# MAKING SENSE OF THE COVID-19 PANDEMIC

## AN ANALYSIS OF THE DYNAMICS OF CITIZEN SENSEMAKING PRACTICES ACROSS EUROPE


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VIRGIL RERIMASSIE, TESSA ROEDEMA, LISA AUGUSTIJN,
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# EXECUTIVE SUMMARY

## MAKING SENSE OF THE COVID-19 PANDEMIC – AN ANALYSIS OF THE DYNAMICS OF CITIZEN SENSEMAKING PRACTICES ACROSS EUROPE

Marking the beginning of 2021, humanity is facing difficult times, as the COVID-19 crisis continues to impact societies all over the globe. The pandemic has been difficult to manage as well as to endure as it is continuously surrounded by complexity and uncertainty and moreover involves fundamental medical, political, societal, economic, and ethical issues. Currently, governments try to navigate nations through the pandemic to the best of their knowledge and capabilities. At the same time, numerous media and other actors are continuously reporting on COVID-19, often highlighting widely differing viewpoints.

This situation raises difficult questions for citizens: which information is true, flawed or even false? Which actors can I trust to determine what is true? Will containment measures be effective, and are such measures proportional and legitimate? Indeed, the prevailing complexity and uncertainty of the COVID-19 crisis make it extremely challenging for citizens to come to terms with this new reality. The COVID-19 crisis thus unveils not only the interdependency of society, politics, and science, but also the need to foster the relationship between them to address complex societal challenges, such as the current pandemic, successfully.

## 1. EXPLORING THE SENSEMAKING PRACTICES OF EUROPEAN CITIZENS

The aim of this report is to explore how European citizens make sense of the COVID-19 pandemic. In order to do so, we conducted 81 in-depth interviews with citizens, during the first wave of the pandemic. Participants came from eight European countries: Germany, Italy, the Netherlands, Poland, Portugal, Serbia, Sweden and the United Kingdom. Following the Sensemaking Methodology (SMM) developed by Dervin (2008), during these interviews we explored how citizens made sense of so-called micro-moments: specific moments in which they stumbled upon questions and uncertainties relating to the pandemic.

Our intention is not primarily to assess how science communicators or governments should communicate about the coronavirus or containment measures. We rather view the pandemic as an opportunity to learn about the challenges that occur at the science-society interface and what this means for science communication. Accordingly, our goal is to show the diversity of mechanisms that play a



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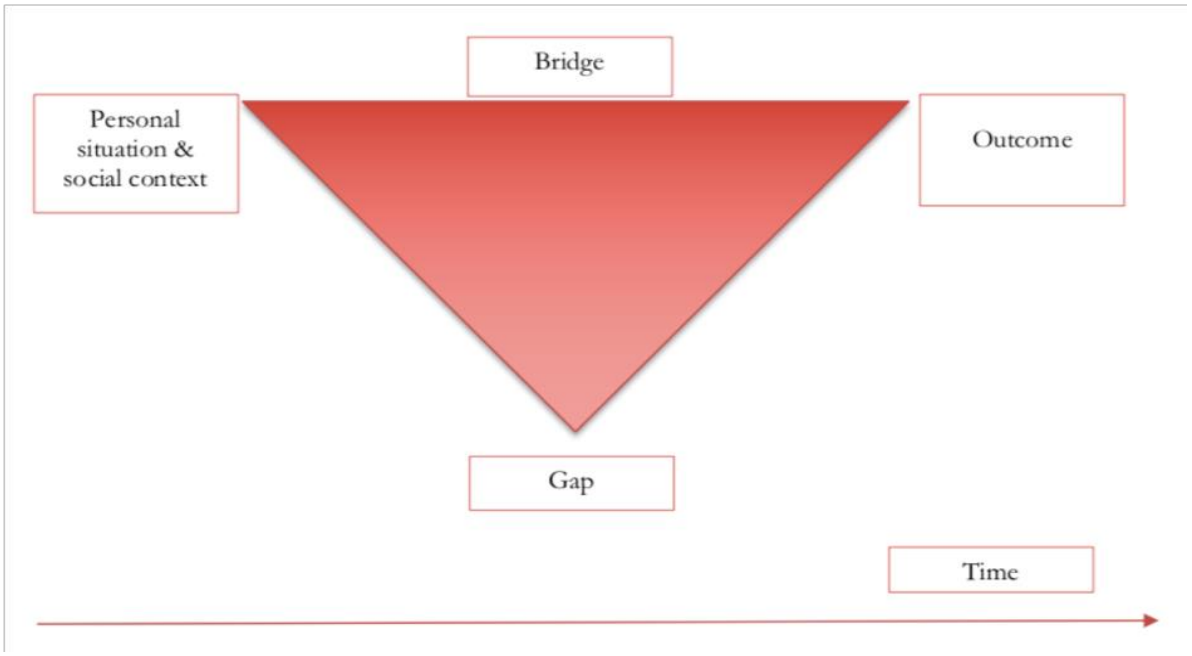
role in citizen sensemaking practices, related to an issue where the connections between science and society have been brought into sharp view. Our assumption is that a better understanding of sensemaking practices will enable the formulation of science communication strategies tailored to various sensemaking styles and local contexts and communities, with the overarching aim to contribute to a constructive public dialogue on science.

## 2. SENSEMAKING METHODOLOGY

Both for informing our interviews and analysis of the results we drew from the SMM (Dervin 1998). The central assumption in the SMM is that information is regarded as 'never complete', implying that people are always in a process of finding a way to accommodate diversity, complexity and incompleteness in information. Against this backdrop, the SMM is built around the idea that when individuals are confronted with a complex, ambiguous issue relating to science, they are facing a gap. Sensemaking takes place at this gap, by means of using and rejecting information and knowledge. In facing this gap, individuals can draw from certain sources and relevances to evaluate how different sources serve or impede the sensemaking practice. In order to overcome the faced gap, bridges need to be established. Through time people build bridges over these gaps, while using various sources of information and appointed relevances, by engaging in other activities – and as such not with a blank sheet but rather informed by their personal situation and societal context. Eventually, this leads to an outcome in which a momentary understanding of this particular issue was formulated based on a particular set of bridging elements in relation to the situation and context (Ibid.). A schematic depiction of the SMM framework we used, is found below:



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## 3. KEY OBSERVATIONS

Taking stock from the total of results share the following key observations:

### *I. PERSONAL SITUATION: DECISIVE FACTOR IN SENSEMAKING*

First of all, our analysis shows that one's personal situation is one of the most important factors in the sensemaking practices we examined: to a large extent it shapes the gaps the participants perceived, the bridging strategies they used and the outcomes they reached. For the practice of science communication, it is a sobering insight that, when looking at our results, elements that make up one's personal situation often outweigh information and insights provided by science communicators.

Looking at the themes that emerged, first of all, closeness to COVID-19 is evidently of great significance. If participants fell ill with the disease themselves, or witnessed others in their local environment getting sick (such as Italian participants that saw the immense impact of the coronavirus in their country early during the pandemic), this made a fundamental impact on their understanding of the pandemic. Secondly, the (perceived) vulnerability of ourselves and loved ones to coronavirus was important, e.g. many participants expressed concerns due to pre-existing health conditions. Furthermore, one's professional occupation (or more broadly, one's developmental path) is crucial. Participants that have experience in the health care sector took the pandemic very seriously from the outset, either due to personal experiences with COVID-19 patients, or their perspective and respect regarding healthcare workers. When looking at other examples, we continue to see such connections. For instance, a civil servant of an employment agency was particularly worried about the unemployment that may result from drastic containment measures, and therefore also gauged such measures from this perspective. Lastly, the participants' circle of friends and family carries great weight, meaning that if we have - or do not have - a family member that for instance works in the healthcare sector, this will impact our sensemaking practices.

### *II. GAPS: UNCERTAINTIES AND AMBIGUITIES*

Two types of gaps the participants perceived were identified: fundamental uncertainties and ambiguities. Starting with the uncertainties, participants evidently had numerous questions about the nature, characteristics and origin of the virus. How does it transfer? How harmful is it? How did it originate and what impact will it eventually have? Some even wondered whether it was human-made and what the intentions of its creation were. Uncertainties were also experienced regarding effective prevention, both on a personal and policy level, e.g. concerning the contested effectiveness of masks.



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Next to uncertainties, most participants experienced fundamental ambiguities, related to doubts and worries about the appropriate response to the pandemic, notably from the government. Many participants raised concerns about the proportionality of containment measures for instance, in relation to their potential economic damage and the negative impact on societal wellbeing. Relatedly, in varying degrees, several participants questioned the legitimacy of the measures, i.e. to what extent governmental restrictions of freedoms of citizens are justified. Some outspokenly worried whether the imposed measures were in fact misused by their respective government to gain more power and control over their citizens.

### *III. Emergence of gaps: overwhelming information and contradictions*

When considering sources of gaps, first (the abundance of) information, and changing and contradicting information and policies are important. For science communication it is relevant that, given the uncertainties concerning the pandemic, participants are continuously confronted with new information that - in turn - often raises new questions. Furthermore, participants found contradictory information one of the most frustrating issues when trying to make sense of the pandemic. In this context some participants even expressed feeling angry with science being unable to provide the certainty they were hoping for. This was amplified when policy changes were based on (perceived) uncertain scientific insights, while such uncertainty was often perceived by participants to be masked by governments. In this light, we believe that transparency and openness about uncertainties are in the end, most fruitful for a constructive science-society relationship

Next, interaction with others was another source of gaps. This either entailed direct personal contacts but also observing the behaviour and choices of others. Such interactions often revealed gaps relating to what level of cautious behaviour is warranted. Some participants would for instance, find giving others a hug unproblematic, while others would consider this as irresponsible and potentially dangerous. Less directly, related gaps also emerged through observing the behaviour of others in public, such as witnessing fellow citizens paying little attention to social distancing or the advice to wear masks. Such interaction with others effectively reveals different sensemaking practices of citizens, which in turn may cause citizens to question their own sensemaking practices.

### *IV. Overcoming gaps: a plethora of bridges*

Looking at the bridges that the participants used, we first saw that participants uphold different a priori beliefs and ideas about institutions, in short, different worldviews, relating to e.g. society, government, experts and the media. Two ends of a spectrum became apparent. On the one end, a large cluster trusts



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the aforementioned institutions and therefore is prone to trust and follow authoritative advice and policy. On the other end of the spectrum a cluster of participants had very sceptical ideas and beliefs about the government, experts and the media. At the extreme of this end, many believed that the pandemic and containment measures were misused by their governments to exert power and control over the public and experts and the media were seen as a pawn in a grander scheme.

Furthermore, many participants evidently made use of information to bridge gaps. In most cases this was 'passively received' information (e.g. through television or social media). In some cases, participants actively looked up information in relation to the gaps they were facing. However, direct reference to dedicated science communication outlets were limited.

Last, emotions played a very important role. The results make clear that citizens experience a multitude of (mostly negative) emotions regarding the pandemic, e.g. anxiety, anger and frustration, which play a fundamental role in reaching certain outcomes. Anxiety for instance strengthened cautious behaviour and anger and frustration fed into views about how the authorities are dealing with the pandemic. However, occasionally participants explicitly referred to positive emotions, such as feelings of pride and resilience, that provided grip in making the situation manageable.

### *V. Sources and relevances: trust & perspectives of family and friends*

Looking at sources and relevances, we first note that a large number of participants demonstrated *a priori* trust towards institutions that play a big role in the pandemic, while others distrusted such institutions from the outset. This directly influenced their assessment of the reliability of information that these institutions produce, as well as their actions. If we look at gaps relating to the legitimacy of governmental containment measures, the participants that had the bleakest assessments of the intentions of government, already had a very sceptical view of the government. Furthermore, the perspectives and experiences of family and friends are a crucial element in individual sensemaking practices. Most participants assigned great weight to the ideas, needs and experiences of their inner circle. On many occasions participants explicitly referred to their inner circle, while science communication information outlets were not explicitly mentioned by them.

### *VI. Outcomes: viewpoints, actions & decisions*

The outcomes reached by the participants can be categorized in two overarching categories: reaching and reinforcing certain viewpoints in relation to gaps and second, guiding certain actions and decisions.



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The citizens we interviewed ran into fundamental uncertainties relating to the pandemic. Generally speaking, participants formulated an understanding of symptoms of COVID-19 and how the virus spreads. Participants recognized the danger of the coronavirus and realized that the pandemic would have an enormous impact on society. The majority of participants therefore took the crisis very seriously and accordingly concluded that a governmental response is needed. At the same time, the participants also concluded that containment measures will probably have (potentially drastic) negative impacts, e.g. for the economy.

Against this backdrop, participants experienced many ambiguities regarding these measures, which can be summarized as 'asking whether the cure is worse than the disease'. On the one hand, most participants seemed to trust the government and health authorities in their policies and advice. On the other hand, participants who already upheld a sceptical view towards governmental and health authorities found that the measures taken were illegitimate and disproportional. At the extreme end of this spectrum, some participants concluded that citizens were being manipulated and the pandemic was used by politicians as a ploy to gain more power and control over their citizens. Some participants even concluded that corona was man-made with a purpose.

Furthermore, participants adopted certain behaviour and made decisions in response to the gaps they faced. Overall, participants adopted prudent behaviour, often practically operationalized by not visiting loved ones– and cancelling get-togethers. Most participants indicated that they respected and behaved according to the advice of relevant authorities.

### *VII. Making sense of the COVID-19 pandemic: dynamic and stressful*

Sensemaking is a dynamic and continuous process and making sense of the COVID-19 pandemic emotional and tiring. In this light, we observed the importance of finding relief and acceptance in sensemaking practices, while stress and fatigue are important hindrances. Most participants want to be assured that a certain understanding they adopted is indeed correct, or that a certain behaviour or decision is indeed responsible. This particularly applies to gaps that relate to our personal needs: given the precautionary measures I have taken; can I now safely visit my parents? Can I give them a hug, even though the rules forbid it? Indeed, to paraphrase a participant, in addressing such fundamental questions, many participants resort to 'emotional analysis over purely rational analysis'.

Yet, in spite of the relief many participants sought, participants mostly reached outcomes that affirmed the stressful nature of the pandemic. In response, some participants indicated that they were looking to accept the grim nature of the situation. Furthermore, notably relevant for the practice of science



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communication, multiple participants indicated that they stopped following news on the pandemic or stopped looking up information about this, because it had become too stressful and tiring.

