of time-thrift and industriousness continued. With the 19th century, literally a ‘new time’ began as the logic of industrial, abstract time became valid globally through the international standardisation of time measurement, congenial to the ubiquity of (now precise and portable) timepieces and their users' obedience to mechanical time, telling the new order and rhythms of industrial life (Osterhammel, 2009; Thompson, 1967).

The modern conversion of the conceptions of work and time thus entailed far-reaching changes in the *organisation* of work. Enhanced industriousness, industrial temporality, disciplining of labour, commercial and technological momentum during the 18th century had already led to an early phase of industrialisation, to growth in productivity and production, competitive markets, consump-

discipline, industry, thrift, order, early rising, regularity, punctuality, and competition, to foster work discipline, habituate children to constant employment, to “labour and fatigue”, and to render them “more tractable and obedient, and less quarrelsome and revengeful” (Thompson, 1967; Conze, 1972).

17 Throughout history, earning one's means of subsistence was the strongest if not sole reason for working employed and disciplined – or not. Diligent wage workers were recruited first by coerced expropriation and enclosures of such means, collectively held and managed common goods, rights and lands, then by holding down wages, in European as well as colonial history until the present day (Conze, 1972; Thompson, 1967; Weber, 1992; Gorz, 1989).

18 Water as the hitherto main energy source increasingly became a legacy of the old temporality as it was tied to certain places and natural fluctuations, while steam-powered factories could be placed within populous areas where most workforce *“trained to industrious habits”* could be procured, especially given the issues with insubordinate, organised workers and fierce labour conflicts. Moreover, with British factory legislation of 1833 and 1847, profitability of production was only warranted if power supply could be regulated at will (Malm, 2013).

tion, and biosphere exploitation, when the actual 'industrial revolution' from the late 18th through the 19th century brought about a changed mode of production on an increasingly greater scale under the emerging industrial-capitalist system.[19] Work was now above all distinguished by its organising in large-scale mechanised factories geared to mass production for mass consumption in anonymous mass markets, which, as described, demanded radically altered working habits, entailed pervasive changes for society at large, and provoked serious social conflicts. Moreover, the new industrial system could be sustained by a proportion of unskilled workers unprecedented in the history of labour, which had always rested on the primacy of skilled labour, the intelligent efforts of producers over their tools and equipment, but now transitioned to the supremacy of the machine and the normalisation of technological innovation (Sahlins, 1972; Osterhammel, 2009). Another genuine novelty was the change in energy regime towards fossil fuels with the above-mentioned implications, which further activated a process of self-sustaining growth, and necessitated a continually rising supply with resources, provided by domestic mines and lands, but in particular of colonial origin already before resource imperialism peaked. Most notably with regard to work, industrialisation combined with certain institutional reforms gave birth to the wage relation between employer and employee as mass phenomenon and new social relation, completely detached from prevalent traditional social relationships, especially the household working association (Osterhammel, 2009).[20] By 1900, regular, gainful employment in the labour market as free[21] wage labour had, from once being an occupation of 'last resort' for the lowest, unfree classes, become the social norm and central societal relation, and 'unemployment' accordingly for the first time a core political issue (Conze, 1972; Osterhammel, 2009).[22]

The conversion of work thus "was a revolution, a subversion of the way of life, the values, the social relations and relation to Nature, the *invention* in the full sense of the word of something which had never existed before" (Gorz, 1989). Today, this is largely forgotten as the conceptions of industrial, abstract work and time have entirely been normalised and internalised. The central social relation (besides the family) in industrial/work society now was an instrumental relation, and abstract,

19 Since mid-19th century, the new economic order has been called 'capitalism' ('industrialisation' and 'industrial revolution' had been in use already somewhat earlier). Closely tied to industry during the 19th century, capitalism was not independently theorised before the early 20th century; then, however, its beginnings have been traced far into the past (Osterhammel, 2009).

20 Here again, the transition to abstract time becomes obvious, for as soon as labour is employed, i.e. purchased as specified in time to produce maximal output regardless of any circumstances, the shift from task-orientation and towards the reduction of time to monetary value is accomplished (Malm, 2013; Thompson, 1967).

21 The ideal of 'free' labour notwithstanding, simultaneously forms of (uninterrupted or novel) atrocious exploitation, oppression, and violence were practised, both domestically and in colonial contexts, leading to new hierarchies, alienation, pauperisation and fierce opposition. This "continuum of coercion" was to some degree mitigated through state reforms establishing the early welfare state in late 19th century (Osterhammel, 2009).

22 Most of the points raised here were also valid for agriculture, which for some time continued to be the largest sector but was also increasingly industrialised, commercialised, and explicitly no longer concerned with subsistence production but itself an industry producing for exchange value. Likewise, the emancipation of the serfs primarily meant the adaptation of rural society to the new socio-economic conditions (Osterhammel, 2009).

glorified, paid work the “necessary center of social existence, moral duty, ontological essence, and time and energy” (Weeks, 2011). As such, modern-day work has little in common with those activities that have always been necessary to reproduce life and livelihoods; in this form it is a cultural exception, unprecedented in history, and based on a genuinely new rationality.[23]

3.2 Societal concerns

I will now turn to RQ 1, and ask in which ways work, historically formed as *abstract-exalted gainful employment in industrial-capitalist labour markets*, is socially and ecologically unsustainable. As critical debates on work usually exclusively focus on societal problems, I will not discuss them in detail but rather concisely outline the most serious concerns.

Precarity. Long-term ‘structural’ unemployment has long-since become an ordinary phenomenon, although in work societies this implies exclusion, loss of recognition, and existential risks for the persons affected. Those who do have jobs increasingly work in precarious conditions involving temporary, marginal, subcontracted, or non-contracted employment, considerably lower or irregular incomes and higher poverty risks, as well as permanent competition and performance tests. Up to a quarter of the working population in industrialised countries (in Southern Europe even a majority of the population), globally over 46% and in some parts of the world over 70% are impacted by precarious or ‘vulnerable’ employment and living conditions; accordingly, working poverty is globally widespread and increasing, also in Europe (ILO, 2016; Dörre, 2014a, 2014b). Associated phenomena are extreme social inequality, forms of modern slavery, and a “refeudalisation” of society (Neckel, 2013; Dörre, 2014b; Osterhammel, 2009). Specifically the latter entails that the merit principle, promising social security and opportunities for advancement through hard work, has significantly eroded, with structural constraints impeding changes regardless the individual effort. Nonetheless the work ethic is still widely adhered to, suggesting social ‘normality’ can be reached through strict discipline and commitment. This individualisation of responsibility is further advanced through the activating and coercive measures by state authorities (Dörre, 2014a, 2014b; Weeks, 2011).

Health. The connection between the demands of modern-day working life and the dramatic increase in mental exhaustion and psychological disorders, most often anxiety disorders, burnout,

23 For what Protestant mercantilists and moralists lamented over traditional working people in the 18th and 19th century (their lack of discipline, commitment and entrepreneurial spirit, instead their laziness, unpunctuality, inefficiency, frequent celebrations and absences, low standards, and unresponsiveness to economic incentives), is today still being said by theorists and practitioners of economic growth and development about people in non-industrialised Southern countries or cultures which ‘lack’ industrial temporality and work ethic and rather adhere to forms of ‘traditional’ rationality. “The evidence is plentiful, and, by the method of contrast, it reminds us how far we have become habituated to different disciplines” and a different rationality (Thompson, 1967; Weber, 1992; Sahlins, 1972; Osterhammel, 2009; Latouche, 2001).

depression, and psychosomatic ailments, across all sectors, occupational and age groups is regarded as scientifically ascertained (Graefe, 2014; Fergen, 2014). Major causes include persistent pressure to perform under all-encompassing competition; expectations of self-optimisation and self-marketing of the employee as both commodity and entrepreneurial subject; flexibilisation, dissolution of limits and ceaselessness of work; lack of recognition and loss of meaning; increasing work and time compression, constantly high velocity and further acceleration; precarity, fear of job loss and social decline; as well as unemployment (Graefe, 2014; Jürgens, 2014; Voß & Pongratz, 1998; Blom et al., 2015; Janlert, 2012). The risen pressures correspond with rising intake of psychotropic medication, not only for curative treatment, but also as 'smart drugs' for cognitive and mood enhancement to be able to cope, function, and assert oneself at work, often implying prescription drug abuse with unknown health risks (Maier & Schaub, 2015; Academy of Medical Sciences et al., 2012). Another unhealthy tendency is that today's working environments appear to favour and foster psychopathy, and that certain traits of this severe personality disorder are increasingly described as virtues and celebrated for their usefulness for professional 'success' and career advancement (Boddy, 2015; Dutton & McNab, 2014).[24] More existentially, characterisations of modern employees as 'dead men working' (Cederström & Fleming, 2012), 'living dead' (Bolchover, 2005), or (as mere things, ventures, human capital) emotionally dead and therefore dangerous (Fromm, 1992 [1961]) are worrisome in themselves, but additionally no longer to be understood metaphorically when links between both work- and unemployment-induced premature deaths and specifically suicides are found (Cederström & Fleming, 2012; Janlert, 2012; Rosa, 2012). Additional to these pervasive, work-induced social pathologies and instances of psychological ill-health, work under conditions of climate change (will) again cause greater somatic health problems (Holmér & Albin, 2012).

