

A photograph of an elderly man with white hair, wearing a dark sweater over a light blue collared shirt and dark trousers, walking down a wooden staircase. He is leaning on a wooden handrail with dark metal balusters. The background shows a white wall and a door.

**Christian Pfister,  
an historian  
passing across  
borders**

**Christian  
Pfister**

An Interview by Hans von Storch and Heinz Wanner  
an introduction by Thomas Stocker  
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The cover photo was made by Tanja Bernold, Lenzburg, who allowed the usage here. The origin of the other photos is given in the captions.

The interview was prepared by an extensive but unrecorded conversation among Christian Pfister, Heinz Wanner, while the written questions and answers were exchanged by e-mail between March and December 2018.

The original interview was done in German, see [https://www.academia.edu/38311144/Christian\\_Pfister - ein Historiker der Grenzen %C3%BCberwindet](https://www.academia.edu/38311144/Christian_Pfister_-_ein_Historiker_der_Grenzen_%C3%BCberwindet); its translation, as well as the translation of Thomas Stocker's preface, was done by Christian Pfister.

This interview is part of a series of interviews with impressive scientific personalities, mostly from climate science, oceanography and meteorology. See <http://www.hvonstorch.de/klima/interview.htm#individuals>; in many cases, English or other translations are available.

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## **Preface by Thomas Stocker**

### **Foreword to the interview with Prof. Christian Pfister**

My colleague Christian Pfister is a pioneer: through the ground-breaking work he has done in connecting climate history with quantitative climate science. Not by merely telling stories (he can do that too!), what lay people would expect from historians, but by means of indices, time series, geographical location, stored in the electronic medium. This is how interdisciplinarity emerges, and Christian Pfister laid the foundations for it at the University of Bern. Climate research is not limited to physics, biology and geography, but today it obviously includes the historical and social sciences. It is thanks to Christian Pfister that we in Bern were able to benefit from this expansion at an early stage.

Christian's research gives degrees Celsius, meters, kilograms, and millimeters per year a face, because he painstakingly, year after year, often even season after season, traces the conditions under which people experienced weather and climate, how they dealt with it, and what conclusions they drew from extreme events. In the form of climate history, this approach can provide an additional -- and as we know from today's perspective -- indispensable context for the development of society. Climate history also provides key data for "palaeometeorology", i.e. the reconstruction of weather conditions during extreme events. This research is of the highest topicality, because even today, in climate research looking to the future, it is not only degrees Celsius of warming, meters of sea-level rise, kilograms of melting ice in the Alps and polar regions, and millimeters per year of precipitation change that are of interest, but also the face of climate heating: its impact on man, society, and nature. Christian Pfister's research broadens our perspective, highlights the vulnerabilities of the past and teaches us how even the smallest fluctuations, such as the Little Ice Age, have the greatest social effects. The results obtained from Climate History, especially those concerning extreme events, contribute to improving risk assessment by broadening the basis of statistics.

Christian is an endurance runner, both in science and in sport. He has the finish in front of him, is fast on his way, and already talks about the next race at the finish. Especially in recent years, when a climate record is soon overtaken by the next one -- in Switzerland we have just experienced the driest summer since 1864 -- Christian reminds us with a short, precise remark "But in the year 15xy was ..." that extreme events occur today with alarming frequency and with increasing intensity, but do not "create unprecedented suffering", but also

had serious consequences for man and society in the past. The multifaceted sources of information about climate change and its effects form the fertile substrate on which the Oeschger Centre for Climate Research at the University of Berne, to which Christian Pfister has contributed a great deal, blossoms and grows.

Prof. Thomas Stocker

Climate and Environmental Physics, Physics Institute University of Bern.

President of the Oeschger Centre for Climate Change Research

## Preface of the editor

Traditional climate researchers often consider societal change and societal processes not to be among the legitimate topics of climate science. And indeed, such issues do hardly help better understanding of physical, ecological or chemical processes, which are significant for the formation of climate change. However, this view fails to recognize that “climate” is more than dynamics, more than differential equations and computer programs.

Climate is not only a construct built by natural sciences, but there are social and cultural constructions which make climate an issue of significance for our life. But these aspects are in the field of social sciences. One of these social sciences is climate and environmental history, and our interviewee is among the great of this field: Christian Pfister. Christian himself does not like to be narrowed to a “climate historian”, because it downplays other aspects of his competence.<sup>1</sup>

In my own research arena, history of climate entered only in the 1990s. One aspect is the description of past climate variations, as documented in historical documents and indirect proxy data. This field, the analysis of historical documents and the derivation of estimates of varying climate, kept Christian Pfister busy. However, there is another aspect, namely the contemporary perception and explanation of climate variations and extremes. A result, which became an eye-opener for me, was the analysis of the implementation of the Swiss Forest Law (Waldpolizeigesetz) in the 19th century. The process was described and analysed by Pfister and Brändli in „Rodungen im Gebirge - Überschwemmungen im Vorland: Ein Deutungsmuster macht Karriere” (forest clearance in the mountains, flooding in the floodplains – an interpretation gaining traction), a chapter of the 1999-book *Buch Natur-Bilder. Wahrnehmungen von Natur und Umwelt in der Geschichte* by von R.P. Sieferle and H. Greunigener (Campus Verlag Frankfurt/ New York).

