

Post-growth geographies

Conceptual and thematic cornerstones of this book

Christian Schulz, Bastian Lange, Martina Hülz, Benedikt Schmid

Post-growth: Context and current debates

In the last ten to fifteen years, there has been a rapid increase in the importance of debates held under the headings of degrowth or post-growth, considering the consequences of systemic growth imperatives and possible alternatives to dominant economic practices.

The enhanced significance of such discussions is linked, first, to the so-called ‘economic and financial crisis’ of 2007/2008, which revealed the culmination (Jorberg, 2010) of global crises (the financial, climate, migration, hunger and biodiversity crises) and their mutual interdependencies.

Second, the growth of social inequality, both globally and between and within regions and cities, and the intensified deregulation and financialisation of the economy, e. g. in the property sector, has led to broad media coverage of their causal interrelationships.

Third, new social movements such as Extinction Rebellion, Fridays for Future and associated groups have recently managed to establish a socio-ecological framework for their climate policy demands, the effectiveness of which seems to be only temporarily overshadowed by the Covid-19 pandemic, as demonstrated by current campaigns for the German 2021 federal elections. Indeed, the pandemic is seen as having the potential to accelerate post-growth policy approaches, for instance in the context of regional resilience, shortened supply chains and security of supply (further discussion of this below).

In the aftermath of the 2007/2008 ‘economic and financial crisis’, a number of growth-critical approaches were taken up by international organisa-

tions that had not previously addressed the issue of growth limits. Examples include the European Commission and their strategy paper 'GDP and beyond' (European Commission, 2009) and the Organisation for Economic Co-operation and Development with their 'Better Life Index' (OECD, 2011). These organisations thus started to engage with conventional measurements of economic development and prosperity.

Subsequently, both organisations attempted to link growth management and sustainability goals: the EU in its 'Strategy 2020', using the concept of 'Sustainable Growth' (European Commission, 2010), and the OECD, who adopted the principle of 'Green Growth' (OECD, 2014, 2009). The concept of the 'Green Economy' propagated by the United Nations (UNEP, 2011) has a similar focus. Indeed, among the Sustainable Development Goals (SDGs), which are currently subject to much discussion, SDG 8 calls for the promotion of 'sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all'. This is to be achieved through explicit adherence to GDP growth targets¹ and a development policy that focuses on technology, efficiency and diversification². The aim is that economic growth and environmental degradation should be decoupled by 2030³. Similarly, the 2019 'Green Deal' called for by the new EU Commission also discusses a 'new growth strategy' based on a 'modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use' (European Commission, 2019, 2).

None of these approaches fundamentally question the material growth logic of the dominant economic system. However, they do see it as causing negative social and ecological externalities and, in order to minimise these externalities, are thus in favour of the ecological modernisation of the current production system. Technology is intended to improve efficiency in the

1 Target 1: 'Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries'

2 Target 2: 'Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors'

3 Target 4: 'Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation'

production and use of goods (e. g. smart homes) and, coupled with greater recycling of resources (e. g. the circular economy), is expected to support sustainability and open up new possibilities for economic development and diversification in the field of environmental technology or eco-technology.

However, it is already apparent that such technology-based modernisation approaches are insufficient to address the prevalent ecological and social problems. Indeed, the one-sided focus on improving resource efficiency through technological progress encourages us to assume that current patterns of consumption and behaviour can be maintained in the long term. In this context, Kenis and Lievens (2016, 221) speak of the 'royal road to saving capitalism'. Three important points of criticism can be identified here.

First, it has not yet proved possible to decouple economic growth from resource consumption, either globally or at a national level. Thus, despite all the efforts to improve efficiency in the 2000s and 2010s, resource consumption has continued to rise with economic output (Giljum & Lutter, 2015). At best, it is possible to recognise a degree of *relative* decoupling whereby economic output has risen somewhat faster than resource requirements. However, in absolute terms, consumption of materials and energy has continued to grow steadily (Jackson, 2009, Haberl et al., 2020, Paech, 2010).

Second, this lack of decoupling can only be partially attributed to demographic trends (e. g. global population growth) and socio-economic developments (the emergence of a high-consumption 'middle class' in emerging economies). It is also due to the fact that improved efficiency is associated with financial savings (e. g. reduced heating costs), which then lead to additional purchases (e. g. energy-intensive electrical equipment) or activities (e. g. increased air travel). In terms of resource ecology, this is counterproductive and produces a 'rebound effect' (also known as the 'Jevons paradox'; W.S. Jevons, 1865). In view of recent increases in material intensity in certain industries, there has even been talk of 'recoupling' (Hickel & Kallis, 2019).

Third, 'smart' technologies and the 'Internet of Things' are viewed with increasing scepticism (Kerschner et al., 2018), not only in terms of data protection or the potential vulnerability of such technologies ('critical' infrastructures), but also from a resource perspective. The introduction of high-tech solutions, e. g. in building technology, always involves new materials and energy requirements, which in some cases outweigh the desired efficiency gains or even lead to new environmental and resource problems (as with the example of rare earths).

