



Science popularization in Croatia – myth or reality?

An Overview of the Round Table Discussion held at the Ruđer Bošković Institute

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"Recent scholarship has revealed that pioneering Victorian scientists endeavoured through voluminous writing to raise public interest in science and its implications. But it has generally been assumed that once science became a profession around the turn of the century, this new generation of scientists turned its collective back on public outreach." (1).

The public perception of science in Croatia does not work in favour of science or scientists. The statistics show that although scientists still deserve the major respect and trust of the public (2), most of the people still do not know what the 'use' of science is. Our public is completely unaware of the crucial role of science for the development of sustainable economy. Decision and opinion makers are a major part of this public. The public is their electorate. How can we expect them to invest in science if these investments don't bring them votes?

One of the indirect consequences of this kind of view is the poor investment of only 0,76 percent of GDP in research and development in comparison to other countries such as Slovenia which allocated about 1.3 percent of GDP while the average in developed EU countries is about 3 percent of GDP. The share of employees in scientific and technical activities in the total number of employees in Croatia is only 12.8 percent, and it is in fact this branch that is the main pillar of a possible economic recovery of Croatian economy.

There are many reasons for this awkward and unfavourable situation, but one of the key problems undoubtedly lies in the 'broken' communication channels between scientists – media – decision makers – public. So, while on the one hand we have to deal with the public perception of science, the responsibility of the media and the decision makers, on the other hand the best way to address this issue could simply be to act within the scientific community. Instead of pointing fingers at someone else, one should explore what can be done to change this 'un-win' situation. What can I, the scientist, do to increase the public outreach of my work?

Many would agree with the statement that the best science communicators, presenters and supporters are the scientists themselves. However, scientists and researchers do tend to regard themselves as a privileged few working for a higher cause and therefore in no need to explain their work to the public who by no means understands what they do. Science is not and should not be the privilege of the few chosen, it is not

a private possession, its character is not local – it works globally and belongs to everyone.

Popularization of science is an endeavour to communicate scientific ideas in such a way that everyone regardless of their age, gender, education, social or academic background can easily understand the basic concepts and have an idea of what science in its essence could be. The question here is do scientist themselves know how to communicate those results, achievements and discoveries. Do scientists and researchers use all the available tools to communicate the key role of science and research for the development of the society as a whole?

In this context, the Ruđer Bošković Institute, Croatia's leading scientific institute in the natural and biomedical sciences as well as marine and environmental research, has a duty towards its 'shareholders' – the Croatian taxpayers. This is in addition to RBI's primary task of conducting excellent basic research, development of innovative research, participation in higher education and knowledge transfer to the economy. It is, therefore, the duty of every RBI scientist to inform RBI 'shareholders' about how we use the invested resources for research and development which also contribute to the development of a sustainable economy in Croatia.

To be able to achieve greater 'openness' to its public in the upcoming period, the Ruđer Bošković Institute plans to launch major projects in order to take advantage of the additional resources provided by the EU structural funds.

In this strategy the key RBI project is the "Open Scientific Infrastructure Platform for Innovative Applications in the Economy and Society" (O-ZIP), which is worth 50 million euros and has already been placed on the indicative list for the European Regional Development Fund 2014 – 2020 by the Croatian Ministry of Science, Education and Sports (MSES). The main goal of O-ZIP is to improve parts of RBI with the greatest commercial potential and proven excellence in obtaining European and applied projects. Such capital investments in infrastructure and equipment will improve the quality and accessibility of research, equipment and expertise at the RBI to the wider Croatian academic community and industry, and contribute to quality integration of the RBI in the European Research Area (ERA) as a top scientific and research centre.

However, with Croatia's accession to the EU in July 2013, besides the benefits provided by European funds, the new socio-economic context will place before Croatia a number of challenges such as a likely increase in the brain drain trend once the opportunities for obtaining permanent work permits in the more developed EU countries become available. Since the share of the university educated population in Croatia does not exceed 18 percent, it is evident that without increasing the number of trained professionals in science and technology, the development of the sustainable economy remains only an empty slogan.

Bearing in mind the necessity of encouraging young people to engage in scientific careers with the goal of

positioning Croatia in the global labour market as well as the role and capabilities of science and technology in the creation of new values and economic prosperity, it is extremely important to create opportunities for scientists and the general public to exchange views in a two-way dialogue of mutual respect and trust.