## 4. Learning opportunities for science communication

Scholars have raised the concern of adopting a rather monolithic perspective wherein interactions with widely diverse (online) audiences are placed under the same umbrella term of public engagement with science – and with less attention to individual differences (Stilgoe, Lock, & Wilsdon, 2014). In this study, we have tried to address these valuable critiques, and aspired to shed a light on the various, continuous and dynamic ways in which citizens make sense of science. One apparent notion of this study is that personal situations, emotions and worldviews heavily inform sensemaking practices of citizens on science. In fact, if we would ignore larger and mainstream news outlets, participants only rarely explicitly refer to science communication channels as crucial elements in their bridging strategies. This is a rather sobering insight for the practice of science communication. However, a valuable learning opportunity for science communication is that a micro-empirical approach is needed to open-up and connect to the precise processes in which sense of science is formed by citizens.

Such science communication practices are necessarily focused on addressing underlying perspectives, worldviews and uncertainties that lay to the basis of the sensemaking practices of citizens. In other words, opening-up sensemaking practices would help science communicators to establish meaningful interactions - an interaction wherein mutual trust and understanding is facilitated. Therefore, we suggest that science communicators in the future develop reflective practices (Roedema, Kupper & Broerse, forthcoming). In such a practice, science communicators could explore the sensemaking practices that they encounter in their audience, and at the same time reflect on their own actions and approach in reaching-out to these audiences (Roedema et al., forthcoming; Schön, 1983). This might be especially important in online interactions, for differing opinions and worldviews have become more numerous and explicit there. The RETHINK project aspires to develop guidelines, workshops and strategies that enable science communication practitioners to open-up and enhance reflexivity in sensemaking practices on science.



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# CHAPTER 1: INTRODUCTION

Different but interrelated trends lay to the basis of the RETHINK project: *opening-up of science to society* and *digitalization* (Roedema, Rerimassie & Kupper, 2020). Firstly, boundaries between science and society are blurring (Nowotny, Scott, & Gibbons, 2001). For example, citizens increasingly interact with science via (digital) interfaces, which induces conversations not only on the scientific information or facts but also concerning the social and cultural implications of scientific and technological development. Furthermore, the interactions and interfaces between science and other fields in society such as economics, politics, art and culture have become more numerous and diverse. The range of actors involved in public discussions relating to science also increases; which implies that the range of issues that is – or should be – discussed also increases. In public discussions on science, which involve a wide range of stakeholders, scientific knowledge is only one of the ingredients. Discussions on 'facts', i.e. on what is considered true or not, are always influenced by the values, ideologies and interests of the specific actor (Jasanoff, 2007). Evidently, this has made public discussions on science ever more complex.

The second trend, *digitalization,* only amplifies this complexity. Consider for example the sometimes-harsh discussions on the COVID-19 pandemic on social media, that involves many different stakeholders and individuals with wide-ranging perspectives on the crisis. Indeed, next to all of the benefits of the internet and social media, for example the possibilities of increased interaction of audiences with science, there are also serious risks and challenges. First of all, online we may be confronted with an overload of information that additionally, can be inaccurate, incomplete or even biased – for science journalists are no longer the gatekeepers of the information that is presented online (Trench, 2007, p.141). Moreover, new players have emerged that both receive, spread *and* generate information online. Earlier work in the RETHINK project has revealed the roles and repertoires of old and new professional science communicators online, as well as the audiences they seek to reach (Milani, Ridgway, Weitkamp, & Wilkinson, 2020a and 2020b) and the (dis)incentive structures that surround scientists that engage with publics online (Roedema, Rerimassie & Kupper, 2020).

The research presented here provides a further exploration of the interactions between science, the science communication ecosystem and society – and specifically by focusing on the sensemaking practices of citizens on science. The aim of the RETHINK project is to better understand these dynamics and consider *how science communication can contribute to a better science-society relationship*. In order to achieve this, and in the light of the aforementioned trends, we need to better understand *how people make sense* of complex problems relating to science. Our assumption is that a better



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understanding of sensemaking practices of citizens will enable us to formulate different science communication strategies, tailored to different sensemaking styles.

Sensemaking is the process through which we create an understanding about a complex reality (Weick, 1995; Dervin, 1998). In this deliverable, we take the COVID-19 pandemic as a case to illustrate complex realities wherein citizens need to make sense of science. The COVID-19 crisis not only demands knowledge of scientists from various scientific disciplines such as public health, virology or epidemiology, but also requires an approach that focuses on social, economic, political, cultural and ethical dimensions (Sinatra, Kienhues, & Hofer, 2014). Moreover, public discussions on the COVID-19 crisis include difficult questions such as "who do we want to give access to emergency care first?", "do face masks sufficiently protect against the spreading of the virus?" and "should our public spaces be reopened to prevent an economic crisis, knowing there is a trade-off with safeguarding a nation's public health?". Online, an overload of information is presented on COVID-19 research – not only by scientists and other R&D researchers, but also by citizens themselves. Hence, the current COVID-19 pandemic illustrates a highly complex and uncertain situation, wherein a spotlight is placed on the collective and individual sensemaking practices citizens on science related to the COVID-19 crisis.

In the current science communication ecosystem, this complexity is illustrated by the previously mentioned trends of digitalization and science opening-up to society. For example, the rather direct form of interaction between a wide-range of stakeholders and individuals on scientific topics online, for example on Twitter, has made it more explicit that public understanding of and conversations on science are a blend of worldviews, facts, opinions, ideologies, culture and politics. Moreover, the audiences that actually interact in public discussions on science and the way in which they perceive scientific information differs tremendously (Schäfer, Füchslin, Metag, Kristiansen & Rauchfleisch, 2018; Ryghaug, Sørensen & Næs, 2011). Moreover, Reinhard & Dervin (2011) state that information is not only interpreted from a purely scientific, rational or factual perspective, but also accordingly to an individual's contextual knowledge and experiences, and emotions, culture, values and worldviews (Reinhard & Dervin, 2011). This illustrates that engagement with science is context specific and that the understanding of science and its implications differs in various contexts and communities (Feinstein, Allen, & Jenkins, 2013). Yet, due to the fragmentation of the media landscape the public often reads and watches information about science from sources where the traditional media's editorial oversight and fact checking are lacking (Trench, 2008).

The RETHINK project aims to contribute to a constructive, open and reflexive societal discussion on science. This research lays a basis for the subsequent goal to develop strategies for science



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communicators to adapt to sensemaking practices in supporting the dialogue that is already present. Therefore, this research aims to explore the sensemaking processes of European citizens on COVID-19. With this, this deliverable does not aim for a comprehensive or representative overview of sensemaking styles, yet rather focuses on diversity of the participating citizens. Moreover, it is important to note that the COVID-19 crisis is chosen as a case study to illustrate a public discussion on contested and uncertain science, related to a complex societal problem. In order to answer this research question, the study is embedded in a European context, and has made use of local hubs throughout Europe (Rethinkerspaces) in the context of which interviews with citizens were conducted in their local contexts. Our assumption is that a better understanding of sensemaking practices will enable the formulation of science communication strategies tailored to various sensemaking styles and local contexts and communities; the overarching aim is to contribute to a constructive public dialogue on science.

This report is structured as follows: First, the analytical framework is outlined, which gives rise to the sensemaking theory by Brenda Dervin and its application in this study. This is followed by the methods, explaining that semi-structured interviews were used for the exploration of sensemaking practices of European citizens. Subsequently, the results are presented in the form of country reports and key observations that highlight notable similarities and differences, when regarding the total of country reports. Lastly, the discussion outlines implications of the results for the field of science communication theory and practice and looks forward to give input for future work of the RETHINK project.



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# CHAPTER 2: THEORETICAL FRAMEWORK

In the previous chapter, we have set the stage and indicated the context in which this research takes place. The following chapter describes the theoretical background and approach, starting with a description of the process that takes place when individuals make sense of a complex reality. The 'sensemaking theory' by Brenda Dervin, that strongly takes into account the personal situation and context that individuals find themselves in, was central to this research (Dervin, 1998).

## 2.1 THEORETICAL APPROACH: SENSEMAKING

Sensemaking is the process through which people create an understanding of situations they find themselves in (Fiss et al., 2000; Zhang & Soergel, 2014). When broadly defining this process, it consists of two phases: 1) the seeking and filtering information part, also called *sensing* and 2) the *making sense* part, in which an understanding of the information is established by relating to existing structures and previous experience (Zhang et al., 2019). These processes can take place on different levels: the macro level, which sensemaking focuses on organizations and groups; the meso level, which focuses on collective and individual sensemaking; and the micro level, which focuses on the cognitive processes of individual sensemaking (O'Connor, 2015). Each level of sensemaking has been researched in different fields of science: 'Human Computer Interaction (HCI)' (i.e. Russell's micro sensemaking); Cognitive Systems Engineering (i.e. Klein's micro sensemaking); Organizational Communication (i.e. Weick's macro sensemaking, and; Kurtz and Snowden's sensemaking); and Library and Information Science (i.e. Dervin's meso sensemaking)' (Zhang et al., 2019).

In this research, emphasis is placed on exploring sensemaking at the collective and individual level, for we are interested in how individuals make sense of science in the wider context of a fragmented and digitalised media landscape. Therefore, this study uses Dervin's sensemaking methodology (SMM), which stems from the informational sciences (Dervin, 2010; Reinhard & Dervin, 2012). We use SMM here because of the similarity between the situation and process in which people are looking for information (in information sciences) and the situation and process in which people make sense of science related issues. The central assumption in Dervin's sensemaking theory is that information is regarded as 'never complete', implying that people are always in a process of finding a way to accommodate diversity, complexity and incompleteness in information (Dervin, 1998).

Firstly, it is crucial to note that individual and collective sensemaking is always constrained. According to SSM, the perception of reality is neither complete nor constant, but continuously filled with gaps –



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or situations wherein an individual need to make sense of a certain situation (a central notion in the SMM). Sensemaking is thus constrained, for instance by physiology (information always being a product of the bounded human observation and mind), the space-time inhabited and the unknown future. “Individuals must 'muddle' through together with others to understand both order and chaos that is taking place in the world” (Dervin, 2010). Accordingly, in the absence of completeness, accuracy and clarity, people have to ‘take the next step’ in order to make sense of ‘raw data’. In order to do so, they draw from a broad range of sources that are available, such as previous experience and knowledge, expectations, emotions, values and interests.

Secondly, relating to the former remark, sensemaking is not stable, it is a continuous *practice* or *process*. Sensemaking takes place from situation to situation, i.e. it is behaviour responsive to changing situational conditions. Consider for instance being continuously confronted with very different perspectives or worldviews on the COVID-19 pandemic through, for example, news media reporting or on social media. This notion brings about a number of implications. First that it puts the perspective of the *participant* (or sense-maker) central in the online public discussion, and second, that the study of sensemaking takes an individual’s *situation* as a starting point. This culminates in the following core concept in Dervin's SMM, the so-called *'micro- moments'*. These are moments when an individual is confronted with an ambiguous, complex situation, i.e. with a gap in understanding of the complex reality that is in need of sensemaking. Through analysing such micro-moments, we gain insight into what individual persons see as real and true and *how* they make sense of the world (Reinhard & Dervin, 2011).

## 2.2 Dimensions of the sensemaking Methodology

Following the aforementioned notions, the sensemaking methodology is built around the idea that when individuals are confronted with a complex, ambiguous issue relating to science, they are facing a *gap*. The sensemaking takes place at this gap, by means of using and rejecting previous information and knowledge. In facing this gap, individuals can draw from certain *sources* and their related *relevance* to evaluate how different sources serve or impede the sensemaking practice. In order to address the faced gap, i.e. to make sense, *bridges* need to be established. Through time people build bridges over these gaps, while using various sources of information and appointed relevance, by engaging in other activities – and as such not with a blank sheet but rather informed by an individual’s *situation and context*. Eventually, this leads to an *outcome* in which a momentary understanding of this particular issue is formulated based on a particular set of bridging elements in relation to the situation and context (Dervin, 1998). Therefore, they arrive at a certain outcome and subsequently evaluate and adjust their



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'understanding'. Sensemaking and sense un-making is a continuous and dynamic act – and sense-makers continuously go back and forth between different stages in the sensemaking process. Therefore, sensemaking puts emphasis on 'verbing', highlighting practices instead of persons (Dervin, 1998).

In table 1, we describe these five dimensions of sense making practices in more detail. These dimensions have been used as a framework for analysing sense making practices on COVID-19 empirically.

*Table 1: Description of SMM concepts (amongst others based on Savolainen, 2006).*

| **Concept** | **Description** |
|---|---|
| **Situation & Context** | *Personal situation:*<br><br>In sensemaking, individuals continuously take steps in space-time, in which the emerging situation is on-goingly defined. In this process of sensemaking, individuals can draw on previously achieved knowledge, understanding, a certain history, with different experiences, skills and so on. These previously achieved understandings and experiences are defined as the situation of the sensemaker, which takes into account where somebody is coming from when arriving at the micro-moment.<br><br>*Social context:*<br><br>Context is defined as external forces that facilitate progress in the sensemaking process, but also limit it. Such forces can come from *social, political or economic conditions, power structures,* and *cultural values* which influence sensemaking. Context exists outside of the individual person and outside of her personal history of experience. |
| **Gap** | In the sensemaking process, it is the gap where contradictory information is present or a lack of information is perceived; and people do not yet know what to think or how to make sense of science. This gives rise to *questions, frustrations, misunderstandings, confusions and angst*. It is also the moment when someone may express a need for information, or, express a need for sensemaking. |
| **Sources & Relevances** | *Sources:*<br><br>While facing a gap, people can draw upon certain sources, which are defined as anything providing information, such as media, newspapers, institutions and people. |



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|---|---|
| | In this research, any reference made to information, institutions, people and (online) media will be represented as 'source'.<br><br>*Relevances:*<br><br>Relevance refer to the criteria used to evaluate how different sources serve or impede movement. These criteria can encompass perceived trustworthiness, accuracy, reliability, legitimacy and usefulness of the source. In this study, relevances help people how they evaluate their sources of information. This can, for example, be articulated as 'trust in science' or 'taking certain information from friends seriously'. |
| Bridge | In order to bridge a gap, people select different *ideas, beliefs* and *emotions from their own experience as well as the stories and narratives of others.* Furthermore, they can draw from certain *sources* of information, such as media, institutions and people. Together, the selected elements constitute the bridging of the gap, based on what is relevant for a particular person in a specific moment in time to move on making sense. Thus, when people bridge the gap, they find their *temporary* way to make sense of this particular issue relating to science. |
| Outcome | Outcome is the way in which a momentary understanding of a particular issue is formulated, i.e. how the sense-maker determines what is true, or not, or who and what is trusted. In the outcome, situation, context and bridges come together in a number of selected elements that the person bases his/her momentary conclusion on. An important element herein are *helps* and *hindrances*, i.e. factors that either contributed to finding a way to make sense, or a barrier to do so. |



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# CHAPTER 3: METHODS

This research aims to answer the research question: *What are the sensemaking practices of European citizens on the COVID-19 crisis?* To answer this research question, semi-structured interviews were used to enable a deep and holistic exploration of the sensemaking practices (Clarke & Jack, 1998; Gray, 2013). Choosing this qualitative approach to interviewing allowed the researchers to steer the interviews into a direction relevant for the research, without interfering too abundantly with the perceptions of the interviewee (Ritchie, J. & Lewis, 2003). The interview guideline is modelled after Reinhard & Dervin's SSM, as described in the theoretical background here above, and can be found in Annex I. Selection criteria for participants are described in the following.

