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## CHAPTER 5 . / Round-Table Discussion 2.

### *The history of science and the cultural integration of Europe: Barriers and opportunities*

***Chaired by:***

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## **Introduction by Robert Fox** (Oxford, United Kingdom) \*

Outgoing President of the ESHS, Chairman of the Programme Committee of the 2<sup>nd</sup> ICESHS

THE AIM OF THIS ROUND-TABLE DISCUSSION, entitled “The History of Science and the Cultural Integration of Europe: Barriers and Opportunities”, is to explore — from a variety of national and international perspectives — the problems we face in cultivating the branch of knowledge that we know as the history of science. We hope that such a discussion will help to identify both the barriers that impede the fruitful development of the discipline and the opportunities that might allow the history of science to assume a more prominent place in the cultural life of Europe.

## **INTERVENTIONS BY:**

### **Hans-Joachim Braun** (Hamburg, Germany) \*\*

President of the International Committee for the History of Technology (ICOHTEC)

AS FAR AS ECONOMIC MATTERS are concerned, European integration has been underway for a long time and in various other political arenas there have been successful attempts at integration. Multinational institutions have been founded which have come up with a large amount of rules and regulations, some obviously to the good, others ... well, many citizens of Europe complain about slow-going bureaucratic procedures and hyperbureaucratization. And these complaints are not unfounded.

Economic integration and, to a large extent, political integration? Yes. But what about cultural integration? This is a touchy field because, although economic and cultural behaviour is, to an extent, quite close to each other, there are obvious differences. Just think about the idea of establishing a European Ministry of Culture. Undoubtedly, it could be done, and, may be, it will be done some day. But, as things are and speaking from the point of view of today, the risks and possible losses of such an undertaking would be far larger than its gains. On the other hand and looking at this from a historical point of view, there was a European Scientific Community in the 17th and 18th centuries. Just think of the extensive correspondence between the *savants* of that period. During the 19th century, in the period of nationalism, some of this was lost — but quite a bit survived — and in the first half of the 20th century, in the “age of extremes”, attempts at international cultural integration did not square at all with the ideas of some nationalist and even fascist leaders.

What are the main obstacles to cultural integration of Europe?

There is, of course, the language barrier. Although English has, to some extent, adopted the role of a *lingua franca*, discussing some intricate scholarly issues at an international conference is still a problem. In fields like the natural sciences, engineering or medicine this problem might be smaller, but in the humanities it definitely exists. Just listen to the efforts of well-trained simultaneous translators at humanities conferences. They do their best, but their best is often not good enough. How do you translate the German philosopher Hegel into English? You need a lot of explanations for many Hegelian key terms because his way of thinking evolves in a manner unfamiliar even to well-educated British people (but also to many Germans).

But there are other barriers. Different methodological approaches make it difficult for scholars to communicate with each other. In the history of science but also in the history of technology methodological ideas based on the social sciences have been *en vogue* for a long time and for about two decades cultural studies have been successful in providing new, often interesting and challenging ideas as to how a scholarly problem in the history of science and technology could be tackled. This has been a laudable and welcome development. Looking at the other side of the coin, however, there has been, as far as social science inspired methodology is concerned, a tendency towards methodological uniformity.

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Regarding cultural studies, the opposite seems to be true: one ‘cultural turn’ has followed the other and many scholars in Europe but also world wide are eager not to miss one. Others have turned so much that they got dizzy. In some instances one could get the impression that one purpose of this was to launch large academic work creation programs.

But these criticisms aside, there can be no doubt that every historian of science and technology needs methodological awareness and expertise; the proof of how useful the different heuristic and analytical tools are, is in the way they can be applied with convincing results to dealing with historical problems. A basic requirements for a paper at a scholarly conference, a requirement which is often not fulfilled, is to make clear what the state of the art on the topic the paper is dealing with is and what is new. Also purely antiquarian matters should have no place at a scholarly conference.

