

THE AGE OF BIOLOGY

HOW THE RELATIONSHIP BETWEEN HUMANS, NATURE
AND TECHNOLOGY IS CHANGING

Karin Frick, Dr Johannes C. Bauer

CREATING

FUTURES



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How the relationship between humans, nature and technology is changing

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IN BRIEF

Biology is emerging as a megatrend and a key technology on our way to a sustainable future. It is an essential tool in overcoming the challenges of a limited biosphere and in preventing overexploitation of our planet's resources. By promoting an economy based on regenerative rather than industrial principles, advances in biotechnology and microbiology are revolutionising the way we produce, consume, and interact with our environment.

The value of the bioeconomy is expected to rise to up to 30 trillion US dollars by 2030. It is an industry facing significant growth. Bioeconomy is based on biological innovations that aim to make production methods more environmentally friendly by using renewable materials and energy sources. Technological breakthroughs such as organ culture and the production of fuels from algae are examples of this progress.

How does the Swiss population feel about biotech and the bioeconomy? What is their relationship to nature and technology today? The results of a representative survey conducted in Switzerland point to a shift in values from an anthropocentric to an ecocentric world view. Most respondents, regardless of their age, sex and education, feel a deep connection with nature. Public opinion is gravitating towards equality for all living beings and an increasing recognition of nature as an integral part of human life. The majority of respondents are open to granting nature legal personhood.

However, the Swiss population approaches biotechnology and synthetic biology with caution and a keen awareness of potential risks. On the one hand, the survey results show that biotechnological methods of repairing environmental damage and healing health problems enjoy majority support. On the other hand, respondents reject more radical biotechnological interventions, such as the creation of optimised designer humans and the revival of extinct species. While legal bans on fossil raw materials and plastic are met with approval, a hypothetical ban on meat is less popular. Microorganisms and solutions based on them are predominantly perceived positively.

Although Swiss people generally have great confidence in science, half of those surveyed consider the use of biotechnology to be risky, particularly in terms of misuse or accidents. They increasingly question the idea that humans, their technologies and nature are separate fields. In the age of biotechnology, machines can become organisms and vice versa. Nature inspires new production methods that use organic raw materials and cultivate systems rather than programming them.

Attitudes towards the bioeconomy can be divided into four types that reflect different perspectives on the relationship between humans, nature and technology:

Pragmatists focus on incremental improvements and a balanced relationship between technology use and nature conservation. Eco-purists prefer a return to nature with less technology. Transhumanists are looking for ways to improve human nature through biotechnology. Tech-naturalists believe in a fusion of people, technology and nature.



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