

## The Next 25 Years

I would like to say a few words in my capacity as chairman of the NBA Board. The Board's task is two-fold: to ensure that the NBA continues to exist and that it lives up to the high standards of archival practice and scholarly production mandated by its charter. It has done so admirably during its first 25 years. The documents in its care are in the best possible physical condition. The most fragile items — films and audio tapes — have been digitized. And a vigorous program of digitizing all material is currently underway. On the scholarly front, one need only point to the completion of the Collected Works.

It is amazing that these tasks were ever completed given the fact that the income of the NBA has *never* been sufficient to cover its real expenses. At the moment, this shortfall is roughly 25%. Fortunately, there have been other options. The NBI has been open-handed in fulfilling KU's obligation to provide a home for the NBA. A number of funds — both public and private — have made major donations in support of individual projects. And generous bequests have been made by private individuals. We are immensely grateful for this support. Above all, the staff of the NBA — past and present — has performed its tasks with dedication and passion.

The next 25 years will be filled with new challenges and new solutions. L. P. Hartley's novel *The Go-between* begins with the sentence: "The past is a foreign country: they do things differently there". The future of the NBA is also a foreign country. What archival tasks will need to be done? What will be the new scholarly focus of the NBA, and how will it be realized? And, not least, how will these activities be funded? I would really rather have spoken about these matters on the occasion of the Archive's 50th anniversary when the answers to these questions will be clear. But since I may be prevented from attending that celebration, I shall try to address them today. Obviously,

my own views of the future of the Archive can differ from those of others. And I may get it all wrong.

*Archival tasks:* Archival tasks are far from over. *All* archival material must be digitized — every photograph and every scrap of paper. Suitable back-up facilities must be established and maintained. Given the rapid rate of technological development, this will not be a once-and-for-all fix. It will rather be a continuous process that responds to new hardware possibilities and to emerging software standards. (I suspect that there are some of us who still have a shelf full of unplayable 8 track cassettes at home. That format lasted less than 20 years.)

There is also an important strategic issue to be considered. During its first 25 years, the NBA has followed a somewhat restrictive policy regarding access. Many documents were accessible to scholars upon application. Others documents were and are simply not available. This practice was undoubtedly a necessary initial policy. (E.g., Carl von Weizsäcker, who was *not* one of Bohr's favorites, died in 2007 at the age of 95. An embargo on related documents made sense.) In these days of Wikipedias — not to mention Wikileaks — immediate and unrestricted access to documents on the internet is rapidly attaining the status of a “human right”. There is no indication of a reversal of this trend, and I consider it inevitable that the NBA will have to adopt a policy of open [electronic] access relatively soon — independent of personal views about its desirability.

Open access can be good for scholarship and good for the NBA. The Ampère collection (at [www.ampere.cnrs.fr](http://www.ampere.cnrs.fr)) is simply beautiful and immensely useful with good transcriptions and scanned originals. The decision to release (in print and on the internet) the otherwise inaccessible “unsent” letters from Bohr to Heisenberg in 2002 literally put the NBA on the digital map — dramatically and permanently!

*Outreach:* Is there really any point in talking to school classes and the lay public when it's all out there on the internet? The answer is a resounding YES! Virtual reality is all well and good, but real reality wins every time. Students and Nobel Prize winners alike feel the atmosphere in Auditorium A, and there *is* something special about sitting where Niels Bohr ... or Heisenberg ... or Pauli sat. The NBA has been remarkably successful in transmitting both the excitement of the science and a sense of the people who have dedicated their lives to it. This program will continue.

*History of Science:* The obvious primary task of publishing the Collected Works was completed in 2006. What comes next? Obviously, the NBA will continue to assist external scholars. As always, those who can find their own support for a longer research stay at the NBA will be welcome. But what about the NBA's in-house scholarly activities? Given the NBA's currently strained economy, scholarly activities can only be carried out by the NBA Director in the limited time that remains when other duties have been performed. This seems a meagre return given the time and effort invested in organizing this valuable resource!

There are so many interesting open questions. Let me offer two examples:

[1] There is still much to be learned about the process that led from Bohr's tentative quantum theory of 1913 to the "real" quantum mechanics (from 1925) that we know today? While this issue has already received considerable scholarly attention, I am certain that the materials in the Archive have more to say about it. Mining this data will require the combined efforts of historians of science and physicists.

[2] It can be argued that Niels Bohr's greatest achievement was the Niels Bohr Institute itself. We know that his desire for such an institution came early in his career. But what enabled him to identify, to recruit, and to inspire the extraordinary collection of people that literally revolutionized our

world? And what can we learn about creating similarly stimulating intellectual environments today? I am sure that many people — not just historians of scientists — care about these questions. Most people are familiar with George Santayana’s remark: “Those who cannot remember the past are condemned to repeat it.” Rephrased with a more positive spin, I would suggest that those who *can* remember the past have the best chance of emulating its successes!

My own hope is that it will be possible to create an externally funded “center of excellence” in the history of science at the NBA with the size and intellectual strength required to address these and other issues. Of course, such centers do not last forever. So, such an initiative makes sense only with the cooperation of Copenhagen University with the broader aim of using the Archive’s unique resources to establish a *permanent* coherent program in the history of science at KU.

*Finances:* According to Mr. Micawber, when annual expenses exceed annual income, the result is misery. The Niels Bohr Archive has been in this unhappy state throughout its existence. Needless to say, it is difficult for the Archive to preserve the documents in its care for posterity if it consistently runs at a loss. This is a luxury reserved for politicians. Our first and most pressing task is to secure an annual income from the Ministry of Science that is sufficient to cover minimal running costs. If this cannot be done, there will be no 50th anniversary celebration. I am optimistic that this acute problem will be solved. And, “with a little help from our friends”, I believe that we will be able to create a world-class center for the history of science in Copenhagen. When we meet again in 2035, I am confident that we will be able to agree that the second quarter century was a period in which the Niels Bohr Archive was able to bring the experiences of the past to bear on the problems of the future.