

## Diversity in transition: is transitions research diverse (enough)?

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# 1 **Diversity in transition: Is transition research diverse (enough)?**

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14 Keywords: transition, diversity, heterogeneity, intersectionality, justice, energy poverty

15  
16 *"We need to think about [...] ways in which the transitions will really leave no one behind"*  
17 *(Tavoni, 2021)*

## 18 **Why is diversity important for successful transition (research)?**

19 In this contribution we argue that successful sustainability transitions and research  
20 require greater sensitivity to diversity issues. We focus on social diversity, highlighting  
21 heterogeneity and including dimensions such as gender, age, country of origin, culture,  
22 location, economic status, sexual orientation, levels of interest, ability, and literacy.  
23 Diversity dimensions can overlap leading to intersectionalities. For instance, women in  
24 the Global South present a group lying at the intersection of gender, geographical  
25 location and economic context.

26 The aim of diversity as a topic is twofold: to consider everyone and to improve everyone's  
27 quality of life, synergically. This connects with transition research because research into  
28 sustainability transitions strives to reach the same goals. Moreover, certain people or  
29 groups in society are more likely to suffer from a lack of transition (than others). Here,  
30 majorities and power come into play, connecting the issue of diversity with issues of  
31 power, elites, and social justice (e.g., recognition justice, Jenkins et al., 2021). Further,  
32 considering diversity can help to avoid resistance, negative emotions and transition  
33 failure.

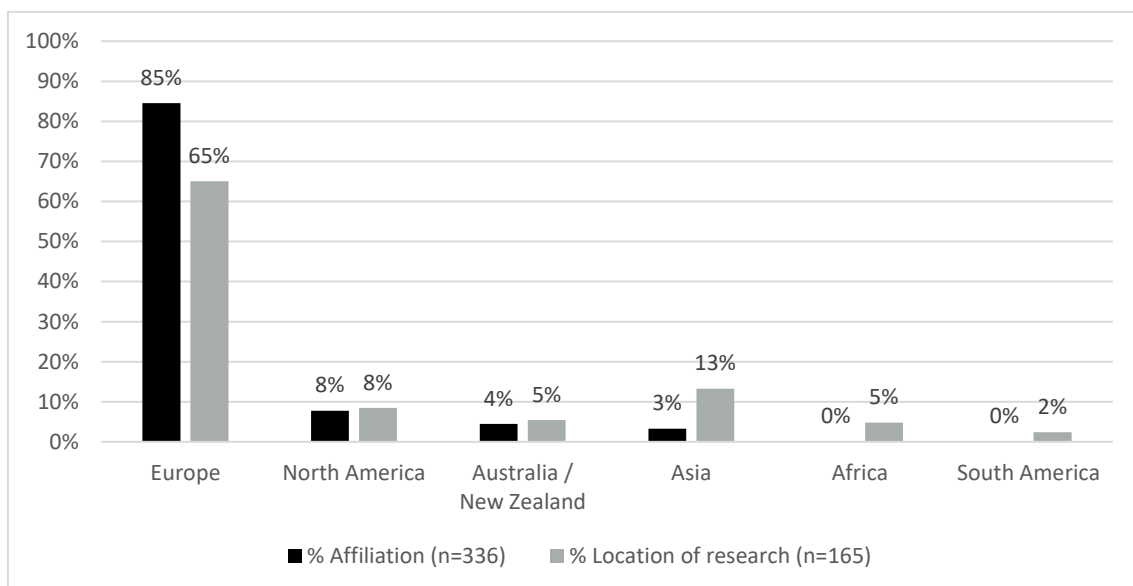
### 34 **How diverse is current transition research?**

35 It is important to consider the diversity of the transition research community, plus the role  
36 of diversity as a research topic.

#### 37 Diversity in the transition research community

38 We scanned the diversity of the transition research community based on data from the  
39 EIST journal retrieved from Web of Science, analysing a database containing 336 articles  
40 and reviews published in EIST between its foundation in 2015 and May 2021. We looked  
41 specifically at (1) authors' gender<sup>i</sup>, and (2) geographical spread in terms of (a) authors'  
42 affiliation and (b) research location.

