Expert Group "Communicating Sciences and Arts in Times of Digital Media"
of the Swiss Academies of Arts and Sciences

Draft Chapter

Science and the Swiss Public: Science-related Perceptions and Sources of Information in Switzerland

Excerpt from of the Upcoming Expert Group Report "*Science in Public: The State of Science Communication and Public Engagement with Science in Switzerland*", to be published in 2021

«Communicating Sciences and Arts in Times of Digital Media»: About the Expert Group

In Switzerland and beyond, science communication – encompassing not only STEM subjects, but also humanities and arts – has received more attention from academia, (science) politics and society in recent years. But the science communication landscape is changing, creating new challenges such as economic pressures on science journalism, a pluralization of science communication actors and formats, and the emergence and growth of digital media.

The expert group “Communicating Sciences and Arts in Times of Digital Media” has been set up by the Swiss Academies of Arts and Sciences. Its mandate is twofold: First, it assesses the status quo and current trends in science communication in Switzerland. Second, it will develop scenarios for improving science communication and public engagement with science.

The group consists of 16 experts from science communication research, information and computer sciences, disciplines with high public visibility such as climate and health sciences, as well as practitioners from science journalism and institutional science communication ([more information on the expert group](#)).

The Expert Group’s Status Quo Report

The first part of the expert group’s mandate is to assess the status quo & current trends in science communication and public engagement with science in Switzerland. This assessment will culminate in a status quo report which will be published open access by the Swiss Academies of Arts and Sciences.

Based on scholarship on Switzerland and beyond, the report will focus on the perceptions and attitudes of the Swiss populations towards science and their sources of information about science related issues. It also assesses the science-related communication by different stakeholders and the role of journalists, technology platforms and other intermediaries of science communication (see the table of content on the next page). In doing so, it compiles the available scholarly evidence, assesses its robustness, identifies gaps in current knowledge and embeds it in a broader, international context.

The status quo report will also be the foundation for the recommendations on how to improve science communication in Switzerland, which is the second part of the expert group’s mandate.

Inviting Your Feedback on this Chapter

The status quo report will be reviewed and validated in different ways: by incorporating prior scholarship, by discussing it within the expert group, and by having the full report peer-reviewed by renowned experts of science communication in Switzerland and internationally.

Another step of this validation is to invite feedback on the report from stakeholders. This feedback will be invited chapter by chapter. The following text is the first draft of the chapter

describing research on the Swiss public's science-related perceptions and their sources of information.

We ask you to give us feedback on this draft chapter. This feedback can refer to all levels, from structural and stylistic aspects to the interpretation of specific scientific evidence. Especially welcome are pointers to scholarly studies, data sets or results that may help us to broaden the basis for the chapter. **Please note that we will be able to consider feedback until the end of July 2020, when we will finalize the chapter.**

You can give public feedback directly in this preprint by setting up an account with hypothes.is. You can also email t.fuechslin@ikmz.uzh.ch, or send regular mail to Dr. Tobias Füchslin, IKMZ, University of Zurich, Andreasstrasse 15, CH-8050 Zurich.

Thank you for your participation, which is highly appreciated and will help the work of the expert group!

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Science and the Swiss Public: Science-related Perceptions and Sources of Information in Switzerland

Most forms of communicating the sciences and arts aim at reaching, potentially engaging and influencing the broader public. This is particularly relevant in Switzerland, where the public regularly votes on referenda on matters of common concern, including on science-related issues. Therefore, an assessment of public perceptions of science – their interest in, knowledge about and trust towards science – is important. Equally important is an assessment of the places and sources through which the public comes into contact with science-related issues, and of the effects these forms of communication have. The scholarly evidence on these questions that is available for Switzerland will be presented in the following chapter.

Public Perceptions of Science in Switzerland: Knowledge, Interest, and Trust

People's interest in, attitudes towards, trust in, and knowledge about science have been analysed extensively by social scientists internationally – and partly also for Switzerland. In doing so, scholars have often subsumed these factors as 'public perceptions' of science (e.g. Besley, 2013 for an overview).

What scientific evidence is available?

