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A Collection of Self-Images: Surveys and Interviews Among Climate Scientists

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Abstract

The history of ideas is essential for understanding how scientific knowledge is produced and sustained. This is particularly true for Western climate science, whose intellectual history spans a long period and has undergone several major transformations. These range from climatic determinism and the development of the physics of the atmosphere and oceans to the prominent role climate science now plays in shaping climate policy. Yet, like many natural sciences, climate science pays relatively little attention to its own intellectual history. As a result, influential past scientists, abandoned ideas, and episodes, in which accepted views were later shown to be wrong, can gradually fade from memory. Oral history offers one way to preserve this intellectual history and to "put people behind the science." It involves interviewing scientists about what happened, how they experienced important developments, and how they and their professional communities perceived the changing role of climate science. To this end, the author and his colleagues have conducted an extensive series of interviews. These include senior climate scientists nearing the end of their careers as well as younger researchers who entered the field more recently.

Keywords: climate science; history of ideas; surveys; interviews; self-images

1. Introduction

1.1. Changing Views of Climate and Climate Change

Today's discussion of climate is dominated by concerns about the currently accelerating anthropogenic climate change. Whereas earlier decades were characterized by considerable resistance—not only among the public but also among some scientists—such skepticism has largely faded. The view that the climate is changing toward a less benign, if not increasingly hostile, state has become firmly established in much of the Western public. As a result, virtually every extreme weather event, such as a tropical cyclone or an episode of intense rainfall, is presented by the media and advocacy organizations as evidence of ongoing anthropogenic climate change. At the same time, highly probable cascades of tipping points are often predicted if the increase in global mean surface temperature exceeds the symbolic threshold of 1.5 °C established by the Paris Agreement.

In this context, it is useful to recall that climate science is itself a social process (Stehr and von Storch 2023). Consequently, some claims presented as purely scientific may instead reflect, at least in part, the prevailing *Zeitgeist*—the broader intellectual and cultural climate of the time, which is itself rooted in history. This is where historical analysis becomes an important tool for understanding the development of climate science and its public interpretation.

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At least in the Western tradition, the idea that climate influences societies and cultures—and that humans, in turn, influence climate—is centuries old (see the anthology by Stehr and von Storch 2023). Historically, the dominant perspective was that of climatic determinism, according to which climate shapes many characteristics of societies, including their perceived level of civilization. Regions with a mild climate, occasionally disturbed by changing weather systems, were thought to provide the most favorable conditions for cultural and intellectual development. In contrast, regions with a pronounced annual cycle were believed to require so much effort for survival that fewer resources remained for the development of an advanced civilization. Not surprisingly, unfavorable climates were generally attributed to others, who were regarded as barbarians because of the environments in which they lived, whereas we were assumed to enjoy the benefits of a benign climate and, consequently, superior intellectual and technological achievements. The best-known advocate of this school of thought was Huntington (1925).

Although climatic determinism largely disappeared from academic discourse along with racial determinism, elements of this way of thinking appear to have reemerged—albeit implicitly—in parts of contemporary climate impact research. In some studies, future societal developments are portrayed as being driven almost exclusively by changes in climate, with comparatively little attention paid to human adaptability, technological progress, institutional change, or other social processes (Stehr and von Storch 2023).

1.2. Added Value of This Article

After this brief overview of the evolution of ideas about climate and climate change, I turn to the added value of this article.

If we accept that climate science is a social process, we should also expect extensive analyses of that process by social scientists (Ibrahim and Rödder 2022). In particular, such analyses should examine the extent to which scientists' views reflect the prevailing *Zeitgeist*—that is, ideas and explanations embraced by what are commonly regarded as progressive elites. They should also explore how scientists perceive their own role and whether they believe they have a responsibility not only to inform but also to influence, or even help shape, climate policy on the basis of their scientific knowledge.

These issues have received comparatively little attention, although scholarly interest in them has grown in recent years (Ibrahim and Rödder 2022; Pielke 2007). In this article, we revisit a series of surveys and interviews conducted between roughly 1995 and 2015 by the natural scientist Hans von Storch and the social scientists Dennis Bray and Nico Stehr.

