INTRODUCTION

Climates and Cultures in Northern America

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1 Cut Down on the Bias

Though anthropogenic climate change is an inherently global phenomenon, its impacts as well as mitigation efforts are always dealt with locally and in a culture-specific way. The assumption that culture mediates individual as well as collective actions related to environmental and climate change is accepted by a wide range of researchers.[1] Therefore, it is common to state that the investigation of anthropogenic climate change needs to take into account the social practices, perceptions, belief systems, and values of specific social groups. Far less simple is, however, to do exactly this: to elaborate the cultural dynamics of a changing climate in a certain place and time. So far, the cultural and societal dimensions of climate change have been largely neglected. This can be illustrated by the assessment reports of the Intergovernmental Panel on Climate Change (IPCC), today's most authoritative source on climate change: The IPCC reports' literature is heavily dominated by natural science disciplines. This does not only apply to the reports on the physical basis of climate change, but also to the reports on impacts, adaptation and vulnerability as well as on mitigation of climate change.[2] Although in recent years a growing number of literature from the social sciences and the humanities has been published on topics such as adaptation, climate migration, climate-friendly behaviour, resilience, vulnerability, etc.,[3] this research remains largely marginalised in the

1 See e.g. Hoffman, Andrew J., "Climate Change as a Cultural and Behavioral Issue: Addressing Barriers and Implementing Solutions," *Organizational Dynamics* 39 (2010): 295–300; Mauch, Christof, and Sylvia Mayer, "Introduction," in *American Environments: Climate-Cultures-Catasthrope*, ed. Christof Mauch, and Sylvia Mayer (Heidelberg: Universitätsverlag Winter Heidelberg, 2012), 1–5; Welzer, Harald, Hans-Georg Soeffner, and Dana Giesecke, ed. *Klimakulturen: Soziale Wirklichkeiten im Klimawandel* (Frankfurt/Main: Campus, 2010).

2 Hulme, Mike, "Meet the Humanities," *Nature Climate Change* 1 (2011): 177–179.

3 Dryzek, John S., Richard B. Norgaard, and David Schlosberg, ed., *The Oxford Handbook of Climate Change and Society* (Oxford: Oxford University Press, 2011); Voss, Martin, ed., *Der Klimawandel: Sozialwissenschaftliche Perspektiven* (Wiesbaden: VS Verlag, 2010); Welzer, Soeffner, and Giesecke, *Klimakulturen: Soziale Wirklichkeiten im Klimawandel*.

IPCC's assessment reports.[4] If social science literature is processed by the intergovernmental body, it is largely from the field of economics.[5]

The series *Climate and Culture*, of which this anthology on Northern America forms the third volume, can be seen as a further contribution to right this bias. It aims at incorporating the rich knowledge of cultural studies and social sciences into the academic debates on environmental change as well as mitigation of and adaptation to climate change.[6]

The geographic region Northern America as the northernmost of the Americas comprises the territories of Canada, Greenland and the United States of America (US).[7] Within this enormous geographical realm almost every climate can be found, ranging from tropical in southern Florida to subarctic and polar in most of Alaska and Greenland as well as northern Canada. An arid climate can be found in the Great Basin, deserts in the Southwest of the US, a Mediterranean climate in California and alpine mountains in the Western part of the continent. Additionally, extreme weather is a recurring feature of the Northern American climate. The South of the US, bordering the Gulf of Mexico, is repeatedly troubled by hurricanes, and the Midwest of the country is one of the most tornado prone regions in the world. Also disasters such as earthquakes, droughts and wildfires occur with certain regularity. Corresponding to its

4 Hulme, "Meet the Humanities," 77.

5 Ibid. The IPCC'S Fifth Assessment Report incorporates relatively more literature from the humanities and social sciences. However, the preference of literature from the natural sciences and economics still prevails. Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2014: Synthesis Report* (Geneva: IPCC, 2014).

6 The series *Climate and Culture* is edited by Carmen Meinert and Claus Leggewie. Already published titles within the series focus on East Asia (Meinert, Carmen, ed., *Nature, Environment and Culture in East Asia: The Challenge of Climate Change*, *Climate and Culture* vol. 1 (Leiden: Brill, 2013)) and South and South-East Asia (Schuler, Barbara, ed., *Environmental and Climate Change in South and Southeast Asia: How Are Local Cultures Coping?*, *Climate and Culture* vol. 2, (Leiden: Brill, 2014)). Over the next years, additional volumes will be published on Europe, Africa, the Middle East, the Pacific Region, Latin America, and Central Asia. For Northern America, an earlier attempt to locate environmental change "within larger historical, social, and cultural contexts" was already provided by the volume *American Environments. Climate–Cultures–Catasthrope*, ed. Christof Mauch and Sylvia Mayer. Cf. Mauch, Christof, and Sylvia Mayer, "Introduction," in *American Environments: Climate–Cultures–Catasthrope*, ed. Christof Mauch and Sylvia Mayer (Heidelberg: Universititätsverlag Winter Heidelberg, 2012), 1.

