# Leverage Points Towards Degrowth: Insights from an Exploratory Study with Housing Associations in London

# Anna Pagani<sup>1\*</sup>, Al Walker<sup>1</sup>, Alex Macmillan<sup>2,1</sup>, Arfenia Nita<sup>1</sup>, Michael Davies<sup>1</sup>, Nici Zimmermann<sup>1</sup>

<sup>1</sup>UCL Institute for Environmental Design and Engineering, University College London Central House, 14 Upper Woburn Place, London, WC1H 0N, UK

<sup>2</sup>Department of Preventive and Social Medicine, University of Otago, Adams Building, 18 Frederick Street, Dunedin Campus, Dunedin 9054, NZ

\*Corresponding author: a.pagani@ucl.ac.uk

The full paper was presented at the *International System Dynamics Conference 2024* and is available from the authors.

**Keywords:** social housing, leverage points, organisational value creation, participatory system dynamics.

**Funding Source**: This study is part of the project "A just transition towards housing sustainability: where systems science and architecture meet", funded by the Swiss National Science Foundation (SNSF) Postdoc.Mobility Fellowship (grant number P500PS\_210875).

#### Abstract

There is no better place to start thinking of a world beyond growth than social housing. Originally devised as an affordable and secure form of tenure, social rented housing in England is now entangled in capitalist market dynamics and associated tensions between economic, social, and environmental targets. Degrowth proposes to reconcile these goals by moving away from the dominant economic growth paradigm, prioritising justice and well-being within planetary boundaries. Developing alternatives to omnipresent growth narratives requires engaging all actors involved in the management and delivery of social housing. Therefore, this study explores the compatibility of a degrowth agenda with that of housing associations (HAs), the largest social housing providers in England. In a workshop with four London-based HAs, we used participatory system dynamics (SD) to elicit perceptions of the interventions needed in the social housing system. Through degrowth and systems thinking frameworks, we then assessed the potential of the proposed interventions to effect change, and their alignment with approaches to creating degrowth value. Interventions at shallow leverage points in the system were more frequently linked to reducing resource use and addressing equality. Instead, the most transformative interventions were associated to promoting democratic governance and overcoming growth dynamics. Our findings highlight the potential of SD to guide interventions in the social housing system that address growth-driven structures and their systemic consequences.

### Introduction

There is no better place to start to think of a world beyond the pursuit of economic growth than social housing. In England, social housing was developed as a strategy to ensure adequate and affordable housing, supported by both philanthropic initiatives and government intervention. However, since the 1980s, neoliberal policies have driven the marketization and privatization of social housing provision, resulting in a dramatic loss in the number and share of social homes (from 31% to 16%; Cromarty and Barton, 2024).

In this setting, the provision and maintenance of social homes have increasingly relied on a "crosssubsidy mechanism," whereby revenue from selling and renting properties at market rates is used to subsidise core services (Manzi and Morrison, 2018). These mechanisms have faced criticism for promoting profit-driven redevelopment of social housing estates, exacerbating tensions between the social purpose of social housing providers, environmental targets, and financial viability (Crawford et al., 2014; Baker et al., 2022).

'Degrowth' proposes to reconcile these competing goals, promoting an emancipation from growth-oriented systems to prioritise good quality of life for all, while enhancing ecological conditions (Demaria et al., 2013). Whilst housing degrowth has predominantly focused on small-scale alternative housing and community-led action, scholars have argued for the need to include existing and social housing and its stakeholders in the debate (Ferreri, 2018; Schneider, 2018; Tunstall, 2023).

In this study, we explore the compatibility of a housing degrowth agenda with the goals of social housing providers, and its potential to address shortcomings in a system governed by development-driven strategies prioritising economic valuation. For this purpose, our empirical work focuses on housing associations (HAs), the largest providers of social housing in England.

#### Methods

Our study consisted of the following phases: (i) development of causal loop diagrams (CLDs) capturing key issues in the social housing system; (ii) elicitation of possible interventions in the system; (iii) exploration of the potential of the proposed interventions to catalyse transformative change aligned with degrowth.

# Developing the CLDs

This research built on a previous research phase, where we used participatory system dynamics (SD) to develop six CLDs of the system structures affecting the provision of social housing in England (Pagani et al., 2023; Pagani et al., 2024). To help stakeholders identify possible interventions in the system, we produced four smaller CLDs, focusing on cases of policy resistance and counterintuitive system dynamics emerging from our analyses.

# *Identifying interventions*

We organised a workshop in January 2024 with nine representatives from four London-based HAs, with expertise in regeneration, strategy, lettings and sales, planning, and communities. The workshop aimed to elicit perceptions of the interventions needed in the social housing system, including their feasibility and impact (activity 1), and opportunities or barriers to implementation (activity 2).

The first activity consisted of two rounds of discussions at two tables, with two CLDs each; participants were free to change table between rounds to discuss the CLD closest to their expertise. We used one guiding question per CLD to support individual brainstorming (e.g. *How to hinder the reinforcing causes and consequences of demolition?*). Participants were asked to share with the group one intervention at a time and point the place in the CLD it affected. They then placed the intervention in a chart according to its perceived feasibility and impact (i.e., low, medium, high).