## 3.1 PARTICIPANT SELECTION CRITERIA

The RETHINK project aims to cover the European science communication landscape. Hence, the RETHINK project has seven participating focus countries: Italy, the Netherlands, Poland, Portugal, Serbia, Sweden and the United Kingdom. Local hubs with science communication theorists and practitioners, or so-called Rethinkerspace, have been established in seven these countries. Project partners and third parties of the RETHINK project that host the Rethinkerspaces have conducted this study, together with work package leader 2 (VU, Amsterdam, Netherlands). All Rethinkerspace hosts were given an extensive step-by-step research protocol, an interview guide (see Annex I), and a list of participant criteria. Additionally, interview training was organized for all Rethinkerspace interviewers and frequent research meetings were held to ensure consistency in execution of the research proceedings.

The goal of this study was to explore various ways in which European citizens make sense of science. Therefore, it is important to grasp many different sensemaking practices and interview people *as diverse as possible*. As a way of achieving a diversity in both participants characteristics and their lived-experience during the COVID-19 pandemic, the group of participants was deliberately selected for the variance in their background, personal situation and social context, as explained in Dervin's sensemaking approach (Reinhard & Dervin, 2012). For example, the culture or community someone belongs to, religion that one follows, work or family someone has, socio-economic status or geographical background may influence the way in which individuals make sense of the COVID-19 crisis. An overview of personal situations and social contexts by which diversity was strived after can be found in table 2. Participants were identified and recruited by Rethinkerspace hosts in their local contexts with regard to selected criteria. Rethinkerspace hosts were provided the following list of



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criteria to ensure the diversity of participants. The criteria listed were examples – and Rethinkerspace hosts added criteria if they found this was adding to diversity.

*Table 2: List of participant selection criteria.*

| **Personal situation and context** | |
|---|---|
| Household | Alone, partner, family, roommates |
| Occupation | Student, freelance, SME, large company |
| Sector | Care, education, industry, hospitality/catering, cultural, consultancy |
| Age | Young, middle, old |
| Urbanised | City, rural |
| Gender | Male, female, nonbinary |
| Community | Mindset, identity, membership of societal or political organisations |
| Mode of transport | Car, foot, bike, public transport |

As a result of the selection process, we have obtained a large diversity of experiences and perspectives of European citizens. Moreover, as this study has been conducted by Rethinkerspace hosts, this study is closely situated in local communities and contexts. Information about the RETHINK project, the focus of this study and an invitation letter were sent by email when approaching participants. Rethinkerspace hosts were each asked to conduct six interviews. The research team at the VU (Amsterdam, Netherlands) conducted an additional 17 interviews in the Netherlands and 14 interviews in Germany. This country was added to the list of countries in a later stage, in order to obtain an even more complete overview of sensemaking practices of citizens on COVID-19 in Europe. In total, 81 interviews were held in 8 countries spread over Europe. You can find a complete overview of the included participants in Annex II.

## 3.2 MICRO-MOMENT INTERVIEWS

All interviews were conducted in a semi-structured way. When interviews are semi-structured, there is an opportunity to go in-depth into opinions, events, and other topics that could provide a significant



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data point to aid in answering the research question. To this end an interview guideline was developed, which includes main questions and themes that support and guide the interview (Qu & Dumay, 2011). Both participants and interviewers were given the opportunity to generate new topics for discussion during the course of the interview that were not previously in the interview guidelines. The interview guideline was constructed by using a framework by Dervin and Foreman-Wernet (2012; see Annex I for interview guide) and adjusted by the VU team to fit the project's purpose.

In order to adapt to the eight Rethinkerspace countries included in this study, Rethinkerspace hosts were asked to focus on moments in the coronavirus crisis that were meaningful to interviewees. The guide followed the conceptual framework to ensure sufficient exploration of the brief sensemaking events, i.e. the micro-moments, that were at the heart of the interviews. Simultaneously, there was room for emerging directions to allow more comprehensive exploration (Bernard, 2006). We focus on micro-moments because concrete and specific micro-moments reveal the sensemaking practice that has taken place in that individual. The words *concrete* and *specific* are purposively chosen here, for micro-moments are literally short, brief or split-second moments wherein an individual is confronted with an aspect, information source, conversation, emotion, thought, Twitter message, or any other experience that relates to the COVID-19 crisis. This means that the individual is confronted with something *of which the individual needs to make sense*.

Rethinkerspace hosts asked interviewees if they could think of a moment of personal significance related to the coronavirus crisis themselves. In other occasions, the Rethinkerspace hosts highlighted what has been a micro-moment to them, in their local context – and asked if the interviewees experienced something similar that was meaningful to them. Then, the interviewers continued with the interview guideline to explore the micro-moment together – therewith revealing the sensemaking practice. Per interview one to five micro-moments were explored. These micro-moments were summarized in the form of micro-moment triangles. An example of a micro-moment triangle is displayed in figure 2.



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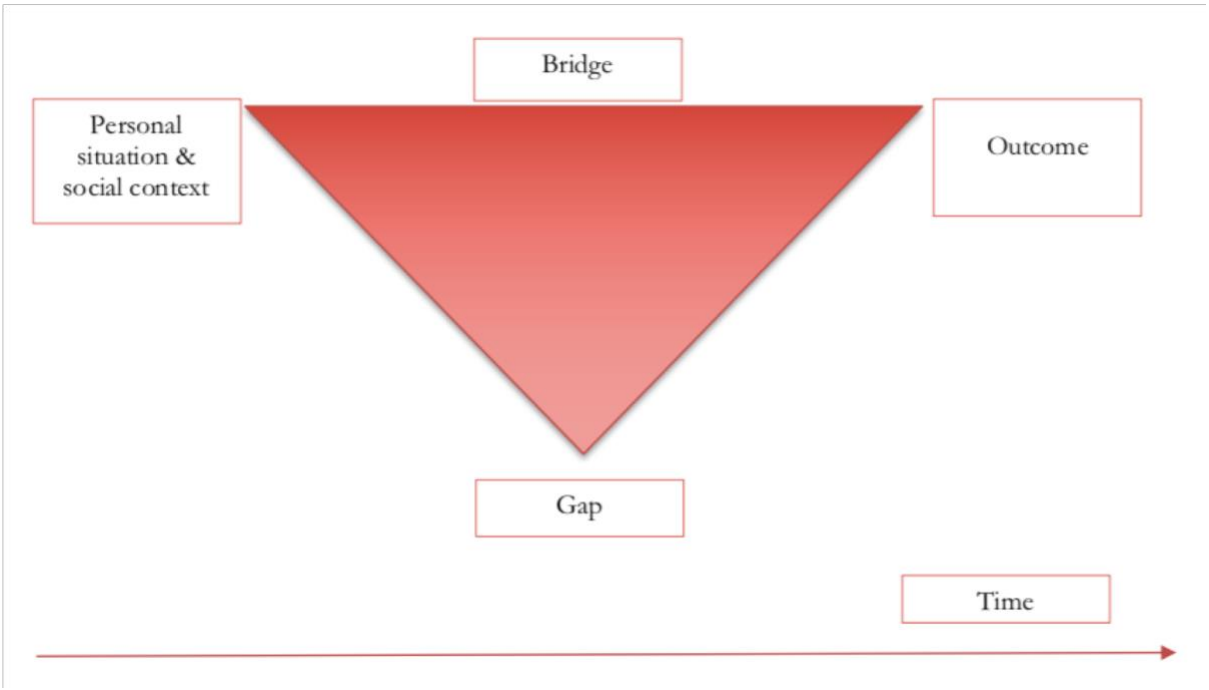


Figure 2: Mirco-moment triangle that illustrates the five dimensions of the sensemaking process as represented in the SSM (modelled after Reinhard & Dervin 2011).

## 3.3 DATA ANALYSIS

All interviews were held via online video conferencing tools, audio recorded and transcribed verbatim. Interviews were conducted in local language and lasted approximately 45 minutes. Moreover, Rethinkerspace hosts analysed their own interviews using the dimensions out of the theoretical framework and SSM, and summarized their analysis in the form of micro-moment triangles (see figure 2). The research team moved in three analytic steps. First, we began by mapping the media reception situations using the SMM Triangle Metaphor as a deductive theoretical tool. The maps were converted into narratives to allow us to see the engagement both as a holistic situation and as a journey experienced by each participant. Sensemaking is a continuous process, wherein citizens subsequently make sense and un-sense in time (Reinhard & Dervin, 2012). Hence, in order to interpret the meaning of the summarised micro-moment triangles, in a second step in the transcripts were analysed by the VU research team. The SSM and theoretical framework were used to deduce themes emerging from transcripts. Finally, we developed a core set of SMM-derived dimensions to compare the media reception situations: combining the understandings gleaned from the first two analyses, we developed five fundamental dimensions drawn from SMM to illustrate a set of situated sense-making processes to be used for systematic comparison across the media reception situations. Categories that described the causal relation and the consequences of interactions between factors regarding relevant concepts of this



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study were included. Following this analysis, sensemaking practices of citizens were reconstructed. These practices were described in the country reports presented in the results section.

## 3.4 ETHICAL CONSIDERATIONS

All respondents voluntarily took part and were fully informed about the purpose and content of the study. Consent was obtained for using their provided information and the respondents were free to withdraw from the study at any time. For an open and honest relationship, respondents have the freedom to contact the interviewer for questions, concerns and remarks, which are handled with care. The privacy of participants is protected by means of restricted access to the data and exclusions of personal and organizational details regarding respondents' identities. However, personal and organizational details of participants are known to the VU-based research team.



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# CHAPTER 4: RESULTS

This chapter contains the results of the interviews we held on how citizens make sense of the COVID-19 crisis. All interviews took place in the period spanning from May up until September 2020. Generally speaking, the interviews thus address what we by now refer to as the first wave of the COVID-19 pandemic in the respective countries. This is crucial to mention given the fact that both the development of the pandemic and the responses to the pandemic, as well as individual sensemaking practices are highly dynamic. The results are discussed per country, allowing us to place the findings in their local context, i.e. do justice to differences regarding for example the way the country was struck by the pandemic, governmental responses, history and culture. Following the framework outlined in chapter 2, each paragraph discusses *gaps*, *bridging strategies*, *sources and relevances,* and *outcomes* identified per country and closes by sharing *observations* for this particular country. Furthermore, we included three *intermezzi,* in which we highlighted the sensemaking practices of one particular participant, which helps to illustrate how *individual* sensemaking practices take place

## 4.1 GERMANY

The German government has prioritized scientifically informed containment measures, research, and stabilizing their healthcare system and social market economy. As a welfare state, Germany implemented numerous law and aid packages to protect citizen's housing and livelihood (Bundesministerium für Gesundheit, 2020). Germany had the advantage of a very strong healthcare system and the chance to learn from countries that were affected earlier, such as Italy, which quickly led to early measure packages. Measures have often been nonuniform due to the federal system. Citizen satisfaction with the government's strategy has been relatively high (ca. 60%) (Ehrhardt, 2020). In Germany, a total of 15 interviews were held between January and September 2020. An overview of the participants can be found in the table below.

*Table 3: Overview of participants in Germany.*

| Participant | Age | Area | Gender | Occupation |
|---|---|---|---|---|
| 1 | 20s | City | Male | Technology and software consultant |
| 2 | 50s | Suburb | Female | Coach and Mediator |
| 3 | 20s | City | Male | Business consultant |



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| | | | | |
|---|---|---|---|---|
| 4 | 50s | Rural | Male | Dentist |
| 5 | 20s | City | Male | Innovation consultant |
| 6 | 20s | City | Female | Master student sustainability and transformation, social science background |
| 7 | 20s | City | Female | Social worker |
| 8 | 20s | City | Female | Secretary and volunteer worker |
| 9 | 20s | Rural | Female | Kindergartner |
| 10 | 30s | City | Female | Digital, international learning at large scientific institution |
| 11 | 60s | Suburb | Male | Spiritual mentor |
| 12 | 30s | City | Female | Self-employed acrobat/dancer/stuntwoman and small part time employments, aspiring natural health practitioner |
| 13 | 60s | Suburb | Female | Housewife |
| 14 | 30s | Suburb | Male | COVID-19 patient transport |
| 15 | 40s | City | Male | Journalist |

### *4.1.1 Personal situation & social context*

The micro-moments that German participants recalled were greatly determined by their situation and context. Five determinants stood out: their *developmental path*, *closeness to COVID-19*, *concerns about friends, family and society, feared impact of the containment measures*, and *the German value system*. Firstly, the path participants had chosen throughout life strongly determined sensemaking. People with similar paths shared similar sensemaking approaches. Through studies, hobbies, occupation, etc., a path close to science or medicine induced greater trust in science. Because participants perceived strong connections between science, government and mainstream media, they equally trusted scientific, government and mainstream media sources in sensemaking, '*I would say I trust that this* [mask obligation] *is right because I know how scientific insight works* […] *Maybe at some point it will turn*



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*out that the masks were worse than they helped, and if so, then I could accept it, because that's how scientific knowledge production works*' (participant 6).

Secondly, contact with COVID-19 patients and COVID-19-related cases of death created greater concerns about the virus, while a lack of these experiences created a more relaxed attitude. (Participant 2) *'Only once you've really spoken to someone, and we already have two cases to bemoan, two seniors* […] *who actually died of corona. I do have a bit more contact* [with COVID-19] *and so the virus is more tangible for me.'*

Next, the perception of the pandemic was further shaped by participants' level of concern for others, including friends, family and society at large. For instance, one participant, like several others, was very concerned for the wellbeing of society rather than about particular persons, '*...it was more of a feeling that by wearing masks, people are safer. And that is above all what is most important*' (participant 1). This guided him in all three recalled sensemaking moments. Others worried for their relatives, neighbours or friends who were elderly or who had pre-existing health conditions.
Further, although no participant reported an effect on their livelihood, the containment measures created genuine fears for their livelihood. This fuelled doubts in the appropriateness of government decisions, '*When it all started, I was actually still in school* […] *But now, when you have a job, when you have to finance an apartment somehow, finance a living, then you think about it differently'* (participant 9).

