

What Stories Should Historians Be Telling at the Dawn of the Anthropocene?



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Abstract This chapter discusses the ways in which history can contribute to coping with the current planetary crisis. It argues that historians should engage more in interdisciplinary exchange across the humanities-natural sciences divide. Thus they will be able to create historical narratives fitting for the Anthropocene—both in terms of explaining it and shaping our responses to it, in particular to the acute planetary crisis that marks its advent. At the same time, history should not give up its drive to critically dissect and analyse socio-political, economic, cultural and ecological change, contributing to developing balanced and resilient public policy.

Keywords Environmental history · Science for policy · Applied history · Interdisciplinary history · Climate history · Pandemics

Ever since the term ‘Anthropocene’ was coined, it has become clear that the condition of both the earth and of humankind that it describes presents a disturbing challenge. Even if the term were not to become an official name for a geological epoch, the destabilization of the planet’s life-supporting systems—from the heights of the atmosphere to the depths of the oceans—is a recipe for a perfect catastrophe. The intellectual endeavor of writing history—the craft of professional historians—is not spared from the anxieties that accompany the realization of the Anthropocene. There is an ongoing debate on what the Anthropocene means for the field, and answers are many (Chakrabarty 2018, to name just one of the most influential).

This chapter offers an interdisciplinary historian’s perspective on what historical storytelling could become in the Anthropocene. It is based on years of, at times, challenging exchanges with natural scientists, which have led to some perceptions of what the strengths of this peculiar academic discipline actually are, and where it could direct its efforts and attention in order to make a difference and contribute to coping with the challenge of humankind’s own making. What follows is more of an essay or even a meditation on the role that history can fulfil, rather than a classic

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research or review paper. I begin by providing four different answers to the question that I am asking in the title, and I present two case studies that can help to illustrate the points that I would like to make. While the first three answers are of more interest to historians, even if they do also show the potential role of history in our society today, a role still to fully materialize, the fourth one, which shows history's potential in re-shaping the policy debates that are already ongoing, could prove most useful for the more general reader.

The First Answer: The Anthropocene as a Challenge to Humankind

So what stories should we be telling as historians—and more generally, as people studying the past? This first answer has to do with the Anthropocene understood as a challenge. Thus, if the Anthropocene is a new situation for us, we need new narratives about the past in order to understand how we got here—new stories of the kind that have not been heard or at least promoted before. Consequently, we as historians should start narrating the past in ways that we have hardly tried before. Of course, this does not mean a complete break from or distortion and rejection of the existing tradition. There is a lot in the historiography, especially in the second half of the twentieth century, on which we can build. The transition we need means, first of all, breaking away from old narrative patterns, the way history is usually told. First of all, we need much less of the 19th-century approach to history, in which the past is recounted in order to understand the conflicts between nations that we see around us. These were conflicts having to do with identity, with industrial societies and the massive scale of aggression, power, and military prowess that industrial societies can mobilize. This is one narrative pattern that we might want to break away from in order to be able to tell stories that rise up to the challenge of the Anthropocene.

The other kind of stories we might want to break away from are the progressivist narratives, or, we could say, liberal, neo-liberal, or even Marxist. In other words, these are stories that see history as the progression from less developed to more developed, from childish to mature states. We as human beings who happen to live in the Anthropocene clearly see that history is not that simple. An increase in complexity can lead to crises and, in the long run, the disintegration of empires, which was the case with the Roman Empire in the 5–7th c. CE and with the British Empire between the 1920s and the 1950s, Brexit being potentially another stage in this process of decomposition, this time showing how ideology and belief lag behind reality. Of course, empires and states do rise and fall. So there is change, but change does not necessarily always mean progress, unless we are narrating history from the point of view of the rising empires' elites, as much of history in the 19 and 20th c. has been done (for a fascinating reflection on how expansionistic states have dominated the narrating of history from the dawn of "civilisation", see Scott 2017).

Distancing ourselves from these two dominant narratives—nationalist and progressivist—can help us share with our readers and listeners—with our societies—new stories that we need for the impending Anthropocene. These new stories should, first of all, respond to the fears of our times and not the fears of the early twentieth century, or even the fears of the Cold War, as much of historiography to date has been doing. We should respond to manmade environmental threats such as the pandemic, that we have been experiencing for more than a year now, or climate changes. Historians, along with archaeologists, palaeo-environmental scientists, archaeogeneticists, and other related field specialists need to work on creating a new sense of meaning for what we are experiencing today as societies. We should address these fears and help our contemporaries by sharing stories about the past that contribute to understanding what is going on around us in this decade and what will only become more powerful as the time goes on. The implications of this are that if we are able to provide new meaning to our historical storytelling, if we are able to break away from old patterns of thought and speech, we will be able to empower our communities to act on these very threats. Our stories could actively respond to the challenge of the Anthropocene and provide the motivation and understanding needed to act and adapt to it.

The Second Answer: The Anthropocene as a Viewpoint

The Anthropocene is not only a problem to solve—or rather, a new living context to which we need to adapt and manage—but also a new viewpoint or even a new philosophical stance. Thus, not only can adapting to the Anthropocene on the part of historical storytelling mean changing the contents and ideological angles of the stories, but also their very structure. Historians as writers—who wish to engage the interest of the public with their stories—might want to start looking for new rhetorical devices, that is actors and modes of rhetorical action (for the basic theory of history's rhetorical structure, see White 1978). Humans will still remain at the center of our stories, of course, simply because we humans are telling these stories and the story is meant for other humans. We are not wolves sharing their stories with deer, or pines whispering to birches. History will always remain a means of communicating within a human community. However, this does not mean that our stories should only be about humans. They should incorporate both human and non-human actors on equal terms, actors such as climate, pathogens, ecosystems, specific plants or animals or even non-organic matter—seas, mountains, and so on. We all belong to networks made up of humans and non-humans, and it is precisely because we belong to these networks that we are confronted by the problems that we are currently experiencing, including the covid pandemic. Yet while the historical narratives we create must reflect these entanglements, this poses a major epistemological and methodological challenge (on human-non-human networks, see Latour 2005).

The Third Answer: The Anthropocene as Opportunity for the Research Community

As a challenge to human societies at large, the Anthropocene is also an opportunity for interdisciplinary researchers. The ‘terror of the Anthropocene’ may prove strong enough to shake the grounds of one of the most traditional institutions of modern society, the university. Developed in the later 19th and early twentieth centuries, the modern university was meant to serve the highly specialized and technical societies of the late industrial age. It is founded on the principle of professional and scientific specialization, through which individuals acquire knowledge and skills in well-defined fields (or disciplines). Given how complex the scientific knowledge is today, we will not avoid specialization in our times either, at least for the foreseeable future: specialization is a way of ensuring efficiency in academic education. It is also crucial for the very process of knowledge production. The formalised and rigid character of academic fields helps to ensure that scientists with relevant expertise end up reviewing their colleagues’ research, being able to evaluate specific methods and the evidence it produces. At the same time, however, this compartmentalisation both of knowledge and of research efforts limits our ability to contemplate the world in its complexity and often leads to rejection of innovative ideas, linking different, usually unrelated specialisations into more unified knowledge. Paradoxically, at times, this same compartmentalisation leads to seemingly peer-reviewed publications containing questionable claims. This happens when what qualifies as interdisciplinary argument is evaluated from the angle of just one of the fields involved, substituting for a more comprehensive review that is often challenging to arrange. For this reason, we urgently need to develop new structures across and within academic fields that help us understand the age we enter in all its facets.