Post-growth as an emancipatory critique of growth promises

In addition to asking whether economic growth can be decoupled from resource consumption, feminist and postcolonial critiques problematise growth, measured as gross domestic product (GDP), as a political economy objective in itself. GDP fails to capture significant and fundamental elements of social relations – such as private care work, household labour, free exchange and production for personal use. Focusing economic policy on growth therefore provides an incentive to repress such social relations in favour of formal markets. This not only limits what is recognised as work and the economy (Gibson-Graham & Dombroski, 2020), but also leads to the undermining and destabilisation of traditional communities and economic activities under the pretext of (economic) progress (Kothari et al., 2019).

Discussions about the limits of economic growth and resulting prosperity and satisfaction are conducted primarily by those who have already achieved a certain level of material prosperity, a position from which it is hardly possible to achieve happiness and fulfilment through further material growth. It is therefore extremely important to problematise global relations of exploitation (Brand & Wissen, 2021), questions of responsibility and distributive justice, for instance in relation to the reduction of greenhouse gas emissions.

Justified doubts about the technology and market focus of approaches favoured by the political sphere have fed a vibrant post-growth debate that is seeking options for fundamental change (see the overview in Schmelzer & Vetter, 2019). This discussion presents the idea of sufficiency as a counterpoint to one-sided, strongly growth-oriented efficiency approaches (Schneidewind & Zahrnt, 2014). However, more recent debates (Kerschner et al., 2018, Pansera et al., 2019, Lange and Santarius, 2020) also include consideration of whether and how technological developments (under the keywords of ‘digitalisation’ and ‘automation’) can be positively managed in social and ecological terms.

Post-growth researchers discuss not only what and how we consume but also the ways in which we organise production, how much time we devote to paid work, and how we measure the importance of non-market and non-GDP-relevant economic activities (home care, neighbourhood help and voluntary work). Behind this is the larger issue of the purpose and focus of our economic system (profit maximisation versus a focus on the com-

mon good) and the attempt to overcome material growth imperatives – for example in the sense of the *décroissance*/degrowth approach (Latouche, 2006, Kallis, 2018) or the search for ‘prosperity without growth’ (Jackson, 2009, Lange, 2018).

Post-growth in spatial and planning sciences

Against the backdrop of the lively debates on post-growth approaches that are currently being conducted primarily in civil society forums and organisations, spatial and planning sciences are also beginning to pay attention to the topic (Zademach & Hillebrand, 2013, Krueger et al., 2017, Schmid, 2019, Schulz & Bailey, 2014, Lamker & Schulze Dieckhoff, 2019, Demaria et al., 2019, Lange, 2017). In some cases this involves drawing on approaches which are not explicitly post-growth but are critical of capitalism, such as the concept of diverse economies (Gibson-Graham, 2008).

It seems surprising that spatial sciences and planning have not become involved in the debate sooner. After all, it is some time since the spatial sciences pointed out the limits to growth and there has been extensive research and many publications on the negative consequences of global resource consumption from within the discipline. In turn, spatial planning has traditionally addressed the scarcity of land, landscapes, habitats and resources and is concerned with channelling or limiting land consumption.

However, most prevailing concepts, models and theoretical approaches in the spatial sciences continue to draw on an unquestioned growth paradigm. For example, common indicators and models in regional development are based on the assumption that quantitative growth (e. g. of labour markets, population, company turnover and infrastructure investment) is the most important driver of any positive development. The negative externalities of this development paradigm – such as environmental and health impacts – are problematised and efforts are made to reduce and manage such impacts, but there is generally little fundamental questioning of the purpose and desirability of continuous growth.

Paradoxically, this also applies to recent research on shrinking cities and on demographic change in rural areas. Here the focus tends to be on the problems and possible ways of returning to growth paths rather than on the opportunities presented by change.

To ensure there is no misunderstanding here: post-growth is not synonymous with shrinkage (e. g. of the population) or recession (e. g. of economic output). Rather, it is about abandoning the illusory notion that technological innovations and improved efficiency can ensure the long-term global growth of current production systems and consumption patterns, thereby improving living conditions for all.

Furthermore, post-growth does not mean that material growth should no longer be possible. Most post-growth approaches rather assume that spatial differentiation is necessary (e. g. pro-poor growth in economically disadvantaged regions). In essence, it is about adjusting understandings of growth and re-evaluating it, examining the long-term meaningfulness of certain developments and, if necessary, looking for possible alternatives within free social conditions. Meaningfulness refers here not only to the environment but also to individual and social needs, i.e. a focus on the common good rather than individual economic profitability.

In this context, a broader understanding of 'economy' is also relevant. This includes not only formally constituted enterprises operating according to market principles, but also forms of the social and solidarity economy, private pursuits (e. g. home care) and community activities (e. g. neighbourhood help, swap shops). This is by no means to say that all forms of human activity should be assessed and quantified according to market logics. Rather, authors like Seidl and Zahrnt (2019) argue that the creation of social prosperity should be recognised as being just as valuable as GDP-relevant activities (see the article by Brückner in this volume).

The spatial sciences, with their established interest in sustainability issues, are particularly called upon to critically engage with the current debates on green growth, the circular economy, smart cities and the sharing economy. At the same time, more systematic engagement with alternative forms of economic activity is urgently needed in order to understand such approaches, some of which remain ephemeral while others are clearly gaining in relevance (e. g. Community Supported Agriculture). This will then allow their transformative potential to be evaluated.