7 According to the United Nations (UN), additionally the Bermuda in the North Atlantic Ocean as well as Saint Pierre and Miquelon, situated in the north-western Atlantic Ocean near Canada, belong to the geographical region of Northern America. Cf. United Nations Statistics Division (UNSD), "Composition of Macro Geographical (Continental) Regions, Geographical Sub-regions, and Selected Economic and other Groupings," accessed May 2, 2014. http://unstats.un.org/unsd/methods/m49/m49regin.htm.

heterogenic climatic conditions, Northern America hosts a 'mega-diverse' ecology; the US belongs to the world's most biodiverse countries.[8]

In the context of the book series *Climate and Culture* as well as in the present volume 'culture' is understood in the broader meaning of cultural anthropology and cultural sociology. Accordingly, culture refers to all forms of notions (symbolic meanings) and practices (including the artefacts generated by them) that individuals share as members of a particular social group or society.[9] Certainly, these 'shared' notions and practices are *never* alike among all members of a specific social group. Especially in modern, highly differentiated societies, they are always individualised to a certain extent.[10] Conceptualised this way, the term 'culture' refers to something that is historically constructed, fluid, and variable in time and space. As its ecology, 'culture' in Northern America is also highly diverse (and therefore more adequately addressed in plural): It comprises countless forms of social practices, habits and traditions, mind-sets and numerous belief systems, religions, languages, etc.

Global warming interacts in multiple ways with Northern American ecological and social systems. While the US and Canada belong to the world's largest per capita emitters of greenhouse gases, the Arctic north of the continent as well as the 'Deep South' are already affected by a changing climate. Having the immense natural as well as cultural diversity of Northern America in mind, the aim of the book series *Climate and Culture* "to provide for a given region and/or cultural setting suitable snapshots [...] in order to lay out a mosaic of ideas, case studies and future projections",[11] is also the only suitable way of investigating the *Cultural Dynamics of Climate Change and the Environment in Northern America*.

Of course, defining the scope of exploration for this volume on geographic terms is arbitrary to a certain extend. For instance, Greenland has a long history of connections to Europe, and Inuit culture in Greenland has been influenced by Danish colonisation as well as nearby Iceland. Something similar can also be witnessed for many places (states, regions, cities, urban quarters) in Northern America. For instance, former French colonies in Canada and the US—such as Québec or Louisiana (with its metropolis New Orleans)—show

8 Biodiversity A–Z, "Megadiversity Countries," accessed May 2, 2014. http://www.biodiversitya-z.org/areas/26.

9 Eriksen, Thomas H., *Small Paces, Large Issues: An Introduction to Social and Cultural Anthropolgy* (London: Pluto Press, 2010), 4.

10 Cf. Elias, Norbert, *Die Gesellschaft der Individuen* (Frankfurt: Suhrkamp, 1996), 240–245.

11 Meinert, Carmen, "Introduction: Climate and Culture in East Asia," in *Nature, Enviroment and Culture in East Asia: The Challenge of Climate Change*, ed. Carmen Meinert (Leiden: Brill, 2013), 6.

distinct features of "French culture" (i.e. Québec has a predominantly francophone population, and French is its sole official language). Moreover, the growing number of people in Northern America referred to as "Hispanics"—which is used as an umbrella term to denote persons who have a factual or assumed historical and cultural relationship with Latin America, Spain or Portugal—additionally exposes the analytical and normative difficulties of linking certain cultural practices to a specific geographical region or even a nation state. Not least, climatic processes and environmental changes do not stop at the (e.g. US-Mexican) border, and thus any attempt to deal with cultural practices concerning the environment and climate change in a clear-cut defined region is in need of explanation. However, the pragmatic approach of this volume to demarcate 'its' area on geography spares the highly problematic endeavour to define something like "the Northern American Culture", including an exact identification of what belongs to it and what does not. Such an attempt would unavoidably entail the danger of promoting "culturalism", putting forward an essentialised notion of culture.[12] The 'snapshot approach' applied for this volume is open for all the numerous cultural practices which can be empirically found in Northern America—being aware of the fact that such an endeavour always remains fragmentary and incomplete.

2 Society–Nature Interactions in Northern America

Theorising the relation between nature and culture in Northern America, respectively interactions between the environment and society, has a long tradition. Already Alexis de Tocqueville described in his classic study on *Democracy in America* how the "nature of the territory which the Americans inhabit" was favourable for "the establishment and maintenance of a democratic republic in the United States".[13] A rich vegetation, combined with a fertile soil and a seemingly boundless continent provided the basis for a general prosperity which Tocqueville viewed as beneficial for all governments, but particularly democracies, which especially depend on the support of the majority. "In the United States," Tocqueville wrote, "not only is legislation democratic, but nature herself favours the cause of the people".[14] About 60 years later, in 1893, the