As I mentioned before: Cultural integration is a problem, because it would involve the loss of valuable regional or national traditions and customs and could lead to uniformity. What we certainly do not need is some kind of “European reference culture” to which everyone has to adapt. In a very general way this role has been played already by the cultures of ancient Greece and Rome, just look at the law systems and political systems in Europe. But then these traditions have transcended Europe a long time ago and have also reached other continents.

What is the outcome of all this? Do not try to establish a European reference culture but cooperate in multinational research projects. Bring in your strengths and expertise gained from various cultural backgrounds and show how useful they are in advancing a common cause. Be equipped with some sound methodological training but refrain from methodological uniformity. Support young gifted scholars, let them travel, study at other European universities, cooperate in research projects, attend international seminars, conferences and summer schools dealing with historical problems. This costs money but that money will be well spent.

**Claude Debru (Paris, France) \***

**Vice-Chairman of the Programme Committee of the 2nd ICESHS**

EUROPEAN COUNTRIES ARE EAGER to make progress towards some sort of cultural integration as well as to keep the best of their own cultural specificity. Europe remains quite diverse, and is rather unique in this respect, but it feels the need of increasing communications, exchanging ideas, sharing different experiences in order to improve current practices, in all sorts of fields including education. As a matter of fact, the Bologna process is a major step towards a better integration of Europe — and the master level is considered as a most appropriate level for exchanging students throughout universities and other institutions of higher learning in Europe, even if it creates some difficulties during the transition. What we need is to make a better use of all existing tools, not necessarily to create a sort of “forced” integration, but to be able to listen more carefully to each other, to be able to understand as many as possible of the different national cultures and history within Europe, and to create very tight multinational networks like the one we are creating with the European Society for the History of Science, or other networks between university departments or research centres. Cultural integration in the context of keeping cultural diversity is a unique challenge which raises much interest from the rest of the world. If I may refer to my own personal experience, the way the French-German friendship was established after WW2 was by creating exchange programs for students at secondary schools. This worked fairly well. At that time, France and Germany were quite different. Of course they are still different in many respects. But we know each other fairly well, and some may wish that such a system could keep its efficiency. There are certain ages which are critical for this kind of cultural experience, and certainly students at secondary schools as well at universities should be more strongly and systematically encouraged to spend time abroad than they are presently. It may even seem that the time spent abroad is one of the most fruitful times in education. lastly, the writing of books with the kind of multinational perspective which is needed in many fields of history like the history of science, would be also a tremendous help for creating this feeling of being culturally integrated in the European family.

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**Eberhard Knobloch** (Berlin, Germany) \*

**Incoming President of the ESHS**

THERE IS AN INCOMPARABLE COMMON European cultural heritage of all European countries. The importance of this heritage cannot be overestimated. But efforts have to be intensified to open it up for historians of science.

To that end we need:

- (1) *European structures of all kinds of scientific research and work.*
  - A European Society:
  - The European Society for the History of Science (ESHS) has been founded some years ago in Paris.
  - European Congresses of History of Science:
  - The Second Congress of the ESHS took place in Cracow.
  - A truly European journal for research results in the history of science:
  - *Centaurus* has begun to play this role since the beginning of 2007.
  - A European newsletter for history of science:
  - Again, such a newsletter is published by the ESHS which quickly and reliably informs about all aspects of European activities in history of science.
  - Thus there are some promising opportunities to foster European history of science and the cultural integration of Europe.
- (2) *More official co-operations between European institutions like universities, academies, research institutes.*
  - The cooperation between the Russian Academy of Sciences and the Berlin-Brandenburg Academy of Sciences and Humanities in order to publish Leibniz's writings regarding natural sciences, medicine, technology (series 8 of the edition of his *Complete Works and Letters*) might serve as an example.
- (3) *More international European councils, commissions of collections, archives, editions, projects.*
  - The Centre d'Archives de Philosophie, d'Histoire et d'Editions des Sciences (CAPHES) in Paris, the council of the Maurolyco edition in Pisa, the Alexander-von-Humboldt-Forschungsstelle in Berlin might serve as examples.
- (4) *Open access to manuscripts, libraries, archives, catalogues.*
  - It is true there is the so-called Berlin Declaration of Open Access. But this aspect of scientific work has certainly to be improved. The digitisation of the concerned books, information, data is a crucial step in this respect.
  - Language barriers do not play an important role. English plays already the role Latin played in earlier times. But we have to make sure that journals and publishers accept more than this only language for publications. *The Archives Internationales d'Histoire des Sciences*, the publisher Brepols in Belgium might serve as examples.