Let us go through this reasoning once again. First, we need new stories to help us understand the planetary crisis we are in. Second, such stories require new actors and new types of connections between them. Third, in order to be able to deliver this, Anthropocene-adequate stories need new evidence (professional history boasts of its evidence-based credibility, after all). It is exactly here that the opportunity for the global research community emerges. If we really want to give voice to Nature, so that we appreciate the fate it has shared with increasingly -powerful humanity, we first need methods to hear this voice, before we make place for this voice in the historical stories we tell.

While this picture may at first seem somewhat pessimistic, in reality the global academic community of the 2020s is very well positioned to achieve this goal. The methods we need already exist, no one needs to be starting from scratch. We are building on more than a hundred years of research in paleo-ecology, paleo-climatology and in the paleo-sciences more broadly, that is in those branches of the natural sciences that work on reconstructing the past of biological (and physical) phenomena other than those specific to the human species. These are the very sciences that study the natural world of the past, its variability and also its agency, the ways in which some natural phenomena influenced each other and in this way

also influenced past human communities. This means that we need to incorporate the evidence and ideas coming from the natural sciences into the historical stories that we as humans develop—into stories about human experience and human fate. In the end, this is only possible if we break down the divide between the humanities and the natural sciences and persevere in developing more unity in our understanding of the world. This is not just an intellectual task: it requires a more unitary and flexible organization of academic disciplines, teaching, and research. We should abandon the disciplinary silos we inherited from the nineteenth century and work on such a restructuring of the human, an adventure with research and universities that would be much more appropriate for the times in which we live.

The very idea of breaking up the disciplinary divides can be illustrated with a tree of knowledge (Fig. 1). The roots go into the different archives, that is the different

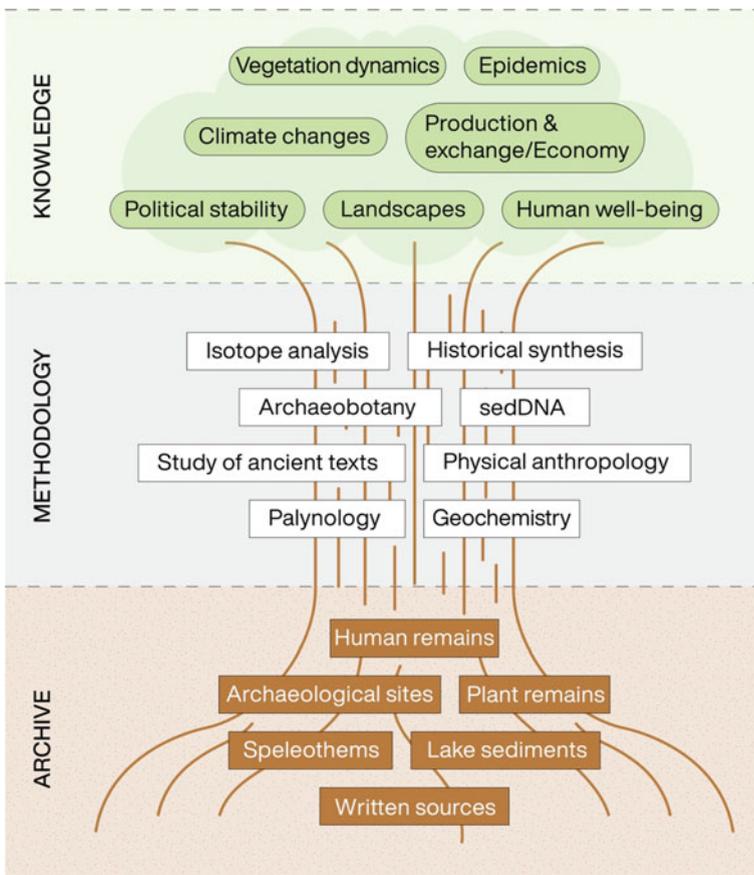


Fig. 1 The interdisciplinary tree of knowledge, uniting archives and methods of different disciplines in order to achieve a holistic knowledge of the past. By Alessia Masi and Adam Izdebski, drawing by Hans Sell, MPI SHH Jena

