The Scientific Community

The direction of scientific research is affected by informal influences within the culture of science itself, such as prevailing opinion on which questions are most interesting or which methods of investigation are most likely to be fruitful. Elaborate processes involving scientists themselves have been developed to decide which research proposals receive funding, and committees of scientists regularly review progress in various disciplines to recommend general priorities for funding.
ⓘ *Science and decision making*

The strongly held traditions of science, including its commitment to peer review and publication, serve to keep the vast majority of scientists well within the bounds of ethical professional behaviour. Deliberate deceit is rare and likely to be exposed sooner or later by the scientific enterprise itself. When violations of these scientific ethical traditions are discovered, they are strongly condemned by the scientific community, and the violators then have difficulty regaining the respect of other scientists.
ⓘ *Science and decision making*

Science disciplines differ from one another in what is studied, techniques used, and outcomes sought, but they share a common purpose and philosophy, and all are part of the same scientific enterprise. Although each discipline provides a conceptual structure for organising and pursuing knowledge, many problems are studied by scientists using information and skills from many disciplines. Disciplines do not have fixed boundaries, and it happens that new scientific disciplines are being formed where existing ones meet and that some sub disciplines spin off to become new disciplines in their own right.

Funding influences the direction of science by virtue of the decisions that are made on which research to support. Research funding comes from various federal government agencies, industry, and private foundations.

Because science is a human activity, what is valued in society influences what is valued in science.
ⓘ *Science and decision making*

Scientists' nationality, sex, ethnic origin, age, political convictions, and so on may incline them to look for or emphasize one or another kind of evidence or interpretation.
Science & Society

The early Egyptian, Greek, Chinese, Hindu, and Arabic cultures are responsible for many scientific and mathematical ideas and technological inventions. Modern science is based on traditions of thought that came together in Europe about 500 years ago. People from all cultures now contribute to that tradition.

The dissemination of scientific information is crucial to its progress. Some scientists present their findings and theories in papers that are delivered at meetings or published in scientific journals. Those papers enable scientists to inform others about their work, to expose their ideas to criticism by other scientists, and, of course, to stay abreast of scientific developments around the world.
ⓘ *Science and decision making*

Scientists' personal interests and viewpoints can influence the questions they investigate.
ⓘ *Science and decision making*

No matter who does science and mathematics or invents things, or when or where they do it, the knowledge and technology that result can eventually become available to everyone in the world.

Until recently, women and racial minorities, because of restrictions on their education and employment opportunities, were essentially left out of much of the formal work of the science establishment; the remarkable few who overcame those obstacles were even then likely to have their work disregarded by the science establishment.
Science & Society

Important contributions to the advancement of science, maths, and technology have been made by different kinds of people, in different cultures, at different times.
ⓘ *Work of science*

Scientists are employed by colleges and universities, business and industry, hospitals, and many government agencies. Their places of work include offices, classrooms, laboratories, farms, factories and natural field settings ranging from space to the ocean floor.
ⓘ *Work of science*

Accurate record keeping, openness, and replication are essential for main - taining an invest- igator's credibility with other scientists and society.
ⓘ *Work of science*
Investigations

Scientists differ greatly in what phenomena they study and how they go about their work.
ⓘ *Work of science*

Scientists are linked to other scientists worldwide both personally and through international scientific organisations.

Human beings have different interests, motivations, skills and talents.

Doing science involves many different kinds of work and engages men and women of all ages and backgrounds.
ⓘ *Work of science*

Science is an adventure that people everywhere can take part in, as they have for many centuries.

Clear communication is an essential part of doing science. It enables scientists to inform others about their work, expose their ideas to criticism by other scientists, and stay informed about scientific discoveries around the world.
ⓘ *Doing science*
Investigations

Describing things as accurately as possible is important in science because it enables people to compare their observations with those of others.
ⓘ *Doing science*

Everybody can do science and invent things and ideas.

In doing science, it is often helpful to work with a team and to share findings with others. All team members should reach their own individual conclusions, however, about what the findings mean.

disciplines ***employment & funding*** ***people*** ***scientific communication***

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