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**Víctor Navarro Brotóns** (Valencia, Spain) \*

Chairman of Symposium R-16:  
'The Iberian World and the modern Science: A comparative perspective'

IN THE LAST DECADES we have witnessed a growing of our discipline in terms of the most obvious indicators: manpower, journals, books, institutions; and we have witnessed also a historiographical renovation both in subjects and in methods or procedures, with greater and better attention to cultural, social, economic, ideological and political dimensions of the scientific activity. There is growing interest for *the History of Science and Technology*, not only amongst scientists but also among the historians of art, literature, politics, economy, or amongst practitioners of any humanities or social sciences discipline. Our audience is growing continuously and at a good rate, in spite of some mistrust amongst some scientists for, in their opinion, a hypercriticism toward the science and the scientists practised by some historians of science, sociologists of scientific knowledge or philosophers of science (especially by the representatives and followers of the so-called social constructivism or epistemological relativism; even though frequently it is a misunderstanding or they, the historians, confront attitudes of corporative self-defence of some scientists based on a priori judgements).

Also on the positive side, in many European nations, an interest to know the history of its own scientific activity (with all the difficulties in placing the limits of the past) has been developed, with more or less intensity. But scientific knowledge moves from the local to the global, and we are now better trained than ever before to study the scientific activity in a comparative perspective, and to study the circulation of knowledge avoiding the ethnocentric temptations — or ideas a priori.

But on the other hand there is a regression of the humanities in Europe that could harm our discipline and, as a matter of fact, there are signs that it is now harming its growth and settlement in the academic world. The creation of new jobs is much slower than the development of the social interest for our discipline.

On the side of duties, the European Society, together with the other national societies of the HST, and departments, institutes or other institutions related to the HST, in short, all the people and institutions concerned with our subject, must make efforts and contribute to the preservation of the scientific and technological heritage — not only European but world-wide, of course, as far as we could have an influence: books, manuscripts, documents, journals, instruments, artefacts, and all kind of objects related to the material culture of the science and technology. We must take care of the preservation of museums of collections and encourage the creation of new ones (not only interactive or Science Centres), as centres of exhibition, of course, but also of research, definition, instruments restoration and preservation of the scientific and technological heritage. Those centres could provide jobs for young historians of science and technology.

The European Society must also encourage the History of Science and Technology as an auxiliary tool to teaching Science. And we have to collaborate in manufacturing materials such as essays, monographs, textbooks, films (CD, DVD), on a European level.

The HST could be a bridge between humanities and sciences, between cultures and nations, to spread the culture of dialogue, civilised discussion, and tolerance: words, not guns. Not to defend an ingenious idea of progress, but to learn of the past and to promote science and reason as a tool to solve problems and to improve the conditions of life on the Earth.

We agree that English should be our common language. We in Spain, to greater or less success, have made an effort to master that language. Our students master it much better than us, my generation. Nevertheless, we have made efforts to learn other European languages, and have encouraged our students to do the same. We would like to see a similar effort made by our English-speaking colleagues.

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**Geert J. Somsen** (Maastricht, The Netherlands) \*

Co-Chairman of Symposium R-17: 'Politically active Scientists in the 20th Century'

### *History of Science and Euro-nationalism*

THE “CULTURAL INTEGRATION OF EUROPE” sounds like a noble and worthy project, but in certain ways, I think, we historians of science need to be very careful embarking upon it. When interpreted at the level of our own community, surely nobody will object to further integration and the strengthening of ties between colleagues on our continent — this ESHS conference is a fine example of this process, which can only be encouraged. But when we take the cultural integration of Europe to be the aim of our historical investigations, it becomes a much more tricky matter.

