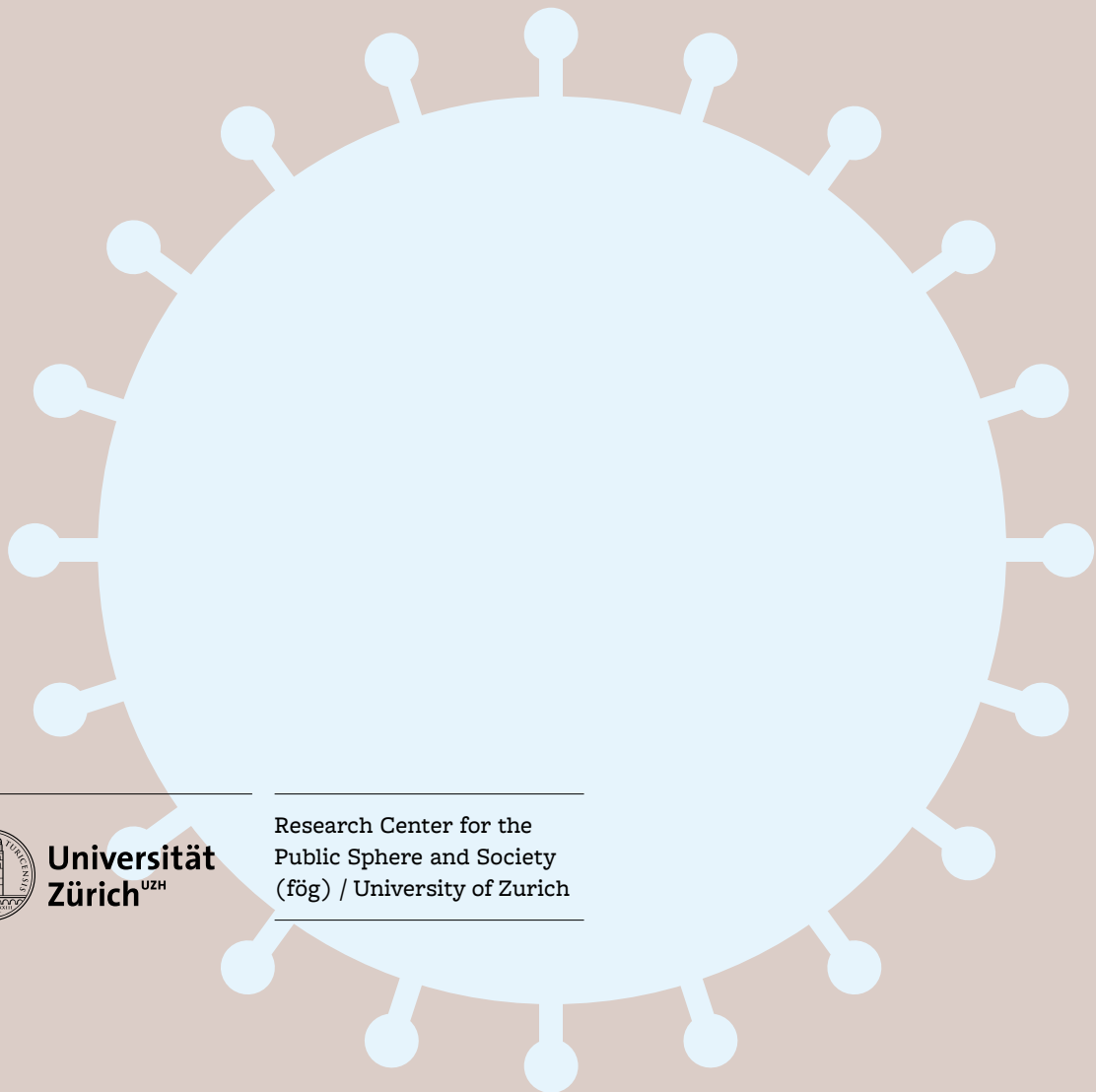# fög

*Forschungszentrum
Öffentlichkeit und Gesellschaft*

Yearbook 2021
The Quality of the Media
Study 2/2021

The quality of the media coverage
in the first and second waves
of the coronavirus pandemic

Universität Zürich UZH

Lessons learned? The quality of media coverage in the first and second waves of the coronavirus pandemic

Mark Eisenegger, Franziska Oehmer, Linards Udris, Daniel Vogler

Summary

Since the beginning of the pandemic, coronavirus reporting has been criticised for being too alarmist (or not cautionary enough), too uncritical of government action, too lacking in context in its use of figures and too one-sided in its selection of experts. The aim of this paper is to examine to what extent the criticism of coronavirus reporting expressed during the first wave (1 January 2020 to 30 April 2020) could have provided a reason to reflect on the quality of reporting during the phases with less reporting and, if necessary, to make adjustments. The study therefore analyses Swiss media coverage of the second wave (1 September 2020 to 28 February 2021) and compares it with findings on coronavirus coverage of the first wave of the pandemic. It ties in with the study on coronavirus reporting published in the 2020 Yearbook Quality of the Media (Eisenegger et al., 2020). The comparison reveals an ambivalent picture: on the one hand, journalists present coronavirus as a clear threat less frequently in the second wave (6%) than in the first wave (16%), despite considerably higher numbers of cases. In addition, they assess government action in the second wave less affirmatively (0.3%) than during the first wave (6%), thus reporting in a way characterised by distance from public authorities. Figures and statistics are increasingly contextualised (first wave: 12%, second wave: 21%). On the other hand, hardly any positive changes can be observed in the selection of experts: diversity continues to be limited. Most of the scientists featured in the media come from the medical field. Their share in the second wave is even slightly higher (83%) than in the first wave (78%). Social science and humanities disciplines are thus largely left out of reporting on the second wave. Female academics are also significantly under-represented compared to their male colleagues. Compared to the first wave (12%), however, they appear somewhat more frequently in the second wave (21%).

