

Preface:

I prepared this editorial for Climate Research on 28. July 2003. It was not accepted by the publisher, and therefore I stepped down as Editor-in-Chief on the same day. The editorial has not been published, and I have left Climate Research for good. (For further details, refer to <http://w3g.gkss.de/staff/storch/cr.2003.htm>)

Hans von Storch, 4. August 2003

Editorial Climate Research 28.7.2003

Until now, Climate Research had a rather liberal procedure of processing submitted manuscripts. A group of several editors operated independently. Manuscripts dealing with "basic and applied research devoted to all aspects of climate - present, past and future; effects of human societies and organisms on climate; effects of climate on the ecosphere." were and are welcome. Before publication they were subjected to a formal peer-review: "Manuscripts are critically evaluated by at least 3 reviewers. The editor decides on acceptance or rejection. Acceptable manuscripts are usually returned to the author for consideration of comments and criticism." (<http://www.int-res.com/journals/misc/instruct.html>). This approach worked well, with a broad range of interesting and good articles. In fact, CR has managed to become a leading journal in interdisciplinary climate research.

However, in recent months the procedure did not function as well. In particular one article, by Soon and Baliunas (CR 23: 89-110), has caused considerable controversy. The article drew severe critique, which was made public by a thorough analysis of the results in the Transaction of the AGU, EOS (vol 84, No. 27, 256). I find this critique well-taken. The major result of the Soon and Baliunas paper "Across the world, many records reveal that the 20th century is probably not the warmest nor a uniquely extreme climatic period of the last millennium." can not be concluded from the evidence presented in that paper, even if the statement itself may be true. It is not a problem of different "opinions" but whether the methodology is adequate or not. Thus, the review process of CR failed to confront the authors with necessary and legitimate methodological questions which should have been addressed in the finally printed paper.

On the other hand, the publisher Inter-Research has determined that the review process was done according to the CR rules. Four different reviewers were involved. Thus, the editorial board of CR had to admit that the formal review rules are not sufficient to guarantee the required quality control of the review process. Therefore the editorial board and the publisher have decided to change the journal's procedures for manuscript review. In particular the office of an Editor-in-Chief has been created, who shall supervise the quality

of the review process and help individual editors with controversial manuscripts.

Inter-Research has asked me to take on the responsibility as Editor-in-Chief of Climate Research and I have accepted per 1. August 2003. An immediate consequence is that authors are requested to send manuscripts to the Editor-in-Chief; requests of authors to have their manuscript processed by a specific editor are welcome, but are not necessarily fulfilled.

When assessing manuscripts we have to balance two objectives, namely to block flawed material from entering the scientific arena, and at the same time to prevent an overly conservative approach blocking innovative ideas and concepts. None of the objectives will be achieved in a fully satisfactory manner.

Even a very thorough review process cannot include all essential perspectives and it cannot exclude mistakes or misjudgements. However, such mistakes are usually rectified later since the real review process never ends: a paper is always subject to future criticism and evaluation by subsequent work by other scientists.

Only naïve people think that climate science has only to do with facts and truth. Also, climate science is to some extent a social process, with many extra-scientific influences. Climate science is definitely in a postnormal stage, and we have to make sure that publications are not just reconfirming preconceived concepts or concepts to which we have grown accustomed to. Ludwig's Fleck remarkable analysis "Genesis and Development of a Scientific Fact" describes this syndrome, which eventually leads to a dogmatization and stand-still of science. Thus, we need a certain level of liberalism. Articles must be allowed to present in addition to their hard and reproducible facts a certain amount of creative speculation. However, papers must be explicit where facts end and where such speculation begins.

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