Youchkevitch, A. P.

[In order that a course in the history...]

Organon 1, 303-304

1964

teaching the history of science, and subsequently to convoke a special International Symposium to this end. The problems of teaching the history of science should also be subject for discussion at the forthcoming XIth International Congress of the History of Science.

A. Teske

Professor Ronchi mentioned in his lecture among difficulties with which the teaching of the history of science is confronted, also the following one: the students prefer to focus their attention and their activity on the present state of the discipline they have chosen, and on its further progress rather than on its history; only very few are interested in this latter respect. This is — and therewith no polemical remark is intended, only a simple statement — a rather sound situation, as all we could wish is only that the proportion of students may change a little in favour of the historical group.

But even if it does not change, I think, this difficulty can be overcome. For it should be possible to teach the history of a given discipline in such a way, as to make it of essential and immediate use for the study of this discipline itself, as to enable us — to say it by the way of an example — to educate better chemists and better physicists. In a somewhat rudimentary form the historical points of view are in common use in the ordinary way of teaching.

Indeed, when lecturing for instance on the theory of relativity, nobody will omit to introduce the students into the former conceptions of space and time. And if we enlarge this picture by giving the students not only the views of Newton, but also those of Mach and of Lorentz, and by introducing a broader philosophical background, we will not loose the connection with our discipline. And it will help the students to understand better the present issue.

True, we can not expect to have another historical chair attached to every existing one. But fortunately there are large fields of scientific research which, in despite of their greatness, form a certain unity — physics for instance or chemistry — and which are represented by a whole ensemble of chairs. So, the situation is not so difficult, and a historical chair connected with such an ensemble could of course serve not only didactic purposes of the whole ensemble but perform also research work in the history of science.

A. P. Youchkevitch

In order that a course in the history of one or another science at the respective faculty of the University may make a success, it has to fulfil, in any case, two conditions. It ought to be interesting to the

students and helpful from the viewpoint of faculty members. To this effect, it is necessary to bring the history of a given subject to the beginning of the XXth century and to give at least a concise characteristic of its present-day state. The material has to be presented from the viewpoint of the contemporary science as regards both the selection of material and the interpretation of old ideas and methods.

In short, such a course ought to give, in the end, a review of the most important trends of science and to represent them, at the same time, as a result of its historical development, that is to reveal the essence of that science in the making. If — simultaneously — the most important internal correlations between the particular branches of a given science as well as its connections with other domains of knowledge and technology become disclosed, if its social meaning gets clear, such a course may answer both of the mentioned requirements. Constructing a course of lectures on the history of mathematics, mechanics, physics and so forth is a hard but quite a feasible task. This is proved, for example, by the experience of the mathematical section of the mechanical-mathematical faculty at the State University of Moscow.

P. Rybicki

Le professeur Ronchi nous a présenté dans son brillant exposé quelques résultats très importants de ses recherches dans le domaine de l'histoire de l'optique. Quoique son rapport concerne l'histoire d'une branche particulière de la physique, il me semble, qu'on peut tirer de ce rapport quelques conclusions générales. Les conclusions, que j'en voudrais tirer, sont un peu différentes des conclusions, que le professeur Ronchi lui-même a formulé; mais j'éspère qu'elles peuvent être complémentaires à ses thèses.

Ma première conclusion: chaque étude d'histoire d'une science particulière, traitée d'une façon approfondie, concernant les notions fondamentales et les questions méthodologiques, appartient en même temps à l'histoire générale de la science. En plus, c'est l'histoire générale de la science qui seule est capable d'expliquer les changements dans les notions fondamentales et les méthodes scientifiques, en principe communes aux plusieures branches de la science. Les changements dans certaines notions et certains termes de l'optique, le dépérissemet de cette distinction fondamentale de *lumen* et de *lux*, y présente un bon exemple; je pense, qu'on ne peut les expliquer sans avoir recours à l'histoire de la pensée philosophique et des courants méthodologiques généraux.

Les changements dans le sujet de l'optique dont le professeur Ronchi