Care and gender. As work in its historical industrial-capitalist form is only marketised employment, care, i.e. activities that care for and reproduce life in interpersonal relationships which are often not marketised and unpaid (e.g. child and eldercare, healthcare, midwifery, housework, etc.), is not recognised as valuable activity but rendered private, 'invisible' and structurally externalised, despite its fundamental importance for a functioning society. Thus, modern work is characterised by the separation of 'productive' and 'reproductive' spheres, between the market-based, waged production of goods and services, and those non-marketised, unpaid, unrecognised activities that form the vital basis for this form of work and society as a whole. This is not only historically unprecedented and problematic in itself but additionally marked by a discriminatory, gendered division of labour and economic division of the sexes as care is predominantly the domain

24 Corporate or workplace psychopaths tend to be inclined to entrepreneurship and are accordingly more often found in the corporate sector in senior (i.e. influential) positions than in the general population. They stand out through their short-termist, asocial, unethical, or illegal behaviour and greatly destructive potential for society including work-force exploitation and bullying, instrumental violence, or environmental damage (Boddy, 2015).

of women (Biesecker & Hofmeister, 2013; Biesecker & Winterfeld, 2000; Illich, 1980). If on the other hand care relations are commodified and marketised as 'personal services' and gainful employment (which was equally inconceivable before the industrial wage system), it is usually poorly remunerated and recognised, and exposed to critical working conditions and general precarisation. An increasingly greater concern also is care migration, as women are bought from abroad to provide care work, with serious consequences for their own families and societies ('care-drain'). Moreover, marketised care is subject to economic rationality and standards of time and cost efficiency, while its traditional devaluation is even purposefully used to further reduce costs and invoke discipline. All of this conflicts with the genuine logic and temporality of care that even within employment structures is task-oriented, relational, and open-ended, and cannot be ever more standardised, accelerated, and optimised (Bryson 2013; Dörre, 2014b, 2014a; Biesecker & Hofmeister, 2013; Thompson, 1967).

Employment and growth. With modern work societies being entirely based on consumptive systems of external supply, work as principal source of income fulfils the existential function of providing livelihoods and social security (Paech, 2012; Biesecker & Winterfeld, 2000). Moreover, as central societal institution wage work secures social integration, identity and stability, personal freedom and participation, social peace, and crucial state revenues (Senghaas-Knobloch, 1999). Following from that, the importance of generating or preserving jobs constitutes the standard argument for sustained economic growth. In turn, work as one basic factor of production creates growth;[25] thus for modern industrial society work is "both its chief means and its ultimate goal" (Gorz, 1989). However, the "policy mantra 'growth equals jobs'" (Jackson, 2013), the relation between growth and employment is not straightforward but 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 to offset job losses and avoid 'jobless growth'. Moreover, faltering or ceasing expansion triggers a spiral of recession which not only affects economic stability but results in crises of society as a whole (confer the above outlined principle of dynamic stabilisation) (Jackson, 2013; Paech, 2012; Schmelzer & Passadakis, 2011). But besides being ecologically unsustainable, uneconomic, unjust, and insatiable, growth is despite all efforts also increasingly unlikely to continue at rates 'required' (Kallis et al., 2015; Victor, 2015; IMF, 2015). Thus, the fundamental *individual and structural dependence* on both waged work and growth implies profound vulnerability: livelihoods and personal well-being are fatefully exposed to globalised competition, societies and politics constrained by 'systemically relevant' job and growth creating industries and global (financial) markets. As they get precarious and ever-more conditional, both work and growth increasingly become seriously destabilising factors (Brand, 2014; Paech, 2012; Gronemeyer, 2012).

25 Already for classical economic theory work served this purpose according to the 'formula' increase of work = economic growth = national monetary wealth = happiness (cf. Conze, 1972).

3.3 Ecological concerns

Turning to the second part of RQ1, I will assess the ecological unsustainability of modern-day work and identify forms and causes of destructive, environmentally harmful work. It has already been quantitatively researched how working hours correlate with environmental impacts in terms of ecological footprint, carbon footprint, GHG emissions, and energy consumption, both on micro/ household and on macro/cross-national levels (Knight, Rosa, & Schor, 2013; Hayden & Shandra, 2009; Nässén & Larsson, 2015; Rosnick & Weisbrot, 2007). Based on these findings, but going beyond them, I will develop a qualitative systematic classification of ecological impacts of work as such (not hours of work only), distinguishing *four analytically distinct factors.*

Most basically, and maybe trivially, all productive activity is, directly or indirectly, based on material and energy throughputs within wider ecological conditions, which necessarily involves interference with the ecosphere. The appropriation and exploitation of land/soil, biomass, water, raw materials, non-human animals, the atmosphere etc. (usually anthropocentrically summarised as natural resources) causes harm and suffering, pollution, degradation, destruction, and extinction. Thus naturally, production always implies destruction; 'work' is ultimately both productive *and* destructive (Clausen, 1988). However, its inevitable biophysical basis alone need not make work unsustainable—people have always produced, but not always done so in an unsustainable manner.[26]

Contributing to its unsustainability is, firstly, the ***factor scale**:* the greater the amount of work, the more 'inputs' are required and the more 'outputs' generated, which means more circulation of matter/energy and resulting ecological impacts; in other words, the more work, the more demands on the biosphere (Knight et al., 2013;[27] Hayden & Shandra, 2009). Obviously, there are important qualitative differences between concrete workplaces or industries, their respective destructive potentials and ecological impacts.[28] Moreover, indirect impacts and contributions matter besides evident direct ones (Kallis et al., 2012). Therefore, also the tertiary/service sector is, against common prejudices, not exempt from this reasoning (Knight et al., 2013; Hayden & Shandra, 2009): on the one hand through its own ecological foundation, materiality and energy requirements (often indirectly or embodied; Haberl et al., 2009), on the other hand as the "software" of industrial production as it enables and manages directly material processes,[29] even if those in turn are outsourced in global production chains (Altvater & Mahnkopf, 2007; Paech, 2012).[30] Overall, while small-scale, isolated acts

26 Just as this basic condition is almost all that modern 'work' has, as demonstrated, in common with pre-modern productive activities.

27 From whom I derive the term factor scale, however used in a slightly different way.

28 Confer e.g., mining, chemical engineering, industrial and biodynamic agriculture, carpentry, and the military.

29 For example, logistics, marketing, financial services, law, education/science, and other "ancillary" industries "to provide administrative, technical, or security support" for all other industries (Graeber, 2013).

30 The popular myth of a transition towards a 'dematerialised' service economy or 'post-industrial', 'knowledge society' is moreover also misleading if industrialisation towards industrial societies is understood (as I do) not only as expansion of

of production/destruction would usually not pose any problems, the socially organised, systematically and continuously advanced amount of work and the corresponding unprecedented scale of production has grown beyond sustainable limits.

Additionally aggravating ecological impacts by further increasing *factor scale*, modern work is subject to certain, integrally connected and mutually reinforcing conditions inherent in industrial-capitalist structures. One such condition is the systematic ***externalisation*** of costs: as both in economic theory and praxis only the sphere of marketised production counts, this necessarily implies an 'exterior' to the production process (the biosphere, society, the global South, the future, etc.), from which the preconditions of production can be cheaply exploited and upon which the consequential costs can be passed along (Brand & Wissen, 2013; Schmelzer & Passadakis, 2011; Biesecker & Hofmeister, 2013). This dissociation between costs and benefits in global chains of production and consumption is what Plumwood (2002) describes as 'remoteness', resulting in irresponsible, bound- and careless exploitation.

Further vital for the general escalation of production are ***fossil fuels*** as crucial energetic base of modern economies. Their dense energy enables the continuity, intensification and acceleration of production, independent of external physical, spatial, or temporal conditions and constraints, and thus the severing of abstract production processes from the biosphere, its own ways and natural limits (Malm, 2013). Moreover, they are grossly destructive in themselves, both the industries occupied with their extraction, and the process of their combustion as a major cause of climate change.

Furthermore, modern industrial ***technology*** greatly enhances the scale of production and industrial operations such that mechanised/automatised/digitalised (and usually fossil-fuelled) production processes increase 'manpower' beyond human (or non-human animal) physical capacities and thus amplify the scope, pace, efficacy and destructive impacts of human intervention in the biosphere (Osterhammel, 2009; Paech, 2012). Moreover, engineering and machinery production themselves are dependent on tremendous amounts of material and energy inputs with devastating ecological consequences.

Besides the impacts of fossil fuels and modern technology as such, their combination, relatively cheap energy converting technologies substituting time-intensive (manual) labour, made possible an unprecedented rise in ***labour productivity***,[31] which became imperative for growth and profitability, and profoundly altered the character of work. Rising productivity entails vastly more

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the secondary, manufacturing sector, but as the historical emergence of work societies on the basis of a specific work ethic and organisation of work, abstract, linear time, and fossil fuel-powered technology enabling unprecedented rates of economic growth; features which have not substantially changed.

31 Output per unit of worktime. Evidently, there are more factors conducive to rising labour productivity, including (global) division of labour, standardisation and serial production, rationalisation, efficient, 'lean' organisation of production processes, and not least the psychologically deeply ingrained time-discipline and productivism (Paech, 2012; Nørgård, 2011; Thompson, 1967; Welzer, 2011). Moreover, 'unproductive' elements are increasingly eliminated from production processes; for example, animals in industrial agriculture systems are killed when their 'productivity' declines.

throughputs in ever-shorter time, and optimised efficiency of destructive processes. In other words, productivity of harmful operations equals 'destructivity' (Jackson & Victor, 2011; Paech, 2012; Gronemeyer, 2012).

Altogether, work under conditions of combined cost-externalisation, fossil energy, industrial technology, and labour productivity, enables[32] unparalleled rates of ***growth*** of production, with corresponding growth in throughputs and environmental destruction. However, in industrial-capitalist economies the amount of abstract work or scale of production is never great enough; growth is in principle unlimited, and an end in itself. All efforts are therefore invested in the evermore rapid and unrestricted appropriation and depredation of the biosphere, secured by legal and military force, towards ever-greater expansion and acceleration of production (Gorz, 2009; Brand & Wissen, 2013; Schmelzer & Passadakis, 2011).

That way, the infinite growth of mass production and consumption necessarily results in massive amounts of ***waste*** that are systematically generated due to the linearity of the industrial production process (extraction—linear throughput—waste/pollution), and there is no 'away' when things are thrown away: waste that is not dealt with in the regular waste industry is externalised in space and time (e.g., e-waste, marine debris, GHG emissions, nuclear waste, POPs). Crucially, this ecologically destructive waste generation is not (only) an adverse side-effect of modern work, but its main purpose: all commodities produced under the imperatives of growth and constant innovation inevitably are waste; ever-cheaper[33] stuff, advertised as always the newest fashion, must be consumed and discarded ever faster, while product quality, longevity, durability, and repairability are detrimental to growth. Throw-away societies' maximal wastefulness thus serves ever-expanding production, and the quicker waste is generated, the richer, as measured in GDP, these societies are. Under these conditions and in this logic, work is parasitical, wasteful, and responsible for large-scale destruction (Gronemeyer, 2012; Gorz, 2009).