Many EU enthusiasts would like historians to contribute to Europe’s cultural integration. They are eager to define a common European culture and heritage, and sometimes consider modern science as an ideal candidate element. They would like us to say that indeed modern science is a truly European accomplishment, that no other culture has ever come up with, and that its establishment involved scientists from all European countries. It is a request for a familiar story, that earlier generations of historians of science have frequently told, but the question is whether we want to tell it again, and grant it our stamp of scholarly approval.

It is instructive to make a comparison with historiography in the nineteenth century, when many countries and would-be countries wanted to create a sense of a national culture, and historians contributed with histories that invented a national past. These histories, we know now, were often not very accurate. National coherence was only achieved by making strategic exclusions, historical figures were forcefully reinterpreted as heroic champions for nationhood, and national origin stories were often little more than national origin myths. As means to foster nationalism these histories were certainly effective, but as renderings of the past they were limited at least. As Ernest Renan already observed in 1874: it is part of being a nation to get your history wrong. And as Eric Hobsbawm has recently added: no serious historian of nations can himself be a committed nationalist.

Today, nationalist histories are a lot less *en vogue*, but at the same time we are confronted with something very similar on a European scale. EU proponents want a picture of a common European culture and a shared European heritage, and we historians of science face the decision if we want to deliver. We could do this — by falling back on the well-known story of science as a uniquely European creation, that defined European culture and set it apart. But this would only be one choice among many other historical accounts. Historians like Butterfield, for example, identified the emergence of modern science with a much smaller area: not Europe but the regions around the Channel. Others like Sarton saw the history of science not a European but a global development. And current scholars such as David Livingstone stress the enormous variety (and hence lack of coherence) within Europe’s scientific culture. The idea of modern science as a *European* production, then, is not a historical fact but a historical interpretation. And it depends on our own politics whether we want to take this interpretation as the leading account of science’s history.

I personally am an enthusiastic supporter of the European Union, and hence as such I might be expected to go along with the European nationalist historiography. But I am also, as we all are, a professional historian of science, who does not like to have his agenda dictated by politicians’ needs. It is for the sake of this kind of professional independence, and also in honour of the insights of Renan, Hobsbawm and others into nationalist historiography, that I believe we should resist the temptation of adjusting our historical agendas to a new nationalism on a European scale. The “cultural integration of Europe” may seem a worthy goal, but it should not be achieved at the expense of independent and sophisticated historiography of science.

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**Geert Vanpaemel** (Leuven, Belgium) \*

Co-Chairman of Symposium R-18:  
'Circulating Knowledge: A European perspective on communication of science'

*One or many histories of science for Europe?*

IN HIS *THE HISTORY OF SCIENCE AND THE NEW HUMANISM* (1931) the Belgian historian of science George Sarton equated the history of science with the history of civilization. As there was only one nature, there could also be but one science. The unity of science represented to Sarton "the central direction of human thought". The search for truth, he stated was "not restricted to any single group or class or nation of men." On the contrary, wherever people were divided by political differences or conflicts, science would bring them together again. Sarton believed that "no matter how inimical one nation may be to another, or one class of people to the other classes, as soon as it comes to science they are indissolubly bound together."

It may be tempting to revive Sarton's humanist view on science and *a fortiori* on the history of science for the present process of unification among the nations of Europe. If the common historical identity of Europe is still difficult to define, it is very obvious that much of the present differences between European regions have been caused by political and ideological dividing lines, which are not the result of basic cultural divergences. As history can easily demonstrate, Europe has more connectedness and unity than a modern observer would find at a first glance. In particular in the history of science, it becomes clear that from London to St. Petersburg and from Oslo to Madrid a wide collaboration and mutual recognition between scholars and propagators of natural science was always at work and that these have created a unified European network of science long before a political union was considered.