In a second activity, each participant joined discussions around one the four CLDs, to elicit barriers and opportunities to the implementation of some of the proposed interventions.

# Bridging systems thinking and degrowth frameworks

After the workshop, the research team developed a theoretical bridge between different systems thinking and degrowth frameworks, to explore the kinds of transformation that the proposed interventions could catalyse and possible synergies with degrowth. As for the former, we used the twelve leverage points of Meadows (1999) and the four system characteristics of Abson et al. (2017) to evaluate the potential of interventions to leverage change; as for the latter, the seven degrowth-oriented organisational value creation patterns of Froese et al. (2023) served to explore the alignment of interventions with approaches adopted by organisations to create degrowth-oriented value (**Table 1**).

Using the frameworks, we identified possible relationships between interventions, leverage points, system characteristics, and approaches to create degrowth-oriented value, and ranked approaches based on their share of transformative interventions.

**Table 1.** Systems thinking and degrowth frameworks to explore the transformative power of system interventions towards degrowth.

Goal	Framework	Short description
Evaluate the potential of proposed interventions to effect change in the system.	Leverage points; Meadows (1999)	A hierarchy of twelve <i>leverage points</i> , i.e., places in complex systems where a small change can trigger transformations across the system. Examples: Constants, parameters, numbers; The rules of the system.
	System characteristics; Abson et al. (2017)	Aggregation of the twelve leverage points in four <i>system characteristics</i> that can be targeted by increasingly effective interventions, i.e., parameters, feedbacks, design, intent.
Explore the alignment of proposed interventions with approaches adopted by organisations to create degrowth-oriented value.	Degrowth-oriented organisational value creation patterns and groups; Froese et al. (2023)	Patterns of organisational activities and their implications that convey degrowth values (of ecological sustainability, equality, and participation), organised into seven groups.  Examples: Equalising inequalities; Shrinking, slowing, and extending resource cycles.

#### **Short summary of results**

Four CLDs display the structures underpinning (i) the response of HAs to financial pressure and their impact on the housing stock, management, and staff; (ii) the decision to demolish social housing estates and their consequences on tenant stigma and discrimination, financial pressure, and social mixing; (iii) the reduction in physical and social infrastructure for residents and their impact on community development and residents' health; (iv) the representation of local residents in management, and its effect on the quality of the housing stock, residents' health, and their participation in decision-making.

During the workshop, participants identified thirty-five interventions across the four CLDs, addressing a range of system characteristics, including parameters (e.g., *incentives for retrofit, refurbishment, and placemaking*), feedbacks (e.g., higher *government spending* to avoid social housing redevelopment), design (e.g., changing system rules to establish *demolition as a last resort*), and intent (e.g., changing stakeholders' mindset to adopt a *long-term perspective in planning and design*).

When linking interventions, leverage points, system characteristics, and approaches to degrowth-oriented value creation, we observe the following:

- Interventions at **shallower leverage** points are more frequently linked to approaches such as 'shrinking, slowing, and extending resource cycles' (e.g., *incentives for retrofit*), and 'equalising inequalities' (e.g., *tenure-blind architecture and amenities*). Instead, interventions at **deeper leverage points** are associated to approaches such as 'democratic, purpose driven, and transparent governance' (e.g. *cooperative models of estate decision-making*), and 'overcoming economic growth' (e.g., *investors valuing social outcomes*).
- Beyond these trends, most approaches encompass interventions at both deep and shallow leverage points; demonstrating the interdependence between them. For instance, 'shrinking, slowing, and extending resource cycles' was linked to higher government spending (a change in system parameters), which is instrumental to set demolition as last resort (a change in system design).
- A considerable share of the proposed interventions have an ambiguous effect, and were linked to both shallow and deep leverage points; for instance, listening and understanding

- of marginalised seldom heard voices could either bring about change in the way information flows in the system, or result in a tick-box exercise.
- The perceived **feasibility of interventions** aligns with their effectiveness within the system; deeper leverage points are seen as more challenging to enact, while shallower leverage points are considered easier to implement. Exceptions include interventions that fall out of the agency of HAs, or interventions with ambiguous effects (see above).
- The perceived **impact of interventions** was consistently medium to high, showing the value that participants attributed to their propositions.

#### Discussion

The interventions proposed by HAs provide insights into the mental models of some of the key agents in the social housing system. By outlining participants' perception of what is desirable and the means to achieve it, our results support reflection on the extent to which HAs are in the position to engage in the design of structures and dynamics supporting a shift beyond growth logics.

In the following, we summarise the contributions of this study to housing degrowth.

Firstly, going beyond a list of measures, a degrowth agenda emerges as a series of interconnected interventions with varying power to effect change and create value aligned with degrowth. Within this framework, our findings suggest that efforts to reduce resource use and promote equality target the symptoms rather than the root causes of the problems of the social housing system, which have to do with growth dynamics, democratic, and transparent governance (see, among others, Savini, 2023).