Secondly, besides and additional to factor scale, ***factor time*** may be identified as rendering modern-day work furthermore unsustainable. This factor, firstly, concerns ecological impacts of consumption relative to worktime, i.e. the time-budgets that households or individuals take into account when making consumption decisions. Time constraints due to time being bound to employment influence time-use and consumption patterns such that less available time encourages more consumption of 'time-saving' products and activities which usually are more energy-intensive and environmentally harmful, while vice versa, ecofriendly activities usually are rather time-intensive and thus conflict with

32 (and in the case of productivity growth also requires, cf. chapter 3.2)

33 Commodities *must* be cheap to be easily consumed and replaced for the growth economy to run smoothly. Due to the conditions of industrial mass production (externalisation of costs, cheap fossil energy, and high productivity as described, as well as outsourced production to low-wage countries, and general conditions of brute competition) commodities are made artificially cheap such that their maintenance does not pay off.

long hours of work (Knight et al., 2013; Nässén & Larsson, 2015; Hayden & Shandra, 2009).[34] However, time-scarcity due to work need not necessarily lead to environmentally harmful consumption patterns and behaviour. Likewise, more available time may as well be allocated to relatively more harmful activities, triggering time-use rebound effects.[35] Nevertheless, despite complicated relationships and dependencies between time and behaviour, with more discretionary time it is more plausible, likely, and crucially, *possible* to reduce ecologically problematic demands for "speed and convenience" (Schor, 2005; Druckman et al., 2012; Jalas, 2002).

Secondly and more fundamentally, *factor time* as correlation of worktime and ecological impacts concerns the basic notion of modern-day work and time: As demonstrated in chapter 3.1, employed, waged, abstract work presupposes an equally abstract, economic or commodified conception of time, linear, clocked and invariable: industrial time. As quantitatively valued cost factor ('time is money'), worktime is purposefully and systematically accelerated,[36] subject to the precepts of discipline and efficiency, and oriented towards the short-term and the succession of arbitrary deadlines (Biesecker, 1998; Rosa, 2013). This logic of abstract industrial, mechanical time is essentially at odds with the multitude and diversity of times and temporalities of the biosphere, embodied beings and processes of life, characterised by complexity, not linearity: their different, variable and changing qualities and paces, unique temporal logics, time scales and patterns, seasons, cycles, rhythms, pulses, chronobiologies and lifetimes, constituting sophisticated ecological relationships (Biesecker, 1998; Adam, 1998, 2013).[37] Thus, modern constantly expanding and accelerating 24/7 global production within the single, universalised and "invariable time of clocks and money" (Adam, 2013) is effectively decoupled from the manifold ecological temporalities, and so short-dated, efficient, and fast-paced that pollution and depletion are caused too rapidly for natural processes of absorption and regeneration that may involve timespans of decades, centuries or millennia, unless fundamentally disturbed or irreversibly destroyed. Moreover, as the uniform industrial time intrudes and determines non-work spheres of life, possibilities get lost of living and experiencing different temporalities depending on activity and biosocial circumstances[38] (Adam, 1998; Biesecker, 1998; Thompson, 1967). Overall, *factor time* may be summarised as follows: the more industrial worktime,

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34 E.g., food-preparation at home instead of packaged instant meals or fast-food on the go, growing vegetables instead of buying them in supermarkets, repairing used electronic gadgets instead of buying new, faster ones, hanging out the laundry instead of using the tumble dryer, crafting presents instead of buying stuff, walking or biking instead of going by car or other means of fast transportation, taking trains and ships for vacation travel instead of airplanes, etc. In these examples, *environmentally benign behaviour overall involves less market-based consumption* (cf. factor work-induced consumption below). Knight et al. (2013) call this phenomenon "compositional effect", shown to work independently of income and other measured effects. Quantitatively, this effect is not as strong and straightforward as the scale effect, but still significant.

35 For example, fashion shopping or more long-distance travelling by airplanes or high-speed trains.

36 …"an expenditure minimized by an enormous mobilization of machinery and energy" (Biesecker, 1998). Cf. what has been written above about fossil fuels and labour productivity, and their respective relation to time.

37 This diversity is reflected in historically and culturally different cosmologies and attitudes towards time and life.

38 Which conforms with the aforementioned aspect of factor time, and reminds of E.P. Thompson's deliberations on task-oriented versus abstract time (cf. chapters 3.1, 3.2, and 4 on the specific temporalities of care work).

the more accelerated destruction and the less time undetermined and available for non-consumptive, environmentally benign time-uses embedded in and supporting diverse ecological temporalities.

A third, analytically distinct aspect contributing to modern work's unsustainability is ***factor income***, concerning the relation between income and the ecological impacts that (private) consumption entails. On average, more hours of work generate more income, which usually translates into increased expenditure and consumption, inducing higher pressures on the environment (Nässén & Larsson, 2015; Knight et al., 2013; Pullinger, 2013). This strong link between levels of income and environmentally problematic consumption is well studied and established (UBA, 2016; Brand & Wissen; 2013; EEA, 2005). However, this factor not only pertains to the hyper-consumption of the extreme wealthy,[39] but is a general, structural concern: as discussed in chapter 3.2, modern societies sustain themselves mainly through market-based consumption financed by income-generating employment. Thus they are systematically locked into a 'work-and-spend' cycle, a way of life of working "standard package: full-day, every day and life-long" (Sanne, 2005), to earn ever-rising incomes to afford ever-increasing consumption (Schor, 2005; Knight et al., 2013; Gronemeyer, 2012). Such work-and-spend lifestyles are, besides the coercion to seek income and 'earn a living', fostered by general time-scarcity (cf. factor time), commercial advertising (which itself is a multi-billion industry), cheap loans, and globalised production chains emitting cheap, mass throwaway products (Nørgård, 2011; Sanne, 2002; Paech, 2012).

The fourth and last factor, ***work-induced mobility, infrastructure, and consumption***, concerns ecological impacts that work induces structurally, independent of the work process itself. To my knowledge, there is no study that has systematically assessed this factor, although some aspects should be easily definable and quantifiable (and have certainly been analysed in different contexts). ***Work-induced mobility*** comprises phenomena such as commuter traffic or business travel (usually by company cars or airplane)—mobility that only exists because work necessitates it. Notably, it needs to be fast, i.e. energy-intensive, owing to businesspeople's busyness and employees' time constraints, punctuality requirements, tight schedules etc. ***Work-induced infrastructure*** includes built infrastructure such as office buildings, factories, warehouses, business parks and industrial estates (including their water, power and heating/cooling supply), ancillary power plants, the roads, tracks and parking sites to reach them, as well as technical infrastructure (computer and telecommunications hardware, data and server centres, office equipment), or supportive service infrastructure (cafeterias, employment

39 ...whose consumption levels and according impacts have reached grossly unsustainable dimensions, which is why this relatively small share of the population is responsible for the most destruction. However, their income may be 'unearned' e.g. due to inheritance or return on capital. On the other hand, within general conditions of growth, the need for and pursuit of money is in principle endless (Odum & Odum, 2006; Gorz, 1989, 2009).

agencies)—infrastructure that is built and maintained only for the purpose of abstract work to 'take place', which from an ecological perspective is particularly problematic due to its land consumption. ***Work-induced consumption***, finally, entails purchases of goods and services like work clothing, take-away coffee, eating out, cleaning services, fitness studios, second cars, daycare centres, and the like—consumption that would be considerably less needed if work did not exist. It also includes so-called compensatory consumption to recompense for the frustration of stressful, unsatisfying, dull, meaningless, alienating work (Gronemeyer, 2012),[40] or luxurious consumption as reward for work performance or career advancement.[41] Thus, the additional, otherwise non-existent employment generated for the provision of all these goods and services (Graeber, 2013) may be described as *work-induced work*, with all ecological impacts as described.

In conclusion of chapter 3, I have untangled how work has historically become what it is today, and with regard to RQ1 identified criteria for how it is socially and ecologically unsustainable. My overall thesis (cf. chapter 1.1) is therewith already partly supported, and shall be further elaborated on in the following chapter.

4 Degrowth perspectives on postwork alternatives

I will now enter into RQ2 and discuss how work can and should be conceptualised and organised differently in light of the concerns outlined in chapter 3, drawing on approaches and proposals to work as debated in the degrowth literature, as well as with recourse to the core degrowth themes delineated in chapter 2.3 (repoliticisation, autonomy, conviviality). The discussion, held concise due to the study's exploratory nature, shall progressively compose into an alternative draft of sustainable 'postwork alternatives'.[42]

In the previous chapter the claim has been supported that a change of work as one of the central building blocks of the present unsustainable societal order is pivotal for a socio-ecological transformation. Largely insufficient and misleading, however, are proposals of 'decent' or 'sustainable' work as 'green jobs' for 'green growth' in a 'green economy', as often promoted in contexts endorsing sustainable development, markets and technology to increase efficiency and competitiveness,

40 Especially when such extremely dull or obviously destructive work is made attractive through high salaries so that 'hard work pays off' (e.g., deep-sea fishery, oil drilling, factory assembly lines, etc.; Gorz, 2009).

41 Admittedly, work-induced consumption as described here is in some cases closely associated with and accordingly more difficult to separate from other factors (time, income, scale).

