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Climate Change Since the Little Ice Age

by Dr. Horst Malberg

Part 1 of 2

Prof. Horst Malberg, a retired professor of meteorology and climatology, gave this presentation at the industrial policy conference held by the German political party BüSo (Civil Rights Solidarity Movement) on March 20, 2010, in Bad Salzuflen. It was translated from German by Vyron Lymberopoulos, and subheads have been added.

Dear ladies and gentlemen: I'm happy to speak to you today, and I promise you I will not speak on questions of faith. I leave that to others. You know, climate change has become a substitute religion, and I am only going to speak about my own results, those which I can also prove.

About myself: For decades I was a professor of meteorology and climatology, and director of the well-known Meteorological Institute at the Free University of Berlin. I have been retired for some years and am no longer accountable to anyone. I always say that the only two things standing over me are the love of God, and my spouse. And because neither objects to my theses, I will tell you something about my research.

Basically, you are all climate experts. The media, newspapers, television, radio, blast the climate theme at your ears, and along with it many things that are simply false.

Aletsch Glacier, the largest glacier of the Alps, in Switzerland.

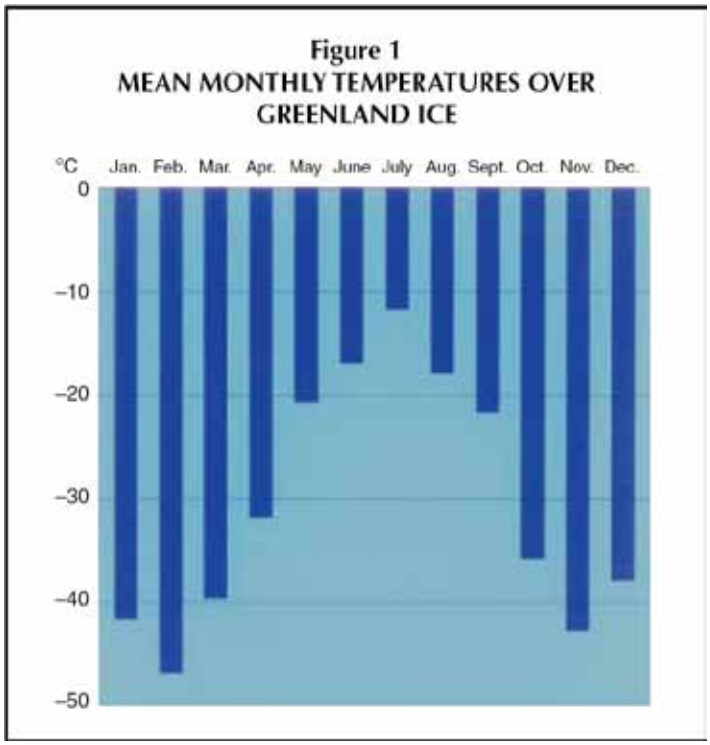
Retreat of Glaciers?

The first topic, I would like to talk about is the thesis of glacial retreat. The hoopla on the Himalayan Glacier—you heard about this—is that by the year 2035, all the ice would have melted. But then it was found to have been a "misprint" by a rogue source; it was supposed to be 2350, not in 30 years but in three centuries. You remember that Madame Chancellor Angela Merkel and Environment Minister Sigmar Gabriel proudly had a photo taken of them on the Greenland glacier. For now we have a temperature rise, as we will see shortly, of nearly 1 degree. And as a consequence, the ablation of glaciers should start now.

Photograph of Ötzi the Iceman, shortly after the discovery of the body in September 1991, when it was still frozen in the glacier and had not yet been removed. Five thousand years ago, when this Iceman lived, the glacier ice front was farther up than it is now.

What you see in Figure 1 are temperatures of the Greenland ice—not below at the coastline, where the sea current plays a role, but higher up on the ice, and also when it is hard to see. When you look at the scale, it starts at zero, and over Greenland it naturally goes farther still in the minus range. We can determine that in Winter we have temperatures between -40°C and -45°C, and in Summer about -15°C. And now we have global warming of +2°C. In other words, in the Greenland wintertime, we have temperatures of -38°C and in Summer -12°C. You see, you have answered the first question with your laughter. Which glacier is melting? Death by laughter! I have always asked my students before graduation: What happens if the temperature rises by 1 degree celsius? The right answer was: "There will be a shift in the snow line—that is, the transition from rain to snowfall—by 1 degree, 150 meters upwards on the map, no more."