This analysis demonstrated the failure of the public, when assessing recent events in the light of past experiences. And it demonstrated how science all too quickly accepts explanations when they fit cultural expectations. The „climate catastrophe” is not a new concept but age old, even if appears now as a global

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<sup>1</sup> Pfister's colleagues and former students have prepared a „Festschrift“ in 2009 – and the introduction to this festschrift provides a good overview about Christian's broad field of interest, with a focus on environmental history. The Festschrift is in German, though: Daniel Krämer, Stephanie Summermatter, Nachhaltige Geschichte - eine Einleitung. [http://www.hist.unibe.ch/ueber\\_uns/personen/pfister\\_christian/](http://www.hist.unibe.ch/ueber_uns/personen/pfister_christian/)

issue. The history of climate is a mirror, which can be used to reflect modern scientists upon their practice, and to try to do better.

Christian Pfister is an excellent representative of the unfortunately small community of historians of climate and the environment. He had a hard time to achieve recognition, as he describes in the interview. Maybe, success could happen only at the University of Bern, with its truly interdisciplinary set-up. Indeed, the cooperation between the historian Christian Pfister, the meteorologist and geographer Heinz Wanner und the physicist Thomas Stocker, is an impressive example for such interdisciplinarity. Bern is one of the best climate-science places, which built its reputation on scientific quality, not on quantity of papers.

In the course of the last three decades, I enjoyed preparing many such interviews. I did so always with a co-reviewer, who allowed us to open a wider horizon than I would have been able alone. We do not claim to provide „truth“; instead we want to enable the interviewee to present his perceptions, his interpretation, his version of personal history. Apart of simply being interesting and intriguing, the series of interviews also demonstrates nicely the richness of scientific existences.

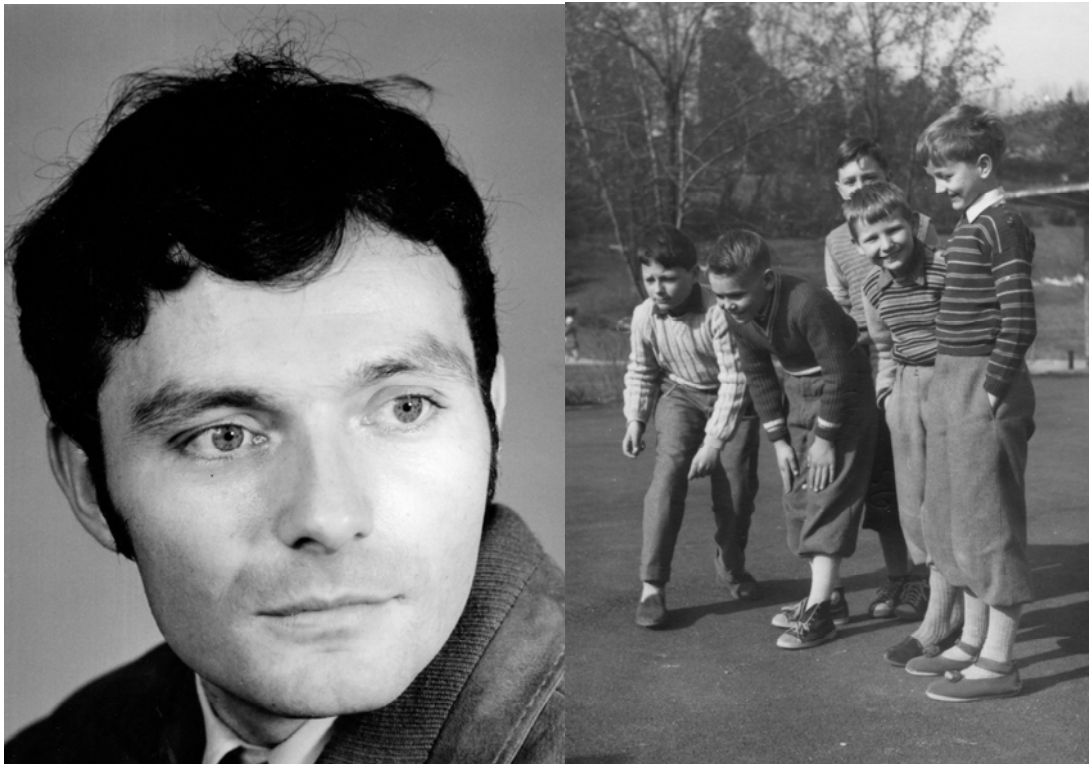
Rødvig, 22. December 2018

# The Interview

*Christian, please tell us about your professional career. How did you arrive at the history of the environment and climate?*

I was born on 23.08.1944 as the son of teachers in Bern, where I attended school. Since 1970 I am married to the biologist Rita Wilhelm, who has significantly influenced my view of the world. Our two children have given us four grandchildren who are a source of joy.

About my career: After completing the Matura examination type A (with Latin and Greek), I first acquired the patent as a secondary school teacher, which later proved useful as a bread basket. Subsequently, I began studying history and geography.



A younger Christian Pfister

The geographer Bruno Messerli (1931-2019), who later became rector of the Bern University, fascinated me both as a scientist and as a person. In 1969 he set the course in my life by offering me a place in his team of assistants. It was an innovative think tank in which I felt recognized.

In this environment, I found a dissertation topic as a historian: The Swiss reform societies of the 18th century understood the world as an interconnected system, similar to the researchers in the wake of scientific and social turning point in the 1970s. In 1760, the Bern Economic Society set up a pioneering meteorological measuring network and in the following decades it had a large number of agricultural production data and prices collected. This material provided the raw material for my study of weather patterns and the agricultural economy in the Canton of Bern (Pfister 1975). I was motivated by the "History of the climate since the year 1000" (1967) of the French historian Emmanuel Le Roy Ladurie (\*1929), with whom I am still in friendship. It was only later that I became aware that our approaches were quite apart: my dissertation focused on weather patterns, not climate change, and in this sense opposed the prevailing patterns of thought.