12 Fredrickson, George M., *Racism: A Short History* (Princeton, New Jersey: Princeton University Press, 2002), 7.

13 Tocqueville, Alexis de, *Democracy in America*, vols. 1 and 2 (New York: Bantam Bell, 2002 [1835]), 337.

14 Ibid., 338.

US historian Frederick Jackson Turner famously argued that American society—including its egalitarianism and notion of democracy—was formed by the frontier experience, the progressive moving of the frontier from east to west.[15] Especially in the late 18th and 19th century, US history and political culture were perceived to be formed by interaction with the natural environment.[16]

For generations of European pioneers and settlers, the aim of this interaction was relatively clear: nature was seen as something which has to be domesticated, something which can and should be exploited. Nature was supposed to serve the fulfilment of human ends and desires. During his trip to the US, Tocqueville observed:

> In Europe, people talk a great deal of the wilds of America, but the Americans themselves never think about them; they are insensible to the wonders of inanimate nature and they may be said not to perceive the mighty forests that surround them till they fall beneath the hatchet. Their eyes are fixed upon other sight [...] the march across the wilds, draining swamps, turning the course of rivers, peopling solitudes, and subduing nature.[17]

This utilitarian or even antagonistic attitude towards nature is closely connected to European colonisation of the North American continent. Previously, of course, there have already been hunters and gatherers as well as agrarian societies in the "New World", which did not perceive nature in this way.[18] For most settlers and colonialists, the wilderness—predominantly those parts of nature which were not subject to human control—constituted a threat to their survival: safety and comfort as well as necessities like food and shelter depended on overcoming the natural environment. In his study on the changing American attitudes towards the wilderness, Roderick Frazier Nash puts it as follows: "There was, initially, too much wilderness for appreciation."[19] However, pioneers did not only combat the natural environment for personal survival,

15 Turner, Frederick Jackson, *The Frontier in American History* (New York: Digireads.com, 2010 [1893]).

16 Mauch, and Mayer, "Introduction," 1–2.

17 Tocqueville, *Democracy in America*, 590.

18 Though, the romantic notion that Native Americans lived in harmony with nature can be revealed as a myth. Cf. Krech, Shephard III, *The Ecological Indian: Myth and History* (New York, London: W.W. Norton & Company, 1999).

19 Nash, Roderick F., *Wilderness and the American Mind* (New Haven, London: Yale University Press, 2001 [1967]), xiii.

physical well-being and material progress, but also in the name of ideologies (such as nationalism or racism) and religions.[20]

The ending of the American frontier in the 19th century, began to work on behalf of nature. The children and grandchildren of the pioneers began to sense nature's ethical and aesthetic values. Ironically, appreciation of nature and wilderness began in the cities.[21] Concern over the loss of nature led to calls for its protection and the creation of the first national parks. One of the most famous representatives of this 19th century environmentalism was Henry David Thoreau, best known for his book *Walden*, in which he reflects on his two-year experiment of simple living in the woods.[22] For Thoreau, the preservation of nature was not an end in itself; he saw the preservation of wilderness as important for the preservation of civilisation.[23]

During the presidency of Theodore Roosevelt (1901–1909), who became famous for his appreciation of nature and the conservationist stance, the protection of wildlife received further support. Under his authority, additionally about 230,000,000 acres of public land became protected, including the establishment of 51 Federal Bird Reservations, four National Game Preserves, 150 National Forests, five National Parks, and the proclamation of eighteen National Monuments through the American Antiquities Act of 1906.[24]

In the 1960s and 1970s—accompanied by broad changes in societal values[25]—environmentalism became a powerful social movement. In 1962, Rachel Carson published *Silent Spring*,[26] which brought the harmful effects of the uncritical use of pesticides on the environment—particularly on birds—to the attention of the American public and became an icon of a new era of environmentalism. In subsequent years, in the US, a flourishing environmental movement emerged, involving charismatic activists, new organisations and forms of protest that have been a source of inspiration for environmentalists

20 Ibid., 25.

21 Ibid., 44.

22 Thoreau, Henry D., *Walden, or Life in the Woods* (New Haven, London: Yale University Press, 2006 [1854]).

23 Nash, *Wilderness and the American Mind*, 102.

24 National Park Service, "Theodore Roosevelt and Conservation," accessed January 15, 2015. http://www.nps.gov/thro/historyculture/theodore-roosevelt-and-conservation.htm.

25 Ingelhart, Roland, *The Silent Revolution: Changing Values and Political Styles Among Western Publics* (Princeton: Princeton University Press, 1977).

26 Carson, Rachel, *Silent Spring* (Boston, New York: Mariner Book, Houghton Mifflin Company, 2002 [1962]).

around the world.[27] During the same time, respectively the late 1960s and early 1970s, environmental policy was 'invented' in the US: for the sake of environmental protection in the US, various laws, such as the *Clean Air Act* (1963), the *National Environmental Policy Act* (1969) or the *Endangered Species Act* (1973) were passed, new agencies, such as the *Environmental Protection Agency* (1970), introduced, and the federal government was promoting an environmental agenda at the United Nations.[28]

The rise of environmentalism in the middle of the last century, however, is also closely connected to a "growing criticism of American culture".[29] The "American Way of Life" has been increasingly associated with resource-intensive lifestyles, 'consumerism', and its devastating environmental impacts.