The Ruđer Bošković Institute recognizes its vital role in continuous communication of science through various activities such as series of popular-scientific lectures for the general public (Scientific Thursday Science Night, Night of the sky Watching, Nobel Series, Eminent Scientist Series etc.). However, the most important and the most popular event is certainly RBI Open Days, when RBI is opening its doors to the general public. During the Open Days more than 15 000 people visited RBI so far.

Taking this growing public interest in the research conducted at RBI in consideration, the RBI scientists believe that it is necessary to enable citizens not only to visit the Institute during the three days once or twice a year. In this sense, there is an initiative to create a future popular research park for the public at RBI in the manner of the leading scientific centres worldwide, with Meštrović monuments of Tesla and Ruđer at the centrepiece, together with hands-on scientific exhibits and related initiatives. This would put the Institute and the City of Zagreb on the world map as a unique tourist destination, which along with the promotion of science and innovation would be a constant reminder of the Croatian scientific geniuses. The opportunity for establishing such a scientific park is seen in cooperation with the Science Centre Zagreb project (ZEZ Centre) through application to EU structural funds.

All these questions were addressed at the roundtable discussion on the Science Popularization in Croatia organized on April 4th by the Ruđer Bošković Institute in cooperation with the project ZEZ Centre, and supported by the Ministry of Science and Technology, University of Zagreb and the City of Zagreb.

The aim of this round table, which gathered a number of scholars, popularisers of science, as well as prominent entrepreneurs and communication professionals, was to discuss several crucial questions about the role of science popularization programs and projects. These roles are improving the perception of science as a social activity that is extremely useful to the development and progress of the community, as a means of competitiveness in the global knowledge market, and finally as a method to draw attention to the funding problems these programs face on a regular basis.

We were particularly pleased to be able to host a special guest, the expert on the subject matter Mr. Robert Firmhofer, Director of the Copernicus Science Centre in Warsaw and President of the European Network of Science Centres. He emphasised the crucial role that scientific centres have in society through informal learning, by linking science and the economy and by increasing the interest of the younger generation in science. He provided a highly successful example of Copernicus Science

Centre in Warsaw, which is visited by over a million people a year.

The organizers tried to provide different perspectives on science popularization programs in this round table discussion. This is why we invited Ms. Dunja Potočnik, PhD, Institute for Social Research/Science and Society Synergy Institute as well as the PR expert Ms. Zrinka Makovac and the successful entrepreneur and business angel Mr. Saša Cvetojević to share their points of view. Mr. Cvetojević said he believed that Croatian scientist should stop perceiving money as something bad and ugly, and search for the successful and useful way of communicating with the economy. He stated that Croatia could become a country of knowledge in which knowledge could be used for quality projects and export products.

As the last speaker, Mr. Saša Zelenika, PhD, Deputy Minister of Science, Education and Sports, stated that the education system was not accompanied by changes in the economy and that we should give more importance to certain professions in the Croatian labour market, which would soon become part of the European Union. He emphasised that popularization of science raises the awareness of the need for investment in science.

During the discussion that followed a number of scientists, businessmen and students stated their positions.

Although having different expectations and different understandings of science popularization projects, they all agreed that an investment in science is imperative for the economic progress in Croatia.

It is important to emphasize that the popularization of science is the first step towards the competitiveness and development of the economy and society as a whole. It is a natural process. By supporting programs and projects in science popularization, particularly those aiming at young people, enabling them to interact with scientists, engage in science experiments and discoveries, we help them fall in love with science and technology and hopefully motivate them to continue their education as engineers, researchers and scientists who develop innovations, which companies can then commercialize and profit from. This is what popularization programs are – a safe return of investment. This is what we need to communicate. The RBI scientist Ivanka Jerić, PhD, one of the panellists at this Round Table brings an interesting understanding of the science communication into focus.

REFERENCES

1. BOWLER P J 2009 "Science for All: The Popularization of Science in Early Twentieth-Century Britain", Kindle Edition.
2. Reserach by respectable Croatian Agency GfK: http://www.gfk.hr/public_relations/press/press_articles/009409/index.hr.html