Concepts for a geographical perspective on post-growth processes

Common spatial concepts such as scale, network, territory and place, along with other terms such as terrain, landscape and border, have a long tradition in spatial science research. The former are cited by various authors as fundamental concepts of space, as they each stand for different logics of how space is produced in social practice and can be examined (Jessop, Brenner & Jones, 2008). The way in which space and spatial relations may be socially produced (Lefebvre) and grasped is also of great importance for transformation research (see the article by Schmid in this volume).

A recurring topic in many of the empirical articles in this volume is, for example, the question of the scaling of civil society initiatives. This reflects the central importance of issues of scaling in current debates on post-growth (Buch-Hansen, 2018). However, understandings of scaling vary considerably and include range, relevance, professionalisation or institutionalisation. Attempts to overcome structural distinctions between the local and global (Marston, Jones & Woodward, 2005, Massey, 2005) play a role here, as does distinguishing between bottom-up and top-down strategies of social change (Gallo-Cruz, 2017).

Inspired by non-hierarchical, rhizomatic and horizontal ontologies – as proposed, for example, by practice theory or actor-network approaches – change is increasingly imagined and conceived as the shifting of diverse practices in more than human contexts (Joutsenvirta, 2016, Lange & Bürkner, 2018, Rodríguez-Giralt, Marrero-Guillamón & Milstein, 2018, Schmid & Smith, 2020).

Similarly, governance and planning-related contributions raise questions about the reference areas, spaces of action and territoriality of post-growth processes (see the article by Bürkner/Lange in this volume). While spatial science approaches repeatedly point out the constructed nature of territorial entities (Agnew, 1994, Cox, 2003), administrative and planning territories are usually presented as one way (among several) of describing ‘reality’ for transformative policies.

With the help of more recent urban research approaches in urban geography and cultural studies, it is possible to identify subject-oriented and scale-critical perspectives as an extension of transition theory approaches. The subjectively configured spatial frame of reference of actors and its rele-

vance for actors' roles, functions and expectations in post-growth processes are examined more closely by Smith, Voß and Grin (2010) and Coenen, Benneworth and Truffer (2012) as transition geographies (see the articles by Lamker/Schulze Dieckhoff and Kettner/Mössner in this volume).

At the same time, debates on digitalisation have detected the increasing dissolution of spatial boundaries. However, it is easy to overlook the fact that social practice is bound to specific places and materialities even in the digital age. The multifaceted spatial relations and translocal linkages of online and offline communities therefore require approaches that capture spatial interconnections and links to places of social practice.

Developments around open workshops (Lange, 2017) and the maker movement (Davies, 2017) are a case in point (see the article by Kurzeja/Thiele/Klagge in this volume). While supra-regional organisations (such as the *Verbund Offener Werkstätten* [Association of Open Workshops]) and online platforms play an important role in the diffusion of open workshops, the actual places themselves are charged with specific meanings, shaped by communities and temporary, so that they cannot easily be expanded or replicated (scaled). Thus, interaction between different forms of space – e. g. scale, place and network – is also an important prerequisite for understanding transformation processes and potentials (Schmid, 2020).

Concrete examples of post-growth economic activities, consumption, planning and construction can thus neither be considered in isolation from superordinate levels of action and policy nor detached from their relational connections to other practices and actors, be they regional or more extensive. It is this interplay of levels, scopes and relationships that creates new geographies of post-growth. We refer here to geographies in the plural in order to include not only the structural and thematic diversity of geographical articulations of post-growth, but also the current dynamics and volatility of emergent patterns. Considering and reflecting upon these developments provides both opportunities and challenges and requires the constant questioning of established models and explanatory approaches. It is to be hoped that the present and future findings of spatial post-growth research will soon be reflected in textbooks and policy recommendations. This book aims to make a contribution here (Oekom, 2020, ARL, 2021a, 2021b).

Challenges for the spatial sciences

From a spatial science perspective, many of the post-growth phenomena are clearly highly relevant and require intensive scientific monitoring so that we can learn from the early phases of the initiatives and draw conclusions for future projects and policy advice (see below).

While, for example, alternative energy concepts (Klagge & Meister, 2018) and aspects of communal urban farming (Rosol, 2018) have already received great attention, the empirical study of other approaches oriented towards post-growth is still in its infancy. The following topics serve as examples.

Land

Land ownership and land policy are not new topics for the spatial sciences or spatial planning (see Hertweck, 2020). However, current debates on rising property prices and housing shortages are bringing the issue of land ownership back into the spotlight (Difu & vhw, 2017). There are a number of links here to the post-growth debate such as the commodification of public land, the question of re-municipalising formerly privatised property (e. g. for public welfare housing) and – closely related to this – the issue of democratic participation in decision-making about the socially desirable use of land (Hesse, 2018).

Housing

Concerns about a lack of control over settlement development in times of progressive privatisation and financialisation are closely linked to the question of what kinds of growth are desired (e. g. what kind of housing for whom). In addition to social factors and design aspects (including sustainable building standards), this also involves ways of enabling and promoting types of housing that offer space for post-growth lifestyles and modes of production (Jarvis, 2017, Nelson & Schneider, 2019). One option is, for example, to combine (comparatively) small private living spaces with spaces for communal use (office spaces, workshops, play and sports areas and gardens). Also of relevance are collective forms of planning, investment and housing provision (e. g. cooperatives) (see the article by Wohlgemuth/Pütz in this volume).