3 The Growing Divide

In recent years, American views on nature and environmental protection are twofold and have become increasingly polarised. This applies especially to the issue of anthropogenic climate change. While the debate of climate change has reached the level of a "scientific consensus",[30] social research highlights a growing divide of the US American public on this issue.[31] Climate change has become a politically charged and partisan topic: Republicans and/or

27 For instance, in 1969, David Brower (who allegedly is the father of the slogan "Think globally, act locally") founded the international environmental organisation *Friends of the Earth*. In 1970, biologist Barry Commoner was on the cover of *Time Magazine*, and on the 22nd of April 1972 *Earth Day* was celebrated in many American cities for the first time. Cf. Radkau, Joachim, *Die Ära der Ökologie: Eine Weltgeschichte* (München: C.H. Beck, 2011), 143–147.

28 This era has repeatedly been called "The 'Golden Age' of Environmental Law". See for example, Klein, Naomi, *This Changes Everything: Capitalism vs. the Climate* (London: Allen Lane, 2014), 201–202; Martinez, Hayley, "An Evening with the Writers of the Clean Air Act: Insight into the 'Golden Age' of Environmental Law," Published by The Earth Institute, Columbia University, accessed January 15, 2015. http://blogs.ei.columbia.edu/2014/10/24/an-evening-with-the-writers-of-the-clean-air-act-insight-into-the-golden-age-of-environmental-law/. Canadian Journalist Naomi Klein refers to twenty-three federal environmental acts that became law over the 1970s alone. Cf. Klein, *This Changes Everything*, 202.

29 Nash, *Wilderness and the American Mind*, vii.

30 Anderegg, William R.L. et al., "Expert Credibility in Climate Change," *Proceedings of the National Academy of Sciences*107.27 (2010): 12107–12109.

31 Cf. Hoffman, Andrew J., "The Growing Climate Divide," *Nature Climate Change* 1 (2011): 195–196.

conservatives are more likely than Democrats and/or liberals to believe that either the earth is not warming or not mainly due to human activities.[32] A similar political cleavage can also be found in Canada.[33] Additionally, in Canada and the US alike, the population of regions that are benefiting economically from the extraction of fossil fuels (such as Alberta, Canada or the Gulf Coast in the United States) show a relatively strong support of the dismissal of the scientific consensus on global warming.[34]

This political rift, however, does not only manifest itself on the level of opinion polls: On the one hand, the US—and since 2011, also Canada—have been rejecting internationally binding climate targets, and on the federal level, ambitious climate policy has not found a congressional majority. The anthropogenic causes for global warming as well as impacts are repeatedly denied or played down by mainstream media[35] and politicians[36]—occasionally, even by referring to religious arguments.[37]

On the other hand, despite the current boom of oil and gas that has been hydraulically fractured, within the G-20 major economies, the US is one of the leading investors in clean energies.[38] And on the sub-federal level, more than half of the US states are considering, developing, or implementing climate

32 Hoffman, "The Growing Climate Divide."

33 The Environics Instititute, "Focus Canada 2013: Canadian Public Opinion about Climate Change," accessed January 15, 2015. http://www.environicsinstitute.org/uploads/news/focus%20canada%202013%20-%20public%20opinion%20on%20climate%20change%20-%20english.pdf.

34 Hamilton, Lawrence C., "Climate Change: Partisanship, Understanding, and Public Opinion," *The Carsey School of Public Policy at the Scholars' Reprosity*, Paper 134 (2011), accessed January 15, 2015. http://scholars.unh.edu/carsey/134.

35 Antilla, Liisa, "Climate of Scepticism: US Newspaper Coverage of the Science of Climate Change," *Global Environmental Change* 15 (2005): 338–352; Boykoff, Mawell T., and Jules Boykoff, "Balance as Bias: Global Warming and the US Prestige Press," *Global Environmental Change* 14.2 (2004): 125–136.

36 Jacques, Peter J. et al., "The Organisation of Denial: Conservative Think Tanks and Environmental Scepticism," *Environmental Politics* 17.3 (2008), 349–385.

37 For instance, John Mondy Shimkus, congressional representative for Illinois, during a subcommittee hearing on adaptation policies for dealing with climate change argued that global warming isn't something to worry about because God said he wouldn't destroy the Earth after Noah's flood. Cf. Samuelsohn, Darren, "John Shimkus Cites Genesis on Climate," published by Politico, accessed May 10, 2014. http://www.politico.com/news/stories/1110/44958.html.

38 The PEW Charitable Trusts, "Who's Winning the Clean Energy Race?," accessed May 10. http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Report/-clenG20-Report-2012-Digital.pdf.

policies.[39] In 2005, several North-eastern and Mid-Atlantic states formed the Regional Greenhouse Gas Initiative (RGGI), the first mandatory US cap-and-trade program for carbon dioxide. California's *Global Warming Solution Act* of 2006 also aims at creating a state-wide cap-and-trade system, which is supposed to be linked with systems in other states and Canadian provinces under the Western Climate Initiative (WCI).