Now, when you look at the glaciers of the Alps, the snow line rises gradually: 150 meters in the vertical. In other words, when the temperature rises, the glacier ice front withdraws at the bottom, not at the top. It withdraws at the ice front. And what is revealed, after the glacier has withdrawn its glacier ice

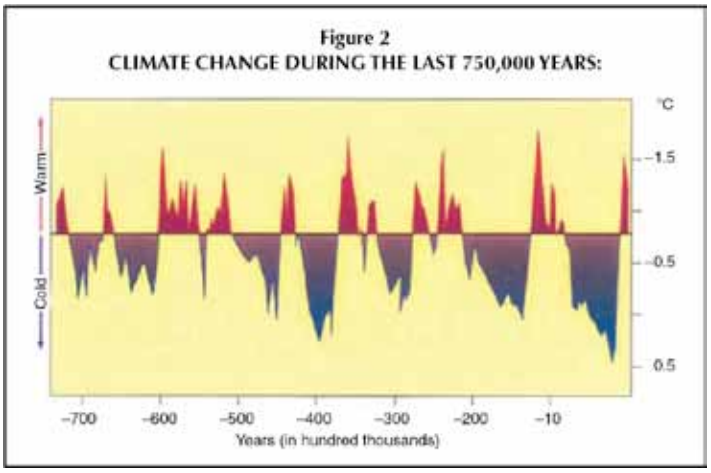


over the last 100 years? Suddenly, tree trunks appear, Ötzi the 5,000-year old iceman appeared again. In other words, at one time the ice front was withdrawn farther then the present day.

And how could the vegetation have developed below the ice? When the glacier withdraws, it is also a very good indication of the climate. On top, primarily nothing happens, at least with normal climate relationships. Why is it that the glacier also melts higher up? Somewhere on television, I saw a mountain guide make this point. He said: The glacier is sweating in the Sun and melts. The parts situated in the shade don't melt. In other words, solar radiation is the core of the problem, not the puny temperature rise of 1 degree C. And what has happened? By industrialization, over the last 100-150 years, the glaciers have become "dirty." A dust layer has formed, little by little. And we all know that a darker body absorbs solar radiation much better than a lighter one. The glacier has lost its natural potential of reflection, and now it sweats and melts, also higher up. This has nothing to do with global climate change.

More Extreme Extra tropical Storms?

The second fairy tale thrown at you, after we had the windstorm Kyrill in January 2007, is that, in the future, we have to become used to such extreme storms. I have asked my students, please explain why wind storms never occur during Summer. Surely we have small storm fronts, but no wind storms of many hundred kilometers; they only occur during Winter. Students who have somewhat mastered cyclone theory knew the answer right away: Wind storms arise only when the polar region is very cold. That means, when the temperature difference between the subtropics, the Azores High, and the polar region should be large. During Winter, the difference in temperature is 45° to 50° C; during Summer, it is approximately 20° to 25° C. In other words, conditions for the genesis of wind storms are worse when the meridianal temperature difference decreases. According to global warming theory, the greenhouse theory, the polar region warming should be two times stronger compared to the subtropics. Consequently, few Kyrills will appear, not more. More is both physically and meteorologically impossible. You have been told old wives' tales.