Work

Aspects of settlement design are in turn closely linked to the development of new forms of urban production. In addition to urban farming, this includes open workshops and makerspaces (Lange & Bürkner, 2018), forms of communal or temporary office use (co-working spaces – increasingly in combination with childcare, housing and catering services) and a variety of other types of cooperative and shared functions.

As well as the issue of new places of work, the post-growth debate also raises the far more fundamental question of the role of work (Grenzdörffer, 2021, McKinnon, 2020, Seidl & Zahrnt, 2019). This is, first, about the general importance of work for social well-being, with a particular focus on improving (formal) recognition of care work, which has mostly gone unpaid and unnoticed by economic statistics. Second, discussion focuses on how the temporal balance between gainful employment and other forms of socially and personally important activities can be changed on an individual basis – not least in order to facilitate more resource-efficient lifestyles with time for gardening, handicrafts/repairing, food preparation, etc.

Sharing

Not every form of the sharing economy is per se post-growth-oriented or more sustainable than conventional forms of use. On the contrary, a whole range of commercial services run under this label only involve sharing on a superficial level or in part, e. g. large car sharing providers or the online accommodation marketplace Airbnb. Such services are increasingly subject to critical scrutiny (Belk, 2017, Martin, 2016). However, sharing practices that focus on conserving resources and the community – so-called ‘transformative sharing’ – provide important impulses for post-growth economies (Schmid, 2020).

Agriculture

Alongside the focus on changing consumption patterns and a return to regional food production, new forms of active or passive participation are also particularly important, for example contributing financial resources or labour in the context of community supported agriculture (CSA). Social science research is interested not only in the ecological aspects of land conversion and spatial patterns of changed supply relationships, but also in the socio-economic questions of cohesion, participation and co-production.

Rural areas

CSA initiatives are not only found in the environs of urban agglomerations but are increasingly shaping rural areas as well. Here, too, the focus is on adaptability, security of supply and social cohesion. In addition to farming, there are a wide variety of growth-critical approaches in rural areas (e. g. neighbourhood shops, co-working spaces, swap shops, local currencies, energy cooperatives) that are often brought together under the umbrella of Transition Town initiatives.

Transdisciplinary perspectives on post-growth

All of the thematic areas discussed above involve new forms of social relations and specific forms of organisation. The latter often go beyond conventional understandings of private-sector enterprises or public institutions and include diverse types of hybrid organisations. These include constellations of economic, public and civil society actors, such as those that have emerged in fair trade initiatives or in the decentralised production of renewable energies (Dufays & Huybrechts, 2016). Social enterprises or '(eco-)social enterprises' (Defourny, 2014, Johanisova & Franková, 2017) are examples of hybrid organisations that combine economic, social and ecological concerns in very different ways. So far, they have only received marginal attention from the spatial sciences (e. g. economic geography).

Post-growth can be taken into account more or less explicitly at all levels of planning. Especially in urban planning and architecture, there are numerous examples of approaches that are creating design and infrastructural conditions intended to promote or enable post-growth activities (see the articles by Kettner/Mössner and Lamker/Schulze Dieckhoff in this volume). Including particular design features in residential and commercial buildings or public areas can proactively create spaces for sharing (e. g. co-working, community gardens) and necessary infrastructures (e. g. workshops, car/bike sharing). In this context, reference should also be made to the idea labs of the ARL's Post-Growth Society Initiative (*Initiative Postwachstums-gesellschaft*), which experimentally engage with approaches to post-growth planning (Schulze Dieckhoff & Lamker, 2017).

Last but not least, we should also consider the question of how intensively the spatial sciences want to participate in these political and social debates.

There is a large gap between, on the one hand, a position of defensive observation, which addresses post-growth phenomena primarily from empirical or conceptual interest, and, on the other hand, an explicitly activist role with socially engaged researchers who see themselves as part of a movement (Participatory Action Research, see Kindon, Pain & Kesby, 2007).

It seems clear that examining the topics presented here from a spatial science perspective is relevant and necessary. This edited volume provides examples that demonstrate how the spatial sciences can continue to serve as descriptive and analytical research disciplines and also develop a role as a body for action and implementation in planning practice. In both cases, far-reaching imperatives for action emerge in the context of a post-growth analysis of society.

A valuable contribution could also be made to the increasingly dynamic debate on fundamental economies (Foundational Economy Collective, 2018). Starting from a critique of the neo-liberal state's withdrawal from public services and welfare, the concept has identified a set of foundational infrastructures and services that is considered indispensable for societal well-being (public utilities, education, health services and care). The authors argue that these services and infrastructures should be distributed and accessible to all members of a society with the same high-quality standards and reliability. They should be counted as citizen rights and not subject to privatisation, speculation or profit-oriented market dynamics. Rather, they should become (or remain) public services financed by the state and decided upon in democratic, transparent and inclusive decision-making processes that serve the common good (Nygaard & Hansen, 2021). This pledge resonates with recent geographical contributions to the role of infrastructures in the socio-ecological transition (Moss & Marvin, 2016; Becker, Naumann & Moss, 2016).