As for the social context, many participants perceived Germany and themselves as obedient, law-abiding people, which reduced their doubts or resistance to government regulations, '*I'm not surprised that in countries where people are not as compliant to the state as in Germany the cases are much higher than here*' (participant 5). Participants who prioritized their autonomy criticized this culture and experienced backlashes by others, causing gaps in interpersonal interactions, '*the other people, they feel insulted by my* [Facebook] *posts, they start to rile* […] *suddenly you weren't allowed to say anything anymore, you lost all credit with them! The freedom of speech had vanished'* (participant 11).

### *4.1.2 GAPS*

The gaps that German participants recalled could be grouped into four categories: uncertainties about *one's appropriate behaviour*, questions about *governmental measures and policies* ,i.e. their reasoning, justification, or meaning, uncertainties about *the Coronavirus*, such as immunity and long-term effects, and gaps about *future transformations,* i.e. the long-term impacts about the pandemic. Furthermore, most participants had overarching topics of gaps, depending on their worldview and value system,



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throughout the pandemic that became apparent through recurring similar gaps. For instance, for one participant, all gaps revolved around the growing interpersonal distance caused by social distancing, while another participant had gaps only about policy inconsistencies. Another participant continuously questioned the sufficiency of her behaviour.

Most prominent were gaps about how one should behave. This included more practical, situational queries about a specific behaviour – '*Should I get tested*?' (participant 9) – or general, recurring reflections about beliefs and assumptions with a less clear outcome – '*Am I overly paranoid*?' (participant 13).

Next, many participants expressed confusions produced by the frequently changing governmental measures and about the inter-state inconsistencies produced by the federal system. There was also unclarity about the reasoning behind these regulations and occasionally doubts about their justifiability, driven by a fear of secret agendas of the government to profit from the crisis. This is illustrated by participant 1, '*I had a moment of confusion when in the beginning they said that masks were not obligatory and that masks wouldn't help* […] *And then from one day to the next they said ok masks actually help* […] *Did they know before, or why? What happened there?*' A lack of knowledge about the novel coronavirus caused questions about the virus itself, such as the impact it could have on the health of others or oneself, whether there is immunity, or the actual chances of developing COVID-19, e.g. (Participant 6) '*Should I classify myself as a risk patient*?' Lastly, several gaps concerned the future, i.e. how the pandemic would or should transform different aspects of life, '*What will change in our work culture in general*?' (participant 12). Other such aspects were travel, the environment, the German political system, or interpersonal relationships and communication.

After outlining the most common gaps, it should also be noted in what situations gaps mostly arose. Gaps often arose in *interaction with others*, for instance when another person or another group in society exhibited behaviour or expressed opinions or claims that conflicted with the participants' view. Alternatively, this also entailed situations when a participant did not know what view another person held and how to consequently interact with them, as participant 12 explained, '*the fact that in all social interactions it was, well, especially in the beginning, you always had to look out, ok, how is this for the other person? [...] To have to consider whether you can even meet anyone, and if so whom? To always check first how it is for someone else, will they already get mad for just suggesting to meet? Do we have to have the whole corona discussion first?*' Other gaps were induced when participants experienced the reality of new policies and measures first-hand. Most often named were gaps about the introduction of home office and of the mask obligation, which distinctly interfered with participants' everyday life.



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Participant 7 illustrates this with her memory of a sudden transition to performing her social work digitally, '*It was a huge chaos. We were not prepared for home office, I didn't even have a laptop, none of us had access from home [...] It was absolutely chaotic. We had to overthink everything impromptu and coordinate ourselves differently, because we didn't have the option to sit with a distance or anything. We then found ways but then we all had to retrain because of the digital means.*'

### *4.1.3 Bridges*

Common bridging techniques were *different ideas and beliefs about society and institutions*, *comparisons with other countries, people or experiences*, to follow their *values*, and *negative emotions*. A strategy that was common to all participants in Germany were different ideas and beliefs about society. Participants categorized society into groups, such as conspiracy versus mainstream thinkers, people with or without science connections, and risk and non-risk groups. Using stereotypes and beliefs about these groups, participants positioned themselves in or outside of them to structure and appraise information in line with their group, or in contradiction with the group they did not (want to) belong to, such as participant 10, '*I have the feeling that I actually have a responsibility due to my position in science, as a scientist that I see myself as and very strongly identify as, to somehow position myself.*' Most participants used comparisons to help them interpret and qualify a situation or information. This included comparisons with infection developments in other countries to estimate the effectiveness of governmental measures, comparisons with other people to appraise one's wellbeing, or comparisons with past events - such as the swine flu in 2009 - to interpret the meaning of a current situation. For instance, participant 3 stated, '*I'm still optimistic that we're somehow on the right track. You would always compare the situation with the next, like let's say Spain where the numbers steeply increase or in the US where it's just crazy! And Germany hasn't seen that so far.'*

To overcome a gap, participants tended to either follow community-oriented values or self-serving values, which guided their conclusions. Others, who did not have a clear tendency, often experienced a conflict between one's own wellbeing and the wellbeing of others, and it was difficult to reach a conclusion, '*For one, there is this economic consequence since I need this salary to survive, I need the job, that's just my security. And on the other hand, ok, corona is an issue and it will be an issue for even longer and you also have to protect others*' (participant 9).

All participants expressed negative emotions associated with their sensemaking experiences, most commonly worry, anger, disappointment, annoyance and sadness. The intensity of the emotion signalled how starkly a situation conflicted with a participant's understanding of reality, '*Hate. I feel pure hate*



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[…] *I just cannot understand why people would behave that way*' (participant 14). A consequence of this emotional burden was that participants decided to avoid or ignore gaps.

### *4.1.4 Sources & relevances*

Overall, German participants selected sources based on their *trust and distrust in institutions*. This trust determined who they deemed an expert or authority and what claims they found credible. Depending on where they placed their trust, participants either relied on *official and mainstream media,* or on *alternative, online media* and *experiences and information from others*.

Participants implicitly treated science outlets, government communications and the traditional media as interchangeable sources. Those who trusted science and government relied on official and mainstream sources, particularly established newspapers and television news formats because these reiterated what government and science communicated. They disregarded personal conversations because people usually had differing and incomplete, i.e. unhelpful, states of knowledge, and what they preferred was unambiguous, clear information and instructions. Few sought additional science communication outlets. Some visited the website of the Robert Koch Institute (federal institute for disease control and surveillance) to follow the infection numbers and two mentioned the 'Corona Update' Podcast, produced by the German public broadcasting service NDR and hosted by the German specialist virologist Prof. Dr. Drosten, one of the most visible experts who is also advising the German federal government.

Those who distrusted official institutions and outlets, avoided the above-mentioned sources. They named mostly two reasons: they desired a holistic, contextual perspective on the pandemic which was missing from the factual, scientific information presented in mainstream outlets, or they doubted the sincerity and intentions of scientists and policymakers and looked for contradicting information, *'I didn't like this* [mask] *measure. I found it very restricting and then I looked for alternatives in that regard, primarily via YouTube, and then pulled information from there that blatantly contradicted what the mainstream media were saying*' (Participant 11). These participants sought alternative experts through alternative, online media, particularly YouTube and Facebook, but they also valued opinions and experiences of other, mostly like-minded citizens to create a holistic, contextual understanding of the crisis. In addition, one participant strongly looked to his faith for answers to his gaps.

Lastly, most participants explained that after an initial surge, they chose a *conscious reduction in media consumption*. They felt overwhelmed and exhausted by the amount of information and the emotional



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burden they had experienced, like participant 11, '*Even the YouTube videos that I liked to watch before, which deal with* [the pandemic] *very critically, I only watch to a limited extent because they just get me down.*'

### *4.1.5 Outcomes*

Participants reached three types of outcomes: *reinforcing an existing view, adopting a new view*, and *guiding actions and decisions.* Furthermore, participants reflected on what hindered and helped their sensemaking, and what consequences followed their sensemaking conclusions.

Many participants moved past a gap because it fit into their existing view, or they chose to ignore it in order to maintain their view, which was thereby reinforced, (participant 6) '*When friends told me they went to birthday parties* […] *I was like what's going on here?* […] *I'm somehow angry that everyone is doing all these things and living their lives again. But I still feel that that's just totally wrong*'. In other cases, participants adapted their view to integrate the new situation. That outcome is illustrated by participant 6, '*I recently read many news regarding insights about long-term effects of corona* […] *that has changed my attitude, away from a sort of carelessness about myself, my risk, to now I really, really don't want to have it*.' However, a new understanding was only adopted when another aspect of their view was upheld. For instance, participant 6 could change her view on the attitude towards the virus because this still supported her position as a careful, science-trusting citizen.

Next, another outcome of sensemaking was that it guided participants' actions and decisions. Most common was the acceptance of and adherence to new government regulations, which had created gaps. This often entailed the relearning and restructuring of work and everyday life, as participant 3 outlined when he reflected his conclusion about the sudden transition to working from home, '*I think one thing that became clear to me early on was that I need to make this work and I need to figure out, like move something, change some things about myself, to make it work. The first thing that my mind went to was: change the way, like, your apartment is set up, just to have a clear boundary between work and life* [...] *so I rearranged everything, reconstructed some things*.'

Common helps for sensemaking were *empathy* and *pragmatism*. Empathizing with other actors helped to understand new situations or information, '*That's why I can back the rulings of the Federal Government, even if I don't consider them very logical, because I know that they, too, are only acting to the best of their knowledge*' (participant 5). For others, it was a pragmatic choice to adjust their understanding because it was convenient or comfortable, '*You have to take things as they come, and*



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*those you cannot change you must reconcile with*' (participant 2). Thus, empathy and pragmatism helped participants to overcome a conflict between their understanding and a new, strange situation.

There was one hindrance to sensemaking that stood out: *the lack of clear rights or wrongs*. This created gaps in the first place, but because participants had to decide for themselves how to behave or how to interpret information, the lack of guidance created a struggle to conclude these personal assessments. Participant 9 summarized, '*I have a feeling that many in Germany are up in the air, not knowing what to do, what is allowed, what not, and that that's why many people don't know how to act*.'

Sensemaking was often incomplete and left some questions unresolved. It further triggered new gaps and a re-evaluation of past conclusions. Following her conclusion that she would quarantine, participant 9 described, *'I had thousands of questions of course: What about my income?* [...] *Do we have to get a test? If it's negative, can we get out sooner? What about our pets, can we walk our dogs? All these things* [...] *I had doubts if it's right, fourteen days of quarantine.*'

### *4.1.6 Observations*

The German sample appeared to be divided into two groups. Some participants were more extreme while others were rather located on a spectrum between these groups. One group was characterized by feeling closer to science and trusting science, and by extension the government and the mainstream media. Participants in this group tended to perceive themselves more as part of society. Their concerns focused more on others and particularly others' possible health detriments. Their sensemaking was strongly guided by mainstream media and by communal values, such as solidarity, collective responsibility and lawfulness.

In contrast to this we found the second group. Participants in this group were less connected to science and showed a mistrust for science, the government and the mainstream media. They worried more about their mental, social and financial wellbeing, which were threatened by the containment measures. These participants thus primarily perceived themselves as an individual rather than belonging to society. Their sensemaking followed individualistic values, such as freedom, autonomy and control. Further, these participants rejected mainstream media and instead resorted to alternative, online media. There, they were free to seek and interpret information rather than be told how to behave or what to believe. Instead of facts and regulations, they sought personal experiences, conversations and opinions. Importantly, they sought information that contradicted the mainstream perspective and helped them to find fault with the government or science.



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The division between these groups was communicated by all participants through stereotypes and negative opinions of the other group, as well as explicit disregard of the other's sources, experts and priorities. Both groups thus fortified their 'membership' and thus their understanding through the process of sensemaking. There was, however, no particular difference in gaps or outcomes between the groups. Shared by everyone were also the negative emotions that accompanied sensemaking.



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## 4.2 ITALY

Italy was one of the first countries hit by the novel coronavirus after China. With at its peak about 5643 new cases each day. Especially the northern parts, such as the densely populated Lombardy with 10 million inhabitants, were hit severely. Italy was one of the first European countries to call for a full lockdown on March 10th in which Italians were homebound for almost 2 months. The effects of the COVID-19 pandemic were present in the everyday lives of the Italians, especially in the Northern regions where the coronavirus hit hardest. Five Interviews were conducted after the first wave of the COVID-19 pandemic (July 2020).

*Table 4: Overview of participants in Italy.*

| Participant | Age | Area | Gender | Occupation |
|---|---|---|---|---|
| 1. | 50 | Trieste | Male | Craftsman, team leader of the municipal civil protection group |
| 2. | 35 | Lombardy region | Female | Digital communication journalist and art exhibitions |
| 3. | 40 | Piedmont region | Male | Social worker |
| 4. | 66 | Milan region | Female | Housewife |
| 5. | 23 | Trieste | Female | University student |

### *4.2.1 PERSONAL SITUATION & SOCIAL CONTEXT*

Personal situations like being self-employed or having a pregnant wife, all contributed to the sensemaking subjects that were mentioned. These were starting points from where sensemaking took place and created the context in which a gap was faced. Most micro-moments were linked to the *closeness* between the citizens and the virus, *the feeling of community* and being supported, and differences in coping with the situation based on *age*.



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The severity of the COVID-19 pandemic in Italy made the 'distance' between the citizens and the virus small: corona was very close to the citizens. The personal context for the people in Italy was therefore especially relevant as many people came in contact with physical changes themselves due to corona.

Furthermore, many participants mentioned the feeling of belonging to a group and having a feeling of community. Certain events in the personal lives of the participants, such as the offer of a family member to support financially or the call of the civil organization to work from home before the government took that action, all gave a sense of community and safety, *'[...] the importance of the community because it is a trade association that all in all, [...] they invite you to stay at home, they tell you it is an important social action, which has common importance, it is important for everyone. We block production because we have to work to stop the contagion. This has been a formidable thing for me, very much appreciated'* (participant 1).

