

Chapter 12

Conclusion: Where We Are and Where We Are Going



Nada Kujundžić and Matúš Mišík

Abstract The chapter provides an overview of the edited volume and summarises the main contributions of the individual chapters to the energy humanities. Based on this, it provides an overview of the issues that are currently at the forefront of energy humanities research and identifies possible venues for future inquiries. It also addresses some of the volume's limitations. The chapter underscores the importance of the energy humanities for examining the roots and extent of our dependency on fossil fuels, and the social, political, ideological, aesthetic, and cultural aspects of energy, as well as its role in bridging the gap between the natural sciences and the general public. Namely, while natural sciences continue to generate data regarding the devastating and fast-approaching consequences of climate change, they are not always successful in communicating their immediacy and importance to a wider audience. Many directly link this absence of effective communication with the lack of concrete action on the part of decision makers and the public. The chapter argues that the humanities and social sciences can greatly contribute to the transfer of knowledge between the scientific community and the general public, and the creation of a greater sense of immediacy and significance related to taking decisive action, necessary to prevent irreversible consequences of climate change.

Keywords Climate change · Energy transition · Public · Natural science · Policy change

The main idea behind this edited volume—and the energy humanities as a whole—is the notion that the humanities and social sciences have a lot to contribute to solving current global challenges related to climate change, especially energy transition. For a long time, climate change, global warming, and the role of humankind in these

N. Kujundžić
University of Turku, Turku, Finland
University of Zagreb, Zagreb, Croatia

M. Mišík (✉)
Comenius University in Bratislava, Bratislava, Slovakia
e-mail: matus.misik@uniba.sk

processes were viewed almost exclusively through the prism of natural sciences: for example, climatologists and mathematicians have modelled the development of the planet's climate; chemists and physicists have explained how different gases produced by humans create a layer in the atmosphere which prevents the excess heat to leave the planet, thus causing a temperature rise. Despite some discussion on whether the current climate crisis is entirely caused by humans (some see it as a result of the natural cycle of colder and warmer climate periods; Bertoldo et al. 2019), scientists agree that climate change (and other radical changes of our planet) is anthropocentric (Doran and Zimmerman 2009), a notion reflected in the use of the term 'Anthropocene' ('the epoch of humanity') to describe our current era and highlight the extent to which it has been shaped by humans (Crutzen 2002; Crutzen and Stoermer 2000; Zalasiewicz et al. 2012). Opposition to this claim (so-called climate change denial) comes from questionable sources that are regularly invalidated, but still manage to enter the public discourse thanks to their vocal supporters (Dunlap and McCright 2011; Washington and Cook 2011).

For decades, natural sciences have consistently been providing evidence about climate change and the seriousness of its consequences for the entire planet. Recent research has shown that even 50-year-old climate models were precise in predicting climate development, and that future expectations provided by those and the more precise current models will very likely be realised (Cornwall 2019). However, despite the plethora of scientific evidence highlighting the need to alter our way of life and use existing opportunities (such as the current post-pandemic recovery)¹ to decrease greenhouse gas (GHG) emissions, and public calls to heed their warning—voiced especially loudly by the young Swedish activist Greta Thunberg (2019), initiator of the 'Fridays for Future' movement—there is still a considerable lack of decisive action, both on the part of decision makers and the general public. Some researchers attribute this to the lack of effective communication on the part of natural sciences (Nisbet and Scheufele 2009; Whitmer et al. 2010), claiming that, in order "to motivate, enable, and sustain public action on climate change and other environmental issues", scientists need a better understanding of the processes of communication and learning, the conditions needed to improve the learning experience, as well as the different sources of information, from news broadcasts and online platforms, to museums, video games, and social media (Groffman et al. 2010, p. 286).