Giants to build upon: Bruno Messerli (left; Foto: U Bern) and Emmanuel Le Roy Ladurie

A three-year research fellowship from the Swiss National Science Foundation in **1975** enabled me to work on a climate history of Switzerland since the early 16th century. In this context I spent a study stay at the **Rochester University NY** in **1976/77** together with my wife Rita and our two children, where among other things I dealt with the programming language PL-1. In 1978, for three months, I got to know the **Climatic Research Unit** in **Norwich**, England, which under Hubert Lamb had become the most important centre for climate history.

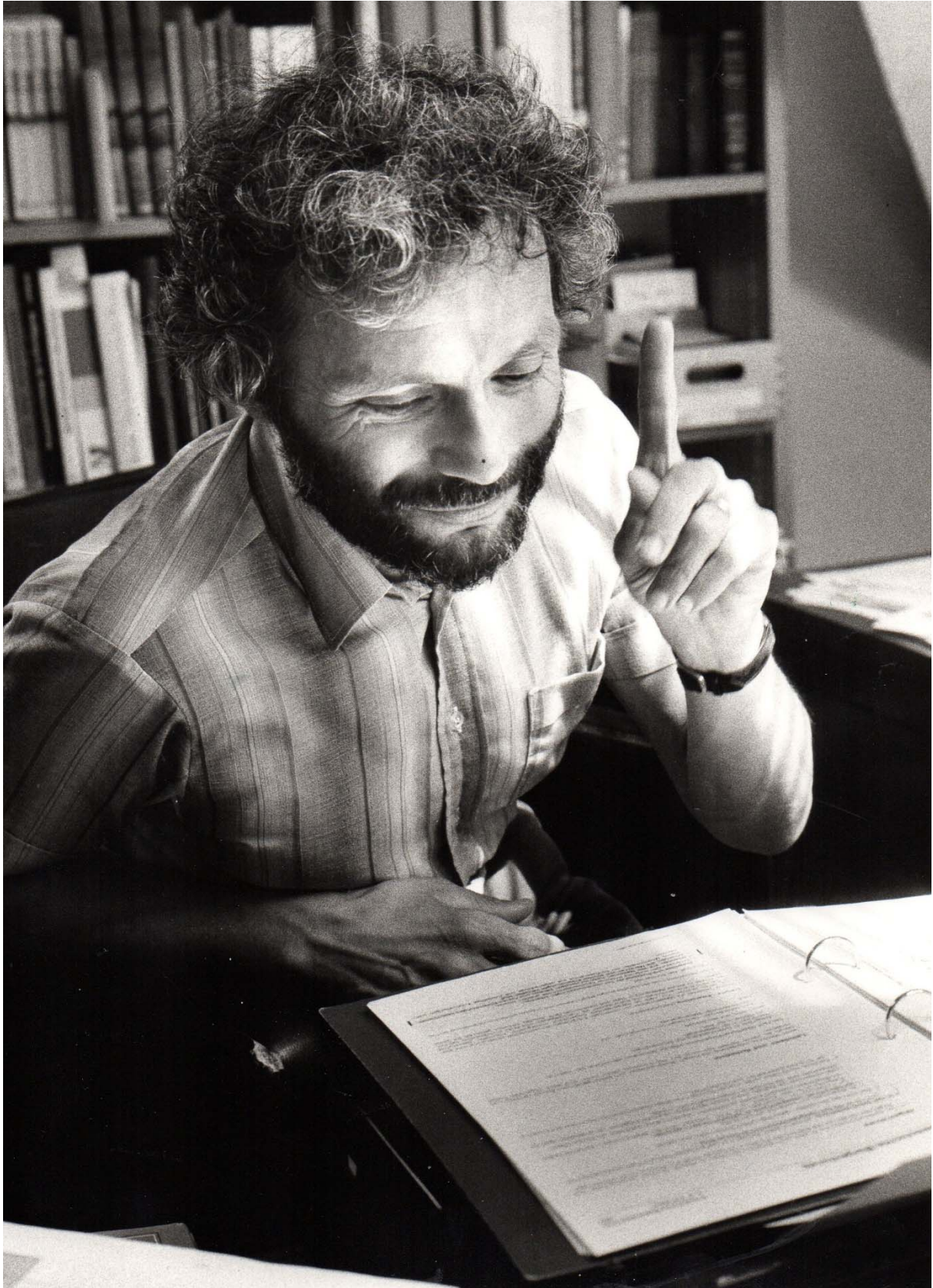


After the scholarship expired in the fall of **1978** I went through the worst crisis in my career, because no assistant position was available at the university and my thesis had not yet been completed. As a father of two children, I had to look for a job. At least I was offered a teaching position in the village Waldenburg (Canton Baselland). A move to this mountain village would have ended my university career. The evening before my final decision Bruno Messerli persuaded me to continue my research by looking for a position in the wider Bern area, where cooperation with the university was easier. I indeed got a position as a secondary school teacher in **Langenthal**, where I taught German, French, History and Geography for the following three years besides continuing my research during the vacation. Renowned scientists such as the climatologist Hermann Flohn (1912-1997) and the physicist Hans Oeschger (1927-1998) were convinced of my approach.

