

## Book Review

Harry Margalit, *Energy cities and sustainability: a historical approach*, Earthscan, Routledge, 2016. 206pp. ISBN-13: 978-1138852396. R.R.P. NZD \$69.59 (paperback)

Environmental and urban crises have made cities the subject of analysis of many books in different fields of research. However, the number of books that have attempted to analyse cities using an integrative approach, one that creates bridges between fields of research, is far fewer. Harry Margalit has produced a book that belongs to this number. In *Energy cities and sustainability: a historical approach*, the author proposes that the role that energy has played in the development of cities is disconnected from the history of the ideas that have influenced this development. The aim of the book is to understand urban form by considering the ways in which energy has been used to shape the city and its urban life. The author integrates a historical view of the urban development of Western and some Eastern societies with data about energy production, distribution and consumption in cities.

The book can be divided into three parts: the pre-modern city, the modern city and the critiques of the modern city. In the first part (chapters one and two), the author discusses the relationship between pre-capitalist societies, energy and the growth of pre-industrial cities. Even though it is a long historical period, the author highlights key events that marked changes in energy production and consumption and how these helped societies to cluster into cities. The author uses Rome, Florence and Venice as key case studies to explain the link between the urban size of cities, their importance and the struggles to produce the energy needed to satisfy their demands. The transition from solar sources of energy to fossil fuels is also developed in this part. In the second part of the book (chapters three and four), the author discusses the development of transportation systems and their impact on the connectivity and density of cities. The author proposes that energy has had a role in the distribution of wealth “by enabling the conversion of land around cities to housing” (p. 107).

The hypothesis is that the 'modern city' was equalitarian because technological advances, powered by the abundance of energy, made possible a number of changes such as the popularisation of cars and the electrification of households. In the third part of the book (chapters five, six and seven) the subject of analysis becomes the post-modern critiques of cities. The chapters provide a good review of Jacobs, Lefebvre and Castells and an introduction to the main criticism of the first wave of environmentalists. The conclusion provides a set of key speculations and future predictions, where the questioning of compact cities as the optimum model for making more sustainable cities is one of the highlights.

The book is more effective in highlighting the importance of energy flows in the expansion of urban phenomena than in its discussion of the relationship with the urban form of cities. The morphology of the built environment is mostly discussed on the large scale. Consequently, the bottom-up impact that discrete architectural types and urban patterns have had in the energy demands of cities is not discussed in depth. From a sustainable point of view, the book may have benefited from measuring the environmental impact of each historical phase by consistently using the same methods of assessment. The use of an ecological or carbon footprint to measure the impact of urban growth could have been instrumental in illustrating the narrative and comparing the periods. Moreover, the use of an ecological footprint could have been helpful in approaching the discussion of the limits to urban expansion, a topic that is mentioned as very important in the introduction (p. 1), but that is progressively displaced by discussions and speculations around transitions to new energy sources. Consequently, ideas that include changing the behaviours and life styles of people in order to create more sustainable ways of living are not even considered as strategies to consume less energy. This is still a key topic in debates about urban sustainability and it is also linked to the relationship between equity and energy, an important component of the social sustainability that the book aims to develop. The author states that "the levelling effects of fossil fuel power in the modern world should be at least obvious" (p. 108) and continues by saying that "in modern industrialized economies the lives of the rich and the poor are more alike than any time in history" (p. 108). The

author proposes that this is basic to understanding the 'equality of technology'. The book suggests that the development of technology and the production and consumption of energy in cities is an instrument and synonym of equality, and in this way, progress. Cities that produce and consume more energy will do better than the rest, particularly if they find a way to produce more energy at a lower cost. This assumption might be helpful in explaining the growth of the urban phenomenon and its expansion; however, it is hardly convincing in terms of explaining how energy and urban expansion will contribute to a reduction in the socio-economic inequality in cities. The inequality crisis has been well documented in recent years. Unfortunately, data shows that some of the most developed countries are also some of the most unequal. From a sustainability point of view, countries with the lowest ecological footprint tend to be more equalitarian and to consume less energy than countries that produce and consume more energy, that tend to have bigger ecological footprints and that suffer from more inequality. This poses a different picture of progress, one where having more does not mean being better. Therefore, the idea of progress and the links between equity and energy proposed in the book are highly contestable.

The book is helpful in questioning the transition to alternative sources of energy and in understanding that there is no such a thing as a perfect form for cities. It shows that the growth of the urban phenomenon depends on contextual factors, which play a key role in the way that energy is produced and used. The author warns us about standardised urban models, such as the compact city ideal, that must be carefully analysed and contextualised to challenge their suitability for different contexts. Criticism of the compact city model is timely, and it can push designers to think differently about the present and future growth of cities. The literature review on key urban thinkers along with the efforts to highlight the importance of energy flows to understand the growth of cities are much appreciated. The book can encourage scholars to produce integrative ways of looking at cities and it is also a good reference for students of history in architecture and planning.

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