Amount of data available for CH:	Quality of data available for CH:	Analyses available for CH:
considerable body of data available; mostly quantitative surveys; little qualitative work	high quality quantitative survey data (standardised, representative) for public perceptions of science in general; similar data for specific research fields or science-related issues lacking	limited amount of scholarly analyses available for Switzerland; some areas well-researched, but considerable desiderata

Data on Switzerland

A considerable body of high-quality quantitative data is available to assess public perceptions of science in Switzerland. This is particularly true for perceptions of science in general, which are assessed via representative, national population surveys such as the Eurobarometer (2001, 2005, 2010b), the Wellcome Global Monitor 2018 (Gallup, 2019), and the tri-annual Science Barometer Switzerland (2016, 2019), among others.

The quantity and quality of standardized data are more varied when it comes to public perceptions of specific science-related topics. Surveys have included this only selectively: The Science Barometer Switzerland captured support of selected disciplines and the Wellcome Global Monitor 2018 assessed attitudes towards health professionals and vaccines. Other surveys have measured attitudes towards bio- and gene technology (Bonfadelli & Meier, 2010; Eurobarometer, 2010a; NFP 59, 2013), animal testing (Eurobarometer, 2001, 2005), nuclear energy (Kristiansen, Bonfadelli, & Kovic, 2016), environmental issues (Diekmann, Meyer, Mühlemann, & Diem, 2009; gfs-zürich, 2018), 5G cellular network technology (Frey, 2020; Schanne, 2003), innovation (Seidl, Wirth, & Krütli, 2019), as well as adolescents' perceptions of STEM fields (Bührer et al., 2014). Continuous national surveys on issues like

health and medicine and general attitudes towards technology, among others, are missing in Switzerland, and the number of academic analyses and publications is limited compared to the available data.

In addition, the amount of qualitative studies on the Swiss population's perceptions of science and science-related issues is limited. Exceptions are a study that tracked people's science-related media use via smartphone diaries and subsequently discussed their perceptions of science (Koch, Saner, Schäfer, Herrmann-Giovanelli, & Metag, 2019), a report and a study summarizing the "publifocus" public discussion forum on nanotechnology (Burri & Bellucci, 2008; TA-Swiss, 2006).

Findings on Switzerland

The Swiss population perceives science very positively. The Science Barometer Switzerland (2019) shows that Swiss residents have considerable interest (56% "high" or "very high") in science and research. This interest is higher among men (63%) and people with tertiary education (66%). A majority of 73% of the Swiss population "agree" or "fully agree" that scientific research should be publicly funded and support basic research without any immediate applications. People with tertiary education hold these two views even more strongly (ca. 80%). These findings mirror those of the Science Barometer (2016). The 2016 survey also asked about people's motives to deal with science, showing they mostly do so out of curiosity (69% "agree" or "fully agree"), to increase their understanding of science (58%), and to obtain knowledge for school or work (57%). These trends are corroborated by Eurobarometer data, which show that only about 10% of the Swiss population are "not at all" (vs. "moderately" vs. "very") interested in "new scientific discoveries" and "new inventions and technologies" (Eurobarometer, 2005), and that 16% were "not at all" interested in new scientific discoveries and technological developments in 2010 (Eurobarometer, 2010b). Generally, where international comparisons are available, they indicate that the Swiss population's perceptions of science are on par or slightly more positive compared to other countries (Eurobarometer, 2010b; Wissenschaft im Dialog, 2019).

Most Swiss residents are knowledgeable about science and well equipped to understand scientific content. Knowledge about science has been measured extensively in international studies. This was done in different ways, several of which are also available for Switzerland: First, scholars have embedded quiz questions (i.e. true/false statements) about scientific facts in surveys, aiming to assess "scientific literacy", like "electrons are smaller than atoms – true or false?". The Science Barometer Switzerland (2016) used such a measure, indicating that the Swiss population, on average, answered 7.6 out of 11 quiz questions correctly. It also confirmed that people with tertiary education (8.1 correct answers) perform significantly better than the rest of the population. The Eurobarometer (2005), using a similar quiz in several countries, ranked Switzerland clearly above the European average (71% correct answers compared to 66%) and 8th among 32 European countries. Second, scholars have asked respondents to self-assess their knowledge about science. The Swiss population's self-assessment is modest in this respect: 66% of the Swiss population report to know some (55%) or a lot (11%) about science, which is comparable to averages of countries in Western (54% and 15%) and Northern Europe (53% and 14%) (Gallup, 2019). A third measure assessing knowledge about science are standardized education tests. The Programme for International Student Assessment (PISA) regularly tests 15-year-old students' competences