*How did you get your professorship despite the detours?*

Thanks to a supplementary scholarship, I was able to bring my “postdoctoral thesis” (Habilitation) to a successful conclusion and to habilitate in **1982**. From 1982 to 1988 I taught as a “Privatdozent” at the Bern History Institute. At the same time I created a **software package called Climhist** which presented the 34,000 proofs of my 1984 thesis on 1251 pages chronologically and by theme. In 1990 I was awarded a **six-year research professorship** of the Swiss National Science Foundation for Environmental History with Special Consideration of the Climate History of the Last Centuries.

The project "European Palaeoclimate and Man since the Last Glaciation" of the "European Science Foundation" (1989) became a springboard for creating an international data-base out of the existing nucleus of **Climhist Switzerland**. In this context I led a research group that gathered machine-readable documentary data from all over Europe to reconstruct maps of the monthly weather in Europe over the period 1675 to 1715, the "Late Maunder Minimum", as Heinz Wanner called it. For this purpose, the software created for Climhist (Switzerland) was extended to EURO-CLIMHIST. During the presentation of the results at a conference in Bern in August 1994 **Heinz Wanner** caught fire for the topic. In the following two decades he put the investigation of the climate in the last centuries together with his students on a statistical basis. He is still fascinated by this topic today.



Reading, always reading: Christian Pfister in the 1980s.



In 1996, at the age of 53, I successfully applied to succeed Beatrix Mesmer as professor on the **chair of modern Swiss history**. However, the faculty offered me an attractive alternative: Appointment as full professor, initially with a four-hours teaching duty, with a **focus on Economic, Social and Environmental History**. The Swiss National Science Foundation initially contributed 30% of the cost.

With the exception of a 25% secretarial post, no further human resources were available for this job in 1997. I was promised more resources in the future. However, in 1999, I had to take over the direction of the institute including the regular 8 hours teaching load without any compensation. In this situation I turned to the university rectorate, whereupon the institute had to cede me a 50% assistant position.

The de facto separation of teaching in economic, social and environmental history from the research focus on climate history was maintained after 1997, with natural disasters gaining in importance according to the topicality of the time. Only after **2000** I turned to the actual history of climate. My succession was originally not planned. It was arranged in time by my colleague Marina Cattaruzza and supported in 2009 by Heinz Wanner via the Oeschger Center.

*What are the most important sources of historical climate research? Some have certainly been added in recent decades.*

In the period before the spread of meteorological instruments from the mid-18th century, documentary sources were the most important sources including narrative weather reports supplemented by several kinds of proxy data, namely phenological, hydrological and cryological (ice and snow related) observations, which can be evaluated with statistical methods. Over the last two decades, accounts of cities, monasteries and territories have been added in which weather-related activities such as grain and wine harvests, snow clearance and flood protection measures are documented day by day year according to standardized criteria. They can be evaluated in the form of time series.

If the data density is sufficient, all the evidence available for a month or a season is evaluated in the form of so-called Pfister temperature and precipitation indices. These assume values between -3 (very cold or dry) and +3 (very warm or humid), with "0" standing for unspectacular observations. Using statistical methods Pfister indices were converted into monthly or seasonal estimates of temperature and precipitation (Pfister et al. 2018).

***Concerning the climate history of Switzerland (1984): Which were the most surprising results of this climate reconstruction?***

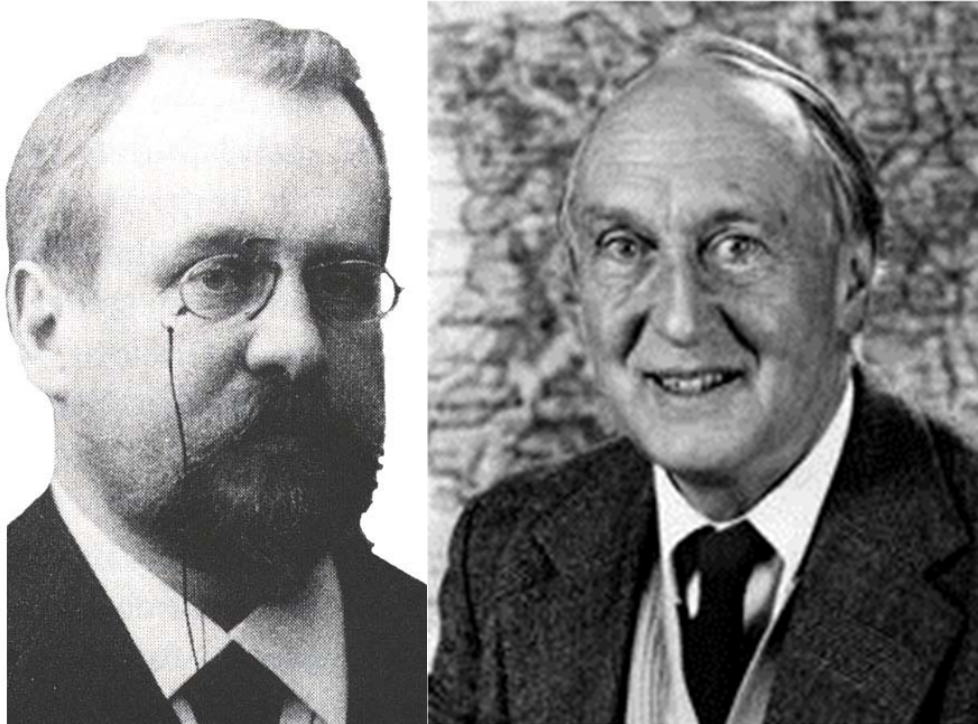
To my knowledge, this is the first climate history based on monthly and seasonal time series of temperature and precipitation indices reaching from the early 16th century to the late 19th century. It allowed comparison with fluctuations in the Alpine glaciers and at the same time it formed the basis for a population and economic history that took account of the climate. In particular, it enabled a refined interpretation the 16th century conditions, distinguishing between a warm and rather dry period of population and economic upswing (approx. 1530 to 1565) which was followed by a four decades long crisis-ridden cold and humid phase (1566 to 1602)