In terms of publications, the US is the world's leading nation in climate science.[40] What we know about global warming, is largely knowledge generated by US researchers and research institutions. Additionally, similar to the environmental movement in the 1960s and 1970s, climate activism is strong in Northern America and holds a powerful impact on movements around the globe: Al Gore, the Democratic Party's nominee for President in 2000, raised the awareness of climate change internationally with his Academy Award-winning documentary film *An Inconvenient Truth* (2006).[41] Moreover, environmentalist organisations, such as 350.org (founded by the American environmentalist Bill McKibben), represent some of the biggest global grassroots movements dealing with climate change.[42]

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39 Stavins, Robert N., "The National Context of U.S. State Policies for a Global Commons Problem," *Policy Brief*, published by UNEP Risoe Centre on Energy, Climate and Sustainable Development, November 2011, accessed May 10, 2014. http://www.hks.harvard.edu/fs/rstavins/Selected_Articles/Stavins_Perspectives_Durban_2011.pdf.

40 In 34 percent of the more than 100.000 research papers in climate science published during the last 5 years, researchers from the US were involved; second are researchers from Great Britain, who participated in 11 percent of all climate studies and third are German-based reserachers, who took part in 9 percent of all studies. Cf. Sommer, Bernd, "Exzellente deutsche Klimaforschung," published by Spektrum der Wissenschaft, accessed May 2, 2014. http://www.spektrum.de/alias/klimapolitik/exzellente-deutsche-klimaforschung/1256194.

41 Jointly with the Intergovernmental Panel on Climate Change (IPCC), in 2007 Al Gore received the Nobel Peace Price "for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change". Cf. Nobelprize.org, "The Nobel Peace Prize 2007," accessed May 10, 2014. http://www.nobelprize.org/nobel_prizes/peace/laureates/2007/index.html.

42 On September 21, 2014, more than 300,000 participants attended the so-called "People's Climate March" (organised by 350.org) in New York City, which thereby became the largest climate rally in history worldwide. The march took place in the forerun of an UN summit organised by United Nations' Secretary General Ban Ki-moon in order to improve the chances for a world climate treaty under the aegis of the United Nations Framework Convention on Climate Change (UNFCCC) in Paris 2015.

This polarisation of the American public as well as politics, can paradigmatically be illustrated by the *Keystone Pipeline* project. The *Keystone Pipeline* is a more than 3,000 km-long oil pipeline system that carries crude oil, including oil from tar sands in Alberta in Western Canada, to refineries in the US. After several extensions, the system, since January 2014, even includes refineries in Texas and on the Gulf of Mexico. The various phases of extension faced criticism from environmentalists and some members of the US Congress. An additional extension, the so-called *Keystone XL Proposal*, is disputed due to the risk of oil spills along the pipeline and its impact on Nebraska's ecologically sensitive Sand Hills. However, related to the controversy surrounding the *Keystone Pipeline* is an even more significant symbolic dimension. Energy from tar sands is supposed to be particularly carbon intensive and damaging to the environment. Therefore, the building of the pipeline is expected to exacerbate climate change.[43] Promoting a large-scale infrastructure project, such as the *Keystone XL* oil pipeline, is seen as a symbol of holding on to an energy supply based on fossil fuels that contributes to climate change.[44]

Consequently, the *Keystone Pipeline* project provoked some of the most visible environmental and climate rallies in recent years. In August 2011, more than 1,000 protestors were arrested in front of the White House, including environmental activists such as Bill McKibben and Phil Radford as well as celebrities such as actress Daryl Hannah. Just a couple of months later (November 2011), several thousand protestors formed a human chain around the White House to call on US President Barack Obama to reject the planned pipeline extension. And in February 2013, major environmental organisations such as The Sierra Club and 350.org organised another protest march in Washington,

43 Biello, David, "Keystone XL Oil Pipeline Exacerbates Climate Change," *Scientific American*, April 17, 2013, accessed May 10, 2014. http://www.scientificamerican.com/article/keystone-xl-oil-pipeline-exacerbates-climate-change/.

44 See e.g. the editorial of the *New York Times*, "When to Say No", from March 10, 2013: The State Department's latest environmental assessment of the controversial Keystone XL oil pipeline makes no recommendation about whether President Obama should approve it. Here is ours. He should say no, and for one overriding reason: A president who has repeatedly identified climate change as one of humanity's most pressing dangers cannot in good conscience approve a project that—even by the State Department's most cautious calculations—can only add to the problem. […] In itself, the Keystone pipeline will not push the world into a climate apocalypse. But it will continue to fuel our appetite for oil and add to the carbon load in the atmosphere. There is no need to accept it. Cf. "When to Say No," *New York Times*, March 10, 2013, accessed May 10, 2014. http://www.nytimes.com/2013/03/11/opinion/when-to-say-no-to-the-keystone-xl.html?smid=pl-share&_r=0.