Secondly, our study underlines the importance of capturing stakeholders' *perceptions* of interventions in the system (including their impact, feasibility, and implementation barriers) to uncover their potential to catalyse change (Videira et al., 2014). Although perceived as highly impactful, transformational interventions can be hindered by the complicated and complex decision-making structures within which organisations operate, which may lead to discrepancies between perceptions of what is needed (e.g. stopping demolition) and action (e.g., redevelopment; Simon, 1990). Furthermore, the challenges mentioned in the discussions on the implementation of the proposed measures resonate with issues at the heart of degrowth debates; one example is the gap between the promotion and implementation of participation, discussed by HAs, as well as degrowth scholars (Savini, 2011).

Finally, moving back to the topic of the *ISDC24* conference, our work demonstrates the value of *bridging perspectives* to respond to pressing societal needs – i.e., a transdisciplinary approach to knowledge production. In particular, it shows the potential of participatory SD to support stakeholders in formulating systemic interventions towards degrowth. In anonymous questionnaires, all participants declared to have gained knowledge on ways of acting on the systems underpinning social housing provision.

# Future research

Several avenues are open to address the limitations of this study—from the system boundaries chosen to the nature of participatory activities—and to advance housing degrowth research and practice. Workshops could be organised to validate the links identified by the research team, between interventions and approaches to create degrowth value; by introducing the degrowth agenda to stakeholders, these activities could provide a framework to formulate additional interventions. Furthermore, future research could involve stakeholders beyond HAs (e.g. residents, architects, urban planners, doctors) to identify interconnections and interdependencies between the proposed interventions, and devise strategies accordingly. More broadly, the framework proposed in this study could be used both as a design and assessment tool, supporting built environment stakeholders in redesigning growth-oriented system structures.

#### References

- Abson DJ, Fischer J, Leventon J, Newig J, Schomerus T, Vilsmaier U, Von Wehrden H, Abernethy P, Ives CD, Jager NW, et al. 2017. Leverage points for sustainability transformation. *Ambio* **49**(1): 30–39. https://doi.org/10.1007/s13280-016-0800-y
- Baker H, Brathwaite J, Singha S, Wylde N, Markham T. 2022. The Better Social Housing Review.
- Crawford K, Johnson C, Davies F, Joo S, Bell S. 2014. Demolition or refurbishment of social housing: A review of evidence. London.
- Cromarty H, Barton C. 2024. Social rented housing in England: past trends and prospects.
- Demaria F, Schneider F, Sekulova F, Martinez-Alier J. 2013. What is degrowth? from an activist slogan to a social movement. *Environmental Values* **22**(2): 191–215. https://doi.org/10.3197/096327113X13581561725194
- Ferreri M. 2018. Refurbishment vs demolition? Social housing campaigning for degrowth. In Nelson A, Scheider F (eds.) *Housing for Degrowth*. Routdledge, London, 109–119.
- Froese T, Richter M, Hofmann F, Lüdeke-Freund F. 2023. Degrowth-oriented organisational value creation: A systematic literature review of case studies. *Ecological Economics* **207**. https://doi.org/10.1016/j.ecolecon.2023.107765
- Manzi T, Morrison N. 2018. Risk, commercialism and social purpose: Repositioning the English housing association sector. *Urban Studies* **55**(9): 1924–1942. https://doi.org/10.1177/0042098017700792
- Meadows DH. 1999. Leverage Points: Places to Intervene in a System. The Sustainability Institute, Hartland.
- Pagani A, Zimmermann N, Davies M. 2023. Systemic Issues of Social Housing in England: Identifying Archetypes for a Just Transition towards Sustainability. In 41st International System Dynamics Conference (ISDC 2023). Chicago, IL, USA.
- Pagani A, Zimmermann N, Macmillan A, Zhou K, Davies M. 2024. Systemic issues of social housing in London: mapping interrelated challenges faced by Housing Associations. *In review (pre-print)*. https://doi.org/10.31235/osf.io/hbfwu
- Savini F. 2011. The Endowment of Community Participation: Institutional Settings in Two Urban Regeneration Projects. *International Journal of Urban and Regional Research* **35**(5): 949–968. https://doi.org/10.1111/j.1468-2427.2010.00997.x
- Savini F. 2023. Maintaining autonomy: Urban degrowth and the commoning of housing. *Urban Studies* **60**(7): 1231–1248. https://doi.org/10.1177/00420980221121517
- Schneider F. 2018. Housing for degrowth narratives. In Nelson A, Schneider F (eds.) *Housing for Degrowth. Principles, Models, Challenges and Opportunities*. Routledge, London, 14–20.
- Simon HA. 1990. Bounded Rationality. In Eatwell J, Milgate M, Newman P (eds.) *Utility and Probability*. Palgrave Macmillan UK, London, 15–18.
- Tunstall R. 2023. An empirical test of measures of housing degrowth: Learning from the limited experience of England and Wales, 1981–2011. *Urban Studies* **60**(7): 1285–1303. https://doi.org/10.1177/00420980221121198
- Videira N, Schneider F, Sekulova F, Kallis G. 2014. Improving understanding on degrowth pathways: An exploratory study using collaborative causal models. *Futures* **55**: 58–77. https://doi.org/10.1016/j.futures.2013.11.001