The climate debate on a new track?

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The climate debate becomes fairly absurd when we merely focus on the uncertainty associated with climate knowledge and simultaneously make strong statements about how the economy will be affected by precautionary measures, writes Rasmus E. Benestad in this response to Per Anker-Nilsen.

Researcher Per Anker-Nilssen (PAN) from the Norwegian School of Management and meteorologist Sigbjørn Grønås have been engaged in a debate on climate change in issues 4/00, 5/00, and 6/00 of *Cicerone*. PAN has argued that Norwegian climate research is one-sided. I think he means the climate *debate*, because he perhaps is not entirely familiar with climate research. I will venture out of the "typical one-sidedness of Norwegian climate research" by drawing attention to the economic arguments in the climate debate. I hope that PAN will appreciate my attempt to increase the "interdisciplinary" nature of climate research through my efforts, as a natural scientist, to offer some economic considerations. Until now, the economic aspects of the climate debate have probably been "at the mercy of the tyranny of the economists."[1] Thus, I will do as PAN does, namely take on the role of "generalist," but I will nevertheless try, to the best of my ability, to avoid making erroneous assertions.

PAN and some others have offered bold doomsday prophesies (e.g., *Bergens Tidene* [in Norwegian] 14/2 "…unnecessary destruction of the world economy"; and 19/12 "economic and social costs will be enormous.") for the economy should we endeavor to reduce emissions of greenhouse gases. I would like to know: *How can the economists be so sure about the future when no one else is? Where do the models that these economic scenarios build upon get discussed and evaluated in the same way as the climate models have been?* I would like to point out to PAN that the global climate models are based on current weather models (which are "tested" and evaluated several times a day), and they are almost identical with the seasonal forecast models that are used to forecast the El Niño Southern Oscillation (which are also evaluated regularly). The practice of thoroughly discussing and testing a hypothesis before accepting or rejecting it is not the exclusive privilege of the natural science community.

[1] Using PAN's choice of words.

I was somewhat taken aback by the idea that all "climate measures" are associated with a cost (e.g., K. Roland at the polytechnical plenary debate on Nov. 14, 2000). And I wonder how some economists can argue that *it costs more to put four commuters in a car pool* (a potential climate measure) than it would for each man and woman to move a ton of metal each back and fourth to work. And *what are we doing wrong when energy-saving measures don't turn out to be profitable?* We are not left with the impression that the calculations distinguish between "productive consumption" and wastage. Or *perhaps it is erroneous or unrealistic assumptions that are being used in the economic calculations?* If you look at earlier economic projections for telecommunication stocks, the dot.com hysteria, or the "outlook" for the "Asian tigers," you get the impression that not all economic projections are equally well founded. Even Nobel prize winners in economics can miss the mark with their theories – as did the 1997 winners Robert Merton and Myron Scholes when they misjudged the market and had to be rescued from bankruptcy after investing in long-term asset management.

It's wonderful that economists are becoming more interdisciplinary by expanding their interests to include climate-related issues, but the debate becomes fairly absurd when they focus only on the uncertainty associated with climate knowledge while simultaneously making strong statements about what will happen to the economy. Similar examples of doomsday prophesies from economics can be found in historical times, when it was claimed that the economy would collapse should slavery end. Thus projections made by economists should also be subject to documentation that they have a certain accuracy and satisfactorily describe reality. I myself wonder *how in the world one can forecast costs when one doesn't even know the impacts of climate changes.* If the calculations assume that the future climate will be similar to today's climate, the answer is already given. Such analyses take into account only one side of the complex issue, and this kind of scenario advocates only one particular view – namely that global warming will not occur. But climate changes can have a serious impact on major sectors of society, and it is not difficult to image how these changes could affect agriculture, the energy sector, the ecosystem, maritime traffic, fishing, forestry, defense (http://www.worldwater.org/conflictIntro.htm), athletics, the infrastructure, tourism, and the insurance industry. We can learn from experiences from relatively modest climate changes – such as those associated with El Niño or the extreme weather that Norway experienced this past fall – but we can also learn from the past, where the economic base has eroded (partly from climate and partly from mismanagement): Just look at North Korea.

The climate debate is perhaps repetitive, as PAN suggests. But I am somewhat surprised that PAN still advocates Svensmark's hypothesis at the same time he refers to John Christy's satellite measurements to cast doubt on the observed global warming. *Doesn't PAN see a slight paradox here? Is it that he doubts there has been any global warming, or does he believe that there has been a warming but that it stems from natural (and not human-induced) causes?* This is a question I would dearly like have an answer to because Svensmark is trying to argue that the observed global warming is the result of changes in galactic cosmic rays associated with changes in the solar activity. He maintains that this radiation affects the formation of low clouds, and believes that the cloud over associated with the low clouds has been reduced. This is supposed to explain the observed global warming because less sunlight

has been reflected back to outer space and that more solar energy has been captured by the climate system.

As usual, the devil is in the details. Svensmark's hypothesis cannot explain why night temperatures have increased more than day temperatures. One would expect that the day temperatures (when the sun is shining) would be the most affected if Svensmark's hypothesis were correct. But *perhaps PAN's "unknown" mechanisms can explain this paradox?*[2] Also here I would like an explanation from PAN, and if he does not have one, he should be more critical of his sources. There are also a number of other assertions in PAN's article that I believe are erroneous, but these have been criticized before. The "assumptions"[3] about the radiative forcing of greenhouse gases are, by the way, based on empirical evidence. PAN also sows confusion regarding the role of the oceans, but this is probably because he does not understand how they affect climate.

It is fabulous that PAN wishes champion objective research, but then he must avoid negligence, misunderstanding, and liberal interpretations. If PAN wishes to take on this role, he should also refrain from behaving like a lawyer – deciding first what the "truth" is and then digging through publications to support his side of the case. It does not help to be good at debating if the arguments ring false or the logic cracks upon close examination. I have tried to pose direct questions where I believe such cracks have appeared, and I hope to receive a clear answer from PAN on these points.

Translated from the Norwegian

[2] Refering to PAN's statement about there being many unknown climate processes.
[3] PAN's wording