D.C., which about 35,000 people attended—again, including many public environmental leaders and celebrities.[45]

However, this is just one—the environmentally prone—part of the *Keystone XL* story. Repeatedly, various senators and governors urged the federal government to approve the extension of the pipeline. Proponents argue that it would allow the US to increase its energy security and reduce its dependency on 'foreign oil'. Additionally, the *Keystone Pipeline* is supposed to create several thousand new jobs. Opinion polls, taken by various independent polling organisations, have shown a continued support of the *Keystone XL Pipeline* by the majority of the American people.[46] In January 2015, legislation passed the US Senate approving the *Keystone XL Pipeline* on a 62-36 vote (including the votes of nine Democratic Members). However, the administration of President Barack Obama announced to veto the decison due to the outstanding assessment of environmental impacts.

4 Exploring the Cultural Dynamics of Climate Change and the Environment in Northern America from Multiple Perspectives

A characteristic feature of the book series *Climate and Culture* is its interdisciplinary approach. Hence, the volume on *Cultural Dynamics of Climate Change and the Environment in Northern America* entails contributions from academics from various fields such as anthropology, art history, educational studies, climate science, cultural studies, environmental science, history, philosophy, political science, psychology, and sociology.

In recent years, there have been numerous conferences, workshops, and publications that focussed on specific dimensions of climate change and the environment (such as "Climate Politics", "Environmental History" or "Climate Change and the Media"). This book not only pursues an interdisciplinary approach, but simultaneously looks at various aspects of the multifaceted image of cultural representations of climate change as well as the environment in Northern America. It is led by the assumption that additional insights can be

45 Goldenberg, Suzanne, "Keystone XL Protestors Pressure Obama on Climate Change Promise," *The Guardian*, February 17, 2013, accessed May 10, 2014. http://www.theguardian.com/environment/2013/feb/17/keystone-xl-pipeline-protest-dc.

46 See e.g. Pew Research Center, "Continued Support for Keystone XL Pipeline," published September 26, 2013, accessed May 10, 2014. http://www.people-press.org/2013/09/26/continued-support-for-keystone-xl-pipeline/.

gained if different fields of interest and approaches are convened in one volume.

All volumes within the Brill series *Climate and Culture* are structured along the four main topics "Ideas", "Past", "Present", and "Prospects". Accordingly, this anthology on *Cultural Dynamics of Climate Change and the Environment in Northern America* opens with a more general discussion on the ideological foundations of society–nature–interactions in Northern America. The text "The 'American Way of Life' and Views on Climate Change and the Environment" by Roland Benedikter, Eugene Cordero, and Anne Marie Todd discusses key arguments of the current US debate on climate change and the environment, its dialectics and potential reasons for an increasingly polarised public on these issues. The chapter aims at providing a 'broad picture' of cultural aspects of climate change and the environment and thus touches various issues that are dealt with more specifically in the following contributions of the book.

Angela Mertig, in the following chapter, gives a comprehensive overview of the American environmental movement and its motives in the 19th and 20th century. From its approximate beginnings in the conservation movement towards the end of the 19th century, the movement has evolved from a relatively narrow engagement with the conservation of local resources and the preservation of scenic areas, parks and forests to the broader concerns of toxic pollution, protection of biodiversity and prevention of global warming.

It is not easy to pinpoint what exactly the "American Way of Life" is. Besides the adherence to principles of "life, liberty and the pursuit of happiness" (*Declaration of Independence*), the "American Way of Life" is presumably connected to individual motor car traffic, living in suburbia, and thus cannot be found in America only. Moreover, it is more than a set of certain cultural practices but can become an ideology that has an impact on the commitment or non-commitment to environmental agreements.[47] In the third chapter, Frederic

47 In 1992, at the so-called Earth Summit in Rio de Janeiro (The United Nations Conference on Environment and Development), US president George Bush Senior forcefully declared, "The American way of life is not negotiable". Cf. McGregor, Alisdair, Cole Roberts, and Fiona Cousins, *Two Degrees: The Built Environment and Our Changing Climate* (Oxon, New York: Routledge Chapman & Hal, 2012), 141. Also more recently, "the American way of life" has repeatedly been evoked in order to dismiss ambitious climate change mitigation efforts. For instance, Thomas J. Donohue, President of the US Chamber of Commerce, declared in 2008: "There is no way this [CO_2 reductions of 80 percent by 2050] can be done without fundamentally changing the American way of life, choking off economic development, and putting large segments of our economy out of business." Cf. Donohue, Thomas J., "Managing a Changing Climate: Challenges & Opportunities for the Buckeye State, Remarks," speech given in Columbus, Ohio, May 2, 2008, accessed January 15, 2015.

Hanusch more systematically explores "The Role of Norms for US Foreign Climate Policy". Based on a social constructivist approach in International Relations, Hanusch focuses on the empirical case of US foreign climate policy from its beginnings in in 1972 until 2005. He shows how norms within the field of climate policy define a government's room for manoeuvre and that domestic norms continue to dominate US foreign climate policy.