While their contribution to the discussion on climate change and energy transition is by no means exhausted in mere mediation, the humanities and social sciences play a key role in successfully communicating 'hard' scientific data in more comprehensible and engaging ways. Namely, effective communication is not just a matter of

¹As the global economy slowed down and transport was almost fully halted for several months, the current Covid-19 pandemic (this Conclusion was written in May 2020) decreased the production of emissions, which raised questions about post-pandemic recovery. Many voices, especially within the European Union, support a 'green' recovery, viewing the pandemic as an opportunity to avoid reverting back to the 'old' system of emission and pollution, and instead exclusively invest in environment-friendly industry. In other geographic areas, however, GHG levels reached pre-pandemic heights even before the pandemic was fully over (Qi 2020), and are expected to continue increasing as many governments give precedence to a fast and steep economic recovery over climate concerns.

creating more accessible narratives, but also (and even more so) of understanding the importance of values, needs, and experiences for interpreting and responding to information (Einsiedel 2008; Nisbet 2009; Weber and Word 2001), as well as the processes wherein individuals make connections between broader issues such as environmental problems, and their everyday lives and value systems (Groffman et al. 2010). The key to getting scientific messages across therefore lies in a more thorough understanding of different audiences and their values, interests, and social networks (the focus of disciplines such as sociology, communication and media studies), as well as the ways in which individual issues should be framed so as to resonate with target audiences (e.g. folklore and literary studies). This is why the interdisciplinary collaboration between the natural sciences, humanities, and social sciences, as well as between academic and other institutions, is crucial for “bring[ing] many sources of specialized knowledge and experience to bear on societal engagement and solutions to climate change and other environmental problems” (Nisbet et al. 2010, p. 329).

In addition to facilitating the transference of scientific knowledge, the humanities and social sciences contribute to discussions on the current climate and energy crises—especially the transition to a carbon-free form of energy production—with their own unique knowledge and expertise. The energy humanities is especially well positioned to study both the minutiae of the energy transition, a complex process that impacts all aspects of human life, and the negative effects of a ‘business-as-usual’ approach to GHG emissions and climate change. As illustrated by the research presented in this volume, its unique combination of approaches from the humanities and social sciences brings the social, political, ideological, aesthetic, and cultural aspects of the energy transition to the forefront by examining how we reached the point at which an energy shift is necessary, how it might be realised, and how it will inevitably alter both our everyday lives and our societies. The edited volume’s different chapters have argued that the energy humanities has an opportunity to assist in the energy transition by (among other things) seeking historical models of more sustainable societies and modes of living (Chap. 3), using literature and other art forms as fictional platforms for developing possible future scenarios (Chap. 9), and identifying and drawing lessons from best contemporary practices (Chap. 6). Furthermore, it has the important task of identifying and highlighting the role of energy in the different operations of politics, governance, power, and freedom. For, as Imre Szeman warns (Chap. 2), the failure to do so not only limits our understanding of energy and the possible manifestations of energy transition, but also (perhaps more importantly) results in a warped and incomplete comprehension of those processes, which, in turn, can lead to the reproduction of their more harmful aspects (Chap. 8).

The chapters assembled in this volume address a number of issues connected to the energy humanities from different disciplinary and theoretical angles. While the chapters in the first section focus on the broader picture and provide theoretical discussions on the critical theory of energy (Chap. 2) and an energy history of the humanities (Chap. 3), those in the second section demonstrate that existing best institutional practices are not always recognised and implemented (Chaps. 4 and 6), and that narratives about carbon-neutral fuels of the future are often used to mask the utilisation of the carbon-based fuels of today (Chap. 5). The chapters included in

the third section argue that fictional depictions of fossil fuels in Norwegian television and film represent not only modernity, but also the toxicity of politics and human nature (Chap. 7), trace the colonial legacy inscribed in the energy transition and fossil fuel extraction in Canada (Chap. 8), draw lessons for current energy relations from science fiction (Chap. 9), analyse representations of the Chernobyl nuclear disaster in contemporary U.S. fiction (Chap. 10), and study cultural artefacts that stress the longevity of nuclear waste (Chap. 11).

Taken together, the chapters underscore several key aspects of the current state of energy humanities, primarily its interdisciplinary potential and ability to bridge the gap between academic and applied research (Chaps. 2 and 3). The emphasis on interdisciplinarity stems from one of the key premises of this research field—the notion that energy permeates every aspect of our contemporary lives, from everyday activities and interpersonal relations, to larger social structures and modes of cultural production. Because energy (especially fossil fuels) is not limited to a single area of our existence, its study cannot be limited to a single discipline. Furthermore, this means that an energy transition (regardless of its concrete course and shape) is not merely a matter of substituting one (non-sustainable, ‘dirty’) energy source with another (sustainable, ‘clean’); rather, it is a process with a wide range of implications, from political and social, to ideological and cultural (Chap. 8).