Our purpose is to make this body of work on climate scientists' self-perceptions more widely known to interested colleagues. It is *not* our aim to provide a comprehensive analysis of the relationships among climate science, public perceptions, and climate policy. Rather, we seek to document and synthesize empirical evidence on how climate scientists have viewed their own roles and responsibilities.

1.3. Overview of Following Sections

The historical perspective presented in Section 2 also provides a framework for examining the current debate—at least in the Western world—particularly with respect to mitigation and adaptation strategies. One illustrative example is the Swiss Forest Police Law of the nineteenth century, which is discussed briefly.

Section 3 addresses the question of how we, as rank-and-file climate scientists, can preserve the memory of past developments, influential personalities, and episodes in which accepted scientific views were later shown to be incorrect. Together with several colleagues, the author has contributed to this effort through a series of interviews with senior climate

scientists who witnessed the transformation of climate science into climate change science, as well as with younger scientists who entered the field at a later stage.

2. Perception of Climate and of Anthropogenic Climate Changes

The topic of climate—that is, the statistical characteristics of weather and their consequences—has been a pervasive object of human observation, interpretation, and reflection throughout history (e.g., Glacken 1976). Remarkably, people have long debated the extent to which the climate could be deliberately improved, for example through the drainage of wetlands, or unintentionally degraded through deforestation (von Storch and Stehr 2000, 2006).

From the perspective of the history of ideas, anthropogenic climate change is therefore not a novel concept but part of a long-standing, culturally constructed understanding of the relationship between humans and climate. What distinguishes the present is the scientific explanation of the underlying physical mechanisms and the unprecedented scale of the human influence.

It remains an open question to what extent this cultural construction shapes public acceptance of the scientific account of anthropogenic climate change driven by greenhouse gas emissions. In everyday experience, anthropogenic climate change cannot be recognized as human-caused. For example, a layperson cannot determine from observation alone whether the retreat of glaciers reflects the continued recovery from the Little Ice Age or the effects of anthropogenic warming; all that can be observed directly is that glaciers are shrinking rapidly. This observation is consistent with the concept of anthropogenic climate change, but the conclusion that the retreat is primarily caused by increasing atmospheric greenhouse gas concentrations rests on scientific inference rather than everyday experience. The same applies to the widespread interpretation of individual extreme weather events as evidence of anthropogenic climate change. Establishing such links requires formal attribution studies rather than direct observation.

A comprehensive account of how weather and climate have been perceived and interpreted throughout history—including their practical significance as well as the contributions of influential observers and thinkers—is provided by Pfister and Wanner (2021), with a particular focus on Europe.

It is instructive to ask how people and societies in the past explained the occurrence of weather-related disasters. One example is provided by the storm surges along the German North Sea coast (Jakubowski-Tiessen 2004), which caused widespread loss of life and extensive destruction of land. These disasters were commonly interpreted as divine punishment: people were believed to have sinned and thereby brought catastrophe upon themselves. Another example is the famine caused by repeated crop failures in fourteenth-century England, where the prevailing authority—the Church—responded to the climatic crisis with religious rather than practical measures (Stehr and von Storch 1995). More generally, religious rituals intended to prevent or alleviate adverse weather appear to have been well established and, in some parts of Europe, even institutionalized (Barriendos 1997).

During the nineteenth century, with the emergence of modern meteorology, climate science increasingly shifted its attention to average climatic conditions, while extreme events were regarded as being of limited scientific interest. As one contemporary view held, "There is nothing to be learned from extraordinary events" (quoted in Pfister and Wanner 2021, p. 111).

A particularly instructive example is provided by the debates of the 1860s and 1870s that led to the Swiss Forest Police Act of 1876 (Pfister and Brändli 1999). In this case, an apparent increase in the frequency of regional floods in Switzerland was portrayed as an unprecedented phenomenon. Because historical records were incomplete and earlier

periods of frequent flooding had largely been forgotten, the events were perceived as something entirely new. Once the phenomenon was regarded as novel, a new causal explanation was sought. It was provided by the then emerging science of forestry (e.g., Grove 1975), which argued that excessive logging in the Alpine catchments had altered precipitation and runoff, thereby increasing the frequency of floods.

The Swiss Forest Police Act prohibited harmful logging practices in mountain forests. There were, and still are, many compelling reasons to protect these forests, and in that respect the legislation proved beneficial. However, the scientific justification advanced at the time—that deforestation had caused a novel increase in regional flooding—was later shown by historical and scientific research to be unfounded.

By the end of the nineteenth century, the practical implications of perceived climate change and appropriate policy responses were already the subject of extensive public debate, as illustrated in the introductory analysis of Brückner's dissertation (Brückner 1890; see also Stehr and von Storch 2000). Even then, the importance of distinguishing between anthropogenic influences and natural climate variability was explicitly recognized. Parliamentary commissions in Prussia, Italy, and Russia considered how governments should respond to the prospect of climate change, with reforestation widely advocated as the appropriate policy response.

It seems to me that reflecting on historical perceptions and responses can help us avoid repeating mistakes of the past when addressing present-day climate issues. In particular, it may help us avoid prematurely attributing rare, but still potentially natural, events to specific causes and adopting policy responses that later prove to be ineffective. At the same time, recognizing such historical episodes should not be taken to imply that the broader scientific understanding of anthropogenic climate change is fundamentally flawed or a hoax. Rather, historical reflection can contribute to a more balanced and rational assessment of both the risks posed by climate change and the opportunities for effective adaptation and mitigation.

3. Interviewing Climate Scientists

Interviewing participants who witnessed and contributed to past developments is a well-established research method known as oral history. According to the Oral History Association, oral history is "*a field of study and a method of gathering, preserving and interpreting the voices and memories of people, communities, and participants in past events*." [1]

3.1. The Scientific Legacy of Dennis Bray

In the mid-1990s, Dennis Bray conducted a series of in-depth, semi-structured interviews, which were audio-recorded and transcribed. The interviews followed a flexible interview protocol, allowing the course of the conversation to determine the subsequent probes and follow-up questions. The objective was to explore how leading climate scientists in Germany and the United States perceived the future of climate change and the scientific and societal challenges associated with it.

In total, 26 interviews were conducted. The participants were promised anonymity, and consequently only an overall synthesis of the findings has been made publicly available. In addition, three interviews have been published in suitably anonymized form.[2]

A major conclusion drawn from the interviews conducted in the mid-1990s was that "*while the data demonstrates that, for the most part, the risk of global climate change is a consensual product of scientific practice, the hazards associated with the event are determined to have a much closer affinity with the scientists' personal belief systems. It is often these beliefs that come to play a role in the application of science to the public and political spheres*." (Bray and von Storch 1996).

Building on these interviews, five international surveys of climate scientists were designed and conducted. The survey responses have been archived[3] and have provided the basis for a substantial body of research. The resulting publications include the following:

- The first paper (Bray and von Storch 1999) examined whether climate science had entered a post-normal phase by assessing the four defining characteristics of post-normal science: inherent uncertainty, high decision stakes, the involvement of social values, and the urgency of policy decisions.
- The frequent failure of climate scientists to distinguish between the concepts of *prediction* and *projection* is analyzed in Bray and von Storch (2009). Contrary to the terminology adopted by the IPCC, 29% of the respondents interpreted a *projection* as the most probable future development, whereas about 20% regarded a *prediction* as merely one possible future outcome.
- Bray (2010) examined the degree of agreement with the assessments of the IPCC. The authors concluded that "results also suggest rather than a single group proclaiming the IPCC does not represent consensus, there are now two groups, one claiming the IPCC overestimates (a group previously labeled skeptics, deniers, etc.) and a relatively new formation of a group (many of whom have participated in the IPCC process) proclaiming that IPCC tends to underestimate some climate related phenomena."
- Bray and von Storch (2011) compared assessments of the quality of climate models by two groups: experts who had participated in the IPCC assessment process and a second group of physical climate scientists. Responses from three consecutive surveys were analyzed. The results indicate that the IPCC experts expressed consistently greater confidence in climate models than the second group. Moreover, the experts perceived substantial progress in model quality over time, whereas the views of the other group remained largely unchanged.
- Using data from the 2013 survey, Bray and von Storch (2017) examined climate scientists' adherence to the CUDOS norms of scientific conduct proposed by Merton (1942). The results suggest that, although these norms continue to serve as the dominant ethical ideals of the scientific community, they are not fully reflected in the everyday practice of climate science. For example, respondents reported a tendency to withhold results until publication, to emphasize intellectual property rights, to allow external influences to shape research agendas, and to attribute the significance of scientific work partly on the basis of the author's status rather than solely on the quality of the work itself.
- The final paper in this series was von Storch and Bray (2017), which examined changes in the views of international climate scientists as documented by five surveys conducted between 1996 and 2015/16. The surveys revealed a substantial increase in agreement that global warming is real and cannot be attributed to changes in measurement or reporting practices. Confidence also increased markedly that the observed warming is primarily attributable to ongoing anthropogenic influences. At the same time, however, confidence in climate modeling changed little between 1995 and 2015. In particular, considerable reservations remained concerning the representation of precipitation and clouds. The growing assessment that ongoing climate change has a substantial anthropogenic component therefore rests on several independent lines of evidence. Climate modeling is only one of these; others include paleoclimatic evidence and statistical analyses of the instrumental record.