42 It will include both endorsement and critique of degrowth ideas, the latter where, to my mind, degrowth approaches are insufficient or mistaken. However, for the sake of conciseness, I won't give an exhaustive overview of the general degrowth and wider postgrowth debate of work which is very diverse and quite often controversial.

i.e. the status-quo (UNEP, 2008; ILO, 2012, 2016; UNDP, 2015a, 2015b). I dissociate myself from such discourses, not because individual measures might not be reasonable, effective, or even identical to those put forward in degrowth debates, but rather because their underlying logic and reasoning as well as their long-term goals and visions are at odds with a change in direction towards sustainable trajectories: they are usually only concerned with a closed, one-dimensional future of perpetuating employment, growth and industrial development (Fischer-Kowalski, 2014), take these as unquestioned givens, and only focus on 'green' sectors ('win-win') while largely ignoring those that need to be abandoned without substitution. By steadily promoting more of the same as only solution (more jobs, more growth), they stay within the prevailing mindset of 'solving by escalation' (Illich, 1973).

For proposals within a degrowth framework, in contrast, it is not only clear that a change in orientation is needed, begun with by drastic reductions of extraction, production, consumption and waste generation (Schneider et al., 2010). It is also clear that work is a social arrangement and therefore genuinely political (Weeks, 2011) and that it is subject to social norming whether its productive or destructive side prevails (Clausen, 1988). Accordingly, to curb production implies the opening of public, political debates about the spirit and purpose of work: which work is, *for individuals, the biosphere and society as a whole*, valuable, meaningful, and to enhance, which work is harmful or pointless and to reduce, how would the remaining work be organised to be socio-ecologically sustainable, which needs are genuine and to be satisfied in which way, and when does a society have 'enough' (Fournier, 2008; Kallis, 2011). This ***repoliticisation of work*** and institutions of production likewise involves the *politicisation of time,* i.e. rendering explicit and challenging the historical construction of time that is usually implicit, internalised and naturalised (Adam, 2013).

More fundamentally (and more ambiguous in degrowth contexts[43]), (re)politicising work may lead to questioning and ultimately *refusing* work as such.[44] To be clear, the refusal of work as a political project of containing and perspectively overcoming work does not mean endorsing anti-egalitarian ancient or aristocrat ideals of wealthy men's philosophy leaving toil and drudgery to women and slaves, and neither does it mean the (impossible) refusal of necessary daily efforts to sustain livelihoods and satisfy basic needs, nor the general refusal of purposeful "creative or productive activity" (Weeks, 2011). Rather, it repudiates the belief that our common obsession with productivity and efficiency is a moral duty and noble virtue, and that only work makes people complete and fully human. It questions the industrial society built upon this work ethic that regards itself with its labour markets, wage dependencies, industrial relations, clocks and watches as the only possible and desirable way of organising human co-existence, and which is so centred around work as

43 Although the refusal of work is in principle consistent with the degrowth rationale, especially when understanding growth and work as mutually dependent, in degrowth debates on work (so far) the refusal of work as such does not figure prominently; it is often implicitly discernible, while in other cases the work ethic still prevails.

44 Recall the definition of work as *abstract-exalted gainful employment in industrial-capitalist labour markets* that has, historically informed, been developed in chapter 3.1.

end in itself that it puts all effort in maintaining and increasing it, regardless of how productive and technologically advanced it has become (Paulsen, 2013), where any job, even the most exploitative and destructive, is better than none. Finally, it suspects a society to be impoverished that finds self-fulfilment, social belonging and societal peace, structure and meaning in life only through work, and which sees its unemployed fellow human beings as use- and worthless parasites while simultaneously cherishing the dynamics of work and growth that systematically produce such precarious, 'dispensable' dropouts (Gronemeyer, 2012). Moreover, matters are aggravated further by each and every concern dealt with in chapter 3. Still, the refusal of work is understood not as defensive stance but as creative practice: to refuse work and the existing work society, *aware of their historical contingency*, implies to demand and struggle for 'postwork' alternatives (Weeks, 2011).

Regarding the organisation of work, one pivotal measure to render possible such alternatives is the ***reduction of work***, both in amount/time (of each employee), and in societal importance. Reducing work could mitigate the concerns identified in chapter 3.2, and it would significantly reduce demands and pressures on the environment, concerning all the factors analysed in chapter 3.3. Moreover, a reduction of work would contribute to its devaluation or 'dethronement': it would "challenge accepted notions of 'normality'" (Coote, 2013), enhance different activities beyond work, establish and strengthen other priorities, and allow new experiences of life in a diversity of times.

There are numerous possibilities and proposals of how and how much to reduce work (which cannot be reviewed here). In order to be effective for the purposes stated, it is crucial that the reduction is substantial,[45] that it is implemented not on an individual basis but for the working population as a whole (Sanne, 2002), and that concrete policies and accompanying measures are wisely designed and framed to counteract rebound and other undesired effects (Coote, 2013; Knight et al., 2013).

As expounded, there are some sectors of employment that, owing to their ecological impacts, need to be cut considerably more radically than others, while certain socially important sectors can and should not be reduced across-the-board (e.g., health care, public transport). Such selectively reduced, the remaining work should be *redistributed and shared*. Note that work-sharing understood this way should *not* lead to more employment, but to the equitable, gender-balanced, and inclusive redistribution of an *overall reduced* amount of work, sparing and sharing only socially necessary work (Nørgård, 2011; Paech, 2012).

Evidently, a reduction of work would usually result in a reduction of income, which from an ecological point of view is considerably better than keeping incomes unaffected (Nässén & Larsson,

45 Substantive proposals for the reduction of average weekly working hours range from around 21 (nef, 2010) or 20 hours (Paech, 2012) per week to begin with, progressively over 15 hours (Keynes, 1930), down to 10 hours per week (or a 75% decline in average annual work year; Victor, 2012), and reductions need not end there.

2015; cf. chapter 3.3), while posing problems to people already struggling with low incomes. However, there is evidence that cutting work hours and according incomes of high earners has by far greater environmentally beneficial effects than for low income groups (Pullinger, 2013). Thus, it seems reasonable to suggest an average reduction of incomes along with the introduction of redistributive policies to end extreme wealth and ensure fair living wages for all (nef, 2010; cf. chapter 5.1).

Overall, the reduction of work is not an end in itself, but a necessary first step to tackle the problems with work and enable an alternative social order.[46] There is, however, one caveat: most proposals of worktime reduction count on continual labour productivity gains to be redirected from rising incomes and output growth (e.g., Schor, 2015). However, it is questionable whether future labour productivity increases can and should be taken for granted: as demonstrated in chapter 3 discussing care and ecological concerns, in certain regards continuously rising labour productivity is neither meaningful nor desirable. Moreover, future labour productivity is likely to be considerably lower, not higher, as its biophysical basis, i.e. certain crucial resources and cheap, high-EROI, always readily available fossil energy, which most machinery and modern technology owe their existence to, peaks and diminishes (Kerschner, 2015). As part of a reasonable proposal of reduced work, therefore, high labour productivity should not be presupposed, but rather *purposefully declined* (Jackson, 2013; Nørgård, 2011) in line with both biophysical realities and according political claims (e.g., climate justice, anti-extractivism, significant reduction of production).[47] This might at first contradict the idea of a substantial reduction of work, as future post-industrial, post-fossil and low-tech production may involve more manual/physical labour (Sorman & Giampietro, 2013). On the other hand, economic activity is likely to decline in a world with overall less energy and cheap material inputs (as historical evidence suggests), also given that needs, desires, and accordingly necessary consumption/production are nothing fixed but subject to social contexts (including manipulation through advertisement) (Sanne, 2005). And not to confuse: reducing work (only) means reducing paid, marketised, employed, i.e. modern work.

From the great variety of ways of organising societal life and securing livelihoods on ecologically sustainable levels, only this modern, one-way ‘work-and-consume’ way of life has remained (Gronemeyer, 2012). The repoliticisation and equitable reduction of work could therefore, besides denormalising employment and mitigating its impacts, gradually supersede it by liberating time for ***postwork alternatives***. Such different ways of organising production and provision, where it remains

46 My proposal as outlined here is in one central aspect at odds with certain degrowth versions, which do not endorse work time reductions (WTR) and work-sharing for the purpose of really reducing work (and incomes) comprehensively, but rather advocate for WTR in order to prevent unemployment or to create additional jobs when growth rates decline, while keeping incomes stable or increasing them (e.g., Kallis et al., 2013).

47 Such considerations cast doubt on the feasibility and desirability of the present frenzy around the new wave of automation and digitalisation, which is almost always portrayed as inevitable and void of preconditions.

necessary or where it is found to be more intelligent and desirable, would follow different guiding principles, a different logic:

Firstly, *autonomy* in its Castoriadian sense would entail community- or civil society-based self-determination and -organisation to execute social control over the means and ends of production and time use. Preferred forms of organisation would be cooperatives, free associations and small non-profit social enterprises, complemented by local and regional 'citizen production audits' (cf. ch. 5.1), and inspired by concepts such as economic democracy (Johanisova & Wolf, 2012) or commons and commoning (Helfrich & Bollier, 2015).

It is, secondly, crucial that structures of production and consumption (political, economic, technological) be *decentralised and limited in scale*, to be democratically understand- and manageable; to be able to be supported and reproduced by regional/local resources, environments, and renewable energy sources with their lower energy potential and intermittent availability, binding production again to specific places (Malm, 2013); and to minimise 'remoteness' to render impacts and limits clearly tangible, foster a sense of place, and enhance responsibility (Plumwood, 2002).

Evidently, reducing work that by definition is employment in labour markets and organising the majority of productive activity in autonomous small-scale units would, thirdly, imply the *de-commodification of work* (and thus of the employee and her time), i.e. to withdraw the 'fictitious commodity' labour (Polanyi, 2001) from market and money exchange and re-embed economic activity in social life and ecological relationships, strengthening and constituting new, non-utilitarian social relationships and networks, assessing production according to its value to society, not to the market, and including everyone not only those who can 'sell themselves' best (Gómez-Baggethun, 2015; Fournier, 2008). Only products that are both important and hard to obtain from regional contexts would, if reasonable and autonomously decided on, still be produced as waged employment in remaining, supplementary (supra-regional) labour markets and supply chains.