in reading, mathematics and natural sciences across countries. Its findings are in line with the above-mentioned results for scientific literacy (Konsortium PISA.ch, 2019): Swiss students display reading competences similar to the OECD average, but perform significantly better in mathematics and natural sciences.

Figure 1: Index of five variables measuring level of trust in scientists by country, depicting 40 European countries, showing the average level of trust indicated by survey respondents between 1 = "low" and 4 = "high". Switzerland ranks 18th among the 40 surveyed European countries (Gallup, 2019)

Trust in science and scientists in Switzerland is high and seems stable over time. The Swiss display high trust in "science in general" (56% "high" or "very high"), and they also trust scientists: 64% of the population have "high" or "very high" trust in university scientists, and about 70% of the population "agree" or "fully agree" that scientists are competent and qualified. Men, people aged 15 to 34, and people with tertiary education all have slightly higher trust in these dimensions (Science Barometer Switzerland, 2019). Trust in science remained strong, and potentially even increased, during the COVID-19 pandemic, with 80% of the Swiss population indicating that they "tend to trust" or "fully trust" science (gfs.bern, 2020). It is also in line with Gallup's (2019) findings from 2018 showing that 91% of Swiss people trust scientists "some" (48%) or "a lot" (43%), which is markedly higher than the Swiss population's trust in journalists (67% "some" or "a lot") or the national government (81% "some" or "a lot"), and only surpassed by their trust in doctors and nurses (95% "some" or "a lot"). The Swiss population's trust in scientists is above average compared to the other 143 countries included in the Gallup survey. Switzerland ranks 18th among 40 European countries (Figure 1), and 37rd among 144 countries worldwide.

The Swiss population expects scientists to communicate actively. The Swiss populations trust in science, in scientists and in their qualifications is accompanied by demands for science communication: 79% of the Swiss population “agree” or “fully agree” that scientists should inform the public about their work (Science Barometer Switzerland, 2019), an opinion that was less common (73%) in 2016 (Science Barometer Switzerland, 2016). 49% “agree” or “fully agree” that scientists should listen more to what common people think (Science Barometer Switzerland, 2019). Older insights from 2005 show that 50% were unsatisfied with scientists’ communication, agreeing that “scientists put too little effort into informing the public about their work” (Eurobarometer, 2005).

These positive perceptions of science, however, need to be qualified in two ways: First, while general support for science is favorable overall, perceptions of specific science-related issues vary – even though the respective data has a lot of gaps and is hard to compare comprehensively. While the Swiss population does not doubt that vaccines can be effective, 22% “somewhat disagree” or “strongly disagree” that vaccines are safe, making it the fifth most skeptical country across 144 countries included in the recent Gallup study (Gallup, 2019). Eurobarometer data showed that the acceptance of animal experimentation dropped significantly in Switzerland from 48% in 2001 to 35% in 2005 (Crettaz von Roten, 2009). Another example is that the Swiss voting population regards climate change and the environment as the fourth most pressing issue in Switzerland (gfs.bern, 2019). Additionally, the Swiss population is mostly against nuclear energy as measured in 2013, 2014, and 2015 and slightly disagrees that the benefits of nuclear energy outweigh its risks (Kristiansen et al., 2016).

Second, perceptions of science and science-related issues also differ between subgroups of the population. Studies based on the Science Barometer Switzerland 2016 have identified four subgroups within the Swiss population with distinct attitudes towards science (Koch et al., 2019; Schäfer, Fuchslin, Metag, Kristiansen, & Rauchfleisch, 2018).

Figure 2 The four audiences of science communication in Switzerland: Swiss population segments based on 20 different attitudes towards science and research (Schäfer et al., 2018).

- The **“Sciencephiles”** make up about 28% of the Swiss population. They consist of people with high interest in, high knowledge of and very positive perceptions towards science. They feel that science plays an important role in their lives and are highly supportive of public funding towards science. They are highly optimistic when it comes to discoveries and advances that science can achieve.
- The **“Critically Interested”** (17%) match the “Sciencephiles” in their knowledge of, positive attitudes towards and support of science funding. The main difference is that

they trust science considerably less, clearly favour research constraints and think that humanity relies too heavily on science.

- **The “Passive Supporters”** (42%) are the largest group. Their interest, attitudes, and trust regarding science are moderate. Overall, they share some hopes when it comes to scientific achievements and harbour some reservations regarding ethical considerations. For example, they think science improves our lives, but also that scientific research should have clear constraints.
- **The “Disengaged”** (13%) – the smallest segment – have more negative perceptions of science, albeit being not wholly negative. The “Disengaged” are on the fence about public funding, science is not important in their lives, they do not necessarily trust science, and they are simply not interested in it. Like the “Critically Interested” they think that society relies too heavily on science and that research constraints should exist.

COVID-19 Context: Science-related Perceptions and Sources of Information

Science-related perceptions and sources of information changed significantly during the 2020 pandemic caused by coronavirus disease 2019 (COVID-19). A large amount of data was collected to analyse this extraordinary situation internationally and a considerable number of research projects were initialized in Switzerland (e.g. SNSF (2020) COVID-19 research project registry). With regards to the population’s science-related perceptions and sources of information, these data showed several developments:

Trust in science increased significantly during the COVID-19 pandemic. A representative survey in Germany showed that trust in science and research increased from 46% in 2019 to 73% in April and 66% in May 2020 during the German COVID-19 lockdown (Wissenschaft im Dialog, 2020). In Switzerland, such comparisons over time with the same data are not available. But a study during the pandemic showed that 80% of the Swiss population indicated that they “tend to trust” or “fully trust” science (gfs.bern, 2020) – a number considerably higher than those reported by the Science Barometer Switzerland in 2016 (57%) or 2019 (56%, (Science Barometer Switzerland, 2016, 2019)).

People’s media and information use, and their attention to science-related and COVID-19-related news, changed and is still changing. A weekly COVID-19 survey in Germany showed that around 72% were regularly informing themselves about COVID-19 around the time when the national Robert-Koch Institute updated the COVID-19 risk to “high”. This attentiveness remained high during subsequent weeks and started to slowly decrease in May 2020 (Betsch, 2020). Similar spikes in news attentiveness were observed when other countries went into lockdowns as well (Kleis Nielsen, Fletcher, Newman, Brennen, & Howard, 2020), as were subsequent reductions of public interest and increasing “issue-fatigue” (Kalogeropoulos, Fletcher, & Kleis Nielsen, 2020).

Traditional media like television, radio and newspapers became increasingly important during the COVID-19 pandemic. In Germany and Sweden, national-public television was the leading source of information for most people (Betsch, 2020; Vetenskap & Allmänhet, 2020). In Argentina, Spain, South Korea and the UK, television was the second most important news source behind online and social media (Kleis Nielsen et al., 2020). Similar data are not available for Switzerland, but it has been shown that the Swiss population’s social media use intensified during the lockdown (Hargittai et al., 2020)

Science reporting was perceived as alarmist in several countries, but less so in Switzerland. Weekly data from Germany showed that about two thirds of Germans perceived media coverage on COVID-19 as out of proportion in early March, before the Robert-Koch Institute updated the COVID-19 risk to “high”. Afterwards, about 47% held this sentiment throughout the pandemic (Betsch, 2020). Similar alarmist sentiments were found in Sweden, where 67% found news media coverage to be alarmist at the end of March (Vetenskap & Allmänhet, 2020). Attitudes are different in Switzerland, however: around 50% of respondents indicated that they felt comprehensively informed by the media, while about a quarter felt that news media were creating panic and exaggerating the risk (SRG SSR, 2020).

It remains to be seen how these attitudes and behaviours develop after the COVID-19 pandemic.

Contact with Science in Everyday Life, Museums, Events and Participatory Formats

The public can encounter science and science-related issues in many places, from conversations and events over popular culture to news media (Bucchi & Trench, 2020, forthcoming). Many scholars have assessed how important encounters with science in everyday life are: in conversations with friends and family, in museums, zoos and at science-related events such as open days and science slams, or by participating even participating in consensus conferences or “citizen science”.

What scientific evidence is available?

Amount of data available for CH:

data available for selected facets of the Swiss contact with science in everyday life; mostly quantitative surveys; a few substantial reports; little qualitative work

Quality of data available for CH:

high quality quantitative survey data (standardised, representative) for everyday life contact with science, but limited to respondents’ self-assessment; reports capture amount of contacts only (and not quality); similar data for specific issues lacking

Analyses available for CH:

few scholarly analyses available for Switzerland; considerable desiderata

Data on Switzerland

Comprehensive evidence on the Swiss public’s engagement with science is available, but only for a narrow spectrum of activities. The Science Barometer surveys ask people *how often* they come into contact with science through a number of everyday life situations, such as going to museums, attending science-related events, or talking about science with friends (Metag, Schäfer, Kristiansen, & Rauchfleisch, 2016; Metag, Schäfer, Mede, & Fuchslin, 2019). Population surveys also measure *attitudes towards forms of engagement* with science (Eurobarometer, 2010b; Science Barometer Switzerland, 2016, 2019), e.g. whether respondents think that science is important in their personal lives, or whether public opinion should influence decisions about science or the research agenda. However, these attitudes cannot be interpreted as behavioural intentions. Lastly, a handful of survey questions ascertain *reported behaviour* such as donating for research projects, attending public meetings, and signing petitions (Eurobarometer, 2005, 2010b), as well as voting on science-related issues and the *intention* to participate in citizen science projects (Science Barometer Switzerland, 2016, 2019). Data on *actual behaviour* is rare but exists, for example, for people’s use of a Swiss crowdfunding platform in 2019 (Hase, Schäfer, Metag, Henry, & Bischofberger, 2020, forthcoming), visitor numbers of Swiss (science) museums (Federal Statistical Office, 2019c), or participants in science cafés (Science et Cité, 2016).

In addition, the amount of qualitative studies on contact with science in everyday life in Switzerland is limited.

Findings on Switzerland

The Swiss population regularly encounters science in everyday life. The Science Barometer Switzerland (2019) asks respondents how often they “come into contact with science and research” through various activities, asking respondents to assess this frequency between 1 = “never” to 5 “very often” (Figure 3). It shows that the Swiss encounter science most often

through conversations with friends and acquaintances (mean frequency of 3.1), films or TV series (2.9), zoos and botanical gardens (2.6), and museums and exhibitions (2.5). It also suggests that everyday conversations are the most common encounter with science for the Swiss on average (more common, as shown later, than news media and online sources).

Figure 3: How frequently does the Swiss population encounter science and research across media (legacy and online) and everyday life sources? Results from Science Barometer Switzerland (2019).

Museums and botanical gardens are important for public interaction with science. While encounter of science through conversations, films, and tv series may be more frequent, the importance of museums, zoos and botanical gardens, is well-tracked and established. The Federal Statistical Office (2019b) reports about 3.5 million (non-unique) visitors for archaeological, historical and ethnographic museums, 1.9 million for technical museums, and 1.7 million for science museums in 2018.

Engaging with science-related issues in a political context is more important in Switzerland than in most other countries. About 10% of the European population engage with scientific issues in a political context, including attending public meetings, signing petitions or protesting, and participating in the activities of a non-governmental organization (Eurobarometer, 2005, 2010b). An analysis of these data shows that Switzerland has the highest proportion of people who at least engaged once in one of these three science-related engagement activities. This is strongly tied to Switzerland's high level of democratization (e.g. strong direct democracy) and high support for a democratic control of science (Makarovs & Achterberg, 2018). This is in line with 73% of the Swiss population "agreeing" or "fully agreeing" that they always participate in public votes that are science related (Science Barometer Switzerland, 2016).

Citizen science seems to have considerable potential in Switzerland. Citizen science, “where people produce scientific knowledge outside of traditional scientific institutions” (Strasser & Haklay, 2018, p. 22), interests more than a third of the Swiss, who indicate they would like to actively participate in scientific research (Science Barometer Switzerland, 2016, 2019). People with such interest can be divided into five groups: “Free-Timers”, who are around 55 years old, mostly female, and are not bound to full time jobs; “Fully-Employed Parents”, who work full time and often have children at home; “Intrigued Adolescents”, who are 18 years on average and have favourable although not (yet) enthusiastic attitudes towards science; “Senior Sciencephiles”, who think very positively about science, highly educated, mostly male, and around 55 years old; “Young Sciencephiles”, who are 26 years old on average and have a more even gender balance than the “Senior Sciencephiles” (Füchslin, Schäfer, and Metag (2019).

Contact with Science via News, Online and Social Media

Internationally, analyses of the public’s use of various news media, online media, and social media sources with regards to science and science-related issues are well established (Bucchi & Trench, 2020, forthcoming for an overview). They span both journalistic news media like newspapers, magazines, radio and television as well as online content on Wikipedia, YouTube, as well as social media platforms like Facebook, Twitter etc. (Brossard, 2013).

What scientific evidence is available?

Amount of data available for CH:

solid body of data available; mostly quantitative surveys; channel-based metrics are scarce; little qualitative work

Quality of data available for CH:

high quality quantitative survey data (standardised, representative) for information and media sources, but limited to respondents’ self-assessment; available metrics capture channel reach only; similar data for specific research fields or science-related issues lacking

Analyses available for CH:

few scholarly analyses available for Switzerland; considerable desiderata

Data on Switzerland

Data on the Swiss population’s use of science-related media exist but are limited both in quantity and quality. A limited number of studies either directly report data in publications within the science domain (e.g. Horizonte, 2019; SRF, 2019), use readership surveys of science-related publications in (partly unpublished) project reports (e.g. Bonfadelli, 2019), or use standardized, representative population surveys (e.g. Eurobarometer, 2005; Science Barometer Switzerland, 2019). At the same time, most of these data are limited: Many only report gross numbers such as readership size, while survey data are usually limited to respondents’ self-assessments, and data regarding specific issues such as health or environment are lacking. These shortcomings contrast the comprehensive data on the Swiss population’s media use in general, which is well documented – both through surveys and published data – for different channels such as print, television, radio, the Internet and its applications (European Social Survey, 2018; e.g. Federal Statistical Office, 2019a, 2019d, 2019e; Latzer, Büchi, & Festic, 2019a, 2019b).

In addition, the amount of qualitative studies on science-related media use in Switzerland is limited. Exceptions are a study that tracked people's science-related media use via smartphone diaries and subsequently discussed their perceptions of science (Koch et al., 2019).

Findings on Switzerland

The Swiss population regularly encounters science through a broad set of legacy media sources. In 2019, respondents indicated that they encountered science-related content mostly through “the Internet” which, with a mean frequency of 3.3 (revisit Figure 3 for measurement scale), is the most prominent source of science-related content for the Swiss population, but also via print media (3.0) and television (2.8). For those aged 55 and older, newspapers (3.4) are far more important than the Internet (2.6); while for people aged 15 to 34, the Internet (3.7) is more relevant than newspapers (2.6) and TV (2.3). Men (3.5) encounter science and research on the Internet more frequently than women (3.0) and TV is more important in the French-speaking part (3.2) compared to the Italian- (2.8) or German-speaking (2.7) part (Science Barometer Switzerland, 2019). The general, and rising, importance of the Internet as the primary source for science-related content is in line with findings from similar surveys in Germany, the USA, and the UK (Castell et al., 2014; National Science Board, 2018; Wissenschaft im Dialog, 2019), but it is notable that print media remain one of the most relevant sources for the Swiss population for encountering science-related content (Metag, Maier, Füchslin, Bromme, & Schäfer, 2018).