The history of science may be considered then a royal road towards the establishment of a European identity. Yet, this would not work and it would even be harmful to the idea of Europe as a whole. Since Sarton, the understanding of what historical research can and should do has been thoroughly reframed. The task of the historian is not about documenting the slow advance of progress, nor about finding the primitive roots of the present. These were the ideals of nineteenth century nationalist historiographies, or early twentieth century utopias of the modernization process. The historian of science should analyze the multifaceted development of science, not in order to harmonize his findings into one coherent picture, but to constantly open up new areas of research, to bring up new questions and to appreciate better the diversity of scientific endeavours in different surroundings. In particular, the historian of science should be aware of the fact that his scientific work is also part of his own research object, and that his historical account is not 'a view from nowhere'. A unified European history of science can therefore only be a well-intended effort to support contemporary aspirations for a greater political union. This fact alone would put the undertaking in a very subjective and unscientific light.

On the other hand, the critical potential of the history of science can fruitfully be enlarged by considering the new and complex problems that arise when dealing with the European diversity of cultures. There has been a tendency in the history of science to concentrate on the Western part of Europe. From Newton to Einstein, the narrative of modern science hardly ever leaves the central stage of London, Paris, Berlin. Yet, the history of science is not only about pioneers and heroes. The purpose of science has been to satisfy human curiosity, to ameliorate the comfort and wealth of mankind and to reorganize society along rational and secular lines. The answers to all of these requirements depend to a large extent from local circumstances, local audiences and local governments. For every other locality, there is another history of science, providing the historian with so many new resources for research.

European history of science should address these new resources, exploring cultural diversity and writing multiple narratives of scientific development. The history of science should try to make sense of the enormous diversity within European culture, and to understand how science has been used to transform European society. This also means that historians of science have to accept the diversity within their profession, accepting but also questioning the different approaches to the history of science in every European culture. This diversity is one of the main assets for the historian of European science, and should be given all possible attention. It could be a fruitful mandate for the European Society for

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History of Science to promote and explore the European diversity of our profession and to provide a forum where the necessary exchange can take place.

**Andrzej K. Wróblewski** (Warsaw, Poland) \*

**Plenary Lecturer of the 2nd ICESHS**

IN MY OPENING LECTURE of this conference I gave evidence that at present there exist various versions of the history of science: British (or Anglo-Saxon), French, German, Italian, Russian, and probably more. I made a plea to change it and work out a common history which would be agreed upon by all of us, Europeans, who decided to share the common future.

I have a dream that it would be possible to achieve it in the near future so that, say, a French historian of science could teach a course in Warsaw, a German historian could teach a course in London, a Russian historian — a course in Paris, and they will be praised by the students for objectivity and lack of nationalism. United Europe, our common home, is a great thing, and we should try our best to make it as comfortable as possible for all its citizens.

**Stanislav Južnič** (Ljubljana, Slovenia) \*\*

CONSIDERING PROFESSOR ANDRZEJ WRÓBLEWSKI interesting ideas about future History of science textbook put forward at opening plenary lecture of ICESHS meeting, the idea could bear useful fruits after some two years of work. As an American born historian of science working for European (Slovenian) Academy of Science, I could provide some new views:

Future textbook should not decide all questions, for example famous controversy about Copernicus' nationality. It will be excellent for our students to have such kinds of answers, but the doubts like that arouse additional research efforts on German, Polish or other sides which will cease if the question could be resolved once for all.

National language and national view on what happened in history (of science) sometimes overlap each other. If that is the case, using English language demands Anglo-Saxon view at least in part.

Technically speaking, to accomplish such a goal as a European common Textbook a team of writers is needed. They could be divided chronologically or by topics, but two additional editors should be used to look after the women and small nations' achievements.

Strictly speaking there is no European history of science and science is not European invention. Europeans could claim to cover the area where the science was used most successfully at warfare and industry before non-European nations learned to copy Europeans. We must bare that in mind, while using the privilege of the title "European history of science" to make the textbook sounding and selling better.

