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# Sustainable and inclusive development in left-behind places

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**Abstract** Scholarly work in economic geography and regional science has recently seen a renewed interest in spatial inequalities, driven significantly by the debate on left-behind places and the resulting geographies of discontent. The plight of left-behind places calls for new place-based policy responses that address the specific challenges of these regions but that at the same time address grand societal challenges such as climate change, biodiversity loss, or pollution with synthetic chemicals. Despite growing attention among economic geographers and regional scientists to either green or inclusive regional development approaches, how to reconcile environmental sustainability and social inclusiveness in highly challenged left-behind places remains poorly understood. This editorial reflects on and critically discusses the literature on left-behind places and distils unifying conceptual characteristics of left-behindness. We argue that left-behindness is a temporal, relational, multidimensional, discursive, but not deterministic concept. The non-determinism of left-behindness opens up different choices for actors to shape regional futures. Imagining and negotiating these futures involves dealing with difficult potential trade-offs between environmental sustainability and social inclusiveness, some of which are explored by the articles in this special issue.

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## 1 Sustainable and inclusive development in left-behind places: why does it matter?

Although spatial inequality has always been among the bread-and-butter topics of economic geography and regional science, it has seen renewed interest recently (e.g., Cox 2022; Evenhuis et al. 2021; Feldman et al. 2021; Iammarino et al. 2019), driven significantly by the debate on “left-behind places” (MacKinnon et al. 2022; Rodríguez-Pose 2018; Pike et al. 2024). The recent publication of various special issues in different journals (e.g., Brenner and Niebuhr 2021; Fiorentino et al. 2024a, b; MacKinnon et al. 2024) testifies to this high tide of academic interest in left-behind places.

Beyond the empirical reality of spatial inequality, the debate on left-behind places also emphasises the social and political repercussions of the “geographies of discontent” (De Ruyter et al. 2021; Essletzbicher et al. 2018; McCann 2020) that emanate from left-behindness (e.g., McQuarrie 2017; Pruitt 2024; Rodrik 2018), albeit mainly studied in the Global North (Tups et al. 2024). Despite its vagueness and lack of definitional clarity (Pike et al. 2024), the term “left-behind places” raises associations of arrested development, deindustrialisation or infrastructural decay in imaginations about regions such as Northern England (Rodríguez-Pose 2018), the German Ruhr area (Butzin and Flögel 2024), or the American “Rust Belt” (McQuarrie 2017). Nevertheless, in line with recent literature, we will argue in this editorial that the empirical reality is more complex than these purely negative attributes.

Given that established regional policy approaches generate mixed results in left-behind places (Brenner and Niebuhr 2021; Fiorentino et al. 2024b; Hassink and Kiese 2021), new place-based policy responses (Barca et al. 2012; Hassink 2020) that address the specific challenges of these regions are urgently needed (see, for instance, Martin et al. 2022; Tödtling et al. 2022). At the same time, grand societal challenges such as climate change, biodiversity loss, or pollution with synthetic chemicals (Richardson et al. 2023) call for strategies to develop regional futures in left-behind places that are environmentally sustainable and socially inclusive (Eadson and van Veelen 2023). By environmentally sustainable and socially inclusive, we mean that regional development, first, keeps within the confines defined by planetary boundaries (Dearing et al. 2014; Rockström et al. 2009), and second, fulfils basic human needs (e.g., employment, energy, food, housing) in an equitable and broadly accessible way (Raworth 2017). While scholars particularly in economic geography, but also to some degree in regional science, have paid growing attention to regional development approaches that are environmentally sustainable or “green” (Audretsch et al. 2024; Corradini 2019; Coenen and Morgan 2020; Sotarauta et al. 2021; Trippel et al. 2020) or “inclusive” (Benner 2023; Evenhuis et al. 2021; Lee 2023), how to reconcile them in highly challenged left behind places is critical but remains poorly understood.

Environmental sustainability and social inclusiveness are not always easy to reconcile due to potential trade-offs and ambivalences between these goals. For example, While and Eadson (2022) provide an overview on negative social effects of “green” industries, among them exclusion of women in renewable energies (Baruah 2017), hard working conditions in offshore wind (Mette et al. 2017), or precarious employment in “green” businesses at large (Castellini 2019). Ensuring that new development paths are both “green” and “just” is therefore a challenge in many cases (Eadson and van Veelen 2023).

Achieving sustainable and inclusive development in left-behind places, however, is even more challenging. Left-behindness may imply limited chances to attract new (green) industries in a way that spreads their benefits widely and often involves experiences of losing or having lost old (brown) industries. Given this situation, how can these regions be made to participate in the opportunities that the spatial reconfiguration of a decarbonising economy holds, and to do so in a way that does not limit the benefits to narrow parts of their population (While and Eadson 2022)? This special issue aims at approaching this overarching question from different perspectives. In this editorial, we synthesise the literature on left-behind places and distil what we consider as unifying conceptual characteristics of left-behindness. We argue that left-behindness is a temporal, relational, multidimensional, discursive, but not deterministic concept. These characteristics draw attention to issues such as the role of the agency of regional actors in framing regional problems (Flanagan et al. 2023) and in imagining, negotiating and building regional futures. Accordingly, these characteristics lead to core questions on sustainable and inclusive development in left-behind places: How and by whom can sustainable and inclusive regional development paths be created and shaped in left-behind places? How can potential trade-offs be handled? How can barriers that stand in the way of achieving better futures in these places be addressed? Against this backdrop, we show how the articles in this special issue explore possibilities of pursuing sustainable and inclusive development. We conclude this editorial by outlining directions for future research.

## 2 Understanding left-behind places and their left-behindness

Since Rodríguez-Pose’s (2018) widely received article on “places that don’t matter”, left-behind places have come into the spotlight (MacKinnon et al. 2022), as has the resulting “geography of discontent” (De Ruyter et al. 2021; Essletzbicher et al. 2018; McCann 2020) fueled by feelings of collective embitterment (Hannemann et al. 2024), and the serious political repercussions and polarisations these engender (Pruitt 2024). Hence, left-behindness simultaneously unites both structural and affective connotations (MacKinnon et al. 2022; Tups et al. 2024).

However, the phenomenon of left-behindness remains elusive as scholars have so far not agreed on a commonly accepted definition, partly because of a large variety of meanings in different contexts and languages (Eisenberg 2024; Fiorentino et al. 2024a; Pike et al. 2024). To shed light on our understanding of left-behind places, we distil characteristics of the concept of left-behindness that emerge from the recent literature, both in terms of what the concept is (temporal, relational,

multidimensional, discursive) and what it is not (deterministic). The latter point leads to ways of shaping and reconciling sustainable and inclusive development paths in left-behind places which are at the heart of this special issue.

## 2.1 Left-behindness is a temporal concept

As the past-perfect form “left” implies, being left behind amounts to *having been* left behind at some point in time (Pike et al. 2024). Thus, left-behindness is often understood in a backward-looking perspective. Usually, when thinking about left-behind places, the implicit narrative is that these regions used to be industrialised (and thus, as the narrative goes, wealthy) but have become left behind more dynamic regions through the negative effects of structural change, that is, deindustrialisation not (fully) compensated by the rise of new (greener, more knowledge-based, and/or service-based) industries.

Moving beyond this common backward-looking view on left-behind places, we argue that there is also a forward-looking view to left-behindness (Gong 2024). Such a forward-looking perspective is important because regions that presently are not understood as left behind can have different degrees of vulnerability to the green transition (Baumgartinger-Seiringer et al. 2024). In these cases, fears of becoming left behind in the future and related “green discontent” can emerge (Rodríguez-Pose and Bartalucci 2024). The geography of emission-intensive industries such as cement, chemicals, metalworking, or paper and pulp across Europe shows that, taken together, a large number of regions will be affected by the negative impact emanating from climate protection policies and green restructuring (OECD 2023; Rodríguez-Pose and Bartalucci 2024). How these transitions are managed at the local and regional scales, and how emerging opportunities offered by new, green industries are used and their possible downsides mitigated (While and Eadson 2022), is likely to shape the future geography of left-behindness in Europe but similarly also in other parts of the world.

## 2.2 Left-behindness is a relational concept

As Pike et al. (2024) argue, the concept of left-behindness raises the issue by whom, or relative to whom, places are left behind or at risk of becoming so, and is therefore inherently relational (see also MacKinnon et al. 2024). Apparently, as Eisenberg (2024) notes, the answer is that these places are left behind by more “advanced” regions which are often urban metropolises, and that left-behindness “implies a sort of failure to advance or move along on the journey toward development goals” (p. 426).

The case of England’s North “left behind” relative to the London conurbation laid out by Rodríguez-Pose (2018) underscores the relational character of left-behindness. This relational character implies that left-behindness is interwoven with agglomeration and deglomeration: the narrative goes that while agglomeration effects draw economic activity and population to urban metropolises, other regions are left behind by the people who leave them and, hence, lose economic activity and innovativeness (Rodríguez-Pose 2018). However, this narrative is simplified (Nilsen

et al. 2023), first, because not all non-core regions are on the losing side of innovation (Meili and Shearmur 2019; Shearmur 2015), and second, because left-behind places can be located in urban areas (Fikri 2024). Hence, rather than agglomeration effects, left-behindness might depend more on whether a place is disconnected (Fikri 2024; Glückler et al. 2023). Disconnection, in turn, is shaped by policy choices about public investments (or their lack) in digital, educational, medical, transport, and other infrastructure (Eisenberg 2023, 2024; Fiorentino et al. 2024a) which makes left-behindness dependent on policy attention and priorities (Rodríguez-Pose 2018).

This discussion shows that what precisely being “left behind” versus “advanced” means eludes simple answers and depends on the dimensions that left-behindness can take, which leads to the next characteristic, the multidimensionality of left-behindness.

### 2.3 Left-behindness is a multidimensional concept

There are many ways in which a place can be left behind. The multidimensionality of left-behindness can refer, for instance, to economic, social, environmental, political, institutional, cultural, or infrastructural dimensions (Pike et al. 2024).

So far, the debate on left-behind places seems to privilege the economic dimension of left-behindness in the sense of exhibiting below-average GDP per capita or above-average unemployment (Evenhuis et al. 2021; MacKinnon et al. 2022; McCann 2020) such as when measuring regional economic “development traps” (Diemer et al. 2022); the political dimension in the sense that these places supposedly “don’t matter” to national (or European) policymakers (Rodríguez-Pose 2018); or the infrastructural dimension in the sense of being disconnected from public infrastructure (Eisenberg 2023). In contrast, the other dimensions listed by Pike et al. (2024) such as the social or cultural dimensions seem underexplored.

In particular, how regions can be left behind by being exposed to toxic pollution is an issue that merits further research (Bez and Virgillito 2024, this special issue). Surprisingly, despite evidence from examples such as Italy’s Taranto (Biddau et al. 2023; Greco and Di Fabbio 2014), the plight of environmentally left-behind places has not made it to the core of the debate.

### 2.4 Left-behindness is a discursive concept

Exactly because of the multidimensionality of the concept, the actual left-behindness of a region lies in the eye of the beholder or, more precisely, is a matter of imagination, perception and discourse (Benner 2024; MacKinnon et al. 2024). Accordingly, Pike et al. (2024) understand left-behindness as a spatial imaginary. As an imaginary, left-behindness is not without alternatives as the same regions could be imagined in different ways (Benner 2024). For example, Görmar (2024) observes how actors in the town of Lauchhammer in the Eastern German left-behind region of Lusatia re-imagined the place away from focusing on the loss of its coal industry and towards culture-based and creative engagement with the town’s three centuries-old industrial past.

The multidimensionality of left-behindness discussed above opens a range of discursive possibilities. For example, a region suffering from toxic pollution is environmentally disadvantaged, but at the same time might not necessarily be economically or socially disadvantaged. In a forward-looking temporal perspective, these discursive possibilities can represent varying degrees and mixtures of hopelessness and hopefulness about regional futures (Tups et al. 2024). Therefore, widespread as they may be, desperate representations of the future of left-behind regions are not set in stone.

These different views, and the angle from which a region is considered left behind or not and in which way, raise complicated questions for place identity and attachment (MacKinnon et al. 2022) and are contested and negotiated by actors (Biddau et al. 2023). This contestation and negotiation lead us to the next characteristic of left-behindness: the non-determinism of the concept which makes it amenable to agency.

## 2.5 Left-behindness is not a deterministic concept

In contrast to the four characteristics laid out above where we discussed what left-behindness is in conceptual terms, the final characteristic highlights what left-behindness is *not*. Left-behindness is not a deterministic fate that leaves regional and local actors with the sole option of watching passively how their region further declines, but instead is subject to many possibilities of agents to exercise agency and thus to shape regional futures in contested negotiation processes (Butzin and Flögel 2024; Eisenberg 2024). The growing literature on agency in regional development (Bækkelund 2021; Grillitsch and Sotarauta 2020; Hassink et al. 2019) has much to say about the roles regional and local actors can play, and the actions they can take, in shaping new, greener paths (Sotarauta et al. 2021; Trippl et al. 2020).

In addition to such a “bright” side of agency, one also needs to consider its potential “dark” sides.<sup>1</sup> A nuanced agency perspective allows for observing the ways in which regions are *made* left-behind through agency, for example, through (dis-)investment decisions by firms, and privatisation and deregulation decisions made by policymakers (Eisenberg 2024; Fiorentino et al. 2024a; Martin et al. 2022). Austerity policies since the 2007/2008 global financial crisis are often blamed for entrenching left-behindness (e.g., Fiorentino et al. 2024b; MacKinnon et al. 2024), but this tends to reflect an Anglocentric view that obscures more variegated reasons that might be found in countries where austerity policies were less salient, such as Austria or Germany.

What is more, an agency perspective also draws attention to the role of vested interests by incumbents and other powerful actors (Fiorentino et al. 2024b) and their role in entrenching lock-in (Grabher 1993; Hassink 2010). Newer insights from the literature (Baumgartinger-Seiringer 2022; Newey and Coenen 2022) can provide useful perspectives in this regard.

<sup>1</sup> While the “dark” side of agency is generally underexplored in the literature, very few exceptions have emerged recently (e.g., Cooke 2024) but not in the context of left-behind places.

A non-deterministic understanding of left-behindness that embraces an agency perspective leads to the core questions underlying this special issue, as stated in the introduction. In particular, a non-deterministic understanding raises the question of who can create and shape sustainable and inclusive regional development paths in left-behind places and how.

### 3 Contributions of the articles in the special issue

While diverse in scope, all four articles in this special issue in some way make important contributions to better understanding topics related to sustainable and inclusive development in left-behind places.

Peñalosa and Castaldi (2024) analyse how participation in Horizon Europe projects offers a “green window of opportunity” through environmental innovation. Their results are mixed and suggest that there is a group of left-behind regions that face significant challenges in accessing Horizon Europe funding for environmental innovation. Hence, long-known problems in promoting regional innovation in lagging regions (e.g., Capello and Lenzi 2013; Gianelle et al. 2024; Oughton et al. 2002) seem to persist but are acquiring an even higher urgency due to the need for a green transition (Peñalosa and Castaldi 2024).

The article by Trejo Nieto (2024) joins the small but growing body of literature on left-behind places in the Global South (e.g., Martins 2024; Tups et al. 2024). This is important because the debate on left-behind places has largely exhibited a bias in favour of the Global North such as Northern England (Rodríguez-Pose 2018), the Ruhr area (Butzin and Flögel 2024), or the “Rust Belt” (McQuarrie 2017). At its core, Trejo Nieto’s article focuses on the trade-off between environmental sustainability and social inclusiveness within the politics of a pro-poor strategy in a left-behind region of Mexico. By examining projects such as the Maya Train and a new refinery that can hardly be considered environmentally sustainable, the case highlights that left-behind places face not only the challenge of making “green” development visions inclusive (as is often the trade-off in regions in the Global North), but also, vice versa, the challenge of making “inclusive” development visions environmentally sustainable (Trejo Nieto 2024).

In their article on toxic pollution in European regions, Bez and Virgillito (2024) present evidence on the environmental dimension of left-behindness. Their extensive, quantitative study complements those few qualitative case studies that redraw the plight of the local population in regions suffering from toxic pollution (Bidau et al. 2023; Greco and Di Fabbio 2014). The article underscores Eisenberg’s (2024) point that left-behind places are often actively made, exploited, or ravaged by actors, in this case environmentally through the toxic pollution caused by dirty industries. Interestingly, the evidence presented by the authors suggests that environmental upgrading and economic prosperity are not necessarily opposed. Rather, their interdependence is more complex because environmental upgrading seems to generate positive labour market spillovers in the region. Hence, the insights point towards opportunities to reconcile economic and environmental goals in left-behind places (Bez and Virgillito 2024).



Finally, Parsons et al. (2024) focus specifically on the inclusiveness of place-based policies in second-tier cities in the United Kingdom that can be understood as left behind in the economic dimension vis-à-vis the London conurbation, and in the context of policy efforts for “levelling up”. Importantly, the empirical cases demonstrate, first, that left-behindness is not an immutable fate but can be addressed through the agency of regional actors, and second, how actors shape discourses and narratives that can deviate from the long-standing relational narrative of “London and the rest” (p. 6), thus underscoring the discursive character of left-behindness (Parsons et al. 2024).

#### 4 Open questions and further research directions

While each of the articles in this special issue presents an interesting aspect of sustainable and inclusive development in left-behind places, as well as the potential trade-offs and ambivalences involved, understanding how better regional futures can be (re)thought, negotiated and implemented requires more research. Therefore, we close this editorial with four proposals for a future research agenda.

We argue, first, that a more capacious, multidimensional understanding of left-behindness would yield interesting insights. For example, a region might be wealthy because of being industrialised but still be disadvantaged because of harmful effects of toxic pollution from its industries on citizens’ health and the environment (Bez and Virgillito 2024, this special issue; Biddau et al. 2023; Greco and Di Fabbio 2014). Options such as closing polluting industries or substantially transforming them would engender uncertainty and fears of employment losses and raise the risk of such a region becoming economically and socially left behind but also enable it to catch up with other regions in terms of public health and environmental quality. In our view, trade-offs such as these are currently not sufficiently appreciated in the debate on left-behind places and require further research.

Second, more attention is needed to contested, agentic negotiation processes to better understand how places are made or un-made left behind, both materially and discursively (Ey and Sherval 2016). This includes more research not just on the “bright” side of agency that has been in the focus of the literature in the past years (e.g., Grillitsch and Sotarauta 2020; Kurikka et al. 2023) but also on its “dark” side that produces or reproduces left-behindness. Reiterating the crucial point that left-behindness is not a deterministic concept but subject to a variety of agentic processes, we believe that a more capacious understanding of agency can be very useful to better understand opportunities for, and barriers to, sustainable and inclusive development paths in left-behind places.

Third, there is a need for rethinking supranational, national and regional policies. As the evidence in this special issue and beyond (e.g., Hassink and Kiese 2021; McCann 2024; Peñalosa and Castaldi 2024, this special issue; Parsons et al. 2024, this special issue) suggests, currently implemented policy approaches are not sufficient to advance sustainable and inclusive development in left-behind places. Following Eisenberg’s (2024) recent provocative call, a promising direction for research would be to go beyond growth-centred visions of “dynamic” regional development in left-

behind places and focus place-based policies instead on ensuring that residents of left-behind places “simply have their needs met” (p. 428). Drawing on recent work laying out territorial perspectives of the circular economy (Arauzo-Carod et al. 2022; Bourdin et al. 2022), the foundational economy (Hansen 2022), or post-growth or de-growth concepts (Lange et al. 2022) and further refocusing their insights on left-behind places, in what MacKinnon et al. (2022) sketch as an agenda of “neo-endogenous development”, is a key future research topic (see also Martin et al. 2022).

Fourth, the future research directions laid out above would benefit from a wider empirical scope with research focusing not only on the Global North but also considering regions in the Global South. Such an extended spatial reach is important because assuming that conclusions drawn from left-behind regions in the Global North can be offhandedly transferred to the Global South is implausible. In contrast, existing studies (Ghorbani and Brenner 2021; Trejo Nieto 2024, this special issue; Tups et al. 2024) suggest that there is much to learn from cases in the Global South. In particular, it would be highly relevant to carve out evidence-based policy options beyond conventional, growth-oriented strategies in left-behind places in the Global South, given that the challenge to reconcile environmental sustainability and social inclusiveness might be at least, if not more, complicated there than in the Global North.

While far from complete, a research agenda for sustainable and inclusive development in left-behind places could contribute to responding to Martin’s (2021) call for economic geographers and regional scientists to reorient their research in a “progressive-melioristic turn” (p. 143). Orienting regional development towards environmental sustainability, doing so in a way that is at the same time socially inclusive, and thereby opening up new futures for those places most in need is a formidable challenge at the very core of such a progressive-melioristic turn. The vast scope of this challenge, and the complexities involved, may seem daunting. Still, we believe that advances in research are likely to bring us closer to understanding how to tackle this challenge, and we hope that this special issue provides inspiration on the way forward.

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