Certain topics of distinct importance are addressed repeatedly and in various papers of this anthology. One of these is religion. The role of religions and religious belief systems in determining human practices towards nature and the environment has been subject to heated academic debates for many years.[48] Religious dimensions also form an important aspect of the cultural dynamics of climate change and the environment in Northern America. Although the US hosts some of the world's leading climate science institutions, religious explanations of why global warming is or is not happening, are of societal and political relevance, too. Accordingly, various authors of the volume in their contributions deal inter alia with religious aspects of the societal relations to nature in Northern America (e.g. Benedikter, Cordero, and Todd; Mertig; Eudell; Heinrichs).

The section "Past" explores how the cultural dynamics of climate change and the environment became manifest in the course of Northern American history. Firstly, Kenneth M. Sylvester, Richard Tucker, and Samuel White provide a broad overview of crucial weather events and climatic changes from the time of the Paleoindians to the 20th century. This chapter chronologically charts the development of climate in the history of the continent in light of its historiography and central sources.

Tropical cyclones that occur in the North Atlantic basin are a recurrent feature of the climate in the eastern and southern part of North America. New Orleans's geographical location makes it especially prone to hurricanes. Hurricane Katrina that struck New Orleans and Louisiana in August 2005 became an icon for the vulnerability of modern societies towards climate related

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http://www.uschamber.com/speech/managing-changing-climate-challenges-opportunities-buckeye-state-remarks.

48 See, for example, Lynn White's classic essay on "The Historical Roots of Our Ecologic Crisis," in which he traces back the root of the modern ecological crisis to Judeo-Christian theology and its influence since the Middle Ages. Cf. White, Lynn, "The Historical Roots of Our Ecological Crisis," *Science* 155.3767 (1967): 1203–1207. A more recent and comprehensive overview of how various religions relate to the natural environment is given in a special issue of *Dædalus* on religion and ecology: Tucker, Mary Evelyn, and John A. Grim, *Daedalus* vol. 130.4, *Special Issue Religion and Ecology: Can the Climate Change?* (Cambridge, Massachusetts: MIT Press, 2001).

disasters. Overall, 1,833 fatalities and damage cost of estimated USD 108 billion are attributed to Katrina, making it one of the most destructive hurricanes in US history.[49] Two contributions to the "Past" section of this book deal with the history of societal impacts of tropical cyclons in New Orleans, respectively the prehistory of hurricane Katrina. Along a timeline of hurricane impacts in New Orleans, Eleonora Rohland provides brief accounts of three particularly devastating, back-to-back hurricane events that occurred throughout the city's French and Spanish reigns between 1718 and 1794. On the basis of this historical account, Rohland reconstructs the adaptive practices that developed in New Orleans with regard to hurricanes between the city's foundation in 1718 and the eve of the Louisiana Purchase in 1804. Demetrius Eudell's analysis "The Landscapes of Man" also examines society-nature interactions in Louisiana. Taking the devastating impacts of Hurrican Katrina (2005) and the scenarios of the IPCC as a starting point, Eudell portrays how the landscape in South Louisiana—which is nowadays seen as particulary vulnerable to climate impacts—has been historically shaped by a certain social order. Especially in this region of the US, this order was constituted by slavery and the continued suppression of Blacks. In the light of this analysis, labelling Hurricane Katrina as a 'natural disaster' appears to be deficient.

The section "Present" deals with current representations of climate change and the environment, respectively, environmentally relevant social practices in America. Here too, the spectrum of analysis is rather broad: Climate change as well as other forms of environmental change—such as loss of biodiversity or depletion of stratospheric ozone—are highly mediatised events. In contrast to many forms of conventional pollution, its causes and impacts can hardly be experienced directly on a personal level. Instead, we know about these environmental issues thanks to scientific findings that are mostly brought to a broader public by the various forms of mass media. Maxwell T. Boykoff and Michael K. Goodman explore in their chapter how mass media shape US American climate discourse. They argue that mass media reporting of climate change and climate sciences work to both inform but also obfuscate climate science and its associated cultural politics.

Next, Jürgen Heinrichs takes the readers of the volume on a twofold journey: not only on a bus ride through Newark, New Jersey, but also on a *tour d'horizon* of the cultural history of bus driving in the US. In recent years, bus driving (as public transport in general) has been increasingly promoted as a climate-

49 Knabb, Richard D., Jamie R. Rhome, and Daniel P. Brown, *Tropical Cyclone Report Hurricane Katrina 23–30 August 2005*, accessed January 15, 2015. http://www.nhc.noaa.gov/pdf/TCR-AL122005_Katrina.pdf.

friendly means of transportation. Heinrichs shows that the bus and bus driving cannot only be viewed from this ecological perspective, but has always been far more than a mere means of transportation. Throughout American history it was charged with different cultural meanings and repeatedly became the arena for major societal conflicts and struggles. Taking a bus in Greater New York today raises questions of racialised poverty, street violence and environmental change in contemporary America.