It was notable that mainly the elderly found the restrictions and regulations hard to comply with. Their personal situation, being old and vulnerable to the virus, and often living alone gave rise to feelings of loneliness. This and other difficulties of having to wear a mask and not being able to breathe freely all made these restrictions more difficult to comply with. While on the other hand younger participants mentioned that the restrictions felt more like protection and therefore found it not hard to comply with the regulations. (Participant 3) *'That is, what our government was doing, in this case, was more for a sense of protection of the citizen rather than a sense of restriction.'*Another divide in elderly/vulnerable and younger participants was prevalent in the arising of the anxiety of contracting the virus, in which the elderly felt more anxiety compared to the younger participants. This theme will be further explained in the gap section.

### *4.2.2 GAPS*

The main gaps faced by older Italian participants were concerns and anxiety about *falling ill* while younger participants mentioned they were less afraid of catching the virus. Another theme was anxiousness about the *reality of the situation* which became apparent due to the physical closeness of the virus. Due to the *reality of the situation* a *change of perception* about the severity of the COVID-19 pandemic was mentioned over time. Also, gaps regarding *the nature of measures and policy* and how it coped with the COVID-19 pandemic arose.

Many participants expressed their worries in micro-moments about falling ill themselves and possibly infecting others. This was especially relevant for people in vulnerable situations such as the elderly but



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also in the following case in which the participants' wife was in labour, '*The big worry, our concern was attending the hospital at that time of intensive therapy full of galloping viruses anyway'* (participant 3). Younger participants in less vulnerable situations described their lack of fear for contracting corona, '*I don't know, it didn't even cross my mind to be able to catch it and not to be able to get sick. I mean, I don't know if because of the fact that I'm young, many times they tell you 'eh you young people don't perceive the risk'* (participant 4).

A change in perception over time about the gravity of the situation was mentioned. *'But at the beginning, I was still a bit hesitant, about everything that was happening, it seemed exaggerated'* (participant 4). As the situation got more serious, more people in Italy (Lombardy region) came into contact with physical changes, which enhanced the reality of the situation and changed the perception of the gravity of the situation, such as deserted streets, *'Really surreal, the silence in the city was really disturbing'* (participant 5) and not being able to give a 'normal' childbirth in the hospital. *'[…] the hospital in Cattinara with the sign outside "Hospital in emergency" and the doors closed. Even now that I'm saying it, I still get the shivers. And it is something that even stunned me because you realize the seriousness, you are not in control of the situation, you do not even know if someone must be inside the hospital, it was terrible, it was terrible'* (participant 3). All these elements were mentioned as contributing to diminishing the 'doubt' on the severity of the COVID-19 crisis and enhancing the perception of the reality of the situation. Confrontation with these cases did increase the confusion about statements of other people not believing in the severity of the COVID-19 situation. Or raised outrage on why people would not wear masks? *'Still today I don't understand how there can be people around who say that it's a bluff. This is inconceivable to me'* (participant 4).

Other participants raised questions on the nature of measures/policy, '*they all got it anyway but she was never swabbed. Here I did not understand why the Lombardy Region did not do this'* (participant 4). Or uncertainties and questions changed over time from a health-focus to a governance focus, '*[...] I had them clear my anxiety shifted from the health aspect to the socio-political aspect. I was clear at the time when I said if the situation does not hold up here, that is, if the governance here, the management of governance does not hold up, it is a problem. It is more a social problem than a health problem'* (participant 3).

Notably, one participant did not mention any gaps or uncertainties. This was linked to their specific personal bridging strategy, which was skipping the gap and taking action straight away. This bridging strategy is further explained in the next section.



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### 4.2.3 BRIDGES

The main bridging strategies articulated were on the topics of *talking* about COVID-19, taking *precautions*, *understanding* the situation due to the physical closeness of the virus, *comparing* both internationally and interpersonally, and *taking action*.

Participants mentioned the strategy of talking to other people as a way of reducing anxiety faced at the gaps. Notably, the mentioned fear of contracting COVID-19 was diminished by sharing thoughts with colleagues, peers, and friends. *'I reacted mainly by talking, [...]because in the end, the relationship was with the colleagues, every day, [...] it was a bit the one that you transferred all your anxieties, and at the same time your joys, to belong to this group. [...] We exchanged emotions on this theme'* (participant 1). Another strategy of coping with insecurities and risks was taking precautions. These precautions made participants feel secure, *'[...] in danger no, I'm not going to tell you that we didn't feel in danger because we took all the necessary precautions'* (participant 1).

Another strategy mentioned was the understanding that arose due to the physical reality of the virus being so close. It has already been mentioned before that many people in Italy were confronted with friends being sick, hospitals closed, deserted streets, which all made the COVID-19 situation very tangible and observable in their own lives. This factor also played an important role in the bridging strategy of sensemaking. Many people indicated that they could more easily make sense of the situation, due to this physical confrontation. '[...] *which is our seafront where the typical Triestino goes to sunbathe and also in Carso where you go for beautiful walks on that day you expected to find many people. There was nobody there. Nobody and therefore this all in all made you understand that we responded well. So that the situation could not be under control because we ourselves, we common people, made sure that it was under control by us. So, I was telling you that it wasn't just access to information that gave us peace of mind, it was just seeing that the answer was there'* (participant 1).

The strategy of comparing arose in two different ways. Firstly, it was employed to make sense of the gaps arising about the government and how it is coping with the situation. Secondly, it was a strategy employed by one participant as a more holistic way of understanding how people respond to the COVID-19 situation by making a distinction and comparison between two types of people: the ones who adapt and the ones who do not.

In the first case, this strategy was employed by comparing how other countries were dealing with the COVID-19 situation, *'Then in the following days, my attention had shifted to the worldwide pandemic trend, almost as if I wanted to find an answer to the Italian attitude. In the sense when Boris Johnson*



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*said "no we won't close", when Sweden didn't close as if to say, deep down I hoped that the same Italian choice would come to them too, but more for a question of, not patriotism, absolutely, but just for a question of feeling more protected because the choices that in that case were of my State, therefore mine, were shared by others'* (participant 1).

In the second case, the comparing strategy was used to compare people and how they coped with the situation. It was mentioned that a crisis situation like the COVID-19 requires people to either adapt or swallow in their own sadness and stay stuck. This sensemaking strategy was expressed by making a comparison to the evolution theory of Darwin: the one who adapts survives and the one who does not will not survive. By making a division of people who adapt and people who don't, this person made sense of the whole corona situation and adaptations that were needed. The capability of adapting gave a sense of agency and pride, which were highly valued and were linked back to the personal situation, in which participant 2 referred to her father, who operated under the same 'adapting' standards.

One participant who did not mention any gaps used the strategy of *taking action*. This participant indicated that her way of making sense of certain situations was not to doubt and worry, but to take action and do what she always did, '*I did what I have always done: motivate people'* (participant 2).

### *4.2.4 Sources & relevances*

It stood out that through all interviews there was a *change over time* in what kind of sources participants trusted and used depending on the content of the sensemaking moment. As the pandemic continued people made more *classifications* in information and for what purpose this could help them in sensemaking. It was seen that there was a turn from more traditional news sources, such as television and newspapers, to information from friends and lived experiences.

At the beginning of the pandemic, many people turned to traditional news outlets such as the news on television, newspapers but also scientific papers, *'We were connected from morning to night with the television.'* (participant 4). As the pandemic continued more contradicting and non-coherent information was presented and participants indicated to stop looking for information as it was not helping them make-sense of particular sensemaking moments. *'I tried, especially during the initial period, the first month and a half, after that I stopped, I said no enough, I don't want to know what they say or not about coronavirus, I go on, [...]. The information was perhaps exaggerated, too discordant and exaggerated perhaps'* (participant 5).



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Together with this change over time in using certain sources, classifications were made of the traditional sources available. In this classification people distinguished between information that was of importance for a *specific personal situation* and information that could give insights into the *general trends*. Some participants indicated that certain specific information relevant to their personal situation was beneficial for sensemaking. Either affecting the occurring gap or bridging strategy, such as in the case of the participant with his wife in labour, '*Some information was reassuring: Yes, that was the only data that reassured me enough because it seemed that on children under 9 years of age and foetuses there was not a much less serious incidence, so it was reassuring'* (participant 3). In another case the information was not directly linked to facts or regulations about the COVID-19 crisis but had personal meaning. For example, one participant read an article about Vietnam veterans which helped in the bridging-strategy. *'[...] an article that struck me was about Vietnam veterans,[...]that when the danger is far away it's as if your psyche can't metabolize, but when you're in it, or you've been hit by it, it's easier to metabolize, easier to understand, easier to understand and less scary in a way'* (participant 3).

Others indicated that information that was non-coherent and contradicting could only serve as a means to understand the *general situation*. *'[...] the information related to the virus, related to the trend, that is, were totally fluctuating even on foreign newspaper sites, you did not have a vision that could be defined objective in my opinion. And therefore, those were the only data that for me had a value on the trend of the situation'* (participant 3). Eventually, all participants indicated that lived experiences or stories from close friends about the news were used in sensemaking moments. *'I stopped following the news but I heard my grandmother or my friends telling me 'ah but they found a cure* [...]*'* (participant 5).

### *4.2.5 Outcomes*

Italian participants indicated two types of outcomes. Firstly, outcomes regarding the general COVID-19 situation were described. All participants greatly reflected on how COVID-19 pandemic has influenced their lives and therefore many general outcomes arose. Secondly, outcomes regarding specific sensemaking moments were mentioned. The general themes were *acceptance of regulations* and *attitudes to life*. The more specific outcomes per micro-moments were *methods for staying calm* and *pride*.

For the general COVID-19 situation participants mentioned the acceptance of regulations. This acceptance was highly linked to the personal experiences with corona. The physical closeness made



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people see the reality of the pandemic making them more prone to accept regulations without doubting them. This physical closeness was also a reality check and seeing both the beauty and the horror of the situation. *'[...] there are what are called ravines, places, for example, the river that creates a deep gorge that to see it generates restlessness, anxiety, fear, but at the same time a fantastic attraction because it is beautiful, [...] And for me, that hospital was a bit like this. It was a gorge'* (participant 3).

Participants also mentioned their general attitudes to life as a 'conclusion' to the situation. Such as one participant who put every moment into a historical perspective, *'But I repeat, there have been much worse historical situations in which people have moved on'* (participant 3). Or another participant emphasized her desire for positivity, *'But I always feel very confident in life so I want to be positive'* (participant 4).

For specific micro-moments, people mentioned how they dealt with fluctuating information and contradictions. Participants indicated that this uncertainty made them depend on their own methods for staying calm. These methods would range from counting days to build in own security to discussing information and situations with colleagues, peers, and family. Throughout the interviews, there was a strong feeling of being proud of how everyone, including themselves, region, and community dealt with COVID-19 For example, younger people expressed how grateful the elderly were for their service of bringing groceries to them which gave them a sense of *pride* and made them feel useful. In other cases, the feeling of pride was more directed to how one coped with the situation.

### 4.2.6 Observations

Taking stock of the Italian sample, we observe that the main characteristic of sensemaking in Italy was the closeness of COVID-19. All participants mentioned this concept in all aspects of sensemaking. This makes the lived experiences taking a central role in sensemaking and distinguishes Italy from other countries where the virus was more abstract and mainly visible in news reporting and public communication. Due to the closeness of COVID-19 fewer doubts on the reality of the situation were articulated, making Italy a country where the main focus was on personal situations instead of information flows and regulations of the government.



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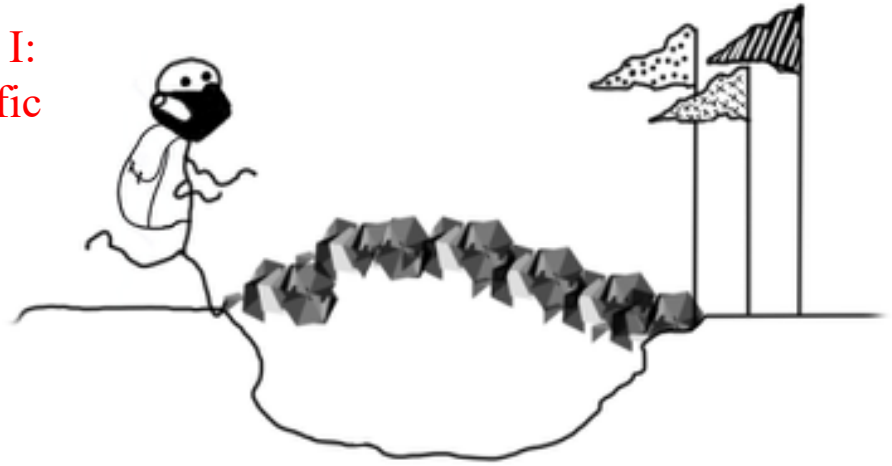
**Personal situation and social context**

- Ca.30 years old, female
- Lives in Berlin, Germany
- Scientific advisor in digital education
- Background in Psychology and Social Science
- Does not come into contact with science critics much
- Her brother is in science too, her parents are engineers

**Bridging**

- 'I actually have the knowledge […] that I could actually completely debunk everything that is being said there by one Google Scholar search'. 'I have the feeling that I actually have a responsibility due to my position in science, as a scientist that I see myself as and very strongly identify as, to somehow position myself and to do something for […] for the side of science'
- 'I know that the public opinion is often different from the scientific consensus'; 'But it really went in a conspiracy direction […] and as soon as I notice that someone talks such nonsense then I have to say ok, sorry, that doesn't work for me.'; 'It exhausts me emotionally too much'
- 'I only had contact with people who do me good and who think like me'; 'There was this sense of an apocalypse also in me. But besides that, there was a focus on the self, which made my everyday life easier as an introvert, not to interact with strangers on the street every day, but to just keep a distance and have time for oneself. It really felt like calming down'; 'It gave me a lot of strength. It was like a gasp of relief and like finding myself again and having a calm anchor in life again.'; 'From conversations and memes I know that many other introverts feel like this.'

# Intermezzo I: The scientific advisor



**Gaps**

- She observed riots on social and official media: 'I see myself caught in a dilemma, what should I do? How much energy do I even have to try to reach people who don't feel like they belong?', 'For whom do we do our job? What is our task responsibility?'
- Her friend invited her to a protest but others who would be there were critical of science: 'Should I still go and support my friend?'
- What can we learn from the first shutdown it?

**Sources and relevances**

- Traditional news, social media, scientific publications
- Respectful and educative information
- Sheds light on all involved perspectives
- Scientific reliability

**Outcomes**

- My personal conclusion is that I need to have enough resources, to work on it professionally, to not let it break you, it makes me feel upset and helpless that I feel paralyzed by it at times. In my private life – as silly as it sounds - I must not deal so much with people who have those opinions' consciously closed Instagram and Twitter and said "not today
- 'I didn't have the impression that I, as a person, can make a difference, nor that our institute can do much, because to reach 20.000 people, who are also set in their beliefs and channels, is an immense challenge. So, I think it is important to educate the next generation in the scientific method. [..] It reassured me in my work'
- 'If there are people who have those opinions, I cannot convince them otherwise'
- 'There are so many of these things that I think it would be cool to keep forever. That it's not so crowded and loud and extensive. […] We need to rethink as a society. To let go of the consumption and to get away from the wheel that never stops spinning'

## 4.3 POLAND

For Poland five interviews were conducted between June and August, covering the period of the first wave of infections and the period slightly thereafter. Poland was also struck by the pandemic and general containment measures, such as advice on washing hands were implemented in a comparable way with most other countries discussed. However, Poland differs in the sense that after testing positive, quarantine measures are enforced and monitored by governmental bodies, in a more rigid way[1].

*Table 5: Overview of participants in Poland.*

| **Participant** | **Age** | **Area** | **Male/female** | **Occupation** |
|---|---|---|---|---|
| 1 | Born in 90s | City | Male | DJ |
| 2 | Middle-aged | City | Female | Art and Culture |
| 3 | Born in 90s | City | Female | Owner of beauty salon |
| 4 | Middle-aged | City | Female | Molecular Biologist, Education |
| 5 | Middle-aged | Rural | Female | HR |

### *4.3.1 PERSONAL SITUATION & SOCIAL CONTEXT*

When making sense of the COVID-19 crisis, the personal situation played an important role for the participants. Four different themes stem out: *the impact of containment measures, concerns about family and friends, falling ill with COVID-19* and last, the *living area*. First of all, the impact of containment measures. Two participants were for instance directly affected in their livelihoods, because of cancellations of (cultural) events due to imposed lockdown measures.

Furthermore, concerns about the needs and health of family and friends are an important recurring theme. Such concerns are felt with regards to parents and grandparents, who are expected to be more at

[1] The (English section) of the website of the Polish government with information and recommendations regarding the Coronavirus reads as follows: 'Important! As part of their regular patrols, police officers visit quarantined persons and make sure that they are staying at their place of residence. Regulations provide for a fine of up to PLN 30 thousand for breaking the quarantine'. See: https://www.gov.pl/web/coronavirus/temporary-limitations.

risk, given their age, but one participant also mentioned pre-existing health conditions regarding her son as an important source of concern.

Next, falling ill with COVID-19 and experiencing the consequences thereof is important, as illustrated by the following quote, *'I was not able to leave quarantine even though I had two negative results - the sanitary inspectorate did not want to release me from quarantine until it had a certificate from a doctor, and I could not have a certificate because no doctor wanted to give it to me'* (participant 1). This experience turned out to be an important factor for the way the participant made sense of further developments in the pandemic.

Last, the living area is important. Most participants live in urban areas where the effects of the pandemic and lockdown measures were more felt than in rural areas; several participants, living in the city, mentioned visiting families in rural areas where they were struck by the differences. The impact of the pandemic was less visible, some participants but also because such family members were sometimes less cautious, thus illustrating that they make sense of the pandemic in a different way.

### *4.3.2 Gaps*

When looking at the gaps experienced by the participants, we can identify three different types of gaps: *uncertainties relating to the virus*, (i.e. its nature, spread and impact) virus, to the *containment measures*, e.g. their effectiveness and last, questions relating to *governmental policy and measures* hereon. First, considering uncertainties regarding the virus, several participants wondered how harmful it would be for their own health and of others, as well as how it spreads. One cautious participant for instance had concerns about how long the virus can survive on surfaces, and also worried about letting a courier in her house, which was amplified by the health conditions of her son. Relatedly, participants felt gaps regarding the measures to contain and prevent infection, such as on the use and effectiveness of masks. Also, they questioned gloves, which were mandatory in Poland at a certain time. Furthermore, all participants had questions and doubts about the governmental policies imposing such measures. They had fundamental questions about their legitimacy, effectiveness and proportionality. Participant 3 even wondered whether the measures taken by the government were an authoritarian move towards more power and control over the public.

After having outlined the most important gaps that occurred, we discuss how such gaps become apparent. This includes, first, when being (involuntarily) *confronted with news on the virus.* Second, they appear through *inconsistencies in policy and communication,* which becomes very clear when



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looking at the perceived effectiveness of masks: '*and the worst was probably the announcements from the government that everything is under control, there is nothing to be afraid of, masks for healthy people are not necessary, and here Szumowski* [the then Minister of Health] *made a deal on masks* [...] *and suddenly everyone has to wear it'* (participant 1). And participant 2 notes that, '*there was information that the masks were not good and suddenly they became good and needed.*' According to some participants the policy of the Polish government thus changed overnight, which raised lots of questions. Last, gaps become apparent in *interaction with others*. Generally speaking, this held for watching the behaviour of others in society or through personal contacts. The situation of family members wanting to hug, while wanting to keep distance yourself, is a recurring example. Participant 2 went to visit her parents (after quarantining themselves, for their safety) and commented: '*it was terribly difficult because* [...] *this was how we were behaving and my older sister, who lives nearby, went to work normally, her husband would also visit her parents normally, and nobody told us about it. And my sister came and she hugged us, and we were creating a terrible distanc*e.' Indeed, gaps emerge when different sensemaking practices of individuals clash.

### *4.3.3 BRIDGES*

In the former paragraph we outlined identified gaps and how they become apparent. Which bridges did the participants construct to reach an outcome? This section addresses the different ideas, beliefs and emotions from their own experience as well as the stories and narratives of others, the Polish participants used as bridges. Four dominant themes seem to emerge: first of all, the use of *information, either* actively looked up or passively received, several *(negative) emotions*, *different ideas and beliefs on the society and institutions* in Poland, and last *analogies* were used. First of all, it is very clear that the participants often experience negative emotions with regards to the gaps they are facing, such as anger or frustration (e.g. about the impact of measures on livelihoods). In this context, anxiety is also noteworthy, strikingly not about one's personal health, but mostly in relation to the health of loved ones. Such fear or concern seemed to prompt cautious behaviour (see below).

Next, information evidently plays an important bridging role. This can take two forms: information 'passively' received, e.g. via television and information actively looked up when facing particular gaps. Participant 2 unsuspiciously let in a courier that did not wear a mask, and felt very bad afterwards, given the health condition of her son. When contemplating how she could visit her parents in a safe manner, she '*started looking for information about how long we have to be at home, what distance we have to keep, information about where I had no knowledge* [...]. *I searched for authorities, scientists who talk*



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*about specifics in order to know how much I am panicking and how much I have actually created a threat to my family, but it was in a situation where we were under terrible stress.'*

Furthermore, there seem to be different ideas and beliefs on the nature of Polish society and institutions, contributing to an *a priori* trust or distrust. The aforementioned 'overnight' changed view on the use of masks was met with suspicion by several participants. Relatedly, some respondents held the idea that the government did not have good intentions regarding their citizens, e.g. participant 3 literally stated to live in '*an authoritarian state*'. Last, occasionally, interviewees drew from analogies to bridge a gap, notably comparisons to the flu were mentioned, multiple times. '*SARS and these derivatives were, are and will be like the flu, but nobody makes a fuss because of the flu, even though people are also dying because of it*' (participant 3).

### *4.3.4 Sources & relevances*

Heavily connected to the former concept, are the sources and relevances used in bridging gaps. Here we see interesting differences emerge, connected to two themes: *trust and distrust* of particular sources and institutions and second, the *experiences of others.* Starting with the former we observed differences in the perceived credibility of governmental institutions, as well as the 'mainstream media', when asked if she was concerned in the beginning, participant 5 remarked that she was not, '*because everything was under control and the Minister of Health said that there was nothing to be afraid of.*' The WHO was mentioned a number of times as a credible source, '*when I saw an article citing the WHO, I somehow believed it more and did not go further*' (participant 1). While some consider official sources like the WHO as being credible, others distrust such institutions. '*As soon as you come out of the mainstream bubble you will see*' (participant 3). When followed up on whether her environment was also boycotting masks, she replied, '*I surround myself with people who are not idiots.*'

As mentioned in section 4.4.2. gaps for instance emerge, when different sensemaking practices clash. This also holds for the valuation of different sources and their relevance. Participant 2's views clashed with her parent's, '*the greatest absurdity of this situation is the information coming from the priest. The priest ordered me to come and said that those who pray will certainly not get sick.*' When confronted with the issue of how long the virus can survive on surfaces, an uncertain topic, she herself felt comfort in the fact that multiple sources stressed the same view, '*since the four articles gave the same information, I started to believe it*' (participant 2).



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Furthermore, experiences of others, i.e. family and friends were an important source for most participants. This holds for knowing people who became ill, as well as *not* knowing anyone who became ill. Participant 1 shared an illustrative experience, '*you could forget that there is a pandemic at all. And here suddenly there was a shot and ten of my close friends were infected. On the one hand, it opens your eyes, but on the other hand, it is actually like going through a cold.*'

### *4.3.5 Outcomes*

This section addresses the types of (preliminary) outcomes the interviewees reached in response to the aforementioned gaps, as well as the factors that helped and hindered them herein. Against the backdrop of the gaps we identified in section 4.4.2, we first see that the outcomes result in *adopting (or reinforcing) a specific view* and second in *guiding a specific action or decision.*

In terms of reaching certain views, participant 1 for instance after contracting the virus noted that, *'I started looking for more information about the virus itself, the symptoms, etc. On the one hand, in order to know how quickly I have a chance of getting out of quarantine, on the other hand, I have been thinking about possible complications. I have heard that the disease can affect the lungs, on the kidneys, on the heart.'* Furthermore, after the sudden switch on the need to wear masks, at least two participants became highly critical of the government. '*I really started to believe in conspiracy theories, because what was happening was some kind of farce'* (participant 1). In conjunction with contracting the virus, this culminated in a highly critical view on the imposed measures, as illustrated by the following quote, '*I think the lockdown has caused more harm than good. Of course, isolation and precautions are important, but in the end it is a bit like the flu, the health service is more burdened by people who have mild symptoms and not those who are actually sick.*[...] *In any case the economic crisis and the problems of work and survival for all those who have lost their livelihood from one day to the next.'* For participant 3 the changed views on masks only amplified pre-existing distrust, noting that we are shifting towards, '*modern slavery in its highest form. People will be vaccinated with a new generation of vaccines and will follow orders, and normal people will be persecuted and excluded from society.'*

Furthermore, outcomes were identified in the form of *specific actions or decisions*, such as guiding behaviour when meeting friends, such as not sharing cigarettes or drinks and keeping sufficient distance. Or whether to meet loved ones - or not, '*we decided to lock ourselves in the house so that we could go to my parents in the countryside afterwards, and I was very worried about them - we had the idea that if we did not have contact with anyone, we would be able to go to my parents and not be a threat to them'* (participant 2). Yet, doubts remained: *'but we were still stressed out whether this was a good*



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*decision or not'* (Ibid.). After going there and being confronted with family members that were less strict, yet without any cases in the area, this prompted sensemaking on what situation would be safer, *'we felt that we were in a place where there is not a single case and staying in such a place. Even loosening the sanitary regime is safer than going back to Warsaw and waking up to the view of ambulances and paramedics. We analysed that it was a safer place for us, but it was a purely emotional analysis of the need to be outside and shutting down was very difficult for us, it was not a purely rational analysis.'*

This quote also brings us to the helps and hindrances. The pandemic - and making sense thereof - is cumbersome and an emotional event for many, and emotional needs may overshadow rational analysis. On the one hand, looking up information can provide a sense of grip, for instance, regarding how long one should quarantine, and keep others safe. On the other hand, this entails that several participants at some point either avoided news on the pandemic and/or stopped actively looking up information. Participant 1 for instance, stopped reading the news and avoided all information and posts, noting not to *'have the strength to do so anymore'*. Such helps and hindrances in turn, will play an important role in future sensemaking. Connected with this point, participants indicated to get used to hearing news on and dealing with the pandemic.

### *4.3.6 Observations*

Looking at the Polish sample, several observations can be made. First of all, the relevance of the personal situation for sensemaking becomes obvious. Several participants come from a situation that is severely affected by the pandemic. This leads to gaps in which emotional needs outweigh rational analysis and decision-making. In the words of participant 2, '*the relief came only when we stopped analysing it and let it go.'* Against this backdrop, we also see that making sense of the COVID-19 crisis is an intense continuous and dynamic process. *Fatigue and stress* resulting from certain outcomes are important hindrances and conversely, *finding relief* an important help. This emotional impact will in turn play an important role in future sensemaking.

Furthermore, we saw that differing ideas and beliefs on the nature of Polish society and institutions played a major role. Some participants trust the Polish government, but we also heard numerous accounts of distrust towards governmental institutions, as well as Polish media. Relatedly, the Polish sample (notably reactions to the need to wear masks) illustrated that sudden changes in policy that are insufficiently motivated, contribute to such distrust and moreover to confusion.



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## 4.4 PORTUGAL

In Portugal five interviews were held in June and July. All of the interviews live in urbanized areas. An overview of the participants can be found in the table below. Prior to discussing the results, we make the following remarks on the Portuguese situation during the interviewing period. Cordeiro-Rodrigues (2020) notes that initial predictions indicated that Portugal's situation would be similar to that of Italy, given e.g. the shortage of medical supplies and medical human resources and the fact that Portugal is a tourist destination. Against this backdrop, the Portuguese government took a number of measures, such as closing schools early on, as well as organizing massive testing (ibid.)

*Table 6: Overview of participants in Portugal.*

| **Participant** | **Age** | **Gender** | **Occupation** |
|---|---|---|---|
| 1 | 21 | Female | Student |
| 2 | 37 | Male | Flight attendant |
| 3 | 51 | Female | Copywriter |
| 4 | 51 | Male | Teacher and designer |
| 5 | 56 | Male | TV Host |

### *4.4.1 PERSONAL SITUATION & SOCIAL CONTEXT*

In making sense of the COVID-19 crisis, different elements relating to the participant's personal situation and social context were mentioned: *the impact of containment measures*, *concerns about the health of family and friends,* and third, the composition of two themes connected to the people that surround us, namely *the presence of healthcare workers in your family and/or friends* and last, *being surrounded by cautious people*.

First, looking at the impact of containment measures, participants for example referred to being directly affected in their livelihoods and taking education that could only be provided online. Several participants furthermore explicitly expressed to feel isolated from friends and family. Concerns about the health of family and friends were expressed as well, particularly when pre-existing health conditions were present. The mother of participant 5 was being treated for cancer in the period when the pandemic just hit Portugal and noted, '*I was very concerned about the major health risks to my mom and tried by*



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*all means to avoid contact with her*' (participant 5). Last, the composition of the group of people that surrounds us was an important factor in the Portuguese sample. For instance, the presence of healthcare workers in one's family turned out to be a guiding element and the same held for being surrounded by friends that are particularly cautious.

### 4.4.2 GAPS

This section discusses the gaps faced by the Portuguese participants. They emerged around three different themes: *uncertainties about the nature and spread of the virus, uncertainty about preventive measures* and finally there were questions about the *impact of governmental measures and policy*. Furthermore, we discuss how gaps became apparent.

To begin with, participants felt several uncertainties regarding the virus and pandemic. Participants expressed a general anxiety about how big the impact was going to be of the pandemic. Furthermore, they worried about how to keep from being infected and wondered about the effectiveness of preventive manners. Participant 4 for instance expressed the following concern, '*I was very afraid of asymptomatic transmission*' (participant 4). Similar to other countries, several participants had questions and concerns about the (consequences of) measures and policies implemented by the Portuguese government, for instance about the economic crisis that may emerge. Gaps also occurred on a more personal level, as illustrated by participant 4 who was anxious about dealing with (potential) emotional stress resulting from the lockdown.

Furthermore, it should be noted that - in contrast with other countries - the Portuguese participants did not explicitly question the legitimacy of containment measures, nor its effectiveness.

If we look at how gaps occurred, *inconsistencies in communication* about the pandemic seem the most important factor. Participant 1 expressed to experience many contradictions in messages from health authorities. Looking at science, participant 3 noted, '*I was kind of angry at science - due to its contradictory conclusions along the process*.'

### 4.4.3 BRIDGES

After having discussed the gaps, we now consider what bridging strategies were used to overcome them. They can be categorized in five themes, *the use of information, relying on governmental regulations, reaching out to family and friends, emotions* and last, *analogies.*



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Many participants explicitly mentioned that they rely on the governmental regulations and furthermore actively looked up (multiple sources of) information in relation to aforementioned gaps. Participant 3 for example looked up information on how people survived the Spanish flu, without a vaccine and the healthcare system we have today and participant 4 sought support to deal with anxiety and depression by consulting the official 'National Health System' website. Furthermore, participants explained that they reached out to family and friends to discuss their questions and concerns. Then, most participants expressed the importance of (negative) emotions in making sense of the pandemic, such stress, anger, anxiety and even paranoia. Interestingly, two participants referred to the same analogy in their sensemaking, namely the Spanish flu, '*we're living an incomparable moment for our generation, like my grandmother lived the pneumonic flu in the early 1900's*' (participant 3). Both participants found some solace in knowing that the current pandemic is not a new phenomenon.

### *4.4.4 Sources & relevances*

When looking at the bridging strategies from the perspective of sources and relevances, we can make a couple of observations. First of all, the Portuguese sample demonstrates *trust in official institutions and information.* '*I stuck to the rules and acted according to the official and scientific information'* (participant 4). Another participant referred specifically to the media: '*as a media worker, I was aware of the news and the quality scientific information since the beginning'* (participant 5); this also illustrates the importance of one's professional background in sensemaking.

Second, most participants express the importance of *experiences and perspectives of family and friends.* This takes shape in two forms. To begin with, the views and experiences of friends and family working in healthcare carried great weight and the same held for friends that are particularly cautious. Participant 3 even cancelled her classes due to concerns of a friend working in the healthcare sector, prior to the official lockdown, which illustrates the weight such views may carry.

### *4.4.5 Outcomes*

The outcomes visible in the Portuguese sample can be clustered into two clear categories. First of all, looking at *reaching specific views in relation to gaps*, we can see that - even while the numbers of COVID-19 cases were relatively low and seemed to be under control - the Portuguese participants expected that both the pandemic and the measures to contain it, would have a *great impact* on the society. Mover, the responses at the time reinforced *trust* in the official health authorities. The following



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quote of participant 5 illustrates this perspective: 'I thought political leaders had as many doubts as the rest of us and were doing their best'.

Furthermore, we can see how bridging strategies *guide certain actions and decisions* in two forms: *adopting prudent behaviour* and following *official recommendations.* Even without official recommendations we saw accounts of precautious behaviour, such as cancelling social events. Furthermore, participants mentioned abide by hard measures of social distancing in order to avoid virus spreading, '*except for caring for my mother, I had no human physical contact*' (participant 4). The same participant even cleaned the building's handrails with alcohol, illustrating just how high the level of prudence can be.

From the perspective of helps and hindrances, in this sample we also found an interesting example of how using analogies can lead to relief. By comparing the current pandemic with the Spanish flu and looking up information hereon, participant 3 '*realised that the apocalypse wasn't coming and we were another generation dealing with a global disease, and we wouldn't be the last.*' At the same time, this participant also acknowledged that she started avoiding news on the pandemic, as to deal with stress, illustrating the importance of emotional wellbeing in sensemaking practices.

### *4.4.6 Observations*

Taking stock from the Portuguese sample, we can make a number of observations. First of all, compared to most countries we examined, there was little questioning of the Portuguese government's policy towards the pandemic. Relatedly, we observed a high degree of trust in both governmental and healthcare institutions, as well as media. Furthermore, the role of one's personal situation and notably, the importance of the perspectives and experiences of family and friends, is very apparent in the Portuguese sample. Last, in terms of outcomes, we observed that the participants seem to act with greater prudence when compared to most other countries.



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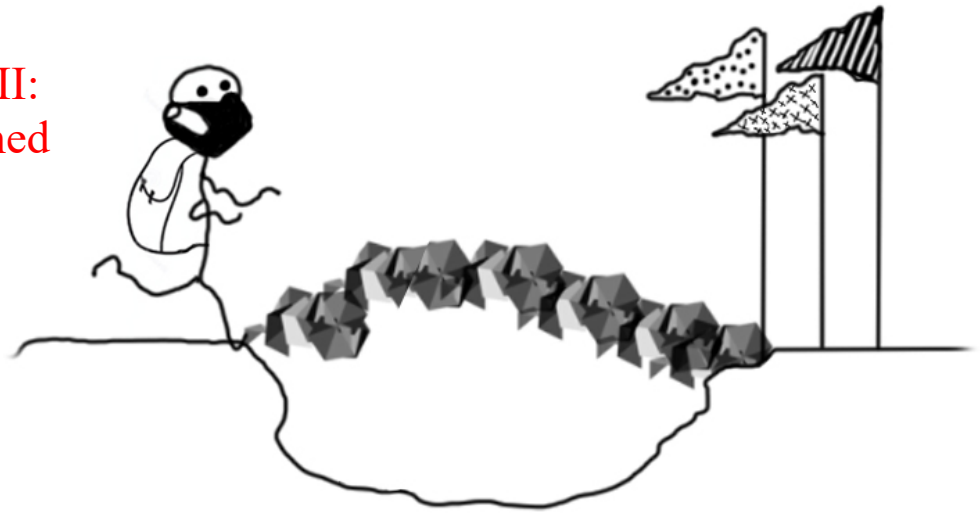
**Personal situation and social context**

- Female, Middle-aged
- Works in the field of art and culture in Warsaw, Poland
- Has a 5-year-old son who has health problems, coronavirus is a danger for him
- She spent part of the lockdown in Warsaw with her family, then left with her husband and son to her parents near Warsaw

**Bridging**

- 'I started looking for information about how long we have to be at home, what distance we have to keep, information I had no knowledge about, we both started looking for what the chance of infection is'
- 'At that time, I needed expert knowledge, I searched on websites, not only popular websites in Poland, but I searched for authorities, scientists who talk about specifics in order to know how much I am panicking and how much I have actually created a threat to my family. It was in a situation where we were under terrible stress, I was frustrated with the nightmare'

# Intermezzo II: The concerned mother



**Outcomes**

- With regards to visiting parents: 'we waited further, but only for a week, not so long. I went through the information then, most probably within five days the virus breaks out, so we waited for seven safe days and we felt so mentally tired that we had to leave, but we did not feel that this was a rational decision, but we had a very big need'
- 'My husband did not go out at all, sometimes for bread, but I sometimes bought supplies for a week and froze them. Today I think of it as absurd, I have the impression that we got used to this reality'
- 'I no longer rely on anything. I have the feeling that the only thing I am basing myself on is that I wash my hands non-stop, disinfect them […], I wear a mask, and I try to keep my distance and I have the feeling that these things are there and that that's the end of it'
- 'The relief came only when we stopped analyzing it and let it go, but this first phase of admission and the feeling of helplessness was very burdensome'

**Gaps**

- How long do I need to quarantine myself before I can visit loved ones without putting them at risk?
- How risky is it that my sister is still hugging my parents?
- How long can the virus survive on surfaces?
- She opened up the door for a courier, without a face mask, and simply let him in and 'forgot what kind of reality she was living in'. Should I panic about this?
- 'Masks were not good and suddenly they became good and needed'

**Sources and relevances**

- Looks for authoritative information and multiple sources
- 'I searched on the basis of the following principle: since the four articles gave the same information I started to believe it.
- The slogan where I saw that this is a science portal, it is a doctor and not a celebrity, increased my sense of credibility'.

## 4.5 SERBIA

In this section we discuss the results from Serbia, based on six interviews, all held in June 2020. Upfront two important remarks need to be made. First of all, in comparison with the other European countries, the Serbian government imposed stringent measures. Notably already on 18 March 2020 a curfew was imposed. Furthermore, citizens over 70 years old were not allowed to leave their homes at any time. In urban areas this applied to citizens over 65 years old.[2] In addition, not long after imposing the lockdown, elections took place. This meant that issues relating to the pandemic were heavily politicized. This played an important role in the sensemaking practices of the respondents.

*Table 7: Overview of participants in Serbia.*

| **Participant** | **Age** | **Area** | **Gender** | **Occupation** |
|---|---|---|---|---|
| 1 | 23 | City | Male | Engineering student |
| 2 | 79 | City | Female | Retired nurse |
| 3 | 52 | City | Male | Early retired manager |
| 4 | 79 | City and Rural | Female | Retired lawyer |
| 5 | 25 | City | Female | Political science student |
| 6 | 30 | City | Male | Lawyer |

### *4.5.1 PERSONAL SITUATION & SOCIAL CONTEXT*

First of all, a number of factors relating to the personal situation and social context of the Serbian participants were mentioned. They are the following: *having a pre-existing health condition, becoming ill with Corona, the impact of containment measures* and *having worked in the healthcare sector.* Such factors related to themselves personally, while the following relate to their circle of family and friends: *concerns about family and friends* and *knowing people who became ill with Corona.*

[2] See e.g.: https://www.reuters.com/article/us-health-coronavirus-serbia-idUSKBN2143XR.

We will first elaborate the themes that related to the participants themselves. Having a pre-existing health condition is highly relevant for broader sensemaking related to the pandemic, as illustrated by participant 3. '*My personal opinion is that, as a person with a pre-existing condition who belongs to the high-risk group, I have to be careful. It is not some conspiracy theory.'* Next to the fear of contracting the virus due to one's health condition, falling ill with COVID-19 has great significance for sensemaking. Furthermore, we observed the importance of the professional background. As seen from the responses of participant 2 professional experience in the healthcare sector had great bearing, '*I really believe that we have truly excellent doctors and experts. I am sure of this; I worked so many years in that field*' (participant 2). Next, almost all respondents made remarks on the impact of the containment measures on their personal situation. The strongest remarks were made by retirees, who had to abide by strict curfew rules, such as feeling isolated and locked up, especially when living alone.

Turning to the circle of family and friends, we first highlight the impact of knowing people who fell ill with corona, as expressed by participant 5, '*It's different when you now someone who has corona, because we didn't know anyone personally until now, and now everyone already knows someone who is ill, and then that's your personal relationship with someone, it's clearer.* [...] *Maybe I'm even more afraid of some things now than before.*' Accordingly, it is not surprising that concerns about family and friends also are of importance, particularly if such persons have pre-existing health conditions. However, such concerns are more broadly felt as well. Participant 1 mentioned that he helps his grandfather who lives 30 km from him and when public transportation stopped, he could not help him anymore, which caused great concern.

### *4.5.2 GAPS*

Turning to the gaps, the Serbian sample gave rise to a plethora of questions either relating to *uncertainties about the (nature and spread of the) virus* or to *ambiguities relating to the nature of containment measures and governmental policy*. Additionally, but to a lesser extent, there were questions about *the (practical) impact of the pandemic and containment measures.*

Starting with the first category, the Serbian participants faced many and diverse questions relating to the nature and spread of the virus. Questions such as: what is its origin? How does it spread? What effect does it have, in the short and long term? And how long will it last? Strikingly, three participants have the idea that the virus was intentionally created, leading to new questions, e.g. participant 1 noted, '*I think it is dangerous, like other genetically-modified viruses. Serious work is being done in that area. We are in the midst of a biological war. I do not know what exactly the target group is.'* Relatedly,



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participant 3 considered the following: '*was COVID-19 genetically modified or genetically created? Well, of course it was. It is so obvious, almost proven.* [...] *What was the intention behind it? Did the virus escape or was it released for testing purposes but got out of control? It certainly did not come from a bat that bit a pangolin which was then eaten by a Chinese person at a market.*' Perhaps unsurprisingly, there was also a wide array of gaps present regarding the nature of containment measures and governmental policies: should the measures have been introduced in the first place? Are they proportional or do they go too far? And last, should we have stuck with them, once they had been introduced? Also, on this topic a cluster of respondents had the viewpoint that something fundamentally different is going on. Participant 1 referred to the obligation to wear masks as '*part of a bigger story of how they create a problem and then offer to fix it*'. Lastly, as already mentioned in the introduction of this section, participants wondered about the impact, concerning issues such as how we will organize social life, work and about getting supplies.

Next, if we look at how gaps emerged, the Serbian participant predominantly made mention of *inconsistencies and abundance of information.* Additional factors were *falling ill* and *interactions with others*. Starting with the first, almost all participants referred to the overwhelming amount of information, often being contradictory, e.g. as recalled by participant 4, '*so much contradictory and controversial information appeared on television that you no longer knew what to believe and what not.'* The 'alarmism', as put by participant 2, that accompanied the information only amplified confusion. Participant 3 wondered what could and could not be believed on social media. Another evident situation that raised numerous questions was when participant 5 fell ill, in the beginning of the pandemic, but (yet) not being able to get tested. Furthermore, participant 4 got into a confrontation with a stranger about not wearing a mask, while being outside with no one else around, revealing different ideas of what is sensible.

### *4.5.3 BRIDGES*

As diverse as the gaps were of the Serbian sample, so were the bridging strategies. They can be categorized as follows: *different ideas and beliefs about society and government, i.e. different worldviews,* the use of *information, emotions* and *analogies.* Lastly, one participant explicitly *acknowledged complexity* as a means to make sense.

As mentioned above, several participants held the view that the coronavirus was human made and wondered what for. In order to make sense of this issue these participants expressed different ideas and beliefs about society and institutions, i.e. different worldviews. Participant 1 believes that experts are



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serving political interests and doctors also change their views about COVID-19, and - in order to avoid losing their jobs - say what is expected from them. Moreover, according to him the COVID-19 crisis is part of a bigger story of how globalists create a problem and then offer to fix it. Somewhat comparable, participant 4 expressed the belief that '*it is produced to purify the world, to leave all those who are weaker, sick, all those who burden the budgets and all that, so that they disappear.'*

Furthermore, most participants expressed the importance of information, either actively looked up (online) or passively received (e.g. through online groups). Participant 3 mentioned that he does not look up information, but that it comes to him '*on its own*' through online groups with whom he interacts and was confronted with the following information on the origin of the virus: '*was COVID-19 genetically modified or genetically created? Well, of course it was. It is so obvious, almost proven. If a French geneticist said it, a Nobel prize winner, the man who discovered the HIV virus, saying how he had found proteins in the genome of the COVID virus which came from the HIV virus, it means it is a laboratory virus.*' With regards to assessing such information he notes the following. '*Information comes to me from different sides, it is only a matter of how you decide to filter it. Will you believe everything or will you, as I do, check everything as many as five times, then come to your own conclusion. We are all intelligent enough to come to our own conclusions, but whether or not we are right is another issue*.' Participant 5, who fell ill with corona, tried to get as much information as possible, since then little was known whilst she experienced symptoms that matched the emerging accounts of COVID-19.

Here too (negative) emotions played a crucial role. The Serbian citizens that were interviewed referred to responsibility and guilt. Two participants expressed the fear that younger people will eventually suffer the most. Lastly, boredom was specifically referred to by participant 5 (in the context of lockdown), '*every day is pretty much the same for you.*' Setting the Serbian sample apart is the use of a specific analogy, namely that of the NATO bombings (in 1999), which performed as a cultural narrative of resilience. Participant 6 for instance, mentioned that his grandmothers and his country already lived through this. During the NATO bombings curfews were enacted, but citizens were also confronted with evacuations, sirens and of course, the danger of the bombings. Having lived through these events his grandmother thus did not experience '*this curfew as anything particularly traumatic*'.

Lastly, participant 2 explicitly acknowledged the complexity of the situation and therefore felt understanding towards experts. '*It is not simple, and experts had to adapt to the situation along the way, and yes, they changed their views which confused people. Very little is still known about the virus and there is no adequate response.'*



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### 4.5.4 SOURCES & RELEVANCES

Looking at sources and relevances two major themes come out: (*a priori) trust and distrust* notably of the media and healthcare professionals was the most important theme, followed by the importance of the *experiences of friends and relatives.* Lastly, the *political climate* played an important role in Serbia.

Many participants expressed their doubts about the media. According to participant 1, '*the mainstream media, national broadcasters and such are all mouthpieces of politicians.*' They are considered one-sided and therefore untrustworthy. According to participant 3 the media are always late and '*after it happened, making everything sensational*'. They held the same sceptical attitude towards experts, e.g. participant 1 thinks that '*doctors also change their views and, to avoid losing their jobs, say what is expected of them, and I also think that the emergency response team in Serbia serves political interests.'* In contrast, participant 2 expressed great trust in experts and in the way politicians handled their viewpoints, '*we are a small and poor country, but we have exceptional, world-renowned experts. I was confused about the discrepancy between their views and recommendations. Some were a bit more relaxed, while others were in favour of stricter measures. And that is normal.* [...] *We need to respect the experts' opinion and I absolutely trust our experts.*' Evidently, her professional background played an important role in this viewpoint, stating that '*as a healthcare worker I respect science*', again illustrating the importance of one's personal situation on individual sensemaking

Furthermore, experiences of friends were paramount for participant 5, since over time she learned that (same aged, young) people ended up on respirators, which made a deep impression. Last, it should be noted that not long after the pandemic hit Serbia, political elections took place and several participants saw linkages between this event and the political choices that were made before and after the elections.

### 4.5.5 OUTCOMES

As became clear in the preceding sections, the types of gaps, bridging strategies and the weight and relevances assigned to different sources are very diverse in the Serbian sample. Accordingly, also the range of outcomes is widely diverse. They can be grouped into two main categories: *reaching a certain view in relation to gaps* and second, in *guiding specific actions and decisions*. Moreover, helps and hindrances are discussed under the heading of *finding relief, preventing stress and acceptance.*



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Several participants questioned the good intentions of the government, media and experts and some held the belief that the virus was human-made. Upholding such a belief can in itself be understood as an outcome, reached through the use of certain (online) sources. As an illustration of the dynamic and continuous process of sensemaking, the viewpoint that the virus was human-made - as well as other sceptic beliefs - led to subsequent, novel outcomes.

Participant 6 for instance, reached the outcome that the same people who developed the virus might even already have a vaccine. '*I am afraid now because even if they really have a vaccine that may have been prepared by the same people who made the virus. Maybe they had the vaccine at the same time, they just let the virus clean first, and then give the vaccine.'* Being human-made or not, some participants concluded that COVID-19 could be a ploy to exert power and control over citizens, e.g. expressed by the following quote: '*COVID is transforming people into the opposite of who they are by their nature. Humans are social beings, and now we are moving away from our roots, becoming individuals, which makes us easier to control'* (participant 2).

When looking at the Serbian government and health authorities, several sceptic outcomes were expressed as well. Tests, for instance, are seen as unreliable, rigged and unnecessary (participant 3), while another participant noted that strict isolation destroys a person (participant 4). Moreover, as already mentioned before, the changing policies were gauged by several participants in the light of the political elections, saying that COVID-19 is being used as a political asset, '*Lifting the lockdown and quarantine measures, and the rest of it, was a political election campaign. Everyone was living as normal, working. There was no talk of the ill, the dead. Once the election had passed, suddenly the rate of infection rose by many times. Suddenly the entire nation came down with COVID-19, and that is politics once again'* (participant 1).

Furthermore, some participants reached highly critical outcomes regarding the media. Alarmism about COVID-19 is propaganda (participant 1). According to participant 4 notably elderly citizens would be susceptible for such propaganda. '*They indiscriminately accept everything they say on television*' [...] *I wasn't as scared as other retirees because I don't believe so much in everything I hear on television whilst the majority of other pensioners were terrified.'*

However, there were also outcomes that demonstrated trust in the Serbian government and its experts, '*some doctors were a bit more relaxed, while others were in favour of stricter measures. And that is normal a choir is made up of different chords, so there were different tones as well. I think our politicians respected, to a considerable extent, the decisions of the emergency response team*'



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(participant 2). In spite of the critical attitude that was predominantly present, in terms of actions and decisions, on overall, we saw prudent behaviour, e.g. '*when the reports on Italy started coming in, we were already ready for what was coming. I had already introduced measures of self-isolation, restricted movement. We started gathering certain things for a state of emergency of which there was still no talk at the time*' (participant 3).

Last, when looking at *helps and hindrances,* we found that finding relief, preventing stress and acceptance played an important role in the outcomes reached. Despite the 24-hour curfew for retirees, participant 4 went out every day and walked in a nearby park. Participant 6 found thinking about the NATO bombings sobering and a reminder that others are facing more difficult times. Furthermore, in order to prevent stress, many participants stated that they avoided information about the coronavirus. In spite of valuing Serbian experts, participant 5 at some point stopped listening, because it was too much of a burden. Participant 6 referred to 'hyperinformedness', noting '*it doesn't calm me down. The more information you consume, the more information you need and somehow you are more and more drawn into that whirlpool that is not constructive at all.'* Relatedly, participant 2 remarked the following. '*To be honest, I avoid watching the news, because there is too much different information. I cannot deal with that, which is why I avoid it. So many discrepant and contradictory reports* [...]. *I stay away from the news to preserve my inner peace.'* Lastly, some of the participants tried to embrace the grim nature of the situation and even tried to find peace with the thought that they would die. '*I'm like 'if I'm destined to get the Corona* [...] *I really can't do anything about it'. I can't really put that pressure on myself, because there are just some things that we can't influence'* (participant 5).

### *4.5.6 Observations*

Taking stock of the Serbian sample, we observe that it paints a different picture compared to most countries. The severity of the coronavirus pandemic is not denied, but most participants demonstrate stark distrust in institutions, such as the government, as well as the media and experts. Furthermore, the belief that coronavirus was human-made is prevalent in comparison to other countries. Last, interestingly from the perspective of the Serbian social context, the NATO bombings acted as a 'shared cultural narrative', that exerted a powerful influence over how participants made sense of the pandemic as well find strength.



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**Personal situation and social context**

- Male, 23 years old
- Lives in Niš, Serbia
- Electrical Engineering student
- Regularly exercises in the gym and plays football, eats healthy and takes vitamins and supplements
- Helps grandfather living 30 km from him. When public transportation stopped, he could not help him or get anything

**Bridging**

- Believing that experts are serving political interests: 'I think that doctors also change their views about COVID, and to avoid losing their jobs, say what is expected from them'
- Actively doing research and getting informed online
- Beliefs that rhetoric and politics play an important role in communication about the pandemic
- Media are on-sided

# Intermezzo III: The Skeptic Student

**Gaps**

- 'I think it is dangerous, like other genetically-modified viruses. Serious work is being done in that area. We are in the midst of a biological war. I do not know what exactly the target group is'
- 'As one Croatian politician said, you wear a mask – now you are part of the game. In my view, that is part of a bigger story: what is the bigger story?
- 'The same is true of the lockdown, which included a curfew here in Serbia, a total movement ban. It is all part of an imposed ideology which holds that we have to act as we are told': what ideology?

**Sources and relevances**

- Try to ascertain the truth by viewing it from multiple angles
- The internet is a neutral tool, that you can use to cut tomatoes and peppers, or you can kill someone with it
- Point of concern is that media outlets support liberal ideology
- 'The mainstream media, national broadcasters and such are all mouthpieces of politicians and political PR entities'
- 'I personally do not trust anyone who benefits from the government budget, and receives a salary from the government'

**Outcomes**

- Alarmism about COVID-19 is propaganda
- The coronavirus is made in laboratory
- 'Lifting the lockdown and quarantine measures, and the rest of it, was a political election campaign. Everyone was living as normal, working. There was no talk of the ill, the dead. Once the election had passed, suddenly the rate of infection rose by many times. Suddenly the entire nation came down with COVID-19, and that is politics once again'
- 'I think that doctors also change their views and, to avoid losing their jobs, say what is expected of them, and I also think that the emergency response team in Serbia serves political interests'
- The COVID-19 crisis is part of a bigger story of how globalists create a problem and then offer to fix it
- 'I believe that newer vaccines are more harmful and intended to destroy humanity. I often read the Bible. It does not say we need to vaccinate ourselves'
- Because of their one-sidedness I cannot trust the media

## 4.6 SWEDEN

We will now discuss the results from the six interviews held in Sweden. The interviews with participants 1-3 took place in May. The other three interviews took place in September. An overview of the participants can be found in the table below. In gauging the results, it is crucial to remark that Sweden had a different, less rigid, approach to the pandemic, when compared to the other countries we discussed. As Claeson and Hanson commented in *The Lancet* (2021) the amount of cases and deaths increased more rapidly than in its Nordic neighbours (as well as in the other European countries discussed in this study, red.). According to the authors this needs to be ascribed to the Swedish national COVID-19 strategy, the assumptions on which it is based, and in the governance of the health system. From the onset of the COVID-19 pandemic, the Swedish Public Health Agency, embarked on a *de facto* herd immunity approach, allowing community transmission to occur relatively unchecked. No mandatory measures were taken to limit crowds on public transport or in other crowded places. Additionally, coronavirus testing, contact tracing, source identification, and reporting, as recommended by WHO were limited (ibid.).

*Table 8: Overview of participants in Sweden.*

| **Participant** | **Age** | **Area** | **Gender** | **Occupation** |
|---|---|---|---|---|
| 1 | Mid 40s | City | Female | Global health researcher |
| 2 | 34 | City | Male | Public employment agency |
| 3 | 30s | City | Female | Car industry |
| 4 | 59 | Suburb | Female | Food production, taste tester |
| 5 | 70s | Rural (Island) | Female | Retired dentist |
| 6 | 18 | Town | Male | School student |

### *4.6.1 PERSONAL SITUATION & SOCIAL CONTEXT*

We start off by looking at the personal situation and social context of the Swedish participants. They can be grouped in three overarching themes: *the type of occupation, the composition of family and circle of friends* and last, *country of birth.*

First of all, one's professional occupation played an important role. Participant 1 for instance, is a researcher in global health and participant 2 works at the Swedish agency that helps unemployed people. Next the family situation is relevant, e.g. participant 3 has a young child and is expecting her second child. Participant 1 is married to a surgeon, which again showed the relevance of having healthcare workers close to you. Last, participant 3 has been living in Sweden for a number of years, but is originally of French descent. She still has a lot of contact with friends and family in France. As we will discuss below, this aspect of her personal situation was fundamental for her sensemaking practices and very much set her apart from the other participants.

### *4.6.2 GAPS*

The gaps faced by the participants from Sweden can be categorized in two themes: *uncertainties relating to the virus* and second *the nature and implications of containment measures*. After this we discuss how the different gaps became apparent.

First of all, similar to other countries, participants ran into different uncertainties relating to the (nature and spread) of the virus. '*My child has a runny nose and how are we supposed to act?*' (participant 3). For the participant it was unclear whether this was to be treated as a possible symptom of COVID-19 and whether she should keep her child at home or not. Participant 5 wondered whether the pandemic is also a problem for more rural areas, i.e. the countryside and islands. Of course, there were also concerns about what would happen if one were to get ill and how vulnerable someone is. In the words of participant 1, '*God what if you are one of those who end up in a respirator. I am not in the risk group in terms of age or gender. But on the other hand, a little overweight, been smoking a little too much.*' Last, just before official containment measