

Executive Summary

August 2023

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Study on Causations of Science and Democracy Skepticism in Austria

Johannes Starkbaum, Katrin Auel, Valentina Bobi, Simon Fuglsang,
Peter Grand, Erich Griessler, Thomas König, Lucilla Losi, Fabian
Seiser, Guido Tiemann, Klaus Taschwer und Martin Unger

Study by the Institute for Advanced Studies (IHS) in collaboration with Aarhus University
on behalf of the
Austrian Federal Ministry of Education, Science and Research (BMBWF)

 Federal Ministry
Republic of Austria
Education, Science
and Research



INSTITUT FÜR HÖHERE STUDIEN
INSTITUTE FOR ADVANCED STUDIES
Vienna

Imprint

Authors:

Johannes Starkbaum, Katrin Auel, Valentina Bobi, Simon Fuglsang, Peter Grand, Erich Griessler, Thomas König, Lucilla Losi, Fabian Seiser, Guido Tiemann, Klaus Taschwer und Martin Unger

Short Title:

Executive Summary – Study Science Democracy Skepticism

Title of the Study (in German):

Ursachenstudie zu Ambivalenzen und Skepsis in Österreich in Bezug auf Wissenschaft und Demokratie

Contact:

Dr. Johannes Starkbaum

T +43 1 59991-128

E starkbaum@ihs.ac.at

Institut für Höhere Studien – Institute for Advanced Studies (IHS)

Josefstädter Straße 39, A-1080 Vienna

T +43 1 59991-0

F +43 1 59991-555

www.ihs.ac.at

ZVR: 066207973

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Executive Summary

Objective and Scope

In the last two years, the topic of science and democracy skepticism has become a focus of political and media debate, especially because of the experiences during the COVID-19-pandemic and the media reception of the Eurobarometer survey 516 from 2021. Topics addressed in this debate included, for example, questioning the democratic legitimacy of the measures, vaccination skepticism, verbal attacks on scientists, various surveys on science skepticism in Austria, and the spread of conspiracy theories. A frequent topos of the debate was Austria's supposed special position regarding skepticism about science and democracy. This study therefore addresses the question of whether and to what extent Austria's population is skeptical about science and democracy, what the possible reasons for any skepticism might be, and in which areas actions could be taken to improve the situation.

The study was commissioned by the Federal Ministry of Education, Science and Research (BMBWF) as part of a departmental strategy to strengthen trust in science and democracy. It focuses on the relationships between science, society and democracy and addresses the questions (1) how these relationships have developed historically in Austria, (2) which attitudes can be identified in different population groups with regard to science and democracy, and (3) how they interact with other areas of society. The study also reflects on the often poorly defined concepts of science and democracy skepticism in order to make them usable for the empirical analysis. In addition to a literature review and a historical analysis, the empirical work consists of a secondary data analysis of several survey data, focus groups, expert interviews, and an expert workshop. Factors explaining skepticism and corresponding fields of action are derived from the results of the study.

Positive Attitudes but also Criticism

The results of the analysis of secondary data (Eurobarometer 2021, European Social Survey wave 10, Austrian Corona Panel Project 2020-2022, Citizens' Attitudes Under Covid-19 Pandemic 2020, Wellcome Global Monitor 2018/2020) show that a large part of the Austrian population has a positive attitude toward science and democracy. However, parts of the population also face these two areas with disinterest, criticism, and skepticism. Different surveys clearly show that respondents' trust in science and scientists is almost consistently the highest compared to other institutions or groups of people and has remained largely stable at this high level over the course of recent years.

There are also no clear indications that attitudes rejecting science have increased recently. The available data do not confirm that Austria is among the most science-skeptical countries in the EU-27 comparison. On the one hand, respondents in Austria are indeed particularly dismissive of or distanced from science in the EU-27 comparison in some questions of the 2021 Special Eurobarometer - for example, respondents in Austria suspect negative effects comparatively more often on the topics of nuclear energy or genetic engineering. On the other hand, however, respondents in Austria answer predominantly positive to questions about the impact of renewable technologies or vaccines and thus similar to the EU-27 average (see chapter 3.3).

Results of the analysis of different data sets also show that parts of the Austrian population are disinterested in, critical of, or even skeptical about science. The Special Eurobarometer 2021 captures this, for example, with questions on the importance of science for the respondent's everyday life or on the role of science for the future prosperity of Austria. Other surveys reveal a critical assessment of the work of scientists, their competence, or their motivation, by the respondents (see chapters 6.1 and 6.2). In the focus groups of our study, criticism of science (and democracy) was expressed, which primarily refers to influence by politics or business, as well as the pursuit of self-interests by politicians and scientists (see chapter 7.2). However, contradictions between the statements of different scientists and non-linear knowledge discovery processes, which became visible to the public during the COVID 19 pandemic, among other things, can also be a reason for irritation. In some cases, as the expert interviews show, too little consideration is given to the fact that organized skepticism and open critical discourse are essential features of science and of a democratic society (see chapters 5.1 and 7.1).

Differentiated perspective on Skepticism towards Science

Science skepticism was defined in the context of the study as a systematic and unwarranted rejection of science or of scientific findings (see chapter 3.5). Based on the data of the Special Eurobarometer 2021, this study therefore measured scientific skepticism on the basis of agreement with four statements that diametrically contradict the current scientific consensus in the areas of human made climate change, evolutionary theory, the creation of new viruses and the withholding of cures for cancer. Two of them also have a conspiracy theory component. Although Austria ranks in the middle of the EU-27 in terms of agreement with these statements, a significant proportion of the population - between 31 percent and 21 percent, depending on the statement - agrees with at least one of these four counter-consensus statements.

But also in this case, a detailed interpretation of results is called for. The group of people, who agree to more than one of the four counter-consensus statements, or all of them, is much smaller. Only one percent of respondents agree with all four statements and

nine percent agree with three of the four statements (see section 6.1). According to the operationalization of our study, this group is the core of systematically skeptical individuals who reject science in principle and across several areas (see chapter 3.5).

Not all criticism of science can be equated with skepticism, as findings from the qualitative empirical work in this study show. Participants in the focus groups gave similar answers to survey questions presented to them but legitimized them for different reasons. For example, several focus group participants affirmed that reliance on "common sense" does not have to mean rejection of science (see Section 7.2.3). The various respondents in expert interviews had very different perspectives on science skepticism. They ranged from an understanding of science skepticism as fundamental rejection of science, its legitimacy and method, to a positive form of interpretation about the risks of technological applications of science in business and politics (see Chapter 7.1).

Moreover, a science-skeptical attitude is not clearly associated with interest or disinterest in science, as survey data from the Wellcome Global Monitor show. In the secondary analysis of the Special Eurobarometer 2021, "skeptics" state somewhat more frequently that they are very interested in science and, compared with all Austrians surveyed, that they are more intensively involved with science. Overall, interest in science in Austria is somewhat lower than the EU-27 average but has increased slightly compared to 2010. Moreover, according to our analyses, people who agree with science-skeptical statements do not differ significantly from the general population in many aspects of their relationship to science.

Connection between Skepticism towards Science and Democracy

The surveys analyzed in the project show that agreement with science-skeptical statements and low trust in science and democracy can be found in all groups of the population. Thus, no clear groups of "skeptics" can be identified for these areas based on sociodemographic characteristics. Lower levels of trust, and higher levels of dissatisfaction and skepticism are associated with younger age, lower levels of education, dissatisfaction with one's own life or with democracy and political orientation on the right of the political spectrum. In comparison, women trust science somewhat less than men. Data from the Eurobarometer 2021 also show higher agreement with science-skeptical statements among people who say they live in a large city. However, the quantitative results here are not consistent for all surveys and are not always empirically reliable.

Overall, similar sociodemographic patterns of trust in science and satisfaction with democracy can be identified in several surveys. Furthermore, our analyses show that

basic political attitudes, affinity for populism, and understanding of democracy are also similarly related to trust in science and satisfaction with democracy. Individuals who identify parties as the country's main problem, prefer direct referendums to representative democracy, and want to see a strong leader installed at the top who is not constrained by parliament and elections and makes policy decisions on his or her own, trust science less and are more dissatisfied with democracy. Similarly, higher normative expectations of democracy, a perceived better functioning of democracy in Austria and the perception of being able to influence politics in Austria are positively related to both trust in science and satisfaction with democracy. The focus groups conducted also show that science is seen in connection with democracy and that criticism of it primarily relates to its practical implementation in the context of political and economic interests (see chapters 7.2.4 and 7.2.6). Some respondents seem to make little distinction between scientists and politicians, and see both professions as representatives of privileged groups and assume that they are equally pursuing their own interests. Accordingly, some respondents seem to differentiate between science, its principles and methods on the one hand, and the institutional and personal dimension of science on the other.