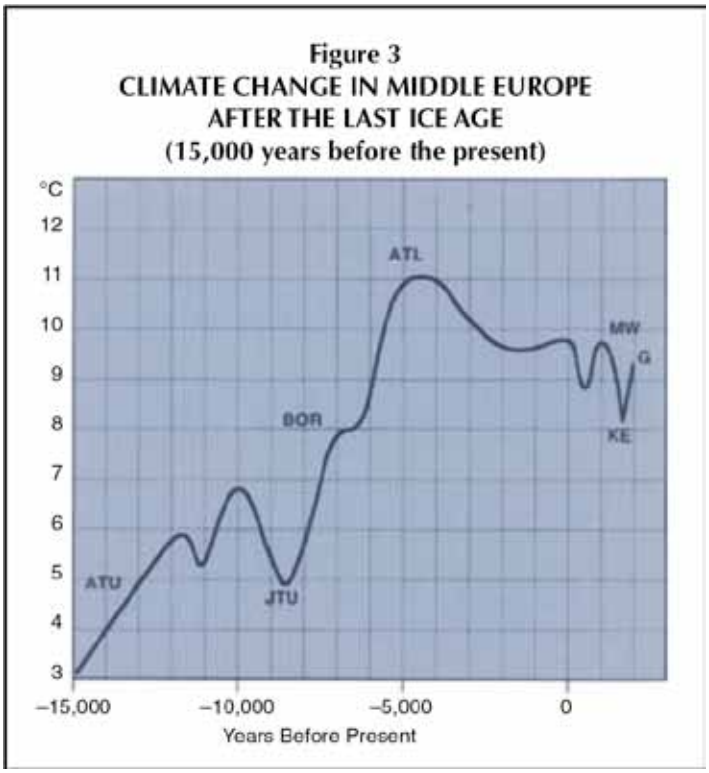
Switch between Interglacial and Ice Ages

What you see in Figure 2 are the Ice Ages, for the last 700,000 years of climatic development. Everything below the horizontal line, pointing down, are the cold periods that led to the Ice Ages, and everything pointing up, above the line, are the interglacial periods. What do we see? First, there is a regular pattern of a switch between Interglacial and Ice Ages. Furthermore, we see, that in general, from the Interglacial to the next Ice Age took really a long time, but from the Ice Age to the next Interglacial there are just some thousands of years. So this change is very fast.

The last Ice Age is approximately 10,000 to 15,000 years behind us; in other words, the climate has recovered really quickly. Above all, we see that permanent climate change is entirely usual. It is absurd to believe that a stable climate is the usual. Natural climate change is normal.

When you look at the figure, you can note that between two Ice Ages, or analogously between two interglacials, there are on average about 100,000 years. Now we are, let's say, 20,000 years after the last Ice Age. Therewith, my first prediction: In about 80,000 years, we will have the coldest part of the next Ice Age, if we live to see it.

Also note that after the Ice Age, our climate has changed



permanently. You see, here (Figure 3) is our region, Germany, after the last Ice Age, when the ice has withdrawn. We used to have climatic conditions like the tundra of Lapland, northern Siberia, or northern Canada, with the accompanying vegetation relationships. Then temperatures curved upwards. Here, at 5,000 to 6,000 B.C., for example, it was warmer in Europe than today. It goes on, up and down, and finally we arrive here at the end, in the present.

This shows that climate change is something very natural and, very important, that there have to be many factors, some main factors at least, that govern our climate and that permanently change the climate.

Global Warming Since 1850

The very wild climate discussion we have today, began when some of my British colleagues started out primarily to collect data from climate observations, and then developed climate graphs for the Northern and Southern hemispheres (Figure 4). You see, for the global, the Northern and Southern hemispheres, identical trends. And notwithstanding these many, many data points, we have to discern between long-term climatic development, and that which happens from year to year, or from decade to decade.

The year-to-year variations are weather anomalies, which have nothing to do with climate. One year does not play a significant role, and also, it has nothing to do with CO_2 but everything to do with the warming of El Niño or the cooling of La Niña in the tropical Pacific between South America and Australia. What we see in Figure 4 is that in general, there is a trend upwards. And that is unchallenged; it's the warming that has taken place since the year 1850. The important question when one sees such warming trends, is "What is the cause?" And here we have a factional split. One group of scientists say that the influence of the Sun cannot explain the global warming since 1850, and that there has to be another magnitude which has changed the climate. These people came up with CO_2 emissions as the cause for the global warming since 1850. In Figure 5, you can see how the CO_2 content in the air has increased from roughly 280 parts per million to 380 units. And you see further that the CO_2 content in the air rises steadily; there are no variations up or down; it just increases.

Then the first climate models were made, and in these models, nature no longer played an important role. The rise in CO_2 content, what humans are doing, became the primary climate forcing. Everything that has been thrown at you, all the calculations, come from that assumption. The result: There is warming of 2 degrees C, or there is warming by 6 degrees in the next 100 years.