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**Soňa Štrbářová** (Prague, Czech Republic) \*

IF WE TALK ABOUT BARRIERS we also should be aware of the invisible barriers within ourselves which might sometimes restrain co-operation. The Iron Curtain has been destroyed, but it left its grim traces whether we want to admit it or not. Let me mention a personal recollection of a small international workshop in 2004 (!) in Paris which discussed a European project in history of technology. There were only two persons present who represented “Eastern Europe” and it was a kind of shock for me to realize that most participants when talking about Europe had only in mind the former “Western Europe”. Such understanding and definition of “Europe” quite incomprehensible to me was also reflected in their papers which mostly ignored (although 15 years after the fall of the Iron Curtain) any historical developments in “Eastern Europe”. The participants felt quite uneasy when I criticised such approach to European history which not only decreased the value of their findings but also was not justifiable from any perspective, whether historical, social or geographical (some of my distinguished colleagues were uncomfortable to hear that I was not from Eastern but Central Europe and that Vienna or Helsinki were more eastern than Prague). Since then the approach of that particular project has changed much to its advantage but I am still I must emphasize sometimes that I have always been a European notwithstanding of the political circumstances in which I was forced to live for most of my life. The distorted understanding of “Europe”, the barriers and prejudices are still here to the disadvantage of our field. Let me give you a few examples. Works of historians of science from “Eastern Europe” written in English and published in accessible sources are still less referred to than papers of the “Western” authors notwithstanding of their qualities. Only exceptionally scholars from “Eastern Europe” are invited to “Western” universities as visiting professors although such exchange would be desirable to fill deep gaps in knowledge of their students. Scholars from the former Communist countries are rarely invited to read plenary papers at top-notch all-European or other international meetings. Even in this round table there are only four representatives of these countries out of total 15 participants. Such phenomena cannot be explained by lower standards of researchers from the former Soviet Bloc countries and I feel they express just those invisible barriers I have mentioned before. Therefore I believe that we all will do our best to dissolve them and that the ESHS will become a potent catalyser in this process.

**Efthymios Nicolaidis** (Athens, Greece) \*\*

Secretary General of the DHST / IUHPS

*Towards a common European schoolbook for secondary education*

CLASSICAL SCIENCE (the science of the “scientific revolution”) was born and developed in Europe, and it has been characterised as a European phenomenon. Its actors corresponded between them, exchanging views and experiences; they also travelled all over the continent spreading the new learning. The main manuals of mathematics, physics, astronomy and later chemistry and biology, have been translated in many European languages and have been taught in schools and universities of different countries. Towards the end of the 18<sup>th</sup> century, in all educational institutions of the continent, the same kind of science was taught and a new vocabulary has been created in the various national languages, in order to express the same concepts.

This integration process which lasted until the end of the 19<sup>th</sup> century for some countries of the European periphery, is a very important fact for the European cultural integration: non other field of civilisation was so common to all European regions. In no other field almost the same things were taught from the primary school to the University. And this integration process constitutes a unique opportunity in order to teach to the European pupils how barriers between their countries can be removed.

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Since several years, a group of historians of science of different European countries, we have conceived the writing of a common European school manual on the history of science, to be introduced in the secondary education schools of all European countries. This book will relate the history of the cultural adventure called European science, from its beginnings to the 20<sup>th</sup> century.

A first problem discussed by the partners of the project, has been to determine the “beginnings” of European science. Since the tradition of that science has its roots in Ancient Greek science but at the same time the concept of Europe as a cultural entity did not exist at that period, we have chosen to fix the beginning during the Roman Empire period, when, anyway, the scientific tradition (and scientific language) was Greek. As for the upper limit, as far as it concerns science, the beginnings of the 20<sup>th</sup> century constitute a globalization period. At that period European science has spread all over the world.

A second problem discussed, was that of the local scientific traditions and the conflicts between these traditions and the spread of classical science. This concerns mainly the history of scientific education in the countries of the European periphery. Since it has been supported that this issue is important for the understanding of the local integration to the main scientific culture, and at the same time that we should not present to the pupils a too voluminous manual, it has been decided to edit a two parts book. A first part, translated in all European languages, will present the “mainstream” history, from the Roman Empire to the beginnings of the 20<sup>th</sup> century and also some elements of the spreading of this knowledge all over Europe. A second part will be specific for each country and will present the local specificities of the spreading of scientific knowledge.