3.2. "Eminent" Scientists

The second series of interviews features 14 eminent climate scientists (see http://www.hvonstorch.de/klima/interview.htm, accessed on 28 July 2026). Hans von

Storch selected the interviewees on the basis of his personal acquaintance with them and his assessment of their scientific significance, intellectual generosity, integrity, and open-mindedness. In one way or another, each contributed to the development of climate science during the second half of the twentieth century. In the German sense, they are *Zeitzeugen*—firsthand witnesses to the history of the field and to the people behind its scientific achievements.

At the time of the interviews, the participants were typically around 75 years old. They could therefore reflect on careers spanning five decades or more and look back on the evolution of climate science from a perspective somewhat removed from the day-to-day demands and responsibilities of active scientific leadership. All of the interviewees were men, reflecting the demographic composition of their generation. Very few women entered climate science during the period in which these scientists began their careers. Regrettably, several of the interviewees have since passed away.

This section is primarily descriptive. Its purpose is to document the interview collection and provide an overview of its contents rather than to analyze the motivations underlying the interviews or the influence of the prevailing *Zeitgeist*. The selection of interviewees was necessarily selective, consisting of individuals whom Hans von Storch encountered during his career, regarded as having made significant contributions to climate science, and whose recollections he considered worth preserving. This inevitably introduces a degree of selection bias, which should be kept in mind when interpreting the material.

The series is ongoing.

In every case, Hans von Storch invited a second interviewer to participate—typically someone who knew the interviewee from a different professional context and could therefore contribute an additional perspective. Whenever possible, the interviews were preceded by extensive personal exchanges to identify topics of particular interest. The first interviews were audio-recorded, whereas later interviews were conducted by e-mail, with questions and responses exchanged in writing.

The interviews were not independently verified for factual accuracy. Their purpose was not to reconstruct the historical record but to preserve the interviewees' own recollections, interpretations, and perceptions of past events. From the perspective of oral history, these personal accounts are themselves an important source of evidence. Nevertheless, despite the passage of many years since publication, neither the interviewees nor readers have identified any major factual inaccuracies in the published interviews.

- The first interview was done with Hans Hinzpeter (1921–1999), the late head of the Meteorological Department of Hamburg University and of a division of the Max Planck Institute of Meteorology. An account of Hans Hinzpeter is given by https://de.wikipedia.org/wiki/Hans_Hinzpeter (accessed on 28 July 2026).
  The interview: von Storch, H. and K. Fraedrich, 1996: Interview mit Prof. Hans Hinzpeter, *Eigenverlag MPI für Meteorologie, Hamburg* in German; DOI: 10.13140/RG.2.2.23236.83847; online in English, at Niels-Bohr Library and Archives of the Center for History of Physics (35176).
- Klaus Wyrtki (1925–2013) was an oceanographer at the University of Hawai'i at Mānoa in Honolulu. After serving in the German Navy during World War II, he moved to Indonesia, where he helped establish the country's hydrographic service. He later joined the University of Hawai'i at Mānoa, where he spent the remainder of his career as Professor of Oceanography. A biographical account of Klaus Wyrtki is available in the German-language Wikipedia.[4]
  Interview: von Storch, H., J. Sündermann, and L. Magaard, 2000: *Interview with Klaus Wyrtki*. GKSS Report 99/E/74; DOI: 10.1007/0-387-33152-2_13; in English.