***How do you assess the status of historical climatology over the decades since the 1950s?***

Climate history is a dynamic element of environmental history, understood as the interweaving of culture, economy and the natural environment. Historical climatology has the task of reconstructing weather patterns, climate parameters (temperature, precipitation) and general weather conditions for the period prior to the establishment of state monitoring networks on the basis of anthropogenic data. Moreover it investigates the resilience of societies to climatic shocks and nature-induced disasters, and finally it outlines the changing social representations of weather and climate. Methodologically, historical climatology is solely responsible for the evaluation of data from Archives of Societies. It gradually emerged as an independent field of research from the 1970s.

Three pioneers have done groundwork. The **German geographer Eduard Brückner (1862-1927)**, son of a historian, published a monograph in 1890 entitled "Climate Fluctuations since 1700" and Remarks on the Climate Fluctuations of the Diluvial Period". In it he not only contrasted himself with the dogma prevailing at the time, which regarded the climate of the past centuries as constant. He also provided evidence in the form of early instrumental measurements, grape harvest dates and glacier fluctuations. Moreover he addressed social impacts of such changes as crop and price fluctuations and migratory movements in his study. But his work was forgotten until Nico Stehr and Hans von Storch (2000) recalled and partly translated it.

Without knowing Brückner's German language publication the **French historian Emmanuel Le Roy Ladurie** (\*1929) also used vintage data and evidence of glacier fluctuations to reconstruct pre-instrumental climates in his "Histoire du Climat depuis l'An Mil" (1967). Out of consideration for his career, however, he distanced himself from the idea that seasonal and monthly weather conditions might have had an impact on human history. Four decades later, however, he admitted that he had only made such statements in order not to be discredited as a climate determinist.



More giants: Eduard Brückner (left) and Hubert Lamb (right)

**Hubert Lamb (1913-1997), an English climatologist with a flair for human history**, evaluated a wealth of historical weather data that he discovered during his work for the British Weather Service. From these elements he got the picture of a medieval warm period. Moreover he discovered the great significance of volcanic eruptions for weather and climate. Although he, like Eduard Brückner 80 years earlier, had differentiated the significance of climate for human history (Lamb 1988), he was confronted with the accusation of determinism.

In **1979** he convened an **International Conference on "Climate and History"** in Norwich (UK). It brought together more than 250 historians, geographers, climatologists and archaeologists who had previously worked more or less in isolation. It is regarded as the culmination of historical climatology in the 1970s.

In the 1990s, the "**cultural turn**" replaced quantitative history and the associated research fields of population, economic and climate history. On the other hand, the long-term approach, which initially continued in climate research, was increasingly supplemented by the accumulation of extreme events and natural catastrophes by a short-term, socially oriented approach, which opened up a new field of activity for historical climatology with the investigation of **nature induced disasters** and their **significance for human affairs**.

In the last decade, historical climatology has established itself as a recognized independent field of knowledge. It has been shown that temperature reconstructions based on Pfister indices are qualitatively equivalent to early instrumental measurement series (Luterbacher et al. 2016). A visible expression of this consolidation is the extensive, globally and technically comprehensive "Palgrave Handbook for Climate History" (2018), which is in great demand, as is the Euro-Climhist data platform (Pfister, Rohr <https://echdb.unibe.ch/>), which emerged from CLIMHIST Switzerland.

And yet it has to be said that environmental history, and certainly climate history, still does not offer a springboard for an academic career. The chair of my successor **Christian Rohr devoted to environmental and climate history** was created in 2009 under extraordinary circumstances. So far It has remained a worldwide singularity.

***How international is historical climate research? You have to deal with written sources in various regional languages. The need to deal with many languages certainly represents a significant barrier in the construction of indices. In which countries of the world does climate history exist at all?***

The "Palgrave Handbook for Climate History" (2018) presents results from all continents, albeit with a focus on China and Europe. Early research in Latin America, South Africa, India, Africa and Australia is so far almost exclusively based on sources laid down by Europeans. Large gaps exist mainly in India and the Islamic world. This is probably less due to a lack of material than to the knowledge and means necessary for its evaluation. Sam White (2011) of Ohio State University, who today figures among the worldwide leading climate historians, learned the (ancient) Turkish language, for example, in order to interpret sources of the Ottoman Empire from the late 16th and early 17th centuries.

**Languages:** Anyone who evaluates data written before the 18th century has to grapple with the subtleties of the languages written at that time. A method has been developed for the Euro-Climhist database to output a summary of each observation in English, German, French and Italian in addition to the wording of the original source.

***Was there a paradigm shift - when and how? Who were the main actors?***

Difficult questions. The knowledge history of the climate is inadequately investigated. It shows numerous blurred transitions. A summary in the context of an interview gets easily stereotyped and reprehensible. Only a few actual paradigm shifts can be identified, and it is even more difficult to name actors. Two central questions emerge: the question of whether the climate has been perceived as constant and the question of what significance it has been and will be ascribed to human affairs.