Scenarios But No Predictions

You are not told that these are not predictions. It just appears as though they are. With predictions, I know exactly all the conditions that have an impact, and I know all the atmospheric reactions. But can you know how many Chinese will drive to the mall with which car 30 years from now? Nobody knows. Or do we know how global cloudiness will increase and cool the Earth, when it gets warmer? That implies that a great many assumptions are inserted into these global calculations, and how the assumptions are inserted will influence the outcome.

And that is the problem. What we get are scenario calculations. They are not predictions, although they are presented as if they were predictions. Scenarios mean that the results will depend on the assumptions. They are computer games.

To be continued...

Figure 4 (a)
YEARLY MEAN TEMPERATURE DEVIATIONS SINCE 1850: GLOBAL

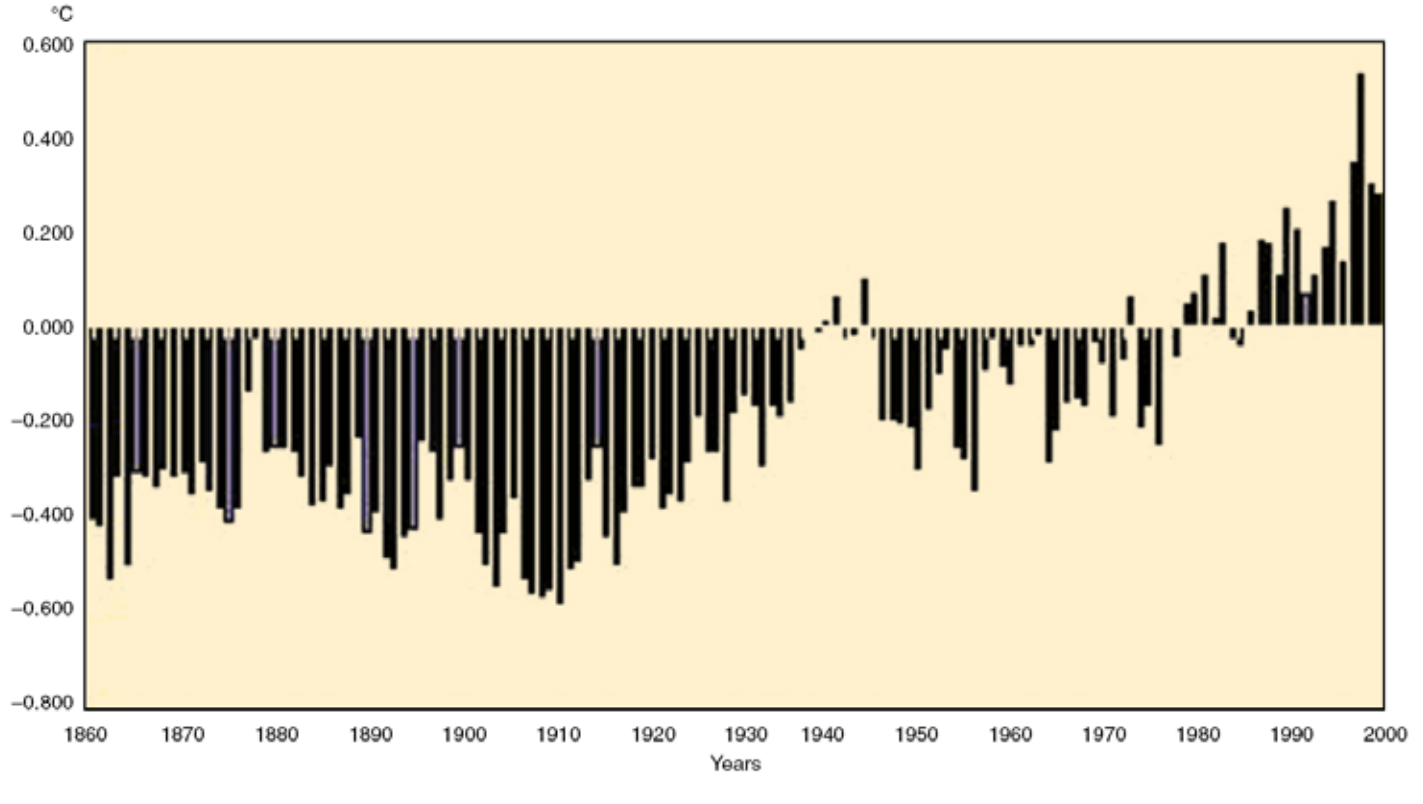


Figure 4 (b)
YEARLY MEAN TEMPERATURE DEVIATIONS SINCE 1850: NORTHERN HEMISPHERE

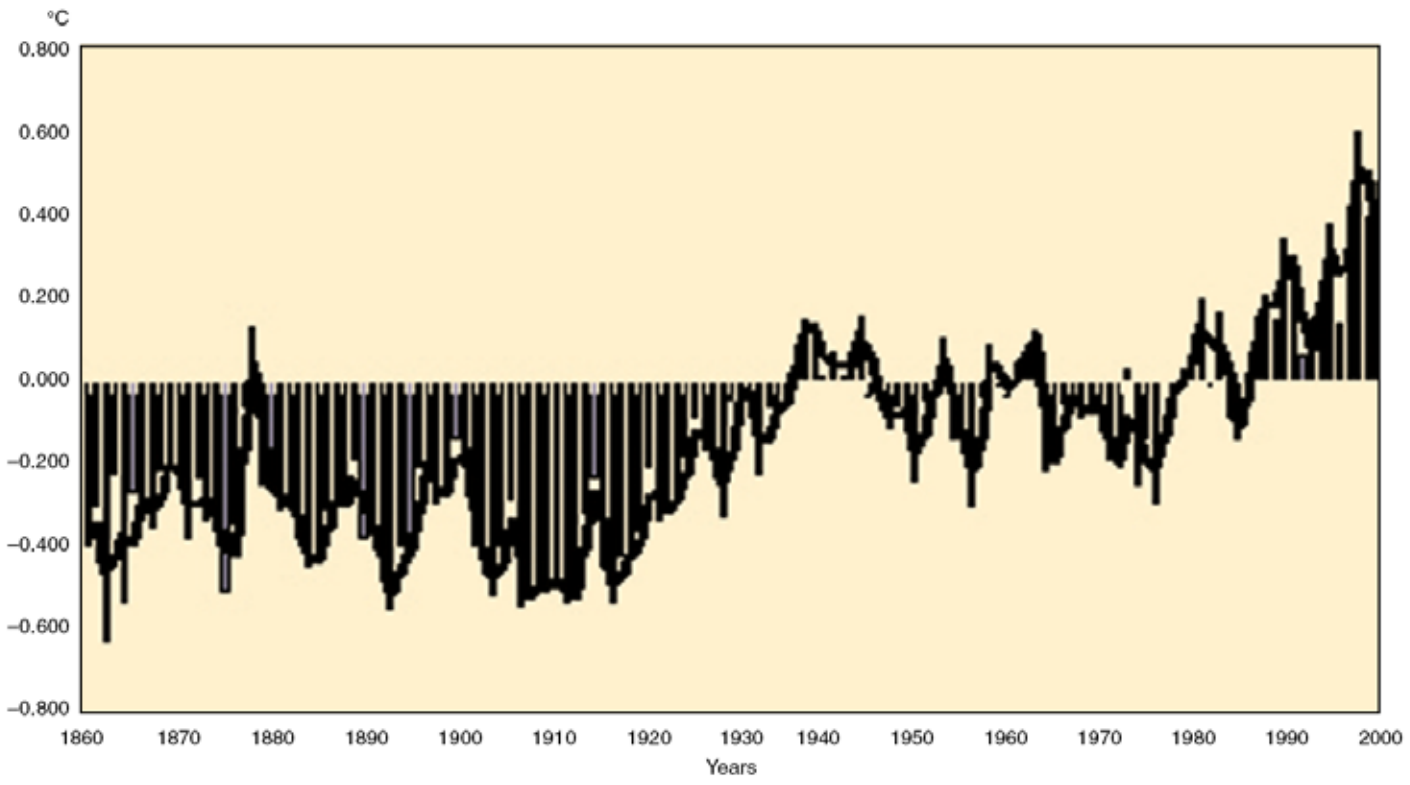


Figure 4 (c)
YEARLY MEAN TEMPERATURE DEVIATIONS SINCE 1850: SOUTHERN HEMISPHERE