Chapter 2
European Trends in Science Communication

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Abstract This chapter reports on current trends in science communication in Europe in the light of several recent studies by the European Commission. The author investigates why the European public’s scientific knowledge, as measured by the surveys, has increased substantially over the past few years. He then reviews coverage of science in the European media and analyses the relationships between European scientists and journalists and recent trends in reportage. Noting that it has become harder to gain public acceptance of scientific and technological innovations in Europe, the author argues that the science–society dialogue is insufficiently developed because a genuine communication culture is lacking in the science and technology sector. This lack may hamper the advancement of the sector.

Keywords Science communication, science journalism, science and the media

2.1 Introduction

In Europe, recent scientific and technological developments in such areas as nuclear energy, GM (genetically modified) food and cloning have generated a lot of media coverage, public debates, political decisions—and even fights. This may create a general impression that the European public is losing confidence in science and technology (S&T). Some media have published reports about growing anti-science opinion in Europe.

Against this background, public opinion surveys (Eurobarometers) are carried out by the European Commission on a regular basis, with the most recent published in December 2007 (EC 2007a). Dedicated reports published in 1992, 2001 and 2005 show that science and technology are still valued positively in Europe. Citizens expect a lot from scientific progress. For example, more than 80% of Europeans are confident that scientific and technological progress will help to cure...
diseases such as AIDS, cancer and so on. Europeans put great trust in S&T: 87% agree that scientific and technological advances have improved their quality of life, and 77% believe that they will continue to do so for future generations. Europeans also want political decisions to rely more on experts’ advice. Interest in S&T remains high (78% of citizens are very or moderately interested in new scientific discoveries), although it has decreased since 1992. The proportion of people who are ‘very interested’ in S&T issues has dropped significantly since then.

The S&T Eurobarometers include the following questions on S&T issues:

*Here is a little quiz. For each of the following statements, please tell me if it is true or false. If you don’t know, say so, and we will go on to the next one.*

- The Sun goes around the Earth
- The centre of the Earth is very hot
- The oxygen we breathe comes from plants
- Radioactive milk can be made safe by boiling it
- Electrons are smaller than atoms
- The continents on which we live have been moving for millions of years and will continue to move in the future
- It is the mother’s genes that decide whether the baby is a boy or a girl
- The earliest humans lived at the same time as the dinosaurs
- Antibiotics kill viruses as well as bacteria
- Lasers work by focusing sound waves
- All radioactivity is man-made
- Human beings, as we know them today, developed from earlier species of animals
- It takes 1 month for the Earth to go around the Sun

Results of this knowledge quiz show that, for most statements, a majority answered correctly (see Fig. 2.1). The average proportion of correct answers reaches 66%, while that of wrong answers is quite low at 21%. However, one should not conclude from this that Europeans have a fairly good knowledge of scientific topics, as answering the quiz at random would give an average proportion of correct answers of 50%.

More interestingly, national averages show that there has been a clear rise in the number of correct answers to the quiz since 1992. This is the case in practically all countries surveyed.

This increase is one of the most stunning developments related to science in Europe. Since the previous surveys in 1992, 2001 and 2002, scientific knowledge, as measured by the surveys, has increased substantially in most European countries. Increases of over 15% have been observed in Luxembourg, Belgium, Greece, the Netherlands and Germany (see Fig. 2.2); among the new EU Member States, the Czech Republic and Slovenia show a 10% increase in only three years. Sweden achieved the highest rates of correct answers.

Further analysis of the Eurobarometer data confirms the overall trend towards higher scientific literacy in all European countries.¹