1 Introduction

The coronavirus pandemic set the news agenda in 2020 and 2021 like no other event in recent decades. From the outset, however, reporting was subject to criticism in German-speaking countries: with headlines such as «Journalismus in der Krise: die fünf Defizite der Corona-Berichterstattung» («Journalism in crisis: the five deficits of coronavirus reporting») (Meier & Wyss, 2020) or «Viele Zahlen, wenig Kontext?» («Lots of numbers, little context?») (Schneider, 2020), four weaknesses in particular were discussed by social and academic actors. First, some observers criticised alarmist reporting that focused on the threat posed by the virus. Others criticised journalists for having warned about the pandemic too little and not early enough. Secondly, they criticised the poorly thought-out reporting of political decisions. Measures adopted to contain the pandemic were found not to have been questioned enough in terms of their usefulness and benefits (Meier & Wyss, 2020; Silini, 2020). Thirdly, journalists were criti-

cised for limiting themselves to the mere reporting of events, while neglecting contextualisation, e.g., when dealing with figures and statistics (Brost & Pörksen, 2020). Fourthly, in the course of the pandemic, more and more critics began complaining about a one-sided focus on just a few experts, thus raising doubts about the diversity of perspectives and the balance of reporting (Jarren, 2020). The general fear was that journalism was not providing the services necessary for a functioning democracy (cf. McQuail, 1992). Yet especially in times of crisis, the media often become the most frequently used sources and are thus particularly relevant for opinion and action. The few published studies on first-wave reporting confirm some of these points of criticism: Wahl-Jorgensen (2020), for example, noted the frequent use of frightening language in English-language newspapers. Using automated content analysis, Quandt et al. (2020) found, regarding the question of distance from authority, that traditional, or «legacy», media reported less negatively than alternative media, «which may be linked to the assessment that these

were less critical or even affirmative» (Quandt et al., 2020, p. 20). And Mellado et al. (2021) identified a dominance of politicians and health experts in social media posts by media outlets in seven countries during the first wave, but an increasing diversity of actors as the pandemic progressed.

Our analysis of Swiss media coverage on the first wave of the pandemic in the first half of 2020, published in the Yearbook Quality of the Media, edition 2020, was able to show that figures were only contextualised in a few cases. Moreover, our findings made clear that the diversity of scientific experts, with a clear focus on male virologists and epidemiologists, was limited and not very diverse in this respect (cf. Eisenegger et al. 2020). However, our study was also able to make it clear that some of the criticism expressed is unjustified, at least for the first wave of the pandemic: the majority of Swiss media coverage during the first wave cannot be considered as alarmist. Only a minority of the reports, especially at the beginning of the pandemic, focused on the threat posed by coronavirus to life and limb. The accusation of reporting in favour of the government also had to be provisionally refuted on the basis of our empirical data: overall, a critical attitude towards the national government and administration predominated slightly.

The aim of this study is to analyse the quality of media coverage of the second wave of the pandemic (from 1 September 2020 to 28 February 2021) and to compare it with the findings of our study on the first wave. Because some problems were repeated in the second and third waves, the question arises as to whether journalists improve the quality of their reporting and take criticism discussed by the public as an opportunity to reflect on their own performance and adjust it if necessary. Specifically, the study is guided by the following questions along the quality dimensions of diversity, relevance and deliberation: In terms of diversity, we are interested in whether the fields from which the experts (F1) considered in the coverage come from are more diverse, and whether the call for a less one-sided consideration of mostly physicians and virologists has thus been heeded. In addition, it is ascertained whether the ratio of male to female experts in reporting on the second wave is more balanced (F2). Whether reporting in the second wave uses fewer or more alarmist narratives (F3) and threat scenarios is included in the survey under the

dimension of relevance. Furthermore, whether the government's actions and decisions are criticised or merely affirmed (F4) and to what extent, among other things, figures and statistics are contextualised (F5) are used as indicators for measuring the quality of deliberation. Finally, the extent to which the achievements and problems (F6) of journalism are discussed in reporting within the framework of a meta-journalistic discourse is of interest.

2   Method

In order to ensure the comparability of the data from the first and second waves, a largely identical, only slightly modified codebook was used. The same media were also selected for the analysis. For the manual content analysis, the coverage of 22 news media from German-speaking and French-speaking Switzerland was taken into account. On the basis of all reports with a reference to the coronavirus pandemic or COVID-19 in the title or lead, a random sample was drawn and examined:

- Online subscription: *nzz.ch* (n = 157), *tagesanzeiger.ch* (n = 165), *24heures.ch* (n = 136), *aargauerzeitung.ch* (n = 173), *bernerzeitung.ch* (n = 117), *lenouvelliste.ch* (n = 117), *letemps.ch* (n = 138)
- Tabloid/commuter paper online: *lematin.ch* (n = 132), *blick.ch* (n = 146), *20minuten.ch* (n = 131), *20minutes.ch* (n=130), *watson.ch* (n = 117), *SonntagsBlick* (n = 101), *Le Matin Dimanche* (n = 90)
- Sunday/magazine: *SonntagsZeitung* (n = 106), *Weltwoche* (n = 113), *NZZaS* (n = 113)
- Public broadcasting: *10vor10* (n = 125), *Tagesschau* (n = 137), *srf.ch* (n = 122), *Le Journal* (n = 101), rts.ch (n = 118)

A total of 2,786 reports were analysed in the manual content analysis: 1,449 for the first wave and 1,337 for the second. The reports were analysed with a manual content analysis. Four coders were involved. The values of Krippendorff's alpha are given in brackets, i.e., how well the coders agreed in the collection of this data. As part of the manual content analysis, information (field/social sphere, 0.86 and gender, 0.85) was collected on the experts whose opinions were

	1st wave			2nd wave		
	Period	Measures	Case numbers	Period	Measures	Case numbers
Total	01/01/2020– 30/04/2020 (n = 1,449)			01/09/2020– 28/02/2021 (n = 1,337)		
1st phase Increase in case numbers and first measures	01/01– 27/02/2020 (n = 154)	Before declaration of the special situation (28/02/2020)		01/09– 18/10/2020 (n = 332)	18/10/2020: Federal Council bans gatherings of >15 people; masks compulsory in all publicly accessible indoor areas/ train stations	Increase of case numbers from 01/08/2020
2nd phase Growth phase and tightening of measures	28/02– 15/03/2020 (n = 255)			19/10– 18/12/2020 (n = 512)	28/10/2020: Closure of night clubs; closing at 11:00 pm; ban on events with >50 persons	Exponential increase in case numbers from 29/09/2020
3rd phase Highest case numbers and intensification of measures	16/03– 07/04/2020 (lock-down), (n = 604)	Declaration of ex-traordinary situation (16/03/2020)	Highest number of cases: 23/03/2021: 16.94 cases/100,000 inhabitants	19/12/2020– 12/01/2021 (n = 198)	18/12/2020: Federal Council decides on closure of restau-rants and sports and cultural facilities; 13/01/2021: Federal Council decides on 2nd lockdown (including compulsory working from home and shop closures)	Highest num-ber of cases: 30/10/2010 3.77 cases/100,000 inhabitants
4th phase Lockdown with prospect of easing of measures and decrease in case numbers	08/04 – 30/04/2020 (n = 435)	Lockdown with prospect of easing of measures 29/04/2020: Federal Council decided to ease a large part of the emergency measures on 11/05/2020	Decrease in case numbers	13/01– 28/02/2021 (n = 295)	Lockdown 17/02/2021: Federal Council decision on easing of measures 01/03/2021: Easing of measures (opening of shops)	Decrease in case numbers: 28/02/2021 6.36 cases/100,000 inhabitants