Taken together, alternative postwork practices consist of a diversity of decommodified, autonomous modes of community production and according diverse ways of life, concerned with income- and consumption-substituting local/regional self-sufficiency and self-production (especially of basic needs such as food, energy, housing, clothing) mostly for use and for free, less for trade, not for profit. They involve less office or factory jobs, bosses and collars, but more self-instituted productive activity in organic agriculture, repair/maintenance/refurbish/recycle/dismantling services "reappropriating the waste stream of modern capitalism" (Carlsson, 2015), more low-productivity 'hands-on' activities combining skilled manual and creative intellectual labour; more crafts,[48] arts,

48 Confer in this context again the view of craftsmanship as attitude, mindset, and way of life that for example Weber (1992) has described as artisan spirit or traditionalism (cf. ch. 3.1, footnote 15). An increase in crafts would need to be accompanied by substantive efforts of re-skilling a populace that has largely become accustomed to industrial, impersonal, interchangeable mechanised labour (cf. ch. 3.1; Sahlins, 1972).

design and culture, more critical education and free services, for all of which countless examples exist (Kallis et al., 2015; Paech, 2012).[49] Moreover crucial for postwork alternatives is the time that is liberated from overwork for participation in politics, public affairs, and community organisation.

With such a multitude of partly quite labour-intensive, no longer abstract-exalted but immediately necessary, meaningful tasks to support livelihoods, and without exclusion or artificial scarcity through labour markets, there would no longer be 'unemployment' but as much to do as collectively decided on (Gorz, 2009). Precarity and social isolation were less likely to occur, or absorbed by stronger social bonds and more freedom from employment, growth, money, consumption and markets.

While so far the reduction of work and postwork alternatives mainly concerned different ways of organisation, the question remains which different conception should inform postwork productive activity to challenge the values and aspirations that govern industrial society and underpin a configuration of work that is deeply absurd, life-destructive and unsustainable.[50] As potential corrective, *conviviality* as introduced emphasises cooperation, compassion, enjoyment of life, and mutual relatedness including all living beings, and it entails an orientation towards ***care*** that, as both mindset and activity, stands for life and its relations, is life-affirming and -supporting (Biesecker & Hofmeister, 2013). As guiding principle for postwork alternatives it would underline the need to care for and take care of life in its entirety: ourselves, each other, and the diverse living world—which in times of extinction is not trivial.[51]

Understood this way, care is opposed to and should not be work, be abstracted and subjected to market and profit logic, nor be regarded as private, individual matter, but be liberated from economic rationalisation and the separation of artificial spheres, and instead be seen and asserted as common public good to be shared in common, gender-equally and less reliant on transnational care chains (Bryson, 2013). This requires that care is given more time acknowledging its specific temporalities, in which time is not abstract and invariable, but *task-oriented* and all tasks an integral

49 Examples of postwork practices include community-supported agriculture, (urban) community gardening and other alternative food networks as well as traditional fruit and vegetable gardens that older generations in rural areas still know well, renewable energy cooperatives, repair cafés, bike kitchens, self-organised open workshops, co-creative urban design, fab-labs, the former local baker/shoemaker/carpenter/miller/tailor etc., handicraft, autonomously organised activist research and education projects, or eco-communities (Cattaneo, 2015), drawing on ideas and initiatives such as solidarity economy, grassroots innovations in sustainability, the global cooperative movement (Johanisova, Padilla, & Parry, 2015), arts and crafts, giving, sharing, open design and open source, commons-based peer production (Helfrich & Bollier, 2015), or Transition Towns, Via Campesina and other movements for local energy democracy and food sovereignty (Schmelzer & Passadakis, 2011). While these examples mainly originate from industrialised countries, peasant/subsistence and commons-based production (still) prevail for a considerable part of the world's population in non-industrialised countries and Indigenous cultures (Haberl et al., 2009; Helfrich & Bollier, 2015), ways of life independent of jobs and consumerism that should serve as ('pre-work') inspiration, and not be destroyed by development.

50 Lifelong full employment, efficiency, productivity, competition, growth at any cost, and suchlike.

51 Which even includes to change relations towards, prolong the life of and care for the world of material objects around us whose production is reliant on ecological processes and human physical inputs.

part of life (Thompson, 1967) that considerably gain quality when done less time-thriftily and efficiently, respecting and allowing each activity and relation their own paces and ways. This logic of care should provide general orientation for all kinds of postwork activities,[52] and raise standards from a resource-intensive, growth-oriented economy towards *low-impact, low-productivity, time- and labour-intensive* meaningful social relationships (Jackson, 2013, 2015).[53]

This further necessitates to actively devaluate work, to devaluate the labour market that subordinates or exploits care, and to devaluate the logic that destroys the meaning and purpose of care, for without that it is unlikely that care be fully recognised in its social importance, its status be enhanced, or enough time and energy be gained for care as postwork attitude and practice with all it entails.[54] This includes a wealth of relations for life-sustaining, meaningful tasks accomplished and experienced in common, not in abstract time but in the 'here and now', with tasks being self-evident and intrinsically motivated, not externally imposed, supporting both human health and biosphere integrity—which are all aspects that are crucial for and considerably enhancing conviviality, well-being, flourishing and quality of life (Sekulova, 2015; Thompson, 1967; Jackson, 2015).

Both alternative postwork practices and care as part of a new postwork conception have so far all been characterised as new directions and traits of, essentially, *purposive activity*. However, to effectively reduce the overall scale of production/destruction, not only employed work but also productive activity in general needs to diminish. Therefore, purposeful activity and productive attitudes as such should come under critical scrutiny and inspiration be taken from attitudes that stand for peaceful unproductiveness: ***idleness****, indolence, laziness*.

For at least three reasons, pleasurable inaction should be part of a conception of postwork life: first, nothing is evidently more carbon-neutral, nondestructive and environment-sparing than being absolutely unproductive. As time-use studies indicate, leisure, recreation and socialising are all relatively low in ecological intensity, with rest and sleep having the lowest to virtually no impacts (Druckman et al., 2012). Apart from humans, also the biosphere needs idle time for regeneration. In this sense, laziness, ideally sleep, can be regarded as the single most ecofriendly state of being.

52 Such task-orientation would greatly improve the quality and experience in many spheres important in a 'post-work world', besides care including ecological conservation and restoration, e.g. crafts, organic food production, arts, direct democracy etc.

53 However, other than that Jackson, as well as other degrowth/postgrowth authors, remain firmly in the logic of both work ethic and commodified labour.

54 This argument does not conform with the two main, longstanding feminist strategies with regard to work, which either stress the importance of getting more women into 'real' work in labour markets (and also endorse further commodification of care through 'wages for housework'), or randomly reinterpret and extend the notion of work to include *any* activity and thus enhance the status of care by also labelling it 'work'. Both would not be able to tackle or solve the actual, underlying problem; it would not mean real emancipation from work and the prevailing economic system with its dictates, logic and values, but to struggle "only within, rather than also against, the terms of the traditional discourse of work (...) and fail to contest the basic terms of the work society's social contract" (Weeks, 2011). My argument would further entail to organise care (health care, eldercare, daycare etc.) where reasonable in a postwork spirit without markets and money, but in self-organised, shared, free-of-charge community-based associations and cooperatives.

Secondly, a life of leisure, loafing, ease and enjoyment, in full sovereignty over one's time allowing its unproductive, non-utilitarian use (or nonuse), withdrawn from the realm where it must be sold for money to pursue mindless rat races, comes very close to longstanding ideals of genuine freedom and quality of life, or again, conviviality.[55]

To recognise idleness[56] as a desirable state of being is, thirdly, an affront against a culture that fears the waste of time and glorifies hard work, productivism and efficiency; nothing could question the meaninglessness of ceaseless work more radically than the outright celebration of unproductiveness. It is no linguistic coincidence that industrial society has to be industrious, that business would be non-existent without busyness. If the engine of capitalism is the work ethic (Weber, 1992), when attention must be paid that 'rivals never rest', it might be true that sleep, interrupting all 24/7 dictates plus being perfectly unproductive and unconsumptive, is capitalism's greatest enemy (Crary, 2013). In that sense, idleness could serve as a political strategy of refusal and disobedience: resisting the allegedly natural precept of early rising in the mornings or obeying the moral rule of punctuality (Thompson, 1967), no longer conquering but cultivating one's 'weaker self', refusing work or going on strike not in order to improve its conditions but to practice and get habituated to non-work,[57] contentment and a leisurely pace of life—by all these (in)actions one could put spanners in the works of a destructive global economy and demonstrate fundamental non-compliance (Gorz, 2009) with a flawed and failing social contract. In a wider sense, deliberate inaction or cessation as design and problem-solving principle may in some cases be wiser than solving 'by escalation', i.e. by always taking action and bringing new stuff into being regardless the problem (Paech, 2012).[58]

With regard to RQ2, it has now been debated how a different organisation and conception of work and productive activity (or unproductive time) would overall combine into an alternative draft of sustainable postwork alternatives, largely resolving the concerns outlined earlier. Regarding my thesis, it has been shown how the postulated change in the way we work, as part of an effective and desirable socio-ecological transformation, may look like in more detail.

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55 Cf. Illich (1973) who sees conviviality as "the opposite of industrial productivity".

56 Laziness as postwork conception does *not* mean taking a rest in order to become more productive at work, it does *not* promote being morally lazy in terms of ecologically harmful convenience consumption, indifference or carelessness towards the world, and it is *not* 'free time' as free time only exists as non-work in opposition to commodified time/work (Adam, 2013), and as such does not help to overcome the logic of abstract time/work.

57 Cf. Fournier (2008) who suggests consumption strikes as political act and way to learn to live without consumption.

58 Such practice of intelligent reduction, temperance, letting go and letting-be, similar to the idea of sufficiency, could foster the non-demanding and non-pursuing traits of the human being, or put positively, the contented, modest, thoughtful, resting traits, which in Eastern philosophies have always been respected as basic life principles; for example referred to as Yin (opposed to Yang), or Wuwei (leading by non-action) (Seungho, 2015).

5 Postwork politics

Having illustrated the problems with work and potential solutions, it is obvious that specifically the proposed alternatives are very far away from the realities of present industrial societies and their political agendas. Therefore, RQ3 shall now be addressed which asks how a transformation towards postwork alternatives is made possible or impeded: which change can be pursued and hoped for reasonably and realistically, which political interests and strategies may promote or hinder change?

Since postwork alternatives have been suggested not as predefined goal or blueprint, but as political, inherently open process under certain practical and conceptual premises, my objective is to identify and understand necessities, possibilities, and areas of conflict. As before, the discussion is kept concise and exploratory, highlighting only key aspects.

5.1 Conditions

As a first basic prerequisite in the process of bringing (post)work alternatives into being, the theme of repoliticisation (cf. ch. 2.3, 4) be resumed in order to emphasise again the need for a public ***debate***, broad, fundamental and open-minded, about the means, ends, and essence of work, as well as the range of problems associated with it, for nothing can change without a shift in perceptions and values and a common desire for change articulated in public discourse.

While naturally work has always been debated, discussions would usually remain on the surface, depoliticise and individualise responsibility, concern working conditions rather than work as such, its meaning, substance, and the system behind (Paulsen, 2013; Frayne, 2015). However, the focus gradually turns towards more basic issues such as industries' responsibility for climate change, the basic income, persistent unemployment and precarity, reduction of worktime, or time use in general; topics “that will not go away” (Coote, 2013), appear increasingly often in the media and reliably generate widespread interest. Such debates aimed at stirring imagination about transforming work could be built on, deepened and raised on a different level,[59] blind spots be cleared, confusion resolved, and genuine alternatives demanded,[60] especially if politicised in terms of options and implications of one way or another, sustainable and desirable or not.

Specifically, the pivotal role of work regarding ecological pressures and climate impacts must

59 E.g., the deliberate refusal of a professional career or the appreciation of idleness reliably cause indignation (Lessenich, 2014) and accordingly work fine as a provocation to get a debate started on the level needed.

60 Demands such as more quality of life, including more sleep, a flourishing environment, the return of numerous old holidays, a life no longer defined by and subordinated to work (Weeks, 2001), more autonomy, more varied and convivial lives (Frayne, 2015), sparing the ecosphere while having a good time, and so on.

be brought to the fore. Also, the meaning and reasonableness of work as such should be radically questioned. What some call “lunacy” or “pathology” (Jackson, 2013), “irrational” (Weber, 1992; Plumwood, 2002; Lessenich, 2014; Latouche, 2001), “propaganda” or “dogma” (Frayne, 2015) could be problematised by asking simple, yet fundamental questions[61] that would help expose and criticise modern, glorified work as absurd cult and arbitrary historical product of an outdated Protestant-capitalist work ethic.

Moreover, ripe for debate is a specific feature of the modern notion of work that, although in the centre of the economic system, is abstract, isolated, morally neutral (Conze, 1972).[62] Consequently, work is usually unconditionally exalted, dissociated from its impacts and products, not made to respect any limits. To include work in ethical considerations entails refusing to accept unquestioningly that, as a rule, employment trumps everything; to unmask the jobs-versus-environment-argument as convenient blackmailing strategy usually and predictably put forward to justify socio-ecologically destructive industries (Fournier, 2008; Plumwood, 2002; Gronemeyer, 2012); and instead, to insist on alternatives of reduced dependency on work and growth, and allow the idea that no job might be better than any.

However, such debates by their nature cannot be limited in time; deliberating the fundamental terms of coexistence is a context-dependent, never concluded process. Moreover, apart from broad and basic questions, very practical, concrete issues need to be discussed and determined as well.[63] Accordingly, it appears further reasonable to institutionalise such crucial debates into autonomous *citizen production audits* (following the example of citizen debt audits (Cutillas, Llistar & Tarafa, 2015)) on all relevant levels, consensus-democratic and fully inclusive, convening regularly, with sophisticated mechanisms for conflict resolution.

For many people, however, debates about ‘work-life-balance’ sound like luxury lifestyle problems; they have to seek work because their economic existence depends on it. Still, the primary purpose of work is the generation of income; thus, under present circumstances, work and income cannot be reduced (cf. ch. 4) if social security is not taken care of in alternative ways. It is, therefore, another

61 Why work? Why grow? As end in itself? To maintain an unsustainable status-quo? Whom is it good for? Whom is it bad for? Why ‘earn’ a living? Is it really human nature? How did/do other societies function? Do we work so rest- and endlessly for any good reason apart from surviving competition? Etc.

62 Likewise, GDP does not distinguish between ‘good’ and ‘bad’ economic activity, it is indifferent to what grows as long as it grows overall, which adds to its absurdity as common ‘welfare’ indicator (Fournier, 2008).

63 Which and how much work is needed for a good life in a very concrete place in a certain month/year, and which limits must simultaneously be respected for sustaining life in the first place? What is meaningful work in a concrete place or community not only for the individual but for all of society and the biosphere? Which industries and businesses – concretely, locally – are no longer wanted and need to be phased out, and which can be altered in which way in order to meet the criteria collectively determined, under which conditions for the employees? How in detail should production and distribution be organised differently? How would the value and recognition of a specific work be determined or revaluated, maybe even beyond monetary terms, if no longer markets would do so according to criteria of profitability and competitiveness? Etc.

necessary condition to break up the existential dependency of livelihoods on work (and thus growth), i.e. to decouple work from income and instead find a new comprehensive agreement of income distribution and entitlement to societal participation. More concretely, it needs to be possible for people not only to determine which kind of work they find unwanted, but also to practically refuse and withdraw from it.

This insight and demand is of course not new, and the most convincing answer that has been put forward is the ***unconditional basic income***: "A certain small income, sufficient for necessities, (...) secured for all, whether they work or not" (Bertrand Russell, cited in Frayne, 2015). Among countless different UBI models, those stand out as specifically reasonable that combine social and ecological objectives, for example, comprising the mechanisms *'cap, tax, and share'*: legal environmental limits or caps are set (Alcott, 2010), under which eco-taxes on primary resources (incl. fossil and nuclear fuels), land consumption, and pollution (incl. carbon emissions) are raised, for then redistributing the revenues equally to everyone. Such an ecological UBI (e.g., Schachtschneider, 2014) would be socially just,[64] financially feasible, ensure that income be spent less on ecologically harmful (then markedly more expensive) consumption, enable ecofriendly idleness, contribute through caps to directly tackle a whole range of ecological issues, and prevent that high productivity and production can continue regardless of worktime reduction through (presently almost untaxed) machines.[65]

Another element of a cap-tax-share-scheme may be a *maximum income*, e.g. as a 100% income tax above a certain threshold, to combine the income 'floor' with a 'ceiling'. This would contribute to ending socially unjust, environmentally wasteful, ethically unacceptable extreme wealth, and harness the scheme's redistributive effect not only for financing a UBI but also to mitigate the implications of stagnating or declining growth (Alexander, 2015; Schmelzer & Passadakis, 2011). In the long run, it would not only redistribute but also *reduce* pecuniary wealth.

Potential galvanising debates and UBI notwithstanding, presently all efforts are directed at integrating people into labour markets; all structures including physical infrastructure favour and facilitate work-and-consume-lifestyles. Under these circumstances, practices of producing and living differently are thus likely to remain in individual niches or endeavours for dropouts. To become building blocks of a new way of life, they need to be generalised (Schneider et al., 2010), i.e. it needs to be made practically possible for average citizens to choose postwork over work, to start local, practical, non-market alternatives to sustain themselves, to realise postwork ideas, not business ideas.

64 As high earners consume and pollute considerably more, they would also pay in significantly more taxes, which contributes to top-down redistribution. Low earners in turn would be subsidised to pay higher prices.

65 All this besides all other advantages of a UBI as usually discussed (e.g., Weeks, 2011; Kallis et al., 2012). As a UBI implies "a more substantial alteration of the wage relation" (Weeks, 2011), it qualifies as *'non-reformist reform'* as described by André Gorz – a policy that is implemented as classical reform within the system's logic, but contains within itself the potential to a more radical, structural transformation (Muraca, 2013).

A further condition for the promotion of postwork alternatives, therefore, are enabling environments, public ***'postwork infrastructures'*** (institutions, physical places and spaces) and ***support*** 'from above' (legal, financial and organisational). This includes better *public services* to provide vital goods and services inexpensive (Schor, 2015)[66] or for free (under certain thresholds), complementing a monetary UBI to perspectively gain independence from work and money. Beyond that it is necessary to create the structural foundations and framework conditions to make possible, encourage, facilitate, fund and subsidise programmes, experiments, initiatives, networks, organisations, places and spaces of decentralised postwork production.[67] Thereby, opportunities for *commons and commoning* can be reclaimed, different forms of collective organisation, cooperation and interaction, new social relations, experiences and temporalities, and thus a social security net that is less dependent on state revenues and economic growth, but solidary, convivial, and community-based.

Moreover, the state is (still) needed to officially recognise postwork practices as valuable and the local and rural as important and sustainable, to change default-options and make them attractive, to create spaces free from competition for purposeful non-competitiveness (Gronemeyer, 2012), to decommodify and redistribute land[68] (e.g., based on community land trusts), and to gradually reduce and withdraw support from unsustainable, undesirable infrastructures.[69] Specifically in the latter two cases questions of property are affected, an instance where only the state is "able both to codify objective necessities in the form of law and to assure its implementation" (Gorz, 1982).

5.2 Constraints

Besides certain conditions that need to be fulfilled, there are certain barriers against rethinking and reorganising work. One such obstacle regularly surfaces in debates about the UBI: the crux is not its financing, but the cultural attitudes towards work. The changes proposed are far more than only a question of individual lifestyles; Lessenich (2014) sees the dismissal of the foundations of work society amount to nothing less than a cultural revolution.

On the one hand, this seems accurate: the work ethic is generally deeply internalised, the specific morality described by Weber (1992) as constitutive of modern industrial culture and determining for all its subjects: an ingrained moral compulsion to abstract, gainful work and timesaving,

66 Interesting in this context could be 'co-production' as a new model for public services, meaning equal and reciprocal relationships between public officials and recipients within their social environments (Boyle et al., 2010).

67 E.g. cooperatives of all kinds, CSAs and community gardens, open arts and crafts spaces for collaborative production and self-production, community-organised education and care centres, citizen production audits, work-reduction and work-sharing counselling and coordination, and suchlike.