It is also published in: *Historisch-Meereskundliches Jahrbuch*, 2000, Vol. 7, pp. 49–94; Jochum, M., and T. Murtugudde (Eds.), 2006: *Physical Oceanography: Developments since 1950*. Springer, ISBN 0-387-30261-1, pp. 203–238; and available online through the Niels Bohr Library & Archives of the Center for History of Physics (Oral History Collection No. 25031).

- Reimar Lüst (1923–2020) was a German astrophysicist who served as President of the Max Planck Society and later as Director General of the European Space Agency (ESA). During his presidency of the Max Planck Society, he played a key role in establishing the Max Planck Institute for Meteorology in Hamburg. A biographical account of Reimar Lüst is available in the English-language Wikipedia.[5]
  Interview: von Storch, H., and K. Hasselmann, 2003: *Interview mit Reimar Lüst*. GKSS Report 2003/16, 39 pp.; DOI: 10.13140/RG.2.2.22764.97928; in German.[6]
  An English translation is available through the Niels Bohr Library & Archives of the Center for History of Physics (Oral History Collection No. 33761).
- Harry van Loon (1915–2021), a born Dane, went after WWII first to South Africa and then to the US, where he became a senior scientist at the National Center of Atmospheric Research. His main interests were atmospheric dynamics on the Southern Hemisphere, El Niño-Southern Oscillation and, in his later years, the link of climate and solar activity. Important advice to the young scholars were: do not become a full professor too early, and when using analyses, always try to validate the result with station data.
  The interview: von Storch, H., G. Kiladis and R. Madden, 2005: Interview with Harry van Loon, *GKSS Report 2005/8*, https://www.hereon.de/imperia/md/content/hzg/zentrale_einrichtungen/bibliothek/berichte/gkss_berichte_2005/gkss_2005_8.pdf (accessed on 28 July 2026) DOI: 10.13140/RG.2.2.19409.53609; in English.
  Also in the Niels-Bohr Library and Archives of the Center for History of Physics: https://www.aip.org/history-programs/niels-bohr-library/oral-histories/34462 (accessed on 28 July 2026).
- Klaus Hasselmann (1931–) was the founding director of the Max Planck Institute for Meteorology and of the German Climate Computing Center (DKRZ) in Hamburg. His scientific interests spanned an exceptionally broad range of topics spanned an exceptionally broad range of topics, including ocean waves, climate dynamics, climate variability, the interactions between climate and society, and even particle physics (von Storch 2022; von Storch and Heimbach 2022). A biographical account of Klaus Hasselmann is available in the English-language Wikipedia.
  The interview: von Storch H., and D. Olbers, 2007: Interview with Klaus Hasselmann, *GKSS Report 2007/5*; 67 pp; https://www.hereon.de/imperia/md/content/hzg/zentrale_einrichtungen/bibliothek/berichte/gkss_berichte_2007/gkss_2007_5.pdf (accessed on 28 July 2026). The interview has been reprinted in (von Storch 2022), and also published online by the Niels-Bohr Library and Archives of the Center for History of Physics: 33645.
- Walter Munk (1917–2019) was one of the most influential oceanographers of the post–World War II era. Born in Austria, he emigrated to the United States in the early 1930s. He later joined the Scripps Institution of Oceanography in La Jolla, California, where he spent most of his scientific career. His pioneering research covered a remarkably broad range of topics. These included the Earth's angular momentum and variations in the length of day, wind-driven ocean circulation and boundary currents, ocean waves, tides, and acoustic thermometry of the oceans. During World War II, he collaborated with Harald Sverdrup to develop a wave-forecasting system. It helped support the Allied landings in Normandy on D-Day. In later years, he worked closely with Klaus

Hasselmann on several topics in physical oceanography. A biographical account of Walter Munk is available in the English-language Wikipedia.
The interview: von Storch, H., and K. Hasselmann, 2010: *Seventy Years of Exploration in Oceanography: A Prolonged Weekend Discussion with Walter Munk*. Springer, 137 pp.; DOI: 10.1007/978-3-642-12087-9; open access.