43 Of the 336 first authors, 39% were female. This is below the share in the population but  
44 relatively high. Geographical spread, however, is less diverse. Most first authors work in  
45 Europe, other Western industrialized countries coming second (Figure 1). The location  
46 where the research was conducted reinforces this. Of the 165 EIST articles and reviews  
47 which mentioned a specific research country in the keywords or title, most research was  
48 conducted in Europe. There is a slight shift towards Asian, African and South American  
49 countries, demonstrating hope for diversification.



50

51 *Figure 1.* Percentage of EIST first authors' affiliation (n = 336) and location of research  
52 (n = 165), categorized by continents.

53 Consequently, theories developed and tested in (too) homogenous societies or samples,  
54 cannot be easily transferred to other societies or minority groups. Testing and developing  
55 concepts in heterogeneous contexts can improve the generalizability of transition  
56 research results and explain phenomena that may appear puzzling at first.

## 57 Diversity in research topics and areas

58 The sustainability transition research agenda (Köhler et al., 2019) highlights several  
59 aspects in sustainability transition research that have recently diversified. It refers to  
60 diversity regarding topics (e.g., Sovacool & Geels, 2016), methods (cf. Hansmeier et al.,  
61 2021) and the spatial dimension, but not social diversity. Recently, selected research  
62 streams have started to explore aspects closely related to diversity issues, for instance,  
63 politics and power (Avelino et al., 2016) and gender in the energy transition (Clancy et  
64 al., 2020; Stephens, 2020). Nevertheless, social diversity is not at the core of these  
65 developments. In the following, we illustrate promising approaches and aspects to  
66 consider:

- 67 • *Research considering heterogeneity within societies (e.g., minorities and*  
68 *marginalized groups)*. For instance, single parents are an under-researched  
69 group. They present more than 15% of EU-households and are more likely than  
70 average households to suffer from energy poverty (Sunikka-Blank & Galvin,  
71 2021). The energy transition, could mitigate or worsen their energy poverty. A  
72 mitigating factor will be the drive to improve the thermal quality of homes,  
73 However, carbon taxes will increase heating bills (O'Malley et al., 2020), and  
74 these households can least afford to pay. Thus it is important to recognize single-  
75 parent households' needs, including access to power and resources. Further,  
76 these households' roles are affected by societal ascriptions and practices, such  
77 as gender roles and gendered perceptions of individuals, demonstrating the  
78 relevance of recognizing intersectionalities.
- 79 • Regarding *geographical research areas*, it is important to extend transitions  
80 research to cultures and locations that have been under-researched - as most  
81 sustainability transitions are relevant globally. This has been taken up - among  
82 others - by the term Global South. However, existing research has shown that  
83 under-researched areas are heterogeneous in themselves. This demands  
84 awareness and methods that are able to capture diversity (Raven et al., 2017;  
85 Ghosh & Arora, 2021).

## 86 **Conclusion and Recommendations: Potential for diversification**

87 To conclude, (i) widening the participation of researchers from diverse backgrounds, (ii)  
88 diversifying research content and location, and (iii) considering the heterogeneity of  
89 under-researched groups, opens up new research questions and contributes to  
90 successful and just transitions. Thus, we argue that the answer to the title question is  
91 "Not yet", leading to four recommendations: Firstly, networking with (more) international  
92 researchers to diversify the research community, potentially creating more diverse

93 research topics; this might include possibilities for capacity building, knowledge sharing  
94 and an increased openness towards alternative approaches and perspectives by  
95 established transition researchers. Secondly, testing concepts in heterogeneous  
96 contexts and considering the diversity within groups when generalizing theories; we  
97 expect this will lead to revisions but also refinements of concepts and their applicability.  
98 Thirdly, implementing diversity-sensitive methods, to avoid an artificial reduction of  
99 diversity by applying diversity-blind methods (e.g., filtering out minority groups; see critics  
100 by Ghosh & Arora, 2021). Fourthly, more strongly integrating expertise from other  
101 disciplines such as social psychology (cf. Upham et al., 2020) or gender studies; these  
102 could inform transition research regarding diversity-sensitive research approaches,  
103 frameworks and concepts. Ideally, these recommendations would be integrated to arrive  
104 at a more diverse research community, researching diverse topics and areas, using  
105 diversity-sensitive methods.