68 The, besides labour and money, third Polanyian (2001) fictitious commodity.

69 E.g., space for motorised individual transport, large industrial estates, employment agencies, etc.

manifested in the common ideals of productivity, achievement and entrepreneurship, in the feeling of guilt when time is 'wasted', in career aspirations[70] and personal identification with one's 'calling', in observations of busyness, even burnout as "badge of honour" (Paulsen, 2013; Graefe, 2014), and remarks of a culture that has lost the "capacity to relax in the old, uninhibited ways" (Thompson, 1967).

On the other hand, attitudes among younger people show signs of a shift towards different values and aspirations. To many, time and life gain importance over money and career, some also sense that a good, meaningful life is opposed to the hollow treadmill of work. The critique of work even seems zeitgeisty—especially in young, political milieus that question unsustainable, neoliberal societal trajectories in general.[71] Carlsson (2015) sees a "growing minority of people" who try and engage in different practices to support themselves and make meaningful contributions to society; Frayne (2015) describes the practical refusal of work by people who wish to live more autonomous lives. Also in average society, the discontent with work is no marginal phenomenon (Cederström & Fleming, 2012; Paulsen, 2013, 2015); 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, 2015). Resistance to work also is historically nothing new and has resurfaced time and again, apparently such as today (Weeks, 2011).

Taken together, the attitudes towards work are ambivalent; it is impossible to discern a clear trend between the tendencies of both the strengthening of the work ethic and its weakening, or which outweighs the other.[72] But regardless whether work is considered inviolable or not: in a ***work-centred culture*** it is *normal* to (seek) work, it is still constructed as main source of income, belonging, and rights (Frayne, 2015), and so commonsensical that it seems extremely impractical to question it. It continues to be normalised through socialisation and schooling that teach (time)discipline, the moral viciousness of laziness, and early rising, industry, and efficiency as laudable and vital for professional success in the labour market as central purpose in life. Forgotten is the history of the lengthy 'educational' process, tenacious resistance and "far-reaching conflict" to keep traditional ways of life against the social order of industrial society (Thompson, 1967; Weber, 1992), and commonly un-

70 The logic of ascent in the career concept is fittingly conducive to growth, transnational corporations and large-scale structures when ascending to the big players is strived after while the local is found unworthy. Moreover, it demands unquestioned acceptance of the status-quo and to refrain from critical thinking, which has been described as "functional stupidity" (Alvesson & Spicer, 2012).

71 Such as the Berlin-based Centre for Career Refusal (http://hausbartleby.org/) that regularly attracts public attention.

72 For example, there is evidence that under conditions of precarity the working morale, the attraction of 'normal' employment, or the condemnation for recipients of unemployment benefits are increasing while solidarity considerably diminishes (Dörre, 2014a). On the other hand, others see potential, if properly mobilised, in this growing 'post-industrial proletariat' or 'nonclass' of systematically outcasted, outburned and disillusioned to deliberately, collectively exit the world of work (Gorz, 2009; Gronemeyer, 2012), which is supported by findings that the diagnosis of burnout fosters criticism of the 'system' and reconsideration of one's personal attachment to work (Graefe, 2014), or those recurring examples of initiatives, protests and movements from within the ranks of the precarious who demand an entirely different societal arrangement beyond work (Weeks, 2011).

known is that labour markets, time measurement or general (un)employment are clearly culture-specific and nothing natural or inevitable.[73]

Consequently, people seem limited in their imagination of alternatives; the prospect of 'losing' jobs usually causes heartfelt fear. For a work society that no longer knows "of those other higher, 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).[74] Although cultures are not static and 'normal' a variable category (Frayne, 2015), and new circumstances and narratives of a new generation may be able to break a fragile, anachronistic work ethic and wage relation (Weeks, 2011), presently it seems true that "instead of championing autonomy, we fear it" (Paulsen, 2013).

Another fundamental constraint is, not unexpectedly, the calculable strong resistance of presently powerful ***political and economic interests and actors***, including ***trade unions***. On the part of 'the economy', the wage relation based on the commodity labour is an essential functional feature of the industrial-capitalist system, and the exaltation of work remains its fundamental ideological foundation and social ethic (Weber, 1992; Weeks, 2011). Questioning/changing this arrangement questions/ changes the system as a whole, its entirely different horizons and guiding principles,[75] which secures the opposition of corporations, average businesses, and their respective beneficiaries who all profit massively from the status-quo (Sanne, 2005).

Also the modern welfare state has a vital interest in work: both the revenues and the growth it generates contribute to the stable financing of social security systems without the need for radical redistribution invoking social conflicts (Paech, 2012). Work is moreover the „institution around which our most oppressive power structures are constructed" (Paulsen, 2013), a convenient instrument of domination and control that structures and disciplines society, and "renders populations at once productive and governable" (Weeks, 2011; Gorz, 1982; Lafargue, 2014).[76] Specifically the dominant

73 Awareness of this history may have implications: as throughout history until not long ago production occurred in irregular, undisciplined ways and times with periods of passionate laziness in between, characteristic of Weber's traditional way of life oriented to contentment and enjoyment, Simon (1992) suggests that in order to change society towards sustainability, no "new human being" with a fundamental change in values is needed, but on the contrary the pre-industrious "old human" with her celebrations and holidays must be brought back, and old virtues like leisure or Weber's traditional, artisan values be asserted and appreciated again.

74 Analogous to the problems of a growth society without growth (Latouche, 2010).

75 Guiding principles reinforced in the present economy are the unlimited expansion of production and productivity, not their intentional shrinking, more competitiveness not the abolition of competition as organising principle, more profits not their limitation and redistribution, a general re-industrialisation by means of more automation and digitalisation, not the introduction of taxes on resources and machines and extensive de-industrialisation, more commodification and according economic growth potential not purposeful de-commodification, more global free markets not the decentralised direct-democratic control over production; more artificial scarcity by means of private property not the enhancement of the commons; increases in working hours not their reduction and refusal; in short: a logic that could not be more fundamentally opposed.

76 Specifically precarity and existential insecurity function clearly as instruments of control and domination, and as such thoroughly disciplining (Dörre, 2014a, cf. footnote 72; Weeks, 2011).

neoliberal ideology, its condemnation of laziness and idealisation of 'hardworking people' has intensified the "moral fortification of work", and accordingly the latest neoliberal/austerity reforms have focussed on job creation and the relentless activation for the labour market, effectively "enforcing work (...) as a key function of the state" (Frayne, 2015).

Even organised labour has historically been accused of cooptation, when in the 19th century a labour movement that wanted to abolish the wage relation became one that struggled for its universalisation (Lessenich, 2014).[77] Accepting its core premises, the working class has (literally) become a collaborator of the industrial-capitalist system, employer and employee structural accomplices in earning money regardless *what* is being produced (Gorz, 2009, 1982). Since the 20th century, unions have primarily fought for higher wages as means of consumption with the general aim of economic growth (Niedermoser, 2012); an interest over time narrowing down to the amelioration of conditions and incomes for core workers in productive sectors and big firms in Northern countries within the confines of the capitalist division of labour (Carlsson, 2015) and the consensus of industrial relations (an institutionalised class struggle that Illich (1980) calls a mere "ritual").[78]

Overall, the dominant economic,[79] state, and trade union interests and actors are not only unsupportive*,* but likely to resist considerably if the proposed alternatives were to become serious: they all strive for *more* work and economic expansion, see industrialism not as a problem but as a solution to many problems, share a productivist ideology and structurally conservative industrial values, and secure their position of power through increased dependency on work. They are open to green/climate jobs within a green economy, but will oppose the cases where 'win-win' is not an option, and defend work at all costs. To say the least, there is an unavoidable conflict of interest (Schmelzer & Passadakis, 2011; Kallis, 2011).

77 Following the historically highly interesting complaint of Lafargue (2014), the workers of the 19th century had adopted the bourgeois work ethic so thoroughly that they even found it revolutionary in 1848 to demand a 'right to work'. According to Lafargue, this "aberration" of an unconditional "love for work", "religion", or "frantic work-addiction" crucially served ruling bourgeois interests while undermining workers' autonomy and dignity.

78 Of course, unions are greatly diverse, even internally, and especially in a North-South perspective; one should therefore be cautious with general assertions, but the described tendency does hold true for the big, influential trade unions in the North (Räthzel & Uzzell, 2011, 2012). There are others that have served as examples of being extraordinarily progressive (Burgmann & Burgmann, 1998), or those genuinely emancipatory ones, demanding a reduction of work, selective degrowth of destructive sectors, general postwork ideas, economic democracy, or a global solidarity economy, however, those are usually small and marginal (Barca, 2015; Gorz, 2009; Weeks, 2011; Niedermoser, 2012). Moreover, in the context of nascent decentralised, practical, direct democratic postwork projects and small green enterprises, there is usually no need for traditional large-scale union organisation (Carlsson, 2015). Still, unions remain important, at least theoretically: not only would worksharing schemes profit from union participation, unions also have a broad social base and high mobilisation potential, access to formal politics, and could act as mediators in difficult transition processes.

79 However, there are also potential allies among economic actors, namely those regionally oriented small businesses, manufacturers, producers and artisans that are not very competitive but provide basic local goods and services and would benefit from re-localised economies, inner-city, regional and rural development.

6 Conclusions

Let us recall Lagerlöf's tale of two entirely different worlds, ways of life and ways of thinking colliding in Europe's North at the end of the 19th century. After some few centuries and the colonisation of the entire globe, it has become clear that industrial society and its way of life built on work is utterly unsustainable. But it is also merely one possible (or rather impossible) way of life; numerous others have always existed, and we decide today how—and if—we will live in the future.