Table 1: Selection and justification of periods of analysis

reported on. In addition, further characteristics of reporting such as the handling of figures (0.84) or statistics, the intensity of the threat conveyed (0.75) and criticism of the government/authority (0.74) in the report were identified. Furthermore, the extent to which the report reflected on the author's own journalistic performance, that of others or that of the media in general was recorded (0.78). For contextualisation, data was also collected on the topic of the report. The study distinguished between the topics «basic knowledge about coronavirus and the pandemic», «dealing with the pandemic', «measures to combat coronavirus/pandemic at individual (micro), organisational (meso) or overall societal level (macro)», «damage (micro, meso, macro)», «benefits (micro, meso, macro)», «assistance in coping with the consequences of coronavirus» and «exit (strategies) from lockdown and easing of measures».

To divide the study period for the first and second waves (and to create phases within the respective waves), distinct events in terms of policy measures and case numbers were used: the beginning of the study period for each wave is marked by the flat increase in the number of cases. The end is determined by the decline in the number of cases and the easing of measures decided on. Each wave was divided into four phases.

In addition to the manual content analysis, an automated content analysis was used to analyse the overall coverage and to identify the scientists in it. To analyse media attention, all media reports with a reference to the coronavirus pandemic or COVID-19 in the title or lead were identified for the period from 1 January 2020 to 30 June 2021 (n = 117,900) and for the first (n = 28,978) and second waves (n = 57,477), the two time periods examined in more detail with the manual content analyses. The volume of coronavirus reporting was shown as a proportion of the total coverage in the 34 outlets examined (cf. method description in Eisenegger et al., 2020). For the analysis
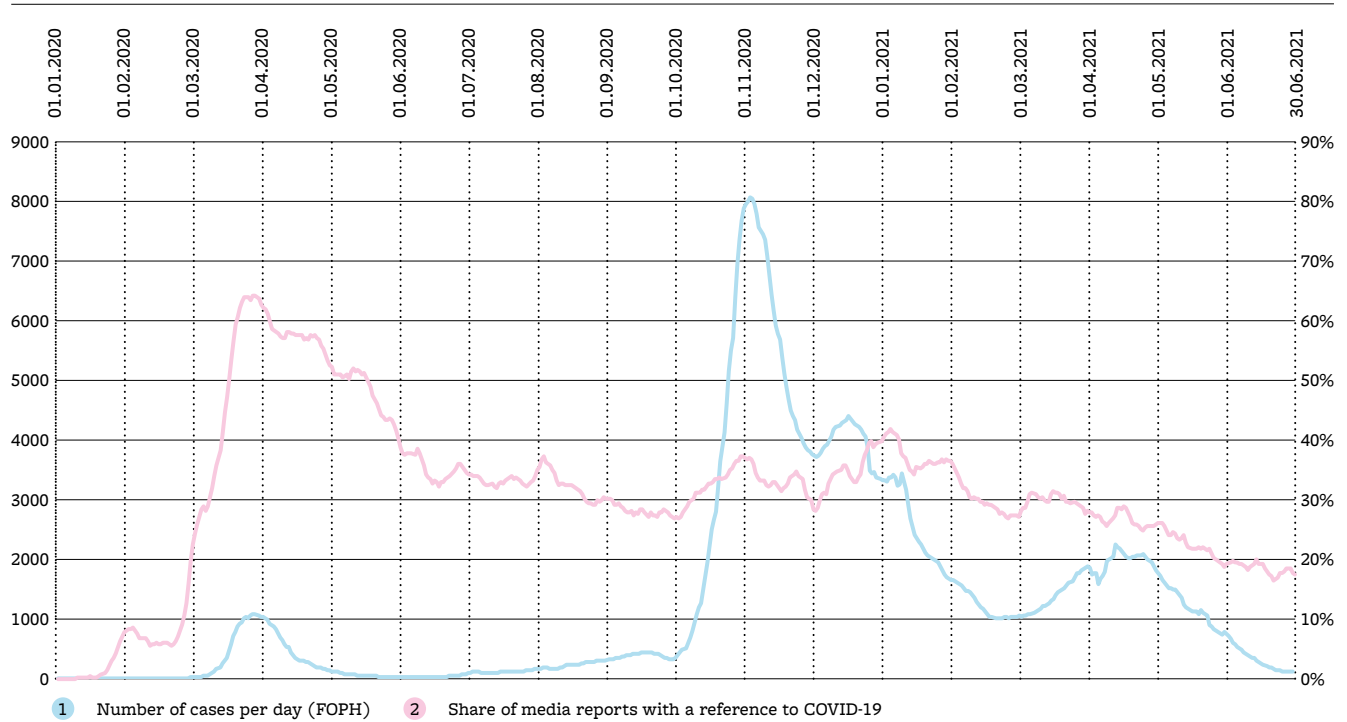
Figure 1: Media attention and case numbers in Switzerland

The figure shows the percentage of media reports with reference to COVID-19 in the total coverage (pink curve) in the media sample for the automated content analysis and the official newly reported COVID-19 cases per day in Switzerland (blue curve) (source: Federal Office of Public Health). The period from 1 January 2020 to 30 June 2021 is shown (n = 117,900). The daily data for both data series are shown as a moving seven-day average prior to each measurement point.
Reading example: October 2020 had the most new cases reported. In contrast, the most media reports on COVID-19, measured in terms of total coverage, were published in March 2020.

of the scientists, a sample of 204 scientists was identified in the texts with a reference to the coronavirus pandemic using an explorative procedure. The disciplinary affiliations (medicine, natural sciences, economics, social sciences, humanities and law) and gender of all scientists were coded. The full names of the scientists were then searched for in the media reports and recorded. The same 34 outlets were used for this as well. Only one mention per scientist was recorded per news item (no multiple mentions of the same person). Thus, a total of 6,433 mentions of scientists could be evaluated for the first wave (2,328 mentions) and for the second wave (4,105 mentions).

A total of 2,786 reports were analysed in the manual content analysis: 1,449 for the first wave and 1,337 for the second.

3   Results

Comparison with the case numbers shows that coverage of the coronavirus pandemic in Swiss media reacts sensitively to these numbers, although less strongly as the pandemic progresses (cf. Figure 1). Due to the high level of attention over the entire period, cyclical changes are not particularly evident. Reports with reference to COVID-19 account for one-third of the total coverage in the low-incidence phase in summer 2020. Accordingly, the swings in the period with the highest incidence in October and November 2020 are no longer as strong as at the beginning of the pandemic. The pandemic seems to have lost newsworthiness, despite high case numbers, if the first wave is taken as a reference. Since the begin-

ning of 2021, media attention towards COVID-19 has been steadily decreasing, despite a further increase in the number of cases during the third wave in April 2021. Unlike in the first wave, when the number of cases and media coverage ran relatively parallel to each other (cf. Eisenegger et al., 2020), a decoupling of the intensity of media coverage and the pandemic has therefore been taking place since summer 2020.

3.1   Diversity of experts and sources

The social sphere of the person whose views, demands or decisions primarily shape the overall report was recorded. A distinction was made between the following spheres, among others politics, business, medicine, sport, culture etc.: the aim was to find out which experts' voices are being heard in the reporting on the coronavirus. The manual content analysis deliberately focused on a broad understanding of experts and also took into account those actors who work outside of science and research, but who have privileged knowledge and extensive experience in their fields.

First of all, the analysis shows that the proportion of reports focusing on the view, position or even demand of an actor with perceived or attributed expert status decreased from the first to the second wave. While 83% of the reports in the first half of 2020 were based on expert opinions, this figure was only 74% in the second wave. The strong orientation towards experts at the beginning of the pandemic, which is understandable due to the complexity of the topic, thus weakened during the second wave. Journalistic self-assessments and arguments became more prominent once again.

The most frequently considered experts were mainly business representatives (entrepreneurs, trade unions etc.) (cf. Table 2). This is also reflected in the strong dominance of reports focusing on measures (first wave 9.2%; second wave 10.7% of reports) and (potential) damage (first wave 7.5%; second wave 9.9% of reports) for companies and organisations: almost every fifth report on the coronavirus crisis addresses these issues. The strong response of business actors in Swiss media coverage is striking, at least in an international comparison. A study of the social media posts of media outlets

Rank	1st wave	2nd wave
1	Business (13.6%)	Business (12.5%)
2	Foreign governments (8.1%)	Medicine/pharmaceuticals (6.9%)/science (6.9%)
3	Science (7.6%)	Foreign governments (6.6%)
Diversity index (Shannon's H)	3.66	3.61

Table 2: Share of spheres of the three most frequently considered experts in the first and second waves of the pandemic and diversity value

from seven countries, including Germany, shows a dominance of actors from politics and medicine (Mellado et al., 2021). In both the first and second waves, representatives of foreign governments also had their say, and were taken into account in the struggle for appropriate measures to combat the pandemic. The expertise of medical professionals was also of great relevance for the contextualisation and control of the disease in news coverage. Especially in the second wave, when the (long-term) consequences for individuals (in 5.9% of reports in the second wave and only 2.3% in the first wave) and the introduction of vaccines (in 9.4% of reports in the second wave and only 0.7% in the first wave) were increasingly discussed, medical expertise came into focus. Overall, no significant differences or developments can be identified in the selection of experts between the first and second waves. This is also confirmed by comparing the diversity measurements (Shannon's H) for both time periods, which are almost identical at 3.66 (first wave) and 3.61 (second wave).

It is striking that other disciplines were also marginalised in reporting in the second wave: representatives from business administration (1.1%), the social sciences (1.6%) and law (0.3%), for example, were hardly considered in spite of the relevance of their expertise in connection with coronavirus. Therefore, a central point of criticism that was articulated with regard to coverage on the first wave was obviously not addressed.

In order to empirically test the accusation of under-representation of female experts in reporting, gender was also recorded, especially for the second wave. Since no data was available for the first wave, no comparison could be made between the two analysis periods, but only a comparison with an ideal
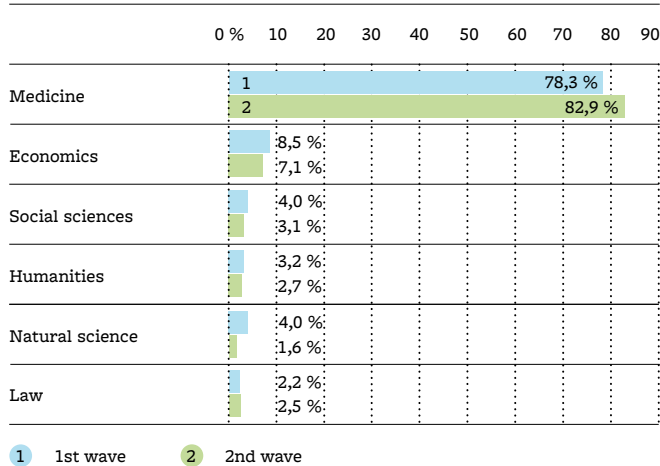
Figure 2: Shares of responses by scientists by discipline in the first and second waves of the pandemic

The figure shows the respective shares of disciplines of scientists mentioned in reporting on the coronavirus pandemic for the first and second waves (n = 6,433 mentions). Only one mention per report was recorded (no multiple mentions). The data basis consists of all reports that contained a reference to the coronavirus pandemic or COVID-19 in the title or lead (n = 86,722).
Reading example: In the first wave, 78.3% of the scientists mentioned in coverage on the coronavirus pandemic were from the field of medicine. In the second wave, this share was 82.9%.

50:50 gender distribution. As the data collected makes clear, in the second wave, only 17.7% of all reports can be attributed to female expert opinions, while 44.8%, and thus more than twice as many, are attributable to male experts. The remaining percentages indicate reports in which a collective actor (such as the FOPH or the Federal Council, 10.8%) has its say, or reports without an expert opinion (26.7%). If we look only at the media reports in which people (and not organisations) are called in as experts, the discrepancy in representation between women and men becomes even more impressive: instead of an ideal 50:50 distribution, only 28.3% of the media coverage represented women and 71.7% represented men. Consequently, women were able to express their position on coronavirus in the media significantly less often than male actors. This confirms a finding which also applies to the entirety of the media coverage. The media with the highest percentage of female experts, if only values for individuals are considered, are *Le Matin Dimanche* (39%), *Sonn-*

tagsblick (37.8%) and *bernerzeitung.ch* (37.5%). The lowest values can be found in *Weltwoche* (14.3%) and *Le Matin* (11.8%). Male voices dominated almost all topics. Only on the topic of «coronavirus therapies» were four out of seven people with expertise female. Reports that dealt with the consequences of the pandemic at the individual level also made comparatively greater use of women: 32 out of a total of 58 reports argumentatively based on individuals give women the opportunity to present their views.

3.2   Diversity of female and male scientists

Scientists contribute a special form of expertise. The mention of scientists in media coverage was investigated by means of an automated content analysis of the entire coverage of the first and second wave of the pandemic. Of the scientists recorded, 46.6% are from the medical field. 13.7% are economists, 13.7% social scientists, 12.3% natural scientists, 8.2% humanities scholars and 5.4% legal scholars. However, this distribution is not reflected 1:1 in the media coverage. Instead, there was a focus on scientists from the medical field. Scientists dealing with medical aspects of the pandemic in the broadest sense, especially epidemiologists and virologists, dominated coverage (cf. Figure 2). In the first wave, this group accounted for 78.3% of mentions. In the second wave, the figure was even somewhat higher at 82.9%. Economists are, by far, the second largest group. They accounted for 8.5% of mentions in the first wave and 7.1% in the second wave. The perspectives of social sciences (4.0% and 3.1% respectively), humanities (3.2% and 2.7% respectively), natural sciences (4.0% and 1.6% respectively, excluding virology and epidemiology) and legal sciences (2.2% and 2.5% respectively) were represented significantly less often in both pandemic waves.

Of the 205 scientists recorded, 37 were female. This corresponds to a share of 18.0%. Almost exactly the same ratio was found in the number of mentions in the media reports. The share of women was 17.6%. However, there is a relatively clear difference between the two periods studied (cf. Figure 3). During the first wave, the share of women was 12.1%; during the second wave, it was noticeably higher at 20.6%. However, the values are very low in view of the

proportion of women at Swiss universities in the field of research and development (45%) (Federal Statistical Office, 2021).

Regardless of discipline and gender, the reporting showed a focus on a relatively small number of prominent scientists. In the first wave, the ten most frequently talked about scientists were responsible for 35.4% of mentions. In the second wave, this focus was even more accentuated at 46.8% While there were no female scientists among the top 10 in the first wave, three women were among the 10 most frequently mentioned scientists in the second wave. While the diversity of scientific expertise increased in terms of gender, it did not increase in terms of disciplines. In both waves, the 10 most frequently talked about scientists were from the medical field.

3.3   Reported danger

As explained in the introduction, journalists were criticised during the first wave, among other things, for having given too little warning of the virus's danger, but also above all for being too alarmist and allegedly portraying a much more exaggerated threat than the actual danger of the situation justified. However, we have already been able to demonstrate for the first wave that the accusation of alarmism, at least, is not true for the majority of Swiss media (cf. Eisenegger et al., 2020). Our findings in this comparison show first of all that the threat to life and limb posed by coronavirus was reported on even less in the second wave than in the first: While at the beginning of the pandemic almost 30% of reports addressed the health aspects of the still comparatively new and unknown coronavirus and the pandemic, only about 20% did so in the second wave. This can be interpreted as a possible habituation effect: the dangers of coronavirus were sufficiently discussed during the first wave and the need to further inform the population decreased. In the second wave, possible long-term consequences or the effects of psychological stress were discussed using the term «long Covid». Only just under 2.5% or 1.4% of reports respectively dealt primarily with the health or psychological consequences of the pandemic. Reports with titles such as «Les Suisses dépriment, et le pire est peut-être à venir» («The
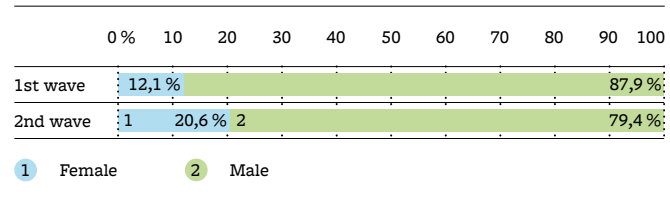

Figure 3: Shares of responses by female and male scientists in reporting on the first and second waves of the pandemic

The figure shows the respective shares of scientists mentioned in reporting on the coronavirus pandemic for the first and second wave (n = 6,433 mentions). Only one mention per report was recorded (no multiple mentions). The data basis consists of all reports that contained a reference to the coronavirus pandemic or COVID-19 in the title or lead (n = 86,722).
Reading example: In the first wave, 12.1% of the scientists mentioned in coverage of the coronavirus pandemic were women. In the second wave, their share was 20.6%.

Swiss are getting depressed and the worst may be yet to come») (*Le Matin Dimanche*, 31/01/2021) or «Psychische Probleme treten in Krisen häufig erst spät auf» («Psychological problems often emerge late in crises») (*bernerzeitung.ch*, 19/09/2020) illustrate this.

Moreover, it can be seen that reporting on dangers also decreased significantly in the second wave (cf. Figure 4). Only just under 6% of reports (thus more than 10% less compared to the first wave) focus on the danger posed by coronavirus to the physical and mental health of the Swiss populace. This is also clearly shown by a differentiated comparison of the individual phases within the two waves: in the first phase of the first wave, at the very beginning of the coronavirus pandemic (01 January to 27 February 2020), as many as 21.4% of reports were concerned with the possible physical and psychological risks of the virus for humans. In the first phase (1 September to 18 October 2020) of the second wave, this was only 7.8%. In the last reporting phase analysed (13 January to 28 February 2021), only 3.7% of reports continued to address a danger. Amidst the considerably higher infection and death rates in the second wave, this is particularly noteworthy (cf. FOPH and Figure 1). The finding is also surprising since psychological and emotional impairments are likely to have increased significantly over time as a result of the pandemic. Despite the increased death rate compared to the beginning of 2020 and the significantly increased probability of dying from COVID-19 in
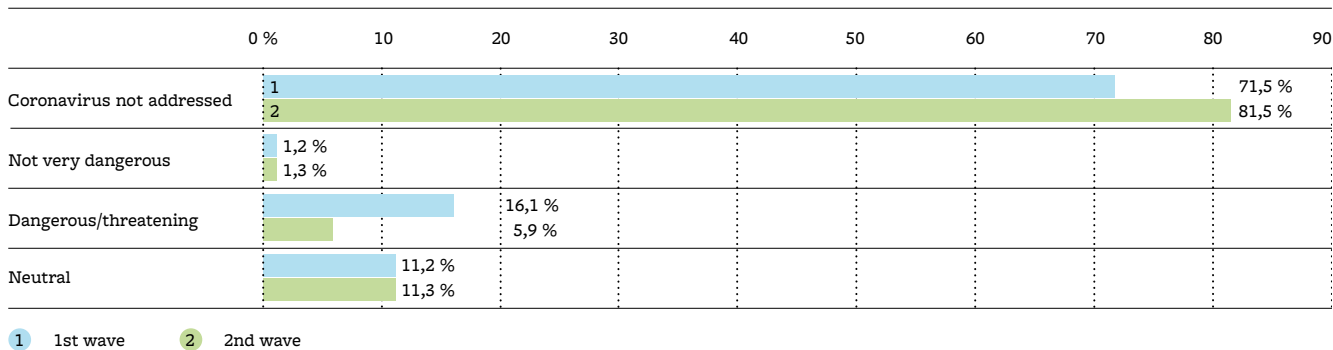
Figure 4: Reporting of danger in the first and second waves of the pandemic

The figure shows, for the first and second waves, the respective share of reports that convey a threat-generating, neutral or qualifying/reassuring picture of coronavirus and the pandemic for Switzerland. It also shows the share of reports that contain no information on the threat posed by the virus for the Swiss. The data basis consists of all reports that were examined with a manual content analysis (n = 2,786). The results are significant ($\chi2$ [4] = 31.97, p<0.001).
Reading example: 5.9% of the reports published in the second wave contained threat-related information on the danger of the virus for Switzerland.

Switzerland, news coverage presented it as less of a threat. Firstly, a habituation effect may be considered as the cause of this as well. Secondly, however, this can also be seen as an indication that the journalists did not want to be accused of alarmism again, like during the first wave, and therefore reported more cautiously about possible health consequences. A critical question would therefore be to what extent journalists may have only insufficiently fulfilled their duty to warn the population during a crisis. This is particularly true for psychological and emotional consequences, which obviously played only a very marginal role in reporting.

3.4   Distance from government and public authorities

A central criticism of the coverage of the first wave was that journalists were too uncritical of the government and public authorities and the measures they had imposed or enforced to contain the spread of coronavirus, i.e. they were accused of reporting in favour of the government. However, our study on the first wave has already shown that this accusation was not, or only very weakly, supported by the empirical evidence. It was only true for the phase immediately before the first lockdown and even then only partially

(Eisenegger et al., 2020). In order to investigate this point further, the second wave was also surveyed to determine whether the media reported on the Swiss government and administration in a supportive, critical or neutral manner. In doing so, it was recorded whether negative or positive value judgements on (adopted) measures could be found in the reporting (government criticism vs. government support) and whether the measures were assessed as too strict, too restrained or sufficiently strict and sufficiently restrained.

A look at the data shows first of all that in the second wave, throughout coronavirus coverage, there was somewhat less focus on the Swiss government and public authorities (22%), than in the first wave (26.4%) (cf. Figure 5). At 6.5% and 6.4% respectively, the share of critical judgements of the government remained almost identical between the first and second waves, i.e. there is no evidence of an increasingly negative attitude towards political decision-makers. But in the second wave, at 2.8%, compared to 1.3% in the first wave, the measures are more often judged as too strict and affirmative positioning towards policy also decreased significantly: while in the first wave around 6% of the reports were explicitly supportive, in the second wave this figure was only 0.3%. Although no more criticism is to be found in the reporting, the media seem to be much
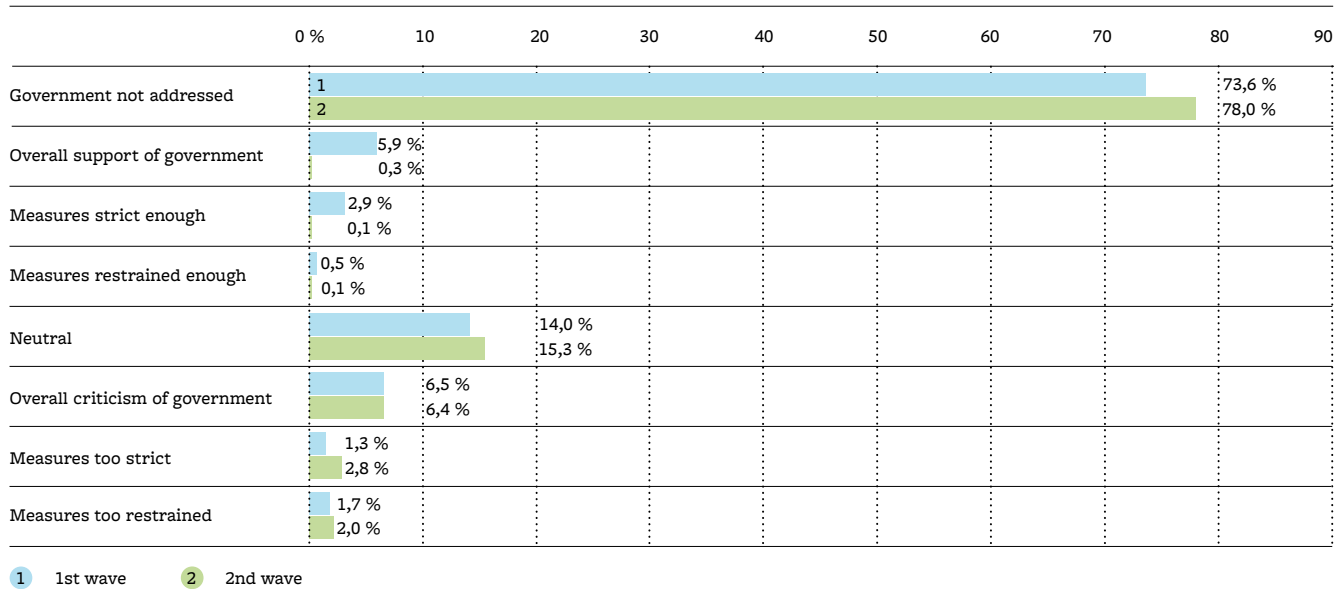
Figure 5: Criticism of government and public authorities in the first and second waves of the pandemic

The figure shows, for the first and second waves, the respective share of reports in which a supportive, critical or ambivalent/neutral image is conveyed towards the national government and the national authorities. It also shows the share of reports in which the national government and the national authorities are not at least discussed in detail. The data basis consists of all reports that were examined with a manual content analysis (n = 2,786). The results are significant ($\chi 2$ [7] = 84.90, p<0.001).
Reading example: 6.5% of the reports published in the first wave convey an image critical of government and public authorities.

more restrained, at least with words of praise. This can be interpreted as an effort on the part of the journalists not to expose themselves to the accusation of reporting in favour of the government.

3.5   Handling of figures and contextualisation

Figures and statistics dominated reporting on coronavirus. Around one in four reports dealt with them as their main topic: for example, case numbers on the spread of the virus or key economic figures (Figure 6). Clear differences can be seen between the two reporting periods: during the second wave (between September 2020 and February 2021), figures and statistics were not only simply presented, but, at 21%, were explained and contextualised significantly more often than in the first wave (12.4%). For instance, reports made clear what positivity rate and incidence value mean, what is behind this data and

how meaningful it is. This is particularly necessary in times of crisis, so that people can better contextualise and, if necessary, weight figures and statistics associated with a high level of (ascribed) objectivity.

For example, a high infection rate can be interpreted both as an increase in the spread of the virus and as the result of increased testing capacity. The increased contextualisation of figures in the second wave can be seen as an indication that the criticism during the first phase that coronavirus reporting was too lacking in context was taken into account in the second wave. During the second wave, the highest percentage in the use of contextualised figures and statistics was recorded by the news programmes of SRF and RTS, i.e. Le Journal (29.3%, and thus significantly higher than during the first wave: 7%), *Tagesschau* (29.7%, first wave: 28.8%) and *10vor10* (28.8%), in addition to *SonntagsZeitung* (36.2%, first wave 8.5%) and the French-speaking Swiss subscription newspaper *Le Temps* (30.0%, first wave 25.6%). The subscription newspaper *NZZ* contextualised figures
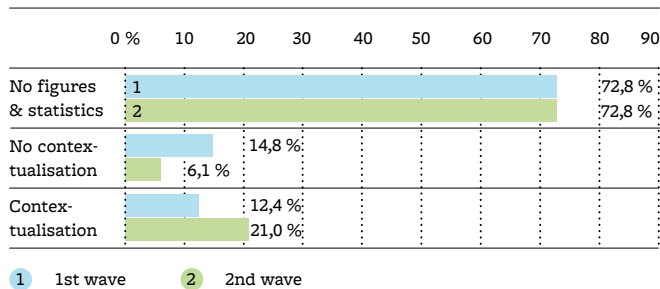
Figure 6: Use of figures and statistics

The figure shows, for the first and second waves of the pandemic, the respective share of reports in which figures and statistics play a prominent role and are or are not contextualised. It also shows the share of reports in which figures and statistics do not play a prominent role. The data basis consists of all reports that were examined with a manual content analysis (n = 2,786). The results are significant ($\chi2$ [3] = 80.43, p<0.001).
Reading example: 14.8% of the reports published in the second wave focus on numbers and statistics and contextualise them.

and statistics even less frequently during the second wave than at the beginning of the pandemic (5.8%, first wave 11.5%).

Increased contextualisation can also be seen in the higher use of contextualising formats compared to the first wave, with a high share of work and research done by journalists themselves, as is evident in interpretive reports. While in the first phase, 5.7% of the reports that focused on coronavirus could be considered as following this format, during the second wave it was 6.7%. In both waves of reporting, however, at 78.3% (first wave) and 77.9% (second wave), a very high share of purely informational contributions can be discerned, which can be characterised above all by the mere transmission of news with little or no contextualisation.

3.6   Meta-journalistic discourse

In some areas, reporting changed from the first to the second wave. It is at least possible that journalists took the criticism of the coronavirus coverage publicly expressed in the first wave as an opportunity to improve their own journalistic performance. In any case, an explicit discussion in the form of media criticism (including self-criticism) would be important to allow

users to understand the reasons why coverage of the dominant topic of coronavirus has (not) changed. In order to obtain more explicit indications of the journalists' possible self-reflexivity, this analysis recorded whether the reports contained positive, negative or neutral statements about the role of journalism (or the journalists' *own* role) and the media and the services rendered during the coverage of coronavirus as part of a «meta-journalistic discourse».

However, as the results make clear, hardly any explicit, self-reflexive meta-reporting took place during the coverage of coronavirus. Self-reflexive and self-critical statements about the journalistic performance of Swiss media in connection with the coronavirus crisis can be found in only 1.5% of all 2,786 articles examined in both waves of reporting. At least in the media and by the media, this did not stimulate a discourse on the opportunities, challenges and the role of journalism in times of crisis.

A closer look shows that during the first wave (and especially in the third phase shortly before the lockdown) both positive and neutral statements can be found about the media's own performance. In particular, they referred to the commitment of journalists who were able to perform at the highest level despite adverse working conditions. The twelve reports in the second wave that contained a certain amount of media criticism were all negative. Of these, six were published in *Weltwoche* alone, which thus proved to be particularly critical. However, the criticism expressed was mostly not directed at its own reporting, but referred to other media companies or journalism as a whole. Overall, journalists' capacity for public self-reflexivity during the coronavirus crisis must be considered deficient.

4   Conclusion

Especially in times of crisis, journalistic media step forward to become the most important sources of information. The positions, arguments and recommendations they convey have a special impact on the public and individual opinion-forming and will-forming process. Journalistic performance therefore also becomes the focus of critical observation and evaluation: Right from the beginning of the pandemic, reporting has been criticised as being too one-sided

with regard to the selection of experts, too alarmist (or not alarming enough), too uncritical of government action and too lacking in context when dealing with figures. Our study on the first wave was able to empirically support some of this criticism (e.g. the criticism of the low diversity of experts or the lack of context in the use of figures); however, other points of criticism seem rather unfounded on the basis of our data (e.g. the accusation of alarmism or government proximity, cf. Eisenegger et al., 2020). The aim of this study was to examine whether the quality of the media improved in the course of the coronavirus pandemic. This was considered partly because journalists at least had the opportunity to reflect on the criticism of coronavirus coverage in the first wave and, if necessary, make adjustments in their coverage of the second wave.

Our findings show an ambivalent picture. Some points have changed; others have not. In the second wave, the following changes stood out:

- Alarmism/level of threat: The reporting showed significantly less alarmist characteristics, despite a significant increase in the number of infected persons and deaths in the second wave. However, this certainly needs to be discussed critically with regard to journalists' duty to warn the population in times of crisis.
- Distance from public authority: The government and the national authorities were not criticised more frequently during the second wave, but they were portrayed significantly less often in a predominantly positive light.
- Handling of figures/statistics and contextualisation: Figures and statistics were contextualised significantly more often during the second wave of reporting. The share of contextualising interpretive reports also increased slightly.

It is quite possible that these changes reflect a reaction to the earlier criticism. However, such an interpretation is not backed up by public self-reflection on the part of journalists. That means that even though journalists may have consciously changed their reporting, they did not do so transparently and did not discuss it.

Several aspects of reporting remained the same in the second wave: business and political actors were still able to contribute their views to news coverage, albeit representatives of other social spheres were also mentioned. However, as both the manual content analysis of the expert opinions in reports and the automated detailed analysis of the scientists mentioned made clear, the diversity of opinions from science and research continued to be limited. The expertise of social science, economics or even humanities disciplines was also less in demand in reporting during the second wave. This remains surprising given the many different areas of life affected by the coronavirus pandemic and thus requiring a wide variety of expertise. The ratio of female and male expert opinions also continues to be in need of improvement, even though female scientists at least received more attention in the second wave than in the first. Journalists also failed to fulfil their early warning function, for example in connection with the psychological and emotional consequences of the pandemic. Our study on the change in the quality of reporting thus arrives at an ambivalent overall result. When explaining the changes observed, it must be noted that other factors (aside from reflection on the criticism voiced) also need to be considered as causes: for example, intra-editorial processes of change or the differing situation between the first and second waves may have been decisive. To verify this, further analysis is needed, such as surveys or expert interviews with journalists and media executives, to ask about the objectives, achievements and challenges of reporting on coronavirus.

Bibliography

Federal Office of Public Health FOPH (ed.). Bericht Todesfälle im Zusammenhang mit COVID-19 in der Schweiz und im internationalen Vergleich (data from: February 2021). https://www.bag.admin.ch/bag/de/home/krankheiten/ausbrueche-epidemien-pandemien/aktuelle-ausbrueche-epidemien/novel-cov/situation-schweiz-und-international.html#2030838475

Federal Statistical Office FSO (2021). Frauen und Wissenschaft. https://www.bfs.admin.ch/bfs/de/home/statistiken/bildung-wissenschaft/technologie/indikatorsystem/zugang-indikatoren/w-t-input/frauen-und-wissenschaft.html

Brost, M. & Pörksen, B. (2020). Angesteckt. Warum der Journalismus in der Corona-Krise besonders gebraucht wird – und vor welchen Problemen er steht. DIE ZEIT 16/2020. https://www.zeit.de/2020/16/coronavirus-berichterstattung-journalismus-information

Eisenegger, M., Oehmer, F., Udris, L. & Vogler, D. (2020). Die Qualität der Medienberichterstattung zur Corona-Pandemie. In fög – Forschungszentrum Öffentlichkeit und Gesellschaft (ed.), Jahrbuch Qualität der Medien. Schweiz – Suisse – Svizzera (p. 29–50). Schwabe. http://www.foeg.uzh.ch/dam/jcr:ad278037-fa75-4eea-a674-7e5ae5ad9c78/Studie_01_2020.pdf

Jarren, O. (3.6.2020). Die Corona-Pandemie ist eine besondere Krise. Higgs. https://www.higgs.ch/die-corona-pandemie-ist-eine-besondere-krise/33283/.

McQuail, D. (1992). Media performance. Mass communication and the public interest. Sage Publications.

Meier, K. & Wyss, V. (2020). Journalismus in der Krise: die fünf Defizite der Corona-Berichterstattung. Meedia. https://meedia.de/2020/04/09/journalismus-in-der-krise-die-fuenf-defizite-der-corona-berichterstattung/

Mellado, C., Hallin, D., Cárcamo, L., Alfaro, R., Jackson, D., Humanes, M. L., Márquez-Ramírez, M., Mick, J., Mothes, C., Lin, C. I.-H., Lee, M., Alfaro, A., Isbej, J. & Ramos, A. (2021). Sourcing pandemic news. A cross-national computational analysis of mainstream media coverage of Covid-19 on *Facebook*, *Twitter*, and *Instagram*. Digital Journalism. https://doi.org/10.1080/21670811.2021.1942114

Quandt, T., Boberg, S., Schatto-Eckrodt, T. & Frischlich, L. (2020). Pandemic News. Facebook Pages of Mainstream News Media and the Coronavirus Crisis. A Computational Content Analysis. arXiV. https://arxiv.org/pdf/2005.13290.pdf

Schneider, A. (2020). Viele Zahlen, wenig Kontext? Deutschlandfunk. https://www.deutschlandfunk.de/corona-berichterstattung-viele-zahlen-wenig-kontext.2907.de.html?dram:article_id=485461

Silini, A. (2020). Comment les médias suisses ont-ils couvert la crise du coronavirus? European Journalism Observatory. https://fr.ejo.ch/formats-pratiques/comment-medias-suisses-couvert-crise-coronavirus-covid-19-presse

Wahl-Jorgensen, K. (2020). Coronavirus: how media coverage of epidemics often stokes fear and panic. The Conversation. https://theconversation.com/coronavirus-how-media-coverage-of-epidemics-often-stokes-fear-and-panic-131844