places or parts of the world around us where we can find material to work on as scholars or scientists of the past. Human remains, archaeological sites, plant remains, speleothems in caves, lake sediments, finally, written sources preserved in human archives and libraries. There is thus a plethora of natural and human archives we can use. What is important is that there is not a single method that we can apply to each of them, on the contrary we can apply several different methods to each archive and in this way create meaning out of these ubiquitous remains of the past. We can analyze the elemental structure of these remains for isotope analysis; we can reconstruct DNA in sediments or in human remains or many other contexts, such as soils in caves formerly occupied by humans. We can read and analyse historical sources (texts) as historians have been doing for generations—but we can also undertake quantitative or digital analysis of such sources. We can apply methods of archaeobotany, palynology, geochemistry and many other paleo-ecological and geological approaches. We can look at human bones through the lens of physical anthropology. No single archive belongs to a single discipline. All these methods are the trunk of the tree that leads us to the leaves and fruits above. Here we learn about different phenomena that have to do with human action, with the production and exchange economy, with the political stability and conflict. Yet the phenomena we can know about are also connected with either exogenous forces such as climate changes, or with human interaction with nature, as, for instance, with the pathogen world, an interaction so obvious to us now at the time of the current pandemic. And thus we have: epidemics, landscapes and ecosystems, as well as human well-being in economic as well as cultural or biological terms. This is how a more unitary, at the same time hybrid and flexible way of approaching the past might appear.

Obviously, this leads to many practical challenges, perhaps the most important of which is the fact that we need new forms of academic writing in order to be able to proceed to new forms of historical narrative, more persuasive and more comprehensive than those currently available. We need to confront different publication cultures, different genres of academic writing that often lead to contradictory perspectives on the same problem. So the new approach to narrating the past in both academic and popular contexts needs to be hybrid, mixed, and most importantly, inclusive of these different perspectives in order to create a more flexible and holistic understanding of the past.

The Fourth Answer: History as Social Critique

Let me begin this section by moving on to my first case study. In fact, it illustrates the points about the hybrid narrative that I have made at the end of the preceding section. We will look at Central Europe in the sixteenth and seventeenth century CE, zooming in on one of the core regions of the Polish-Lithuanian Commonwealth: Greater Poland with its capitals in Poznań and Gniezno, in the west of the country. This province was the most economically developed region of this unusual empire, an aristocratic republic ruled by an elected king and the parliament.

Let me begin with a broad-brush picture. During the 16th and early 17th c., the economy of Poland was booming: every year increasing grain exports were exported to the Netherlands via the Vistula and its tributaries, departing from the port city of Gdańsk. At the same time, there was a steady population growth, largely uninterrupted for more than two centuries (summarised in Haldon et al. 2018). Paleoecological data from many parts of modern-day Poland also show that this period shows a major expansion of cereal cultivation (Izdebski et al. 2016). Yet in contrast the same sources of data indicate a collapsing economy and society in the later 17 and 18th c. A quarter of the population seems to disappear, agricultural expansion stagnates, and grain exports decrease at least by a half and remain highly unstable.

What is the explanation? Much of Polish historical research in the last two hundred years tried to answer this question, and thus explain the inability of the Commonwealth to defend itself against conquest at the hands of its neighbours in the late 18th c. Already in the early 20th c., some historians suggested it was due to natural causes, such as weather extremes or epidemics (Bujak 1938). Today, we can verify or falsify such hypotheses using paleoclimatic data. They show that, while the later 17th c. was indeed particularly cold with respect to summers, similar colder temperatures also prevailed in the mid-16th c, followed by very hot summers at the end of this century (Büntgen et al. 2013). Similarly, whereas there was an increase in droughts in several regions of modern-day Poland in the second half of the 17th c., the core lands of the Commonwealth, such as Greater Poland, Pomerania, Podlasie or Lesser Poland, experienced increased frequency of droughts also in the second half of the 16th c. (Przybylak et al. 2020). There was thus no major difference in climatic conditions during the periods of economic boom and collapse, and in fact there was no difference in general epidemiological conditions either: for instance, waves of plague epidemics were reaching Poland in the 16th c. as they did also in the 17th (Karpiański 2000; Guzowski et al. 2016).