The interview with Walter Munk marked the conclusion of the first phase of the oral history project, which focused on senior scientists who had played a direct role in the history of the Max Planck Institute for Meteorology. After a hiatus of several years, the series was revived, this time with a broader selection of distinguished scientists, most of them from a somewhat younger generation and without the same close institutional ties to the Institute.

- Hartmut Heinrich (1952–) is arguably the most internationally renowned Earth scientist from Hamburg after Klaus Hasselmann. His scientific reputation rests on the careful interpretation of a single stone recovered from a depth of about 4000 m in the northeastern Atlantic. At the time, the core attracted little attention, but Heinrich—then a little-known scientist—examined it in detail. He "read" the rock, asking how it would be possible to find an ice-rafted rock with traces of anoxia at that location. He developed the theory of what was later named by Wally Broecker *Heinrich event*, when armadas of icebergs from ice sheets surrounding the North Atlantic traveled southward, interrupting the oceanic conveyor belt, and indicated periods of short cold events.
  Although Heinrich lived and worked in Hamburg throughout his career, he remained largely unknown to the local public until the interview was conducted.
  See also https://en.wikipedia.org/wiki/Hartmut_Heinrich (accessed on 28 July 2026).
  The interview: von Storch, H., and K. Emeis, 2017:
  The interview: Hartmut Heinrich—der unbekannte weltberühmte Klimaforscher aus Hamburg https://www.academia.edu/30989306/Hartmut_Heinrich_-_der_unbekannte_weltber%C3%BChmte_Klimaforscher_aus_Hamburg._Ein_Interview (accessed on 28 July 2026). English translation: DOI: 10.13140/RG.2.2.22909.15846.
- Jan Harff (1943–) is a German geologist who was scientifically trained in the German Democratic Republic (East Germany). Before 1989, he was prohibited from traveling to Western countries and from participating in research cruises to the west, and therefore focused his research on the modeling of sedimentary basins. Only after the fall of the Berlin Wall did he become a marine geologist, embarking on what was essentially a second scientific career. His research subsequently focused on marginal seas, particularly the evolution of the southern Baltic Sea coast, including its response to climate change.
  The interview: von Storch, H., und R. Dietrich, 2017: Jan Harff—zwischen Welten. www.academia.edu/35456080/Jan_Harff_-_zwischen_Welten (accessed on 28 July 2026)
  See also *Historisch-Meereskundliches Jahrbuch* 23, 2019, 219–264.
  The interview was done in German but was translated into Polish (DOI: 10.13140/RG.2.2.13137.84324), Chinese (DOI: 10.13140/RG.2.2.20519.65440), Russian (DOI: 10.13140/RG.2.2.22539.80160), and English DOI: 10.13140/RG.2.2.32349.721699).
- Christian Pfister (1944–) was the first social scientist to be interviewed in this series. In 2000, he became the inaugural recipient of the Eduard Brückner Prize,[7] awarded in recognition of his outstanding interdisciplinary contributions to climate science. He was Professor of Economic, Social, and Environmental History at the University of Bern, Switzerland. His research has focused both on the climate history of Central Europe over the past millennium and on the historical perception and societal inter-

pretation of climatic events.
See also https://en.wikipedia.org/wiki/Christian_Pfister_-(Swiss_historian) (accessed on 28 July 2026).
The interview: von Storch, H., and H. Wanner, 2019: Christian Pfister—ein Historiker, der Grenzen überwindet. https://www.academia.edu/38311144/Christian_Pfister_ein_Historiker_der_Grenzen_%C3%BCberwindet (accessed on 28 July 2026); (DOI: 10.13140/RG.2.2.16922.41920)
In English: https://www.researchgate.net/publication/371369312_190208pfister-interview (accessed on 28 July 2026).