The common cultural conscience of each cultural entity is taught at schools, and is based mainly (except language) on the teaching of history. At this moment of European integration, it is too premature to consider the introduction to the European secondary education schools of a common manual on History. National history still constitutes the main corpus of the teaching for most of countries, and this teaching is sometimes conflicting depending on the country. History of science constitutes a marvellous alternative. It will give conscience to the pupils that Europe is more than an addition of countries speaking different languages always fighting between them, and that in science — a so important field for our civilization — Europe has found through the centuries a common way, beyond barriers of language, structures or frontiers. The marvellous history of the “Europe savante” of the 17<sup>th</sup> century, when European scholars constituted a common milieu exchanging all their knowledge beyond local interests, and also the history of the spreading of this knowledge during the Enlightenment all over the countries of the European periphery, illustrate that fact.

**Fabio Bevilacqua** (Pavia, Italy) \*

Vice-President of the DHST / IUHPS

**and Lidia Falomo** (Pavia, Italy) \*\*

*Towards a new web site of the DHST: participatory media for a community of scholars.  
Possibilities and choices*

THE DIGITAL WORLD IS WITNESSING and participating in a new revolution that goes by the name of “Web 2.0” and deals with “participatory media” and “social networking”; together with other relevant recent developments it can offer great opportunities for the international community of historians of science.

The phenomenal rapid increase in sites that allow easy communications and exchange of information between members (like MySpace, which has now reached 100 million users); the digitalisation of millions of printed books, images, movies, and music tracks that could within a decade cover the entirety of humankind’s cultural production; co-operative work with tools (like wikis) that have led to new instruments that are used by millions of users daily and compete with well established printed ones;

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the instruments of search and retrieve that enable finding (for instance using “tags”) documents previously lost in “the long tail”; lectures accessible to all (through podcasts); news available in real time (through “RSS”), pose new opportunities and new challenges and question our pleasant, traditional academic scientific routine.

Today historians of science usually work individually within strict boundaries, gather around small local societies, interact just through email or by expensively participating in conferences, publish in traditional media (books and journals), often with financial costs and giving away the copyright of their results. This is possibly not the best way to face universal shortage of funds, of academic positions, of good students.

As a small step to improve matters we propose that the new edition of our web site be based on these new tools (the present one has done a good job so far and has earned a reasonable page rank) and that an effort be made by the Division, but also by other societies, to utilise them. The site would be accessible to individual members and supervised by the Division’s officials. The guiding principles could be those of Open Access (Berlin declaration on the availability of documents online), Open Source (software), Creative commons (a more liberal approach to copyright). The new Web site should integrate the existing potential for searching (the web, the site, the desktop, also utilizing clusters; books, scientific journals, libraries, catalogues, images, movies, blogs, wikis, podcasts, tags), for publishing on the web (working papers, preprints, books, bibliographies, catalogues, biographies, animations, simulations, documentaries, teaching materials, presentations), for receiving at will (not necessarily through email) news organised chronologically (scalable calendars) and geographically (interactive maps) (on current contents, conferences, publications, events, anniversaries, prizes, scholarships, grants), for establishing a community of individual members with the possibility to easily find, contact and work co-operatively with colleagues who share the same interests and fields of research (through profiles, groups, wikis, web mail, chat, talk (phone voip), videoconferencing) and to easily find and locate societies, research centres, university programmes, libraries, journals, archives, museums, exhibitions. The site should of course continue and improve the diffusion of information on the Division’s life and activities.

The standard home page will gradually offer all these possibilities, and the individual member will have the possibility to personalize her / his home page with the tools of choice. Given that most tools are scalable, a similar approach could be adopted by other societies and the result would be increased co-operation, greater visibility and scientific relevance.

A choice should be made between joining together different available public domain software programmes or utilising integrated tools freely downloaded from a major global company.

*For further details on the subject see the plenary lecture « Towards a new web site of the DHST: participatory media for a community of scholars. Possibilities and choices » by Fabio Bevilacqua, Lidia Falomo (chapter 2, p. 16–36, above).*

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### **Final remarks**

WE LIVE IN A TIME OF advancing cultural integration within Europe (and of cultural globalisation). This is beyond question, whether we are advocates or adversaries of the process.<sup>1</sup> It is also evident that the shape of the integration depends on different factors and actors.

