CHAPTER 5

# Concluding Thoughts: Embracing and Capturing Complexity

**Abstract** This chapter summarizes the key findings of the book in the context of its purpose and frameworks, while recommending possible avenues for future research and policy.

**Keywords** Energy poverty • Energy vulnerability • Energy justice • European Union

## Introduction

This book has explored the multiple layers of systemic change implicated in the emergence of energy poverty in Europe and beyond. I have sought to highlight the embeddedness of vulnerability to domestic energy deprivation in wider dynamics of organizational and social transformation. Of particular importance to this argument has been the need to understand how energy poverty and vulnerability are both rooted in and arise out of the material and technical features that characterize the existence of an infrastructural divide in Europe. The divide operates at multiple levels and scales of activity—from the differences between nation states, to variations within the fabric of neighbourhoods and even households themselves. The divide itself can be seen as a socio-technical assemblage that is continuously dismantled and put together by multiple political interests and path dependencies. It is highly territorially contingent, which means that the



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geographical characteristics of cities, regions and countries themselves combine to produce and sustain this particular form of injustice.

As we argued in Bouzarovski et al. (2017) the emergence of energy vulnerability of a distinct spatial formation involves the interplay between concurrent processes of social change on the one hand, and the tangible and intangible features of particular places, on the other. At the same time, the dynamics that allow energy poverty to arise and persist within specific material sites also shape wider political and social processes—as well as processes of institutional change in the energy sector itself—via an additional feedback loop. Thus, the driving forces of energy poverty and vulnerability in socio-spatial terms are multidirectional and multiscalar. They involve different temporal and spatial horizons, while demonstrating the ability to shape broader political dynamics.

The reviewed evidence shows that ECE countries are characterized by record levels of energy poverty in the European context. Here, it is clear that the decision to move towards a market-based regulation of the energy sector—involving, inter alia, the liberalization of energy trade, the rebalancing of energy prices, the unbundling and privatization of energy utilities and the creation of new institutions to facilitate competition—was a crucial component of the institutional driving forces of energy-related injustices. Even if it has been argued that 'the formal remodelling of the institutional landscape has now been largely completed in many former communist countries' (Sýkora & Bouzarovski, 2012, p. 53) a tendency to reverse the movement towards market-based policies has been observed in a number of countries. This may further increase the risks that vulnerable groups face, by denying them the potential benefits of liberalized energy markets despite removing the universal support and subsidy mechanisms that characterized the centrally planned economy. Modifications of neoliberal policies are even more concentrated at the level of organizational and social practice, where corruption, clientelism and price regulation policies have contributed to the rise of a series of hybrid regulatory outcomes.

The urban scale provides a material site for amalgamating the multiple dynamics of change described within the first and second layers of transition into specific spatial formations. Energy vulnerability is imprinted in the urban landscape through existing and new forms of socio-economic segregation, access to infrastructural services and variations in built environment structures. The fact that such configurations extend beyond areas that would be typically considered low income once again points to the cross-sectoral nature of energy vulnerability, as well as its deep connections

with urban processes that evolve and develop over long periods of time. This shows how energy transitions create displacements that are reflected within multiple spatio-temporal scales and thematic areas of activity. Vulnerability to domestic energy deprivation thus cannot be considered as a household issue, but rather a phenomenon that is distributed throughout the 'energy chain' (Chapman, 1989)—an issue that warrants further research in the domain of energy geographies (Calvert, 2015). As argued previously (Bouzarovski et al., 2017) such findings call for a rethink of the conceptual assumptions that inform wider sustainability transitions frameworks, by considering the material and infrastructural characteristics of place and space as contingencies that deserve customized conceptual attention.

Domestic energy deprivation does not bring about a passive and reactive set of behaviours and practices within households and institutions (Bouzarovski, Tirado Herrero, Petrova, & Ürge-Vorsatz, 2016). Rather, the diverse strategies that are articulated with respect to the condition have far-reaching effects on the systemic conditions that underpin the emergence of energy poverty. They can thus potentially challenge the triad of distribution, procedure and recognition that dominates current understandings of the injustices that underpin fuel and energy poverty (Walker & Day, 2012) by introducing notions of spatial justice into the debate (Bouzarovski & Simcock, 2017).

The work reviewed in this book also points to the need for developing a more explicit conceptual and policy link between domestic energy deprivation and the implementation of climate policies. Ex ante studies focusing on the co-benefits and multiple benefits of energy efficiency interventions (Ürge-Vorsatz, Tirado Herrero, Labzina, & Foley, 2012) have highlighted the significant welfare-enhancing effects of thermal retrofits—a key infrastructural solution often prescribed in the policy-oriented literature. However, high or increasing levels of domestic energy deprivation complicate the application of policies that promote energy vulnerability-enhancing measures, such as renewable feed-in tariffs or surcharges paid by domestic energy users irrespective of income, needs or living conditions. In a number of European countries, the expansion of energy poverty among the general population has been accompanied by the adoption of household strategies orientated towards carbon-intensive and polluting fuels, such as coal or firewood (Bouzarovski et al., 2016).

Throughout the book, I have argued in favour of developing a deeper understanding of the manner in which material deprivation both arises out

of and affects the consumption of energy services within the home. This would necessitate a more nuanced theorization of the institutional and spatial contexts that shape energy-related demographic and residential vulnerabilities. The manner in which restructuring processes in the energy and housing sectors have interacted at the regional and local scales deserves particular attention in this context. Also of importance is the nature of policy recognition afforded to groups that are susceptible to the condition but remain outside the focus of present policy measures, due to the state's failure to detect the specific age, gender and locational profiles of energy-poor households. Accepting that energy poverty cannot be addressed via standard income- or economic development-based approaches, a more comprehensive conceptualization of the condition can potentially lead to the development of improved detection and measurement frameworks. The benefits of such an effort could extend beyond Europe to other parts of the Global North, where the relationship between rising energy prices and poverty levels may become a more pressing political and economic issue in the future.

On the practical side, there are significant opportunities to address the issue via demand-side energy efficiency policies—mainly in the form of deep building retrofits and appliance market transformations. Such measures are clear win-win solutions in the case of energy poverty, as they can also assist the broader process of poverty alleviation. Given the major social and geographical differences in the incidence of energy poverty within the European Union (EU), these policies are best delivered at the regional scale. A key challenge, however, lies in exposing and treating energy poverty and energy vulnerability though a political lens (Healy & Barry, 2017): seeing them as injustices that have arisen and are allowed to persist due to the presence of particular power interests and ideologies. As such, they are within the reach of the possible with regard to citizen action and wider institutional structures.

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