In order to shed more light on this complicated entanglement of natural and social processes, we formed an interdisciplinary team that looked in more detail at the central areas of Greater Poland, specifically between Poznań and Gniezno. We looked first at historical, demographic, and economic data from this area, as well as natural scientific data, which we collected from two peat bogs (Lamentowicz et al. 2019). In terms of the historical data, we see a loss of population also at the local level, but the sources are too scarce to follow this process in more detail, we only know about a general loss between a reconstruction for the later 16th and another one for the later 17th c. (Czerwiński et al. 2019). Secondly, we also looked at crop yields in this region and observed declining agricultural productivity for all major grains already in the early seventeenth century, which can probably be related to climatic instability and cold summers in particular (Kozłowska-Szyc 2019). Still, these declining yields do not explain the scale of the collapse that we see when comparing the late 16th and late 17th c. historical data. In fact, if we consider the data on grain exports from Gdańsk, these declining yields did not impact the booming economy and the positive trend continued.

The answer was in fact to be found in the “voice of nature”, a fine-grained reconstruction of the local landscape based on pollen analysis of peat sediments

(Czerwiński et al. 2021). Here, the major watershed very clearly occurred in the middle of the century, in the 1650s, and it was an abrupt process which relieved the landscape of most of the human pressure and allowed for a re-wilding, including a major regrowth of pine forests. After this breakdown point for human activity, there was for several generations no regeneration of the human economy in this part of Poland, thus clarifying the level of demographic and economic loss at the general level.

Of course, it was not a coincidence that the breakthrough point for the collapse of an otherwise booming economy was the 1650s. This was the moment when there were several external invasions of the Polish-Lithuanian Commonwealth: from the north, from Sweden, and from the east, from Russia, together with a massive rebellion in Ukraine, in the south-east of the empire. In this very decade the Commonwealth effectively ceased to exist for a couple of years as a state and an economic system. Its lands were materially devastated and its institutions were severely shaken. It had to rebuild its independence. It seems that it was this external conflict to which the Commonwealth owed the loss of the internal resilience that had allowed for demographic and economic growth in the preceding centuries.

As this example makes clear, the historical and the natural scientific narratives can come together to create a much more meaningful story. First, we see that even a society that is on a strongly expansive trajectory and has at the same time to contain substantial cultural-religious diversity—as the Commonwealth was throughout its entire four hundred year history—can be very resilient to climate change and epidemics that were frequent at the time. Only when the roots of this resilience were destroyed by conflict did the entire social-ecological system falter or break down.

Let me return to the question posed at the beginning: what stories should we be telling at the dawn of the Anthropocene? This case study offers an opportunity to provide a fourth answer to this question, an answer that focuses on the different understandings of the Anthropocene and in particular the criticism of the term itself as too imprecise. According to this critique, ‘Anthropocene’ does not do justice to what really brought us to the situation in which we find ourselves at the moment, with ongoing climate change and the current pandemic. One way in which to challenge the Anthropocene as a historical and philosophical idea is to emphasise that we actually live in a Capitalocene (Bonneuil and Fressoz 2016a, translated as: b). Indeed, it has been the industrial capitalism of the last two hundred years together with the massive acceleration of consumerism since the Second World War that created the fossil-fuel-based Great Acceleration and which generated the Anthropocene with all of its environmental problems.

So, while rejecting the nationalistic perspective of 19th-c. historiography and the origins of modern historical storytelling, our new stories should not at the same time compromise on one of academic history’s strengths, that is, its interest in societies understood as complex entities with internal conflicts and inequalities, as communities ridden by conflicts, both resolving them and endangered by their consequences at one and the same time. The new stories we tell should continue to engage in social criticism. This is something that the natural sciences alone cannot achieve, even if

they are formidable in giving voice to nature, simply because they were not developed for this purpose. History, in contrast, has devoted decades reconfiguring itself for the cultural priorities and conflicts of the age—class, gender, ethnic, institutional, etc. This is one of the great assets humanities can bring to this new, interdisciplinary study of the past.