Restricting our interests to a perspective linked with the history of science,<sup>2</sup> however, this process may run its course in accordance with three different scenarios. Let's sketch them briefly.

According to the first scenario, the cultural integration of Europe (and of cultural globalisation) is highly significant for the historiography of science. Its implications are:

- A greater importance for the history of science in education, since this branch of knowledge — with its central theme of being a bridge between science, the humanities, and society — is the best antidote to the problem of two cultures adumbrated by Sarton and Snow.<sup>3</sup>
- Growing consensus on the standards to be adopted in education and research.
- Growth of international co-operation in research.
- A greater rigour in the historiography of science through serious comparative studies of different national approaches, with equal attention being paid to the achievements of all scholars irrespective of where they come from.

According to the second scenario, the cultural integration of Europe (and of cultural globalisation) does not offer any new perspectives for the historiography of science since:

- We live in our various countries — focusing our attention on our national achievements and, to some degree, on the main achievements of countries within the same cultural sphere. Symbolically, Europe means for us only our part of Europe.
- Therefore we do not need to know anything of achievements in other parts of Europe (and the World) that do not belong to our narrow cultural sphere or are not situated on the immediate peripheries of our culture.

According to the third scenario, the cultural integration of Europe (and of cultural globalisation) may cause irreparable damage to the historiography of science. Namely:

- A move to cultural uniformity under the flag of Euronationalism may be the basis of an ideological attitude in research and education about science in its historical contexts.

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<sup>1</sup> As historians of science we may note that the process of cultural integration is not restricted to only our times. The paradigmatic example is the spread between the 11<sup>th</sup> and 15<sup>th</sup> centuries of Greek philosophy and science (with its transmission from Islamic philosophy and science) to the whole of Europe (West, South, East, North and Central), and the export between the 18<sup>th</sup> and 19<sup>th</sup> centuries, of modern science from Europe to other parts of the world ("New World" — the Americas; Asia, Africa and Australia).

<sup>2</sup> We understand it in its two meanings as the historiography of science, i.e. a branch of knowledge, devoted to the study of the science of the past (as well as of the present), a discipline with its specific objectives, methodology, theory, writing and teaching) and, on the other, as the events or processes of the development of science (past and present) itself.

<sup>3</sup> See M.Kokowski, *Thomas S. Kuhn 1922–1996) and the issue of the Copernican Revolution* (in Polish, with an English extensive abstract), [*"Studia Copernicana"*, vol. XXXIX, Warszawa 2001], pp. 20, 54–55, 224–231.

- Consequently, the independence of the historiography of science might be lost, and professional standards in the field of knowledge may be abandoned.

Which of these scenarios of development in the historiography of science will prevail? In the Europe of our day this will depend on our common commitment to the efforts made both within our countries and in all the international forums open to us, such as the ESHS and the IUHPS / DHST.

Let us note, however, that the last two scenarios are relics of long-standing political divisions in Europe, including as a last chapter the Cold War and the Iron Curtain. Although, for example, the Cold War is over and the Iron Curtain collapsed years ago, the former divisions of Europe are still alive in the minds of many people, even some of the most highly educated.<sup>4</sup>

As we end our debates, we must surely conclude that all our discussion show that the prospects for the historiography of science in this age of cultural integration in Europe (and of cultural globalisation) are very promising. It is an opportunity that we should seize. It is crucial that we enhance the many creative initiatives that have already begun, and that we move ahead resolutely to transform promising initial ideas into real and effective actions!

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<sup>4</sup> As a good antidote to such distorted visions of Europe, see the works of Norman Davies: *Europe: A History* (Oxford: Oxford University Press, 1996) and *Europe East and West: A Collection of Essays on European History* (London: Jonathan Cape, 2006). See also the plenary lecture of Andrzej Kajetan Wróblewski: *Are we ready for common history of science?* (chapter 2, p. 56–92, above).