I have argued that it is modern-day work, as central societal institution and "the glue that holds the system together" (Weeks, 2011), that is inherently unsustainable, and accordingly that a change of work in its organisation and conception is key for an effective and desirable transformation of our way of life according to criteria of socio-ecological sustainability. Against the backdrop of de-growth, I have supported my thesis and elaborated its implications by discussing, first, the historic novelty of work and industrial time contingent upon a specific morality, and by analysing the harmful, destructive impacts of work and its overall socio-ecological unsustainability. Second, I suggested and debated a consistent set of possible alternatives of organising and conceptualising productive activity, taken together a 'postwork way of life' and very different world from today's world of work. Third, I identified and discussed the conditions and constraints that may support or impede change: Sustainable postwork alternatives already exist, are meaningful and can be genuinely desirable. A critical public debate of work and the social order it implies has already started and is unlikely to end. Specifically among younger people, signs of disaffection and changing attitudes spread; broader cultural change favouring sustainable, postwork ways of life may thus arrive with generational change. On the other hand, barriers in mind to rethinking work and industrial society can be found many, specifically under present structural conditions work remains naturalised and discipline high. The powerful profiteers and collaborators of industrialism are largely useless as allies and in clear opposition to any proposals of a post-industrial society based on an entirely new social contract and a different mode of societal wealth distribution; work, productivism, and growth as ideology and general orientation persist.

As unpleasant as this may seem, however, this is precisely the battlefield of sustainability. General sustainability constraints are closely intertwined with those regarding work; the forces that adhere to work and growth as their common vested interest uphold the practices causing limitless exploitation and destruction, and they are unlikely to change course out of enlightened goodwill (Sanne, 2005). It has been part of the broad, depoliticised consensus of unsustainability (Blühdorn, 2009) to avoid this unavoidable conflict of interest—to create a sustainable society it is therefore necessary to face this conflict and no longer accept false compromises of 'green jobs' and sustainable

development. The modern industrial way of life is clearly at odds with notions of a just and responsible society and the continued existence of life on Earth, and this fundamental conflict will not disappear through ignoring it.[80]

Crucial is therefore a common desire for change and collective self-limitation, and significant mobilisation to that end, not only concerning work or postwork, but the foundations of life overall. With UBI-advocates, career refusers, degrowth scholars and climate activists around the world there is already certain potential for such mobilisation, and specifically under conditions of aggravating climate change, ecological destruction, and social injustice, there may be more openness to finding new, sustainable ways of life beyond narrow technological fixes (Hayden & Shandra, 2009). Moreover, much more could be possible if more people had the freedom to put their time, energy, intelligence and creativity in working out such solutions, and in those many more opportunities that stand to be gained, rather than in labour markets and the "everyday practice of disaster" (Gronemeyer, 2012).

Among numerous interesting opportunities for future research, I would highlight the following: postwork implications for education; critical interventions in current, largely uncritical debates about the large-scale, top-down re-industrialisation project of the so-called 'fourth industrial revolution'; or historical and/or decolonial studies of the rich, long forgotten or unknown vocabulary for the many different activities, practices, experiences and according ways of life beyond the generalising, abstract term 'work'.[81]

Besides analysing the connections between modern-day work and (un)sustainability, and advancing an understanding of the politics of overcoming work, among my aims counted to contribute to both sustainability science and degrowth: although sustainable consumption is an important topic in sustainability science, the other side of the same coin, production or work, has largely been absent. I have thus both introduced the discussion of work into sustainability science, and started to elaborate on this issue specifically with regard to its ecological aspects, which to my knowledge has not been done qualitatively and comprehensively in that way. Moreover, I contributed to repoliticising and reinvigorating sustainability (Asara et al., 2015) by showing how sustainability science could gain from including degrowth thought. I have further advanced degrowth concepts by pointing to the relevance

80 There is one particular aspect that appears helpful in this otherwise dire situation: the present order is unsustainable in the literal sense that it is impossible to be sustained in the long run, and it was Weber (1992) 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 *must* be the case soon to avert uncontrollable climate change (McGlade & Ekins, 2015). Whether this will happen in time is uncertain, but either way, the mode of production of the 21st century will be very different from the one Weber had in mind. Similar arguments, stressing the fundamental dependence of capitalism and industrial growth on their specific fossil energetic base, are made by Malm (2013) or Haberl et al. (2009).

81 However, at this point in history it may also be the case that not more research is needed, but rather the collective effort of researchers to contribute meaningfully to societal debates of change, to feed narratives of sustainability, and to engage in "public translation" (Gorz, cited in Frayne, 2015) of complicated but important scientific analyses.

of a thorough critique of work, which needs to be included more explicitly and systematically in any critique of growth that otherwise appears inconsistent.[82] Mostly I hope to have shown how much could be gained from the freedom to choose a life not entirely determined by work, and to have sparked the imagination of a diversity of sustainable, more desirable ways of life.

82 In that regard, more clarity on the historical development of work, which influences its definition, would be helpful for degrowth, as well as to refrain from promoting the in many respects very problematic idea of a job guarantee (e.g., Kallis et al., 2015).

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Appendix

Sustainability, ecocentrism, and degrowth

Sustainable development as anthropocentric notion of sustainability seeks to sustain and universalise a certain hegemonic western idea of human welfare explicitly based on economic growth, normalising the wasteful, destructive 'needs' and lifestyles of the comparably small share of the human population living in industrialised countries, and advancing the instrumentalisation, economic valuation, and exploitation of the biosphere (as resource, service-provider, capital). Underlying is a sustainability conception that asserts equal value to three distinct 'pillars'; a fictitious human 'social'[83] sphere, an abstract, isolated economy, and a nonhuman sphere comprising the entire diversity of life and its very foundations. This notion fails to acknowledge that human societies and economies are as mere subsystems deeply entangled with and fully dependent on their biophysical environment, and accordingly that sustainability is not divisible in certain independent 'dimensions', but a fundamental social condition that is either fulfilled as a whole or not at all (WCED, 1987; Plumwood, 2002; Carton, 2009). For my purposes, I therefore take an ecocentric approach to sustainability (and social theory in general) as a basis.

Ecocentrism is an Earth/ecology-centred orientation towards the world and an ethical and epistemic position that assigns *all* living beings, processes, and constituents of life (individual organisms, populations, species, ecosystems, and the ecosphere) value for their own sake. Moreover, it is "based on an ecologically informed philosophy of *internal relatedness*, according to which all organisms are not simply interrelated with their environment but also *constituted* by those very environmental interrelationships" (Eckersley, 1992), a view consistent with the findings of science. It is thus a prudential failure not to situate humans as ecological beings and an ethical failure not to situate nonhumans ethically and politically (Plumwood, 2002; Smith, 2013). That way, the environmental crisis is interpreted as a fundamental cultural and civilisational crisis (Eckersley, 1992; Plumwood, 2002; Escobar, 2015b; for partly different reasons Latouche, 2010, 2001), which requires 'humankind'[84] to reconsider its place in the world, either as separated and superior, or as equal,

83 The category 'social' has rightly been criticised for its singular focus on humans or inter-human affairs, ontologically separate and often defined against the non-human (Haraway, 2006), although the word principally denotes 'relatedness, sociality, mutuality, sympathy', and as such nothing exclusively human. However, for lack of a better alternative in the English language and to ensure readability and understanding, I largely use it nevertheless in its anthropocentric meaning despite certain inconsistencies, specifically regarding the distinction 'social – ecological' in RQ1, which is purely artificial and introduced only for analytical purposes.

84 Obviously, there is no such thing as a united humanity, but a great number of different cultures some of which do not and have never perceived themselves in anthropocentric terms.

integral part of the living world (Eisenstein, 2014), the latter evidently forming the basis for the cultivation of respectful and responsible ways of life with greater empathy, humility, and caution regarding the fate of human and other life-forms. This further implicates that humans cannot thrive if the living world around them collapses and large numbers of humans *and* nonhumans are exploited, oppressed and deprived (by a human minority). Ecocentrism therefore ceases to "treat as sharply discontinuous human and non-human interests and ethics" (Plumwood, 2002), and extends the boundaries of moral and ethical consideration, the claims of justice and emancipation to include the whole biotic community, in which human societies are embedded (Eckersley, 2004, 1992).[85]

As such, ecocentrism is consistent with what has been proposed as new ecological paradigm or 'green' approach to social theory (Catton & Dunlap, 1980; Barry, 2007). As to the conjunction with degrowth, ecocentrism is not necessarily endorsed, and even explicitly repudiated by some (Fournier, 2008; Muraca, 2013). However, certain foundational ideas of degrowth clearly correspond to an ecocentric standpoint, such as the recognition that the natural world holds intrinsic value and meaning beyond utility, that there is a fundamental conflict between ecological limits and expanding human systems, and that an absolute reduction of human pressures on the environment is necessary, involving a reconsideration of the 'human scale' (Demaria et al., 2013; Alexander, 2010). Degrowth also cautions against the prevailing economic logic in our valuation of the natural environment and the advancing commodification of all relations among humans and between humans and the natural world (Martínez-Alier et al., 2010; Kallis et al., 2012).

Numerous parallels and points of convergence with both degrowth and ecocentrism can further be found in the concepts and theories of post-development and decolonial epistemologies (Asara et al., 2015; Escobar, 2015b), Buen Vivir (Gudynas, 2015) and Ubuntu (Ramose, 2015), post-extractivism, ecological debt, climate justice and environmental justice (Demaria et al., 2013) extended as ecological justice in its proper sense as interspecies relations of justice (Gudynas, 2015; Plumwood, 2002), further regarding commons, care and reproduction (Escobar, 2015b), conviviality including all life as extended mode of multispecies relations or ecological communities (Smith, 2013), and autonomy, which for Castoriadis involves a "radical change in the representation of the world and of the place of human beings within the world" such that the "representation of the world as the object of increasing mastery or as the backdrop for an anthroposphere" must be abandoned (Castoriadis, cited by Asara et al., 2013; Escobar, 2015b; Eckersley, 1992).

85 Allowing "all entities (including humans) the freedom to unfold in their own way unhindered by the various forms of human domination" even amounts to "emancipation writ large" (Warwick Fox, cited in Eckersley, 1992). To ward off misunderstandings, the recognition that humans possess the right to live and thrive *just as any other species* does not imply absolute non-interference with other life-forms, but the imperative to minimise avoidable harm (Eckersley, 1992).