In contrast to trust in science, trust in political institutions and its actors, as well as satisfaction with democracy, have declined continuously in recent years. This is clear from several of the surveys examined. In a longer-term perspective, this decline is less dramatic (see section 3.4). In an international comparison, Austria ranks slightly above the average of the participating European countries in terms of satisfaction with democracy, according to the European Social Survey 2021 (see Chapter 6.2.4). The relation between negative statements on science and democracy, which is measurable in surveys and visible in the focus groups, suggests that these areas are perceived by the population as interconnected. Criticism often goes beyond the individual areas and can concern the interconnectedness of these social subsystems as well as, in some cases, a more general rejection of the political and democratic system.

An Ambivalent Historical Legacy

The historical analysis of this study shows that Austria's history includes events and lines of tradition that were not conducive to the development of science and democracy. Keywords to be named in this respect are Counter-Reformation, Absolutism, Restoration, failed revolutions, civil war, Corporate State, National Socialism and a consociational democracy after 1945 which for a very long time failed to come to terms with the civil war during the Interwar period and Austria's involvement in National Socialism (see Chapter 4). These political developments were unfavorable for science, and in some cases destructive. However, Austria's political culture and national habitus

are not one-dimensional. There are also strong opposing lines of tradition directed toward the emancipation of broader social groups, such as the Enlightenment, aspects of enlightened absolutism and Josephinism in the 18th century, the 1848 Revolution, the short period of liberalism, the extension of suffrage, the founding of the First Republic, resistance to National Socialism and new social movements. For the fields of action against skepticism of science and democracy, the results of the historical analysis mean to continue those patterns of action that were formed in epochs of democratization and promotion of science (e.g., adult education centers as places of science communication, patronage of science). At the same time, patterns of action should be avoided that could lead in the direction of autocracy and dictatorship (e.g., lack of willingness and ability to engage in discussion, devaluation of those who think differently).

Factors Explaining Science and Democracy Skepticism in Austria

Based on these results, we have identified eight factors that contribute causally to skepticism about science and democracy in Austria. We assign these factors to fields of action for actors from politics, administration, and science.

1. In the debate on skepticism about science and democracy, any form of criticism of science is often equated with skepticism about science
2. Science is not very present in the everyday lives of many citizens, and there are often abstract ideas among the population about how science works
3. Criticism of science and democracy can be found in all parts of society and differences according to socio-demographic characteristics are often not uniformly pronounced
4. Criticism of science and democracy is interrelated and often an expression of a comprehensive rejection of existing political conditions
5. Science communicates its activities to the population only to a limited extent and reflects too little on the fact that research results can also be contradictory and that science and research are not independent of interests
6. The structural change in the (media) public sphere poses challenges for the role of science in society
7. In Austria's present and history, there have been repeated phases of low support and also suppression of science
8. Austria's history has shaped a national habitus that makes science difficult as a contribution to self-enlightenment and democratic practice

Discussion and Outlook

Science and democracy skepticism are phenomena that must be taken seriously, which is precisely why an informed and considerate debate based on scientific findings is

necessary and crucial, also to be able to take appropriate action. The systematic and unwarranted rejection of scientific findings and methods as well as democratic processes, which is evident in some parts of the population, is problematic and detrimental to the challenges of our times, such as the climate crisis. This is also a mandate for policy makers and scientists themselves to act. The present study has developed an initial basis for this.

From the perspective of this study, it is important to note that criticism and skepticism of science and democracy are interrelated phenomena that can be found in all areas of the population. Therefore, it also makes sense to think of these areas together. Since criticism of science and democracy is based in a diversity of beliefs and viewpoints, it is also necessary to take diverse measures.

A large proportion of skeptical or critical attitudes do not relate to science or democracy itself, but rather to segments of these, to framework conditions, to links with other areas of society and to their practical implementation, as well as to the way science and politics communicate with the population. This can represent an opportunity. Many people who express criticism of science and democracy do not systematically and unwarrantedly reject these areas and can therefore also be reached through dialogue. However, adequate spaces must be created for this and the necessary skills for dialogue have to be developed and practiced. Likewise, science as well must critically reflect its own role in politics, economy and society and engage transparently in (public) discourse. This requires that political decision-makers understand science and that they trust in its role in society so that science can contribute to evidence-informed policy. This is central to a democratic society and its challenges.