Secondly, the chapters illustrate the ability of the energy humanities to look into the past (Chap. 3), present (chapters in Part II), and future (Chap. 9) in search of the causes and solutions for our contemporary concerns. The volume’s second section offers especially pertinent lessons for energy transition by seeking current examples of climate and renewable policy implementation that should (not) be followed. By discussing examples of best practices that are not always followed or include aspects which are not always climate-oriented, all three chapters in the section underscore the notion that discussions on energy (transition) are deeply rooted in political and social discourses, demanding that special attention be paid to the individual actors within those discussions, and their role in shaping the public perception of individual energy sources and solutions.

Finally, the chapters assembled here highlight the fact that energy is more than just a novel research topic for the humanities and social sciences. Rather, it challenges and alters individual disciplines, prompting them to develop theoretical and methodological apparatuses that are especially suited to the study of energy. Moreover, the increased awareness of the material aspects and requirements of the disciplines within the humanities and social sciences (Chap. 3), as well as the different forms of artistic expression, calls for a reconsideration of their own relationship to energy and inevitable transformations following an energy transition.

By focusing on resources other than oil—specifically, natural gas (Chaps. 4 and 5) and nuclear energy (Chaps. 9, 10 and 11)—the edited volume attempted to avoid the commonly criticised ‘petromyopia’ of the energy humanities (Jones 2016) and broaden the discussion to include energy sources that are being considered as possible alternatives to oil. For example, the conversation on nuclear energy as a possible substitute for fossil fuels necessitates a reconsideration of its traumatic (post-Chernobyl) legacy and reputation, connection to radiation, and potential role in

a new energy regime. The three chapters on nuclear energy included in the volume's third section trace the changing discourse on this energy source, from safe resource that can enable extremely cheap electricity generation (Chap. 9) to devastating threat the consequences of which can hardly be grasped (Chaps. 10 and 11). To be sure, many more energy sources remain outside the scope of the edited volume, including renewable sources such as hydro, wind, and solar energy.

In addition to what might be termed a thematic imbalance (almost exclusive focus on oil), the field of energy humanities has also been marked by a geographical unevenness. As in the case of the environmental humanities, the majority of teaching and research is conducted in Anglophone contexts (cf. O'Gorman et al. 2019), especially Canada, which is hardly surprising considering the pioneering role Canadian researchers and institutions have played in defining and developing the energy humanities. While this volume attempted to address this issue by expanding the discussion to include scholars from beyond Canada and the U.S., there is still considerable room for improvement. Of particular note is the absence of contributions from/about the Global South, as countries from that region play just as important role in the energy transition as those from the Global North, especially considering their requests for unrestricted development, similar to the one enjoyed by countries of the Global North which enabled them to aggregate wealth (at the expense of rising GHG emissions).

While we believe that this edited volume presents a wide variety of perspectives on the energy humanities, thus illustrating its possible contributions to the discussions on energy transition and climate change, many promising areas of inquiry inevitably remain beyond its scope. We present some of the more stimulating and pressing ones as recommendations for future studies. Additional research is needed on the material aspects and energy dependency of the different disciplines within the humanities and social sciences, in order to anticipate their transformations following the energy transition. A topic raised by some of the chapters in this volume which demands more attention is the role of energy in different types of power relations, from (post)colonial relations to the various forms of energy-based power play on the international stage. Future research should also consider the links between the energy humanities and sociotechnical imaginaries, which also address issues connected to energy transition. While representations of energy in literature, film, photography, and other forms of art have already proven to be a productive research field, more systematic efforts should be directed towards examining the role of energy in the production of art and the impact an energy transition would have on individual art forms. Finally, it is imperative to turn our attention to countries of the Global South and similar areas in which energy development has been hindered in some way, and/or which primarily rely on energy sources other than fossil fuels.

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