Let me give you a final case study that will illustrate the point I want to make about social critique as the key strength of professional, humanistic history. It is a case study from Byzantium, the proud continuation of the eastern Roman empire in medieval times, and the story I will tell takes place in the 10th c. CE. From the historical records (written sources), we learn that there was a great winter in the years 927/928, and these same records suggest that it was associated with a great famine in the Byzantine Empire (for more details and references for this case study, see Izdebski et al. 2018). The sources claim that, as a consequence, farmers and peasants were forced to sell their lands to the powerful, the elites—and the state was thereby losing tax income from peasant production. Legal measures were undertaken by the state to remedy this situation and stop this process. In other words, the Byzantine texts describe a major societal change and attribute it to a climatic factor, namely the great winter of 927/928. One might say, a crystal-clear and very interesting story of how climate can trigger profound crisis and social transformation.

However, when we look at paleoclimate data available for this part of the world at this time, things become much more complicated, indeed, the above story no longer holds true. Reconstructions of summer temperatures and winter hydroclimate (mostly snowfall) do not show anything unusual for the 920s, and for 927/928 in particular. There was indeed a very cold summer and an increase in snowfall, but it occurred more than a decade later, in 939, and was caused by a major volcanic eruption on Iceland. At that time there was both a cold summer and a cold winter, and several contemporary European texts record these unusual weather conditions and the associated bad yields.

It is also possible to do model simulations of past climate and see to what extent the period 920–030 was different from the general average conditions and from the preceding decades/centuries. Whichever models we employ, there seems to be nothing in particular happening. Just a moderate decade, even slightly warmer than the average as regards the winters.

So what is going on? Why do the Byzantine sources want us to believe in a major famine preceding the state's legal actions against the elites buying up of peasant lands, that is, a major socio-economic crisis? Why should such a crisis happen at the time when—as all the other data, paleoecological and archaeological, shows—the Byzantine economy was in the middle of a major boom cycle? In other words, neither the material nor the natural evidence attest to any major climatic crisis during the tenth century in the Byzantine world.

Are, then, these medieval texts lying? Not necessarily: here is where the careful analysis of texts—the historian's craft—and a social critique—history's strength—come into play. All these texts (except for the legal documents from the 930s, which mention the famine, but not the winter) were most probably composed a generation later. They conflated the social change that was taking place in Byzantium at that

time as a result of both economic growth and the associated increasing inequality between lower and upper strata of society, with an unusually heavy winter that did in fact occur, but a decade or so later. So this would mean that in fact a later generation of elites attributed social change to external factors: they were not in a position to acknowledge that there was a major social transformation, one orchestrated by their economic activities and one from which they benefited while others were losing (in fact, in the light of the elites' ideology, the changes which made the lower strata more dependent could have even been seen as a positive development). Such processes of socio-economic change are never simple to observe, neither were they for the educated elites of the culturally most advanced European state of the 10th c. CE. It was in fact not until the nineteenth century, with all the theoretical tools generated by the experience of the Industrial Revolution, including Marxism, that we became capable of fully grasping, comprehending and—last but not least—critically reflecting on social change in its economic context.

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My second case study clearly shows that we need both critical history—such as has been developing over the last century—and we need all the interdisciplinarity that is possible today, in order to really understand what was going on in the past and to show the different levels of human and non-human agency. Only a history that breathes with these two lungs—the humanities and the natural sciences—can help us achieve social justice and the fair transformation that the Anthropocene requires from us to survive as a species. More broadly, only a history which is a dialogue of the old and the new can open our minds to move in the direction of true ecological justice, which might be our hope for survival and flourishing.

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