Post-growth in times of pandemic

Both the importance of foundational infrastructures and services for societal well-being and their vulnerability in a growth-based market economy have become very clear in the recent months which have been greatly influenced by Covid-19. In lieu of a detailed analysis, many of which have been offered by scholars across the social sciences (see for example the Special Issue 'The Geography of the COVID-19 Pandemic' of the *Tijdschrift voor Economische*

en Sociale Geografie, KNAG, 2020), we want to highlight a number of observations that are particularly important from a post-growth perspective.

The pandemic has impressively demonstrated the vulnerability of economic relations that depend on highly distributed global value chains and the continuous intensification of market exchange. Even in the absence of real demand – as mass events, holiday travel and many indoor and outdoor leisure activities had to be put on hold – the economy needed to be kept going at all costs. This led to balancing the health of ‘the economy’ against the health of people (e. g. by failing to significantly restrict contacts in offices and factories or by subsidising the automobile industry instead of investing in better public transportation). Higher demands in other areas, in particular the hospital, medical and healthcare sector, in turn, led to the overload and breakdown of basic services which had been streamlined towards market efficiency. Key workers, who were most affected by the pandemic and at the same time crucial for the maintenance of basic supply, received symbolic appreciation (clapping for care workers) but neither monetary nor professional improvement of their structural position.

States, meanwhile, mobilised impressive financial, administrative and discursive resources and implemented a wide range of measures – ranging from comprehensive restrictions on public and private life to massive vaccination programmes. This raises the question of whether this astonishingly rapid execution of power could not be transferred to more diffuse but no less dangerous crises, such as climate change or species extinction? From a post-growth perspective, there needs to be (finally) recognition of the scientifically proven urgency of ecological crises, leading to a decisive redirection of political and economic processes. At the same time, the forces of inertia have been amply demonstrated in the massive subsidies awarded to carbon-intensive industries such as airlines and the automobile sector. In the face of intensifying climate crises, many states have squandered a unique opportunity to ‘build back better’.

In sum, Covid-19 has deepened existing fault lines and socio-ecological challenges, but also made them more visible. Alternative discourses and practices that emancipatory groups and movements were already implementing before the pandemic have acquired new meanings and dynamism. Amidst attempts to get back to ‘normal’, the viability and urgency of alternative forms of economic activity and notions of prosperity have gained traction in social debates. New practices that address social and ecological chal-

allenges have emerged at a speed that would have been unimaginable without the rupture caused by Covid-19. These range from neighbourhood initiatives with a wide variety of people offering help to others, especially those in ‘risk groups’, to pop-up bike lanes in large cities that would otherwise have taken years to implement.

The pandemic has intensified structural issues but also given impetus to certain discussions, some of which have long been part of the post-growth debate. These include the measurement of prosperity by GDP, the growth-oriented incentives of tax and interest rate policy, the limits of markets as an allocation mechanism, the (re)evaluation of waged labour and non-waged labour, and the purposes of business activities. Covid-19 has magnified both the structural inequalities within and across regions and countries, and the severe limitations of existing instruments and approaches intended to address them. Post-growth research therefore has to (continue to) develop alternative visions and discourses that address the roots of socio-environmental crises – of which the current pandemic is but one dimension.

Objectives of the publication

Against this backdrop, the key concern of this book is to provide answers to the following questions:

1. How does a spatial perspective contribute to an understanding of post-growth economies?
2. In which relations of place, network connections and positionings do practices and processes of the post-growth economy become visible?
3. How can established terms and concepts of spatial and planning sciences be fruitfully operationalised for post-growth research?
4. How do the possibilities and problems of institutionalising and scaling post-growth organisations and practices appear from a spatial science perspective?
5. Which consequences and design options emerge for spatial and urban planning?
6. Which explanations of social change that include a spatial perspective prove analytically helpful and applicable to practice?

These questions can only be answered through critical consideration of the established terms and concepts of the spatial and planning sciences. This includes identifying the latent influences of growth-oriented regional and spatial analysis and, if necessary, providing modified heuristics.

For example, our analytical understanding of regional development processes is generally inextricably linked to conventional methods of measuring or evaluating them. Despite long-standing and manifold criticism of the use of purely quantitative monetary indicators (e. g. GDP, productivity, direct investment, expenditure on research and development), these indicators continue to dominate scientific analysis and political debates. Alternative approaches to assessing sustainability, life satisfaction and the extent of social cohesion/solidarity already exist. However, these approaches – not least because of their greater complexity – have so far been confined to the margins of academia.

Our prevailing understanding of innovation is similarly one-sided or narrow. Although the concept of social innovation has found its way into spatial science research in recent years (Avelino et al., 2017), most work remains linked to a more technical-organisational understanding of innovation. The focus tends to be primarily on researching the spatial effects of incremental improvements in production processes (e. g. efficiency increases through new manufacturing processes, the optimisation of logistical processes) rather than on the consequences of disruptive innovations or inventions, such as the so-called Internet of Things. However, an expanded spatially situated understanding of innovation would allow us to additionally capture societal change and related innovations in the areas of, for example, political participation, local communities, models of working hours, lifestyles and consumption patterns (see Lange/Bürkner and Tschumi/Winiger/Wirth et al. in this volume).

