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Degrowth – Taking Stock and Reviewing an Emerging Academic Paradigm

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ABSTRACT

Degrowth has evolved within a decade from an activist movement into a multi-disciplinary academic paradigm. However, an overview taking stock of the peer-refereed degrowth literature is yet missing. Here, we review 91 articles that were published between 2006 and 2015. We find that the academic degrowth discourse occupies a small but expanding niche at the intersection of social and applied environmental sciences. The discourse is shaped by authors from high-income, mainly Mediterranean, countries. Until 2012, articles largely constitute conceptual essays endorsed by normative claims. More recently, degrowth has branched out into modelling, empirical assessments, and the study of concrete implementations. Authors tend to agree in that economic growth cannot be sustained *ad infinitum* on a resource constraint planet and that degrowth requires far reaching societal change. Whether degrowth should be considered as a collectively consented choice or an environmentally-imposed inevitability constitutes a major debate among degrowth thinkers. We argue that the academic discourse could benefit from rigid hypotheses testing through input-output modelling, material flow analysis, life-cycle assessments, or social surveys. By analyzing the potentials for non-market value creation and identifying concrete well-being benefits, the degrowth discourse could receive wider public support and contribute to a paradigmatic change in the social sciences.

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1. Introduction

The 2008 financial crisis has spurred research on alternative development trajectories for the global economy. Among the diverse streams

of thought, degrowth has emerged as a radical call for a voluntary and equitable downscaling of the economy towards a sustainable, just, and participatory steady-state society (R&D, 2010; Schneider et al., 2010; Kallis, 2011). As a political slogan with theoretical and practical implications (Latouche, 2010), degrowth postulates that indefinite economic growth on a finite planet is impossible; facilitating growth as the overarching aim of socio-economic policy will eventually lead to

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involuntary economic decline with far-reaching social and political consequences.

In less than a decade, degrowth has evolved from an activist movement into a vibrant multi-disciplinary academic field, grounding in Georgescu-Roegen's (1971) thermodynamic analysis of the economy, Meadows' et al. (1972) limits to growth, and Daly's (1973, 1997) work on the steady-state economy. Degrowth resonates the anti-utilitarian ideas of Ghandi, Illich, Schumacher, and Latouche (see, e.g., Latouche, 2010; Demaria et al., 2013; Muraca, 2013), draws from anthropology, sociology, and philosophy, and links to inter-disciplinary research in ecological economics and industrial ecology (Martínez-Alier et al., 2010).

The number of peer-refereed articles on degrowth has been growing steadily since 2006. By mid-2016, six dedicated conferences had been organized, seven special issues were published, and an new special issue on degrowth and technology was already in preparation. Yet, a review of the peer-refereed literature that takes stock of the academic degrowth discourse and identifies its magnitude, trends, and unresolved research questions is yet missing. Here, we attempt such a review with the aim to (i) structure the degrowth discourse, (ii) identify areas for future research, and ultimately (iii) help devising implementable degrowth solutions.

The article continues with an explanation of our research method (Section 2) and an overview of key statistics characterizing the degrowth discourse (Section 3). We sketch important topics of the peer-refereed literature in Section 4 and identify knowledge gaps to be addressed as part of a more comprehensive research program in Section 5. The article finishes with a discussion and conclusions in Sections 6 and 7.

2. Materials and Methods

Our review is based on a web-search for peer-refereed journal articles in the online data base 'Scopus'. We include research articles, comments, and editorials that contain the words 'degrowth' or 'de-growth' in their title and were published in the English language before 31 December 2015. This approach yields a timely overview of the academic degrowth literature but is subject to four limitations:

- Potentially relevant articles that do not explicitly mention 'degrowth' in their title are excluded (e.g., Daly, 2010; Mauerhofer, 2013b; Alexander, 2013b; Knight et al., 2013; Antal, 2014; Martínez-Alier et al., 2014; Fitzgerald et al., 2015) even if these are published as a part of a special issue on degrowth (i.e., the following 11 articles: Alcott (2010), D'Alessandro et al. (2010), Hamilton (2010), Hueting (2010), Matthey (2010), Spangenberg (2010), van den Bergh (2010), Johannisova and Wolf (2012), Latouche (2012), Tammilehto (2012), Dobson (2013)¹).
- Research published in languages other than English is excluded (e.g., Bonaiuti, 2013).
- Contributions to the five global conferences on degrowth are excluded, if these have not been published as peer-refereed journal articles.
- Monographs (e.g., Daly, 1973, 1997; Jackson, 2009) are excluded as well as the non-peer-refereed 'gray' literature on degrowth.

