



Abraham Flexner – Reformer of Medical Education and Founder of the Institute for Advanced Studies in Princeton

Prof. Dr. Dr. h. c. Dietrich Niethammer
Wissenschaftskolleg zu Berlin

Dear Colleagues,
Dear Guests!

Who was this man Abraham Flexner? This man who gives his name to the title of our meeting today? Flexner was born in 1866 in Louisville, Kentucky, the ninth child of a German immigrant family. At the age of seventeen he went to Johns-Hopkins-University for an education in teaching. His brother gave him enough money for just two years of study – and due to his energy and determination it was indeed within the space of two and not the standard four years that Flexner earned his degree. For instance, he taught himself sufficient Greek in six weeks to catch up with the regular classics students.

He returned to Louisville to assume a high school teaching position. But he wanted greater freedom and at the age of 23 he left the high school and founded his own prep school for boys who were entering the eastern universities. Nine years later he received a letter from the president of Harvard, who told him that the boys from Flexner's school were entering Harvard younger and graduating more quickly than students from other schools. He asked: "What are you doing?" Flexner then penned an article for *The Educational Record* outlining his approach. This was the first of many articles he composed addressing education.

In 1905 he closed his school to pursue graduate studies at Harvard and at Berlin University, but from neither of these institutions did he receive a degree. In 1906 he published his first book entitled *The American College: A Criticism*. It was a critical book about many aspects of higher education, but it was especially critical of university lectures as a method of instruction. This led to the Carnegie Foundation for the Advancement of Teaching asking him to undertake a study of medical education in the U.S. When he pointed out that he had never set a foot in a medical school, he was told that they wanted an observant educator and not a practitioner.

During the next eighteen months he visited 155 places in the U.S. and Canada where medical students were trained and he found that in the majority of these the education was in a sorry state. Only a small number of these facilities were linked to a university. In 1910 he published his report "Medical Education in the United States and Canada", in which he bluntly described the situation at each place. He recommended that 120 or almost three-quarters of the existing schools should be closed as inadequate and he identified them by name. Almost all of them did indeed eventually close – in substantial part because of his report.

His general recommendations were as follows:

1. Raise entry standards for students.
2. Strengthen oversight by the state.
3. Faculty should engage in research.
4. Practitioners should be scientists.
5. The medical school should be connected to a university.
6. A full-time clinical faculty is necessary.

The recommendations, especially those connected to research, were based on observations he had made in Germany and England.

For me, as former Chairmen of the Medical Committee of the German Science Council, it was impressive that the report goes far beyond just describing the situation of the various schools but also deals extensively with the

question as to how many physicians are needed in every state in relation to their population in 1910 and in relation to the population's expected growth – this diverging tremendously between the various states. He discovered that in the next generation the country would need some two thousand graduates per year, so he concluded that thirty medical schools with an average enrolment of three hundred and an average graduating class of seventy would be more than equal to the task.

From 1913 to 1928 Flexner worked for the nationwide General Educational Board, which had been established by Rockefeller in 1902. He was first involved in projects for assisting negro educational institutions, but later on he again interested himself in medicine. He successfully encouraged Rockefeller to provide fifty million dollars for the modernization of American medical schools and he also helped to allocate this huge sum.

In 1930 he published his book *Universities – American, English, German*, in which he tried to describe the idea of a modern university, using his vast knowledge and experience with the educational systems in these three countries. It would require far more time than I have at my disposal today to give you an adequate idea of this book. Not all of Flexner's notions about the modern university proved to be correct, however, as the former president of Berkley, Clark Cerr, stated in a 1967 article entitled "Remembering Flexner". Cerr wrote: "Flexner thought he was describing the ideal modern university – an institution whose outlines he had glimpsed at Johns Hopkins and Berlin and whose realization throughout America, England and Germany awaited only certain reforms, which he enumerated. Instead, as the passage of history has revealed, he was writing a valedictory to a university form which was already passing – already evolving to a new state. In so doing, he preserved for us, in perhaps its purest and most completely reasoned form, the ideas of a modern university at a crucial stage of its development." Cerr goes on to further explain that the expression of such ideal types is immensely valuable both to an understanding and a proper evaluation of our contemporary institutions. They provide reference points for trends from past to present, and thus help us to speculate as to the future course of our institutions.

Nevertheless, even though some of his ideas about the modern university need to be adapted to our present situation, there is no question that Abraham Flexner was occupied throughout his life with defining problems in the educational system and attempting to solve them. And he was right in many respects. He was the first in his country to undertake a careful study of the university and to recognize its importance in society, and for many years he fought for reform of the university system and in this way developed a clear-cut model of the modern university of his time against which other models could be tested.

Coming from the *Wissenschaftskolleg zu Berlin*, the Institute for Advanced Studies, there is another achievement of Flexner's that bears mentioning. After his retirement from the General Education Board in 1928 he was approached by the rich merchant Louis Bamberger and his sister, who sought his advice concerning the use of five million dollars – at that time a considerable sum of money – for certain educational purposes such as a new medical school. Instead, Flexner proposed the establishment of a centre for advanced scholarship, and the donors accepted his proposal on the condition that he should head the new centre. In 1939, at the age of 64, Abraham Flexner became the first director of the Institute for Advanced Studies in Princeton. He assembled prominent scientists from all over the world, such as Albert Einstein, to whom he personally wrote the letter of invitation, and other refugees from those German institutions that he had so profoundly admired. It was in this way that he offered prominent European scientists shelter in their hour of need, making it possible for them to continue their important research. And the institute in Princeton also became the model for similar institutions founded in other countries, such as the *Wissenschaftskolleg zu Berlin*.

But Flexner's greatest achievement was certainly the impact that his report on medical education, published more than a hundred years ago in the United States, had on the education of physicians not only in America but throughout the world. In a very short time the system for medical education in the United States was dramatically reformed according to his recommen-

dations. And with his report he created a basis for the training of future physicians, including those of the present day.

One of the important aspects of this development was the postulated connection between clinical training and research, which is most efficiently achieved when a medical school is part of or closely linked to a university, and Flexner's model for this idea had been the University at Berlin.

Of course, in the more than hundred years following Flexner's report the medical educational system has continued to develop everywhere and – as with his ideas about the modern university – not all looks the way that Flexner had recommended things should be. Contemplating not only the huge progress made in research-based knowledge – especially in the natural sciences – but in the clinical field, the question arises as to how to train medical students on a scientific basis. In recent years it has become increasingly evident that we need to find an answer to this question – unless one holds to the view that the vast clinical knowledge which the future physician must learn is so important and in the meantime has become so huge that there remains little room for any more knowledge pertaining to basic scientific questions.

But of course we can ask other questions:

Should the curriculum include training that addresses scientific questions? Should every medical student have to write a scientifically based treatise such as a doctoral thesis in Germany – something that is not part of the curriculum? Should every clinical teacher also be involved in basic research? Or is the fulfilment of Flexner's postulate that medical education should always be connected to a university sufficient?

I am sure many more questions and aspects will be discussed today.

In his life and work, Abraham Flexner showed that it is always necessary to ask the right questions. Flexner stressed the importance of science in medical education, but it is possible that he saw too much in research and too little in patient service, since he was no physician. I hope that our meeting today will

help to shape medical education in the next decade, enabling future physicians to render optimal service to their patients.