Furthermore, not only do the spatial sciences mostly use a narrow concept of the economy, they also take a traditional view of enterprises as central actors. As a rule, enterprises are understood as formally constituted organisations that are subject to the rules of the market and pursue targets related to monetary profitability. Public enterprises (e. g. municipal utilities) or social and solidarity enterprises (e. g. cooperatives and non-profit organisations) are also primarily seen from the perspective of market logic. This understanding of enterprises leaves little room for hybrid or temporary constellations of actors, public welfare-oriented initiatives and other heterodox

ways of organising everyday economic activity, developments to which the post-growth debate attaches particular importance.

Structure of the edited volume

The book is structured around the key questions listed above and the associated disciplinary and interdisciplinary strands of discussion. The questions are addressed in four thematic sections (I-IV) in which the individual articles are grouped. On the one hand, these articles reflect the breadth of current debates in academia and practice and, on the other hand, highlight conceptual and factual problems that have been somewhat neglected in discussion to date.

In the first thematic section ‘Spaces of Perspective’, the articles explore how a spatial perspective can contribute to understandings of post-growth. What are the relations of place, network connections and positionings in which practices and processes of the post-growth economy become visible? What spatial strategies and social innovations underlie such post-growth economic practices and processes?

Section II presents ‘Spaces of Possibility’ and discusses how actors in the field of the post-growth economy assess their environmental, spatial and place relations. How do they deal with the expectations of transition and transformation directed towards them? Which concrete practices, concepts and visions create new geographies of post-growth?

The third thematic section ‘Spaces of Conflict’ addresses selected fields of tension, considering, for example, the global dimension or the North-South dimension of socio-ecological transformation and the role of the financial sector.

Finally, thematic Section IV is dedicated to ‘Spaces of Design’ and considers questions such as: What are the consequences for spatial and settlement planning? What impulses, topics and methodologies should be incorporated in training and teaching? What action is required from spatial development policy? What options does civil society have for intervention and co-design?

The four thematic sections are accompanied by practical examples, interviews and case studies. The intention is to present the specific stories, practices, processes and perceptions of activists and actors directly in their own words. This polyvocality thus includes practitioners as defining promoters

of post-growth geographies – even if they rarely use the term post-growth, their practices nevertheless display concrete links to the movement.

The book aims to provide conceptual stimuli and arouse curiosity about a new thematic field. Rather than presenting conclusive answers, the objective is to trace and synthesise the diversity and potentials of post-growth geographies. Open questions are also identified and hence goals for continued debate are derived. A further emphasis is on questioning familiar ways of thinking and working and initiating new thematic collaborations across disciplines. The concluding interview on the potential role of art and creative experimentation in post-growth spatial development exemplifies this approach. We encourage an open and dynamic process between activist and academic discussions on post-growth. Spatial sciences and planning should contribute here by developing a geographical perspective on post-growth processes, taking a differentiated view of the spatial dimensions of societal, socio-economic and ecological change dynamics. This is particularly called for in the context of current debates on the socio-economic and ecological consequences of the Covid-19 pandemic.

Cited literature

- Agnew, J. (1994). The territorial trap: The geographical assumptions of international relations theory. *Review of International Political Economy*, 1(1), 53–80.
- ARL – Akademie für Raumentwicklung in der Leibniz-Gemeinschaft (Ed.) (2021): *Postwachstum und Raumentwicklung – Denkanstöße für Wissenschaft und Praxis*. Positionspapier aus der ARL 122.
- ARL – Akademie für Raumentwicklung in der Leibniz-Gemeinschaft (Ed.) (2021): Themendossier: *Postwachstum und Raumentwicklung* <https://www.arl-net.de/de/postwachstum> (2021, September 02.).
- Avelino, F., Wittmayer, J. M., Pel, B., Weaver, P., Dumitru, A., Haxeltine, A., Kemp, R., Jørgensen, M. S., Bauler, T., Ruijsink, S., & O’Riordan, T. (2017). Transformative social innovation and (dis)empowerment. *Technological Forecasting and Social Change*, 145, 195–206.
- Becker, S., Naumann, M., & Moss T. (2016). Between coproduction and commons: understanding initiatives to reclaim urban energy provision in Berlin and Hamburg. *Urban Research & Practice*, 10(1), 63–85.

- Belk, R. (2017). Sharing versus pseudo-sharing in Web 2.0. *The Anthropologist*, 18(1), 7–23.
- Brand, U., & Wissen, M. (2021). *Imperial mode of living: Everyday life and the ecological crisis of capitalism*. Verso Books.
- Buch-Hansen, J. (2018). The prerequisites for a degrowth paradigm shift: Insights from critical political economy. *Ecological Economics*, 146, 157–163.
- Coenen, L., Benneworth, P., & Truffer, B. (2012). The geography of transitions. Addressing the hidden spatial dimension of sociotechnical transformations. *Research Policy*, 41(6), 955–967.
- Cox, K. R. (2003). Political geography and the territorial. *Political Geography*, 22(6), 607–610.
- Davies, S. R. (2017). *Hackerspaces: Making the maker movement*. Polity.
- Defourny, J. (2014). From third sector to social enterprise. In J. Defourny, L. Hulgard, & V. Pestoff (Eds.), *Social enterprise and the third sector: Changing European landscapes in a comparative perspective*. Routledge, 17–41.
- Demaria, F., Kallis, G., & Bakker, K. (2019). Geographies of degrowth: Nowtopias, resurgences and the decolonization of imaginaries and places. *Environment and Planning E: Nature and Space*, 2(3), 431–450.
- Difu, & vhw (2017). *Bodenpolitische Agenda 2020-2030. Warum wir für eine nachhaltige und sozial gerechte Stadtentwicklungs- und Wohnungspolitik eine andere Bodenpolitik brauchen*.
- Dufays, F., & Huybrechts, B. (2016). Where do hybrids come from? Entrepreneurial team heterogeneity as an avenue for the emergence of hybrid organizations. *International Small Business Journal*, 34(6), 777–796.
- European Commission (2009). *GDP and beyond. Measuring progress in a changing world. COM (2009) 433 final*.
- European Commission (2010). *Europe 2020. A strategy for smart, sustainable and inclusive growth*.
- European Commission (2019). *The European Green Deal. COM(2019) 640 final 11.12.2019*.
- Foundational Economy Collective (2018). *Foundational economy. The infrastructure of everyday life*. Manchester University Press.
- Gallo-Cruz, S. (2017). The insufficient imagery of top-down, bottom-up in global movements analysis. *Social Movement Studies*, 16(2), 153–168.
- Gibson-Graham, J. K. (2008). Diverse economies: performative practices for 'other worlds'. *Progress in Human Geography*, 32(5), 613–632.