The first limitation is justified by the need to set boundaries for our review that prevent discussions about the inclusion versus exclusion of publications while at the same time rendering the research feasible within the resources available to us. The second limitation is born out of practical constraints but could indeed be justified by the observation that English constitutes the *Lingua franca* of the global research community. The third and fourth limitations reflect our concerns about the scientific relevance of publications that are not peer-refereed. Moreover, the exclusion of conference contributions can be justified because selected research presented at the various degrowth conferences has been

also published as peer-refereed articles in special issues and is thus included in our review (see Table S1 in the Supplementary Material).

Nevertheless, we acknowledge that the academic degrowth discourse may have drawn fundamentally from publications that are excluded from this review. Jackson and Victor (2015a), for example, find that declining growth rates may not inevitably raise social inequality. This observation is relevant for the degrowth discourse but not further discussed here. We would therefore argue that the results and conclusions presented in this article are valid, strictly speaking, only for the literature included in our review. Yet, our insights could be considered indicative of the major trends and open research questions of the academic degrowth discourse in general.

To minimize errors in the interpretation of the reviewed articles, we have shared with the corresponding authors, as far as possible, our interpretation of their work. For 60 out of the 91 reviewed articles, we have received a positive response confirming our understanding of the presented research.

We complement our review by a Google search to elicit the magnitude and popularity of the degrowth discourse compared to the more general debate on environmental sustainability and economic growth. The outcome of this search is presented next.

3. Key Statistics of the Degrowth Discourse

By 1 May 2016, the internet search engine Google lists 253,000 web pages in response to the search term 'degrowth'. This number is small compared to the 101 million and 114 million pages listed in response to the terms 'climate change' and 'sustainability' and the 46.5 million webpages listed on 'economic growth'. The term 'post growth' (580,000 webpages) appears to be more popular than degrowth.² Still, the number of webpages on degrowth has been increasing by a factor of 20 since 2006, showing an average annual growth rate of some 150% (Fig. 1a). The number of dedicated Google searches for 'degrowth' are fluctuating at around 27 ± 12 per month with a pronounced peak in early 2014, presumably related to the degrowth conference in Leipzig, Germany (Fig. 1b).

The relatively low but steadily increasing popularity of degrowth is also reflected by the growing number of peer-refereed articles published yearly (Fig. 2). The first articles referring to 'degrowth' in their title appeared in the English academic literature around the year 2006.

By 31 December 2015, 91 articles had been published (Table A1 in the Appendix; Table S1 in the Supplementary Material). These were written by 108 authors and published in 23 journals. Twenty articles were published by the Journal of Cleaner Production, 18 by Ecological Economics, 10 by Futures, and 8 each by Environmental Values and Capitalism Nature Socialism. A first special issue on degrowth was published in 2010 by the Journal of Cleaner Production. Since then, seven special issues comprising a total of 53 articles (including editorials) have been dedicated to degrowth; an eighth special issue on degrowth and technology is to be published in fall 2016 (Kerschner et al., 2015).

Authors from around the globe contribute to the academic degrowth discourse; yet the majority of articles originate from Europe, with a clear dominance of contributions from Spain (Figs. 3 and 4a). This observation supports the hypothesis of Romano (2012) who suggests that the socio-economic conditions of the capitalist periphery in Mediterranean Europe may be suitable for developing and implementing degrowth.

With the exception of Boillat et al. (2012) and Escobar (2015), none of the articles were written by authors affiliated with institutions in emerging or low-income countries. The overwhelming majority of articles is written by a single author (Figs. 3 and 4b), pointing to a close link of the degrowth discourse to social sciences where single-author publications are more common than in natural sciences and engineering. Moreover, co-author collaborations often remain within the same

¹ We deviate from this approach in the case of Muraca (2013) who refers in the title of her article to 'Décroissance', i.e., the French synonym for 'degrowth'.

² The number of relevant web pages is identified by using quotation marks as Google search operator.

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