- Jürgen Sündermann (1938–) is a theoretical oceanographer at the University of Hamburg who was originally trained as a mathematician. His research spans the dynamics and numerical modeling of marginal seas—especially the North Sea—as well as the effects of tidal friction on the long-term evolution of the Earth–Moon system.
  von Storch H., und H. Langenberg, 2019: Interview mit Jürgen Sündermannm *HZG Bericht* 2019-1, www.hereon.de/imperia/md/content/hzg/zentrale_einrichtungen/bibliothek/berichte/hzg_reports_2019/hzg_report_2019_1.pdf (accessed on 28 July 2026) DOI: 10.13140/RG.2.2.12015.48807.
  In Chinese: https://www.academia.edu/38395308/ (accessed on 28 July 2026) (DOI: 10.13140/RG.2.2.21955.58407).
- Anders Omstedt (1949–) is a regional oceanographer at the University of Göteburg, Sweden. His research has focused on modeling the regional Earth system of the Baltic Sea and on broader questions concerning the philosophy of science and the role of the oceans in the Earth system. For nearly three decades, he played a leading role in guiding the international Baltic Sea research program, first known as BALTEX and later as Baltic Earth.
  The interview: von Storch, H., and M. Reckermann, 2020: *Anders Omstedt—45 Years of Wandering: From Processes to Systems, through Outer and Inner Seas. International Baltic Earth Secretariat Publication*, No. 17, February 2020. Available at https://www.researchgate.net/publication/371370176_45_years_of_wandering_-_from_processes_to_systems_through_outer_and_inner_seas_An_interview_by_Hans_von_Storch_and_Marcus_Reckermann_with_a_foreword_by_Juri_Elken (accessed on 28 July 2026). DOI: 10.13140/RG.2.2.11050.39368.
- Geert Jan van Oldenborgh (1961–2021) was a climate physicist at the Royal Netherlands Meteorological Institute (KNMI) in De Bilt and served as a visiting professor at the University of Oxford, where he played a leading role in the development of the methodology of event attribution. An open-minded and generous scientist, he was widely respected for providing the scientific community and the public with robust climate analyses and diagnostics. The interview was conducted while he was already seriously ill, yet he remained remarkably engaged, thoughtful, and committed to science.
  von Storch, H., and S. Philip, 2021: Geert Jan van Oldenborgh—approaching truth in a sea of noise and data deficiencies. https://www.academia.edu/44946272/Geert_Jan_van_Oldenborgh_approaching_truth_in_a_sea_of_noise_and_data_deficiencies (accessed on 28 July 2026) (DOI: 10.13140/RG.2.2.12728.11527).
  In Dutch: van Oldenborgh, G.J., S. Philip, H. von Storch, and M. Allan, 2021: Geert Jan van Oldenborgh - de waarheid benaderen in een zee van ruis en dataproblemen. *Meteorologica* 1-2021, 1–9.
  See also https://en.wikipedia.org/wiki/Geert_Jan_van_Oldenborgh (accessed on 28 July 2026).
- Mike Hulme (1960–) is a geographer at the University of Cambridge, UK, whose outstanding interdisciplinary contributions to climate research were recognized with

the sixth Eduard Brückner Prize. As the founding director of the Tyndall Centre for Climate Change Research at the University of East Anglia, he played an important role in analyzing the scientific, institutional, and societal implications of the *Climategate* affair and in helping to restore public confidence in climate science.
See also https://en.wikipedia.org/wiki/Mike_Hulme (accessed on 28 July 2026).
The interview: von Storch, H., and M. Claussen, 2021: Mike Hulme: The gentleman understanding climate beyond the fascination of differential equations. https://www.academia.edu/49459880/Mike_Hulme_ The_gentleman_understanding _climate_ beyond_the _fascination_of_differential_equations (accessed on 28 July 2026) DOI: 10.13140/RG.2.2.32860.77445.

- Thomas J. Crowley (1948–2014) was a geologist and paleoclimatologist whose research focused on reconstructing Earth's climate history over geological time. One of his most enduring legacies is the landmark textbook, co-authored with Jerry North (Crowley and North 1991), which helped shape modern paleoclimatology. The interview was conducted when he was already terminally ill.
The interview: von Storch, H., H. Wanner, and G. Hegerl, 2014: *Scientific Interview: Tom Crowley (1948–2014). Dust*, 22, 114–115. DOI: 10.13140/RG.2.2.21375.61605.

3.3. Atmospheric Sciences Section of AGU

In the Atmospheric Sciences Section Newsletter of the American Geophysical Union (AGU), Hans von Storch conducted a series of short interviews between July 2009 and March 2013. Senior atmospheric scientists were asked a common set of questions about their personal views on the state of the atmospheric sciences, major developments in recent decades, and their expectations for the future. The complete collection of interviews is available at http://hvonstorch.de/klima/Media/interviews/AS/all.pdf (accessed on 28 July 2026).

3.4. CLISAP Interviews

Members of the Hamburg Cluster of Excellence Integrated Climate System Analysis and Prediction (CliSAP) were interviewed approximately once a month by Mike Schäfer and Hans von Storch between April 2011 and August 2012. The purpose of the series was to introduce members of the Cluster to the wide range of disciplines represented within CliSAP and to highlight the diversity of its research topics and researchers, from Ph.D. students to senior professors. The interviews focused primarily on the interviewees' scientific careers, their aspirations for future research, their views on the role of science in society, the extent to which climate science has become politicized, and their perspectives on what constitutes "good science." The complete collection of interviews can be read online or downloaded from http://hvonstorch.de/klima/interviews.htm#clisap (accessed on 28 July 2026).

4. Epilogue

After a brief overview of the historical development of climate science, this essay presents several series of interviews that shed light on the state of climate research and the evolving relationship between climate science and the public from a historical perspective.

The history of climate provides a rich record of how individuals and societies have perceived and responded to weather events, climatic variability, and climate change. These perceptions and interpretations have always been shaped by the prevailing authorities of their time, whether religious institutions or the scientific community, neither of which is immune to cultural influences and the *Zeitgeist*. A historical perspective therefore offers climate science an important opportunity for self-reflection. Such reflection is particularly valuable for a discipline that has become closely intertwined with public discourse and policymaking. The interviews presented in this essay therefore serve not only as per-

sonal testimonies but also as historical documents, revealing how culturally constructed knowledge and the *Zeitgeist* have shaped the development of climate science itself.

One should also recognize that scientific claims consistent with historically established ideas tend to prevail more readily in the "knowledge market" (von Storch 2023). In this respect, understanding the historical evolution of these ideas is invaluable for informed societal debate about climate and climate policy.

Of course, historical research plays another important role in climate science: the reconstruction of past events, climate conditions, and climatic changes during the historical period, when written and other human archives are available (e.g., Brázdil et al. 2005; Niedźwiedź et al. 2015; Pfister and Wanner 2021; White et al. 2018). Such documentary evidence not only enables the direct reconstruction of past climate conditions but also provides valuable reference data for proxy-based reconstructions and helps to estimate the range and frequency of extreme events. Examples include floods in Germany's Ahr Valley (Roggenkamp 2022), storm surges along the southern Baltic coast (Wagner et al. 2016), and storm surges in the southern North Sea (de Kraker 1999).

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Informed Consent Statement: Verbal informed consent was obtained from the participants. Verbal consent was obtained rather than written because, at the time of the interviews, no such requirement was needed.

Data Availability Statement: No new data were created or analyzed in this study. Data sharing is not applicable to this article.

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Notes

1 https://oralhistory.org/about/do-oral-history/ (accessed on 28 July 2026).
2 The audio recordings and transcripts are archived but are not yet accessible to the scientific community because of the confidentiality assurances given to the interviewees.
3 For details on the archiving of these data, see below.
4 https://de.wikipedia.org/wiki/Klaus_Wyrtki (accessed on 28 July 2026).
5 https://en.wikipedia.org/wiki/Reimar_LÃijst (accessed on 28 July 2026).
6 https://www.hereon.de/imperia/md/content/hzg/zentrale_einrichtungen/bibliothek/berichte/gkss_berichte_2003/gkss_2003_16.pdf (accessed on 28 July 2026).
7 http://www.hvonstorch.de/klima/material/brueckner/brueckner-preis.htm (accessed on 28 July 2026).

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