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## 107 **References**

- 108 Avelino, F., Grin, J., Pel, B. & Jhagroe, S. (2016). The politics of sustainability  
109 transitions. *Journal of Environmental Policy & Planning*, 18, 557–567.  
110 <https://doi.org/10.1080/1523908X.2016.1216782>
- 111 Clancy, J. S., Özerol, G., Mohlakoana, N., Feenstra, M. & Sol Cueva, L. (2020).  
112 *Engendering the Energy Transition* (1<sup>st</sup> Ed. 2020). Springer International Publishing;  
113 Palgrave Macmillan.
- 114 Ghosh, B., & Arora, S. (2021). Smart as (un)democratic? The making of a smart city  
115 imaginary in Kolkata, India. *Environment and Planning C: Politics and Space*,  
116 23996544211027583.
- 117 Hansmeier, H., Schiller, K., & Rogge, K. S. (2021). Towards methodological diversity in  
118 sustainability transitions research? Comparing recent developments (2016-2019) with  
119 the past (before 2016). *Environmental Innovation and Societal Transitions*, 38, 169-  
120 174. <https://doi.org/10.1016/j.eist.2021.01.001>
- 121 Jenkins, K. E. H., Sovacool, B. K., Mouter, N., Hacking, N., Burns, M.-K. &  
122 McCauley, D. (2021). The methodologies, geographies, and technologies of energy  
123 justice: a systematic and comprehensive review. *Environmental Research Letters*,  
124 16, 43009. <https://doi.org/10.1088/1748-9326/abd78c>
- 125 Köhler, J., Geels, F. W., Kern, F., Markard, J., Onsongo, E., Wieczorek, A.,  
126 Alkemade, F., Avelino, F., Bergek, A., Boons, F., Fünfschilling, L., Hess, D.,

- 127 Holtz, G., Hyysalo, S., Jenkins, K., Kivimaa, P., Martiskainen, M., McMeekin, A.,  
128 Mühlemeier, M. S., . . . Wells, P. (2019). An agenda for sustainability transitions  
129 research: State of the art and future directions. *Environmental Innovation and*  
130 *Societal Transitions*, 31, 1–32. <https://doi.org/10.1016/j.eist.2019.01.004>
- 131 O'Malley, S., Roantree, B. & Curtis, J. (2020). *Carbon taxes, poverty and*  
132 *compensation options*. <https://doi.org/10.26504/sustat98>
- 133 Raven, R., Ghosh, B., Wieczorek, A., Stirling, A., Ghosh, D., Jolly, S.,  
134 Karjangtimapron, E., Prabudhanitisarn, S., Roy, J., Sangawongse, S. & Sengers, F.  
135 (2017). Unpacking sustainabilities in diverse transition contexts: solar photovoltaic  
136 and urban mobility experiments in India and Thailand. *Sustainability science*, 12,  
137 579–596. <https://doi.org/10.1007/s11625-017-0438-0>
- 138 Sovacool, B. K. & Geels, F. W. (2016). Further reflections on the temporality of energy  
139 transitions: A response to critics. *Energy Research & Social Science*, 22, 232–237.  
140 <https://doi.org/10.1016/j.erss.2016.08.013>
- 141 Stephens, J. (2020). *Diversifying power: Why we need antiracist, feminist leadership*  
142 *on climate and energy*. Island Press.
- 143 Sunikka-Blank, M. & Galvin, R. (2021). Single parents in cold homes in Europe: How  
144 intersecting personal and national characteristics drive up the numbers of these  
145 vulnerable households. *Energy Policy*, 150, 112134.  
146 <https://doi.org/10.1016/j.enpol.2021.112134>
- 147 Tavoni, M. (2021). Oral discussion in a webinar on April 28<sup>th</sup>, 2021. Webinar title: *Climate*  
148 *change and our future - driving the transition*. Organised by Intergovernmental Panel  
149 on Climate Change (IPCC).
- 150 Upham, P., Bögel, P., Dütschke, E. (2020). Thinking about individual actor-level  
151 perspectives in sociotechnical transitions: A comment on the transitions research  
152 agenda. A comment on the transitions research agenda. *Environmental Innovation*  
153 *and Societal Transitions* 34, 341–343. <https://doi.org/10.1016/j.eist.2019.10.005>

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<sup>i</sup> Since the authors' names only allow a categorization in the binary gender system (women and men), we did not include further gender identities (for instance, the third official gender in Germany). Nonetheless, we would like to note the relevance to recognize all gender identities in empirical data (e.g., when using self-reporting) to ensure diverse and just research. In single cases, we additionally consulted the pictures available on the authors' professional websites to encode the author's gender as male or female.