Karin Schürmann, in the next chapter of this section, examines the relevance of attitudes towards climate change and the environment for everyday life practices in America today. Engaging descriptions of contemporary practice, theoretical approaches and interviews with 21 persons living in urban centres along the Northern US West Coast (among others in Portland, Oregon), Schürmann provides insights in the relationship between environmental and climate-relevant beliefs and behaviour and de-constructs the notion of a causal relationship between thinking and acting. Here, Schürmann addresses the so-called "mind–behaviour gap", the well-documented phenomen that people regularly do not act according to their (environmental) knowledge and awareness.[50] While Schürmann explores this issue in the field of mitigation, Grit Martinez and Michael J. Paolisso later on describe the rift between knowledge and action in their contribution on adaptation to climate change on the US East Coast (see below).

Following Schürman, Omer Aijazi and Martin David take the readers of the anthology further north to Vancouver, British Columbia, on the Canadian side of the US-Canadian border. Vancouver has a vivid history of the articulation and enactment of various environmental concerns (for instance, Vancouver is the birthplace of the today globally operating Greenpeace movement), and this also is the strand Aijazi and David follow. Informed by educational studies, cultural studies, and post-colonial theory, they explore the common opposition of First Nation groups and environmental non-governmental organisations (NGOs) to the construction of the Enbridge Northern Gateway pipeline that could be witnessed in Vancouver during the years 2013 and 2014. Aijazi and David carve out that although First Nation groups and environmental NGOs form an alliance rallying against the Endbridge pipeline, they are movitated for their protest by primarily different motives.

50 Kollmuss, Anja, and Julian Agyeman, "Mind the Gap: Why do People Act Environmentally and What Are the Barriers to Pro-environmental Behavior?," *Environmental Education Research* 8.3 (2002): 239–260.

The global average temperature shows a warming of 0.85°C over the period from 1880 to 2012.[51] However, this global rise of temperature has not been observed in every place around the globe. Especially the Arctic—including Greenland as well as Northern Canada and Alaska—has been particularly affected.[52] Therefore, the Arctic has been repeatedly described as an early warning system for global climate change: Whatever is happening there, will sooner or later happen in other parts of the world, too.[53] Naotaka Hayashi's text in the section "Prospects" explores adaptation to climate change in Greenland. On the basis of his extensive fieldwork among sheep farmers in Greenland as well as the Endogenous Development Theory by sociologist Kazuko Tsurumi, Hayashi argues that governments should seriously take into account local efforts to cope with a changing climate in the past in order to build a resilient community today.

The cultural dynamics of adaptation to climate change also lie at the center of the contribution by Grit Martinez and Michael J. Paolisso. Since adapting to climate change also means adapting to projected and modelled developments—such as the rise of sea levels—questions of adaption generally deal with imagined futures of society-nature-interactions. Though Martinez and Paolisso draw on their fieldwork from a different geographical as well as cultural context (Dorchester County, a region along the state of Maryland's portion of the Chesapeake Bay), their findings are similar to those of Hayashi's for Greenland: If regional and local policies for adaptation to a changing climate are to be effective and sustainable, they must be understood and developed within a given cultural perspective through an understanding and appreciation of local knowledge, values and belief systems.

The last contribution to the section "Prospects" differs from these anthropologically informed texts on climate change adaptation. In "Back to the Future", Antonia Mehnert explores climate change futures in US American literature. Of course, these fictional accounts sometimes have little to do with the scenarios of climate scientists. However, the fantasies and fears that are condensed in bestselling novels such as *A Friend of the Earth* by T.C. Boyle[54] or

51 Intergovernmental Panel on Climate Change (IPCC), "Summary for Policy Makers," in *Climate Change 2013: The Physical Science Basis: Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. T.F. Stocker et al. (Cambridge, New York: Cambridge University Press, 2013), accessed May 14, 2014. http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf.

52 Notz, Dirk, "Die Arktis im Klimawandel," *Aus Politik und Zeitgeschichte* 5–6 (2011): 23–29.

53 Ibid.; Fuchs, Arved, "Nordpoldämmerung," *Aus Politik und Zeitgeschichte* 5–6 (2011): 3–6.

54 Boyle, Tom Coraghessan, *A Friend of the Earth* (London: Bloomsbury Publishing, 2000).

State of Fear by Michael Crichton[55] "play a powerful role in the general perception of the natural environment and in the production of knowledge".[56] Conclusively, Mehnert's text exemplifies the idea that 'culture matters'—even for the understanding of nature.

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55 Crichton, Michael, *State of Fear* (London: Harper Collins, 2004). In *State of Fear* Michael Crichton describes how environmental terrorists plot to cause artificially natural disasters in order to publicise the danger of global warming. What is special about the fictional novel is that it contains a huge number of climate graphs, footnotes, appendices as well as an almost thirty-page bibliography.

56 Mauch, and Mayer, "Introduction," 2.