It should be noted at the outset that the concept of climate has changed in the long term. Until the 19th century, climate (from Greek *klinomai* = incline) was understood to mean the atmospheric conditions to be constant between two latitudes, above all in the tropics, in temperate latitudes and in the polar zones. This view changed from the 19th century onwards with the discovery of the ice ages and the gradual development of dynamic climatology.

The first advocates of the Ice Age theory were based on causal long-term climate changes. In the second half of the 20th century the representatives of the French Annales school (Fernand Braudel, **Emmanuel Le Roy Ladurie**) transferred this view to the Little Ice Age. The German geographer **Eduard Brückner**, writing at the end of the nineteenth century, assumed seasonal cyclical changes to be relevant. The fact that the climate of the past is composed of a quasi-chaotic variety of seasonally different fluctuations and weather capricious partly based on exogenous forcing factors can be credited to palaeoclimatic and historical climatological research over the last 40 years.

A paradigm shift can at most be qualified as the inclusion of short-term dynamics in the 1990s, which Katz and Brown (1992) have brought to the catchy formula: "Extreme Events in a Changing Climate: Variability is more important than averages."

Within the framework of the climate concept that applied until the 19th century, a zone-specific deterministic view of man and history was postulated



(Aristotle, de Bos, Montesquieu), which **Ellsworth Huntington** perpetuated until it was discredited after World War II. The sociologist **Emile Durkheim** contrasted this extreme view in 1900 with an antithesis by denying any significance of climate for human history. **Culturalism** continues this extreme view in the present. This term refers to a quasi-deterministic assessment of cultural in relation to natural factors. Historians have been reticent for a long time. Even Le Roy Ladurie (1967) initially denied any significance of climate for historical development. This happened, however, as he admitted in retrospect, because he did not want to diminish his career opportunities in view of the sceptical and hostile attitude of his guild towards any kind of climate impact research.

***History and climate - the dual challenge: the history of the climate itself, but also the history of climate knowledge.***

The significance of the climate factor for human history is controversial. Two extreme positions, the complete suppression of the climate factor by historians and its overestimation in the form of climate determinism are obsolete. However, stylised climate papers in top journals today often have a trendy relation to society that is inevitably monocausal as long as historians are not included in the review process. **Nico Stehr** and **Hans von Storch** (2000) rightly criticize that part of today's climate impact research is latently deterministic. On the other hand, some historians disregard references to the climate due to the complexity of the topic. For example, the renowned environmental historian **Joachim Radkau** admitted that historical climatology had become so highly specialised that it is impossible to assess how reliable and significant its results really are (Radkau 2008: 33).

In a first step it needs to be clarified what is to be understood by "history" in connection with climate. The focus should be put on the material foundations of human existence such as food, water, heating and the natural environment rather than on major historical events such as wars, revolutions or the spread of new technologies. Within this framework, climate history fits into the larger context of a comprehensive environmental history. The second item to be considered is the spatial and temporal context. Arguments have to be made at relatively short-term and small-scale levels. People were and are mainly affected by the sequence of monthly or seasonal weather conditions. The decisive factors were and are specific combinations of monthly and seasonal temperature and precipitation effects that had a positive or negative impact on

quantitative and qualitative agricultural production and from there on general living conditions.

Historians have come to believe that, in view of the complexity of social vulnerability and human behaviour, it is easier to establish causal relationships on a case-by-case basis than by generalizing them statistically. At best, climate parameters can be correlated with harvest quantities and bread prices, but not with famines, price riots and wars, since these can only be understood in their specific social and political context.

The potential of the history of knowledge and perception of weather and climate is far from being exhausted, although this topic is attractive for the humanities due to its proximity to cultural history and the rich narrative sources available in this context. To this day, no corresponding synthesis is found in the many articles in specialist journals and anthologies on the history of the humanities.

***In this context, one could mention the current issue of "climate refugees". How does this fit into your remarks?***

Current and future climate changes hit the poor countries of the South harder than the rich countries of the North which largely caused the climate problem. Sooner or later a compensation must be found.

***Taboos - are there topics that are kept out of the discourse of both historical research (related to the environment and climate) and scientific climate research?***

Politically sensitive are statements on population development, food production and migration in the past, even if they are limited to the mere ascertainment of facts, but an examination of history and climate cannot do without them.

In accordance with the WMO, the climatic norm period is continuously adapted to global warming and communicated accordingly. Today the thirty-year period is 1981 to 2010. Soon it will be 1991 to 2020. The climate norm taboo, as it might be called, has the effect that the public perceives the ongoing climate change as "normal."



Christian Pfister – an untiring endurance runner

***How do social scientists, economists and natural scientists deal with climate and environmental historians?***

Sometimes it is difficult to find common ground. It seems essential to me that climate and environmental historians are recognised as partners at eye level rather than being misused as mere data providers. Then it depends on whether both scientists and historians are ready to familiarise themselves with neighbouring fields of knowledge in order to get a broader understanding of their subject. In my experience, this is most likely to be the case with geographers, because many of them think in an interdisciplinary way. "Hard" natural scientists are open to dialogue if they are convinced that they can gain new insights into their field from cooperating with environmental historians. For example, the research group led by Sonia Seneviratne of the ETH Institute for Climate and Atmosphere in Zurich, for instance, dealt with the extreme heat and dry year 1540 in the form of models, although no "hard" data are available (Orth et al., 2016). Within hydrological sciences, historical hydrology is recognised as a sub-discipline, because (extreme) precipitation, floods and droughts in the pre-instrumental period are best understood based on narrative and proto-statistical evidence.