- Gibson-Graham, J. K., & Dombroski, K. (2020). Introduction to the handbook of diverse economies: Inventory as ethical intervention. In J. K. Gibson-Graham, & K. Dombroski (Ed.), *The handbook of diverse economies*. Edward Elgar Publishing, 1–24.
- Giljum, S., & Lutter, S. (2015). Globaler Ressourcenkonsum: Die Welt auf dem Weg in eine Green Economy? *Geographische Rundschau*, 67(5), 10–15.
- Grenzdörffer, S. M. (2021). Transformative perspectives on labour geographies – The role of labour agency in processes of socioecological transformations. *Geography Compass*.
- Haberl, H., Wiedenhofer, D., Virág, D., Kalt, G., Plank, B., Brockway, P., Fishman, T., Hausknost, D., Krausmann, F., Leon-Gruchalski, B., Mayer, A., Pichler, M., Schaffartzik, A., Sousa, T., Streeck, J., & Creutzig, F. (2020). A systematic review of the evidence on decoupling of GDP, resource use and GHG emissions, part II: Synthesizing the insights. *Environmental Research Letters*, 15(6), 065003.
- Hertweck, F. (2018). Hans-Jochen Vogels Projekt eines neuen Eigentumsrechts des städtischen Bodens. *Arch+*, 51(231), 46–53.
- Hertweck, F. (2020). *Architecture on common ground. The question of land: Positions and models*. Lars Müller Publishers.
- Hesse, M. (2018). In Grund und Boden. Wie die Finanzialisierung von Bodenmärkten und Flächennutzung Städte unter Druck setzt. *Arch+*, 51(231), 78–83.
- Hickel, J., & Kallis, G. (2019). Is green growth possible? *New Political Economy*, 25(4), 469–486.
- Jackson, T. (2009). *Prosperity without growth? The transition to a sustainable economy*. Sustainable Development Commission.
- Jarvis, H. (2017). Sharing, togetherness and intentional degrowth. *Progress in Human Geography*, 43(2), 256–275.
- Jessop, B., Brenner, N., & Jones, M. (2008). Theorizing sociospatial relations. *Environment and Planning D: Society and Space*, 26(3), 389–401.
- Jevons, W. S. (1865). *The coal question*. Augustus M. Kelley Publishers.
- Johanisova, N., & Fraňková, E. (2013). Eco-social enterprises in practice and theory. A radical vs. mainstream view. In M. Anastasiadis (Ed.), *ECO-WISE. Social enterprises as sustainable actors: Concepts, performances, impacts*. 1. edition. Europäischer Hochschulverlag, 110–129.

- Jorberg, T. (2010). Finanzmärkte und Aufgaben der Banken. In I. Seidl, & A. Zahrnt (Eds.), *Postwachstumsgesellschaft. Konzepte für die Zukunft*. Metropolis Verlag, 145–153.
- Joutsenvirta, M. (2016). A practice approach to the institutionalization of economic degrowth. *Ecological Economics*, 128, 23–32.
- Kallis, G. (2018). *Degrowth*. Agenda.
- Kenis, A., & Lievens, M. (2016). Greening the economy or economizing the green project? When environmental concerns are turned into a means to save the market. *Review of Radical Political Economics*, 48(2), 217–234.
- Kerschner, C., Wächter, P., Nierling, L., & Ehlers, M.-H. (2018). Degrowth and technology: Towards feasible, viable, appropriate and convivial imaginaries. *Journal of Cleaner Production*, 197(2), 1619–1636.
- Kindon, S., Pain, R., Kesby, M. (2009). Participatory Action Research. In R. Kitchin, & N. Thrift (Eds.), *International Encyclopedia of Human Geography*. Elsevier, 90–95.
- Klagge, B. & Meister, T. (2018). Energy cooperatives in Germany – an example of successful alternative economies? *Local Environment*, 23(7), 697–716.
- KNAG - Royal Dutch Geographical Society (Ed.) (2020): The Geography of the COVID-19 Pandemic. Utrecht. = *Journal of Economic and Human Geography* 111(3).
- Kothari, A., Salleh, A., Escobar, A., Demaria, F., & Acosta, A. (2019). *Pluriverse: A post-development dictionary*. Tulika Book.
- Krueger, R., Schulz, C., & Gibbs, D. C. (2017). Institutionalizing alternative economic spaces? An interpretivist perspective on diverse economies. *Progress in Human Geography*, 42(4), 569–589.
- Lamker, C. & Schulze Dieckhoff, V. (2019). Mit oder gegen den Strom? Postwachstumsplanung in der Fishbowl. *RaumPlanung*, 201(2-2019), 48–54.
- Lange, B. (2017). Offene Werkstätten und Postwachstumsökonomien: kollaborative Orte als Wegbereiter transformativer Wirtschaftsentwicklungen? *Zeitschrift für Wirtschaftsgeographie*, 61(1), 38–55.
- Lange, B., & Bürkner, H.-J. (2018). Open workshops as sites of innovative socio-economic practices: approaching urban post-growth by assemblage theory. *Local Environment*, 23(7), 680–696.
- Lange, S. (2018). *Macroeconomics without growth. Sustainable economies in neo-classical, keynesian and marxian theories*. Metropolis Verlag.
- Lange, S., & Santarius, T. (2020). *Smart green world? Making digitalization work for sustainability*. Routledge.

- Latouche, S. (2006). *Le pari de la décroissance*. Fayard.
- Marston, S. A., Jones, J. P., & Woodward, K. (2005). Human geography without scale. *Transactions of the Institute of British Geographers*, 30(4), 416–432.
- Martin, C. J. (2016). The sharing economy: A pathway to sustainability or a nightmarish form of neoliberal capitalism? *Ecological Economics*, 121(C), 149–159.
- Massey, D. (2008). *World city (Reprint)*. Polity.
- McKinnon, K. (2020). Framing essay: the diversity of labour. In J. K. Gibson-Graham, & K. Dombroski (Eds.), *The handbook of diverse economies*. Edward Elgar Publishing, 116–128.
- Moss, T., & Marvin, S. (2016). *Urban infrastructure in transition: networks, buildings and plans*. Routledge.
- Nelson, A., & Schneider, F. (2019). *Housing for degrowth: Principles, models, challenges and opportunities*. Routledge.
- Nygaard, B., & Hansen, T. (2021). Local development through the foundational economy? Priority-setting in Danish municipalities. *Local Economy: The Journal of the Local Economy Policy Unit*, 35(8), 768–786.
- OECD (2009). *Declaration on green growth (adopted at the council meeting at ministerial level on 25 June 2009)*. OECD Publishing.
- OECD (2011). *How's life? Measuring well-being*. OECD Publishing.
- OECD (2014). *Greener skills and jobs. OECD green growth studies*. OECD Publishing.
- Oekom (Ed.) (2020). *Möglichkeitsräume. Raumplanung im Zeichen des Postwachstums*. Politische Ökologie 160.
- Paech, N. (2010). Eine Alternative zum Entkopplungsmythos: Die Postwachstumsökonomie. *Humane Wirtschaft*, 2010(5), 12–14.
- Pansera, M., Ehlers, M.-H., & Kerschner, C. (2019). Unlocking wise digital techno-futures: Contributions from the degrowth community. *Futures*, 114), 102474.
- Rodríguez-Giralt, I., Marrero-Guillamón, I., & Milstein, D. (2018). Reassembling activism, activating assemblages. *Social Movement Studies*, 17(3), 257–268.
- Rosol, M. (2018). Alternative Ernährungsnetzwerke als Alternative Ökonomien. *Zeitschrift für Wirtschaftsgeographie*, 62(3–4), 174–186.
- Schmelzer, M., & Vetter, A. (2019). *Degrowth/Postwachstum zur Einführung*. Junius.

- Schmid, B. (2019). Degrowth and postcapitalism: Transformative geographies beyond accumulation and growth. *Geography Compass*, 13(11), e12470.
- Schmid, B. (2020). *Making transformative geographies. Lessons from Stuttgart's community economy*. transcript.
- Schmid, B., & Smith, T. S. (2020). Social transformation and postcapitalist possibility: Emerging dialogues between practice theory and diverse economies. *Progress in Human Geography*, 45(1), 030913252090564.
- Schneidewind, U., & Zahrnt, A. (2014). *The Politics of Sufficiency*. oekom.
- Schulz, C., & Bailey, I. (2014). The green economy and post-growth regimes: Opportunities and challenges for economic geography. *Geografiska Annaler B*, 96(3), 277–291.
- Schulze Dieckhoff, V., & Lamker, C. (2017). Junges Forum NRW diskutiert Postwachstumsplanung. *Nachrichten der ARL*, 2017(3), 33–34.
- Seidl, I., & Zahrnt, A. (2019). *Tätigsein in der Postwachstumsgesellschaft*. Metropolis Verlag.
- Smith, A., Voß, J.-P., & Grin, J. (2010). Innovation studies and sustainability transitions: The allure of the multi-level perspective and its challenges. *Research and Policy*, 39(4), 435–448.
- UNEP (2011). *Towards a green economy: Pathways to sustainable development and poverty eradication*. www.unep.org/greeneconomy
- Zademach, H.-M., & Hillebrand, S. (2013). *Alternative economies and spaces. New perspectives for a sustainable economy*. transcript.