The Swiss population evaluates science-related news reporting positively, while signalling room for improvement. This is contextualised by a moderate appetite for science news reporting in general. The Swiss population describes science news reporting in Switzerland as trustworthy, easily understandable, and sufficiently extensive (Schäfer et al., 2018). About 70% also agree that it is important to be informed about science and research (Science Barometer Switzerland, 2019). But people's interest in science news seems only moderate: While only about 8% do not pay any attention to science-related content in the media, only about 9% pay a lot of attention to it; the majority of people (45%) place themselves in the middle (Science Barometer Switzerland, 2019). This disinterested proportion seems stable over time as 10% reported in 2005 that they never “read articles on science in newspapers, magazines, or on the Internet.” (Eurobarometer, 2005).

When directly asked whether they are satisfied with science reporting in Switzerland, the Swiss people are again largely undecided (ca. 44% in the middle of the scale), with only about 4% being very satisfied. This shows a clear potential for improvement in science news reporting, similar to a finding from 2010, where 35% of the Swiss population felt “poorly informed” about new scientific discoveries and technological developments (Eurobarometer 2010). During the COVID-19 pandemic, the Swiss population had more pronounced views towards news reporting on the coronavirus: Around 50% of respondents indicated that they felt comprehensively informed by the media, while about a quarter felt that the media were creating panic and exaggerating with their continuous coverage (SRG SSR, 2020). These numbers reflect findings from other countries like Argentina, Germany, South Korea and the U.S. (Kleis Nielsen et al., 2020; Wissenschaft im Dialog, 2020).

The Swiss population regularly encounters science-related content through select online and social media. The most relevant online sources for the Swiss population are websites and

apps of print media (3.0), Wikipedia (3.0) and YouTube (2.8). People aged 55 and older tend to encounter science through these sources less frequently, while people with tertiary education use them more frequently – except for on YouTube, which is the most prominent source for Swiss residents aged 15 to 34 and which is used by people with lower education levels more often to encounter science (Science Barometer Switzerland, 2019).

The Swiss population encounters science-related content less often in science magazines, on the radio, in blogs or social networks. The same data show that people infrequently encounter science and research in science magazines (1.9) and the radio (2.4). Blogs and message boards” (1.9) as well as “Facebook, Twitter, or other social network sites” (2.2) are the least relevant points of contact on the Internet. In other words, 74% of those that encounter science online at all “rarely” or “never” encounter such content on social network sites like Facebook and Twitter. Active use is even rarer: Only about 15% “often” or “very often” press “like” or similar buttons on science-related posts on social media or other online applications. Posting or sharing content “often” or “very often” (6%) and commenting on other content (4%) are even rarer. However, people aged 15-34 (2.6), women (2.4), and people from the French speaking part of Switzerland (2.5) respectively encounter science and research significantly more often on social network sites than their complementary parts in the Swiss population (Science Barometer Switzerland, 2019).

Frequencies of encountering science and research in the media also differ between groups of the population that have different attitudes towards science. According to Schäfer et al. (2018), the “Sciencephiles” and “Critically Interested” encounter science more often on the Internet, particularly on Wikipedia and YouTube. They also read science magazines more often, which might explain the stable offering of science and education magazines over the last 40 years in Switzerland (Jarren, Oehmer, & Dioh, 2020). While the “Passive Supporters” largely mirror the whole population in their media use, the “Disengaged” encounter science in the media much less frequently, except when it comes to television, where they are like the rest of the population.

A partial explanation of these differences is offered by a qualitative study looking at the segments’ media use behaviour. It found that that the “Sciencephiles” and “Critically Interested” recognize science-related content better and based on criteria that largely conform with scientific criteria. The “Disengaged” and partly also the “Passive Supporters”, on the other hand, rely more strongly on purely formal criteria (e.g. mentions of the word “study” or “research”) (Koch et al., 2019).

Members of the Expert Group

- **Prof. Dr. Mike S. Schäfer (Speaker)**, University of Zurich, Communication Scientist, Expert for Science Communication, Co-Leader Science Barometer Switzerland
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- **Prof. Dr. L. Suzanne Suggs (Co-Speaker)**, Università della Svizzera italiana, Communication Scientist and Expert for Health Communication. Vice-President of Swiss School of Public Health
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