The case of as economic historians is ambivalent. As long as they hide behind dogmas, statistics and mathematical formulas, a dialogue with environmental historians is fruitless. It is important to understand that numbers in historical contexts must be critically scrutinized and that economic models should not be uncritically transferred to the past. Provided that economic historians are open in this respect, their findings can significantly enrich our view of the past.

***You mentioned the year 1540, which you have worked out as a truly extraordinary climatic year, as a "Black Swan". Would you like to say something more about this year?***

A "Black Swan" (Nassim Taleb) is a runaway outside the range of normal expectations that has an extreme impact. Climatically, it is an event considered unlikely to occur due to its rarity. In 1540, Europe suffered from the Atlantic to Poland and from Tuscany to the German northern border under an eleven-month heat and drought period, which atrophied rivers to rivulets and ignited forests and settlements. The consequences of such an event would be far-reaching today, mainly due to the lack of water and its consequences for energy supply (cooling water) and health (Pfister 2018). Since with the increase

of the mean values the extreme values become more frequent and more extreme, as the current decade has impressively shown, the probability increases that we will face a Black Swan in the foreseeable future. One of the tasks of a critical climate assessment is to warn the authorities of such events so that they can prepare in good time for such situations.

### ***Was and still is climate knowledge a useful and powerful tool - a way of gaining discourse control?***

From the early Middle Ages the Church successfully controlled oral and written discourse about weather and climate. With the availability of instrumental measurements and the emergence of mathematical-statistical methods from the late seventeenth century, it gradually lost discourse control to the natural sciences.

With the climatic rupture in the 1990s, a dispute flared up between mainstream climate science and the so-called sceptics about the fact and the attribution of climatic change, which today is also conducted on a global political level.

### ***Scientists in Public Space - Norm and Practice***

In addition to science, the media and politics should also be mentioned as actors here (Weingart et al 2002). They all follow different interests: Scientists fear losing their credibility. They have learned from the debate about dying forests not to draw too hasty conclusions. Politicians on their side do not want to make decisions that could lead to a loss of votes. Media people in the end need to gain attention for their products in a highly competitive market.

The public listens to science especially during extremes such as hot and dry summers, snowless winters and nature induced disasters. Scientists must prepare for such windows of opportunity. Only if extremes and catastrophes occur at increasingly shorter intervals the public pressure might urge politicians to take efficient measures.

The social media have become a new, influential but time-consuming facet of public opinion. Whether and how scientists can contribute here without neglecting their primary task of providing new findings remains to be seen.

### ***Science and its role in politics - ideals and practice***

Policy advice is not the business of climate science. The political institutions, in Switzerland above all the voters, have to decide on possible measures. Rather, science has the task of formulating forecasts and objectively pointing out the risks to be expected. A glance at past weather and climate within the last centuries can provide considerable information. It has always played a pivotal role in the assessment of the present. Past data today show how a warmer world will look like in the future, and - this is crucial – less in terms of mean values, but in terms of extremes. In addition, climate research is repeatedly required to correct formulaic opinions about the climate past ("this already has occurred before") and to point to the anthropogenic causes of rapid climate change. Communication is preferably via the media (press, radio and TV). However, climate change is only one of many urgent issues for policy-makers to address.

### ***Pfister as an actor in Bern, in Switzerland and internationally.....***

After the publication of the "Climate History of Switzerland" (1984) and "Wetternachhersage" (1999), I was frequently invited to give lectures and provide interviews to the media on the occasion of extreme events. My media presence was almost exclusively limited to the German-speaking world. In the French-speaking world, even within Switzerland, media did not show any interest, not even when interviews were offered in French.

As a result of my media presence, I fought for a long time against the label "climate historian", which allowed a handy identification in the public, but stamped me for many of my colleagues as a one-theme historian.

I would like to recall that, in addition to climate history, I have delved into research fields such as population, agricultural, forestry, food and economic history. In the early 1990s, when I had to fight for a job, a population history of the early modern period (1994) was created, a work on "Population, Economy and Environment in the Canton of Berne 1700-1914" (1995) and a treatise on the 1950 Syndrome" (1995). It was only because of this broad thematic basis that I was able to make the leap to a chair in 1996.

***We're about to get to the subject of the 1950s Syndrome. What is it and how did you get involved in it?***

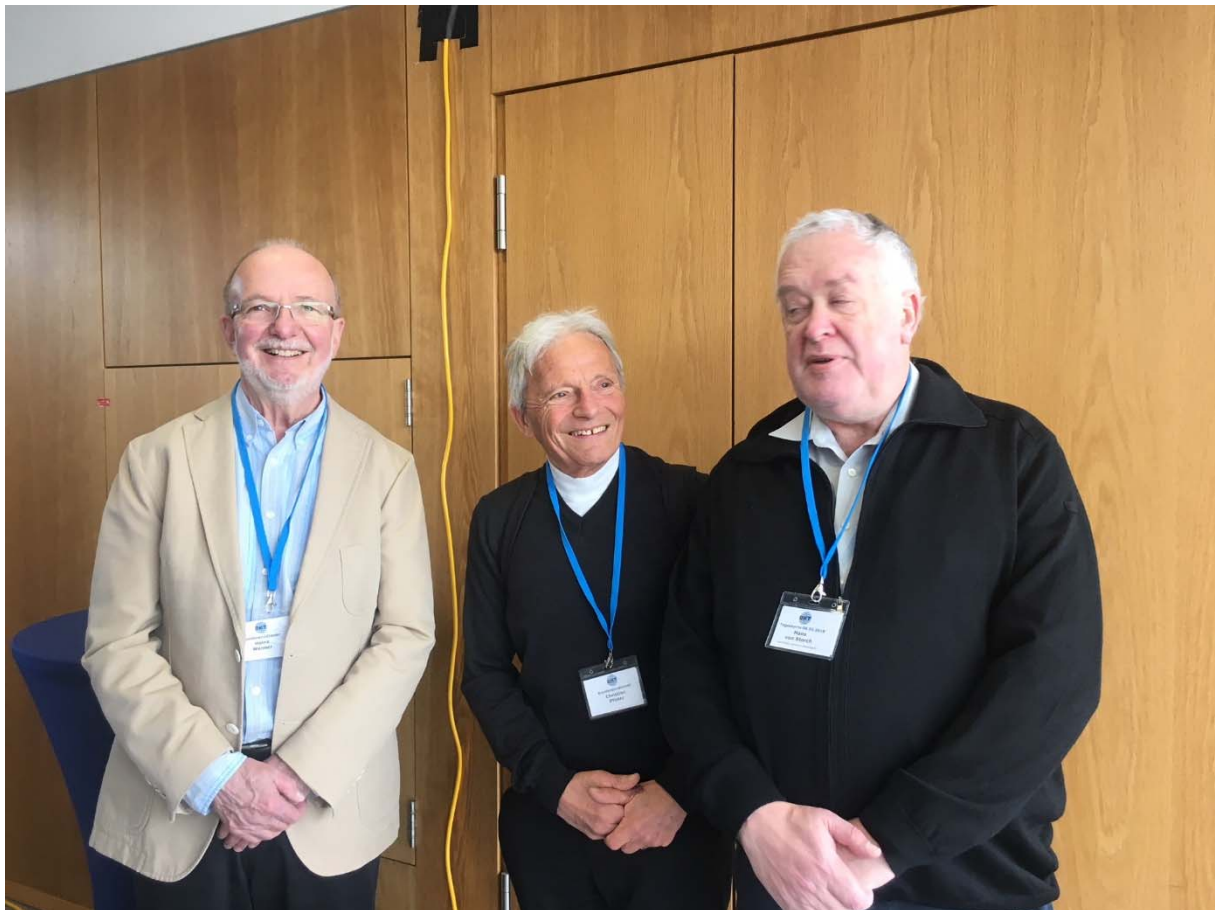
My thesis of a division of (environmental) history into three fundamental periods - agricultural society, industrial society and consumer society - on the basis of their energy base (biomass, coal, oil and gas) (Pfister, 1995) caused a sensation because it hit a nerve of time. At the same time, it met with fundamental criticism of the Consumer Society. In environmental history, the thesis is largely accepted. The corresponding anthology experienced a second edition in 1996. The topic has found an entry in Wikipedia and now has 38,000 entries on the Internet. In the anthology itself, the main criticism was that a single factor could not do justice to the strong economic growth in the post-war period. It was echoed by many social scientists. However, this argumentation does not go far enough in the sense that this claim was never raised in this form. Rather, it always focussed upon the energetic foundations and the ecological consequences of development. How energy is used depends on the relative prices of labour and energy. Coal was used sparingly as long as it was produced by labour-intensive production, not to mention biomass being the main energy source in agricultural societies. However, as soon as less demanding energy sources such as oil or gas became available at almost zero cost, it was no longer worth saving energy and promoting alternative forms of energy such as solar energy. On the basis of cheap crude oil, wasteful lifestyles propagated leading to additional CO<sub>2</sub> and mountains of environmentally damaging plastic waste. It can be assumed that considerable economic growth in the post-war period would have been possible without dirt cheap energy, albeit in a somewhat less wasteful form. In any case, such a development would have given us more precious time to solve the climate problem.

For these reasons, I continue to regard the 1950s Syndrome or Great Acceleration, as it is also called, as the fundamental turning point in environmental and climate history. It was not the transition to the Industrial Revolution in the early 19th century that brought us the climate problem in its present urgency. Rather, it is the vast abundance of cheap fossil energy that has increased greenhouse gas emissions 4.5 times faster than in the pre-war period. If the slow increase in greenhouse gases prevailing in the period of the industrial society would have been maintained up to the present, it could be calculated by simple extrapolation that the current level of greenhouse gases would not have been reached until 2212 (Pfister, 2010).

***Christian, now that you have retired, what advice do you have for colleagues who are about to retire? Likewise: what advice would you give to a 30-year-old who is faced with the choice of staying in science or not after completing his doctorate?***

Those who are fascinated by their field and eager to make further scientific discoveries should continue. Looking after grandchildren or become involved in voluntary work are rewarding alternatives.

I would like to advise a thirty-year-old after his doctorate to familiarize himself as broadly as possible with neighbouring areas in addition to climate history and to look for alternatives outside the university in good time. Climate history by itself is today for historians still a career killer.



... much more is to say at this time ...



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Christian Pfister's updated list of publications is found at

[http://www.hist.unibe.ch/ueber\\_uns/personen/pfister\\_christian/](http://www.hist.unibe.ch/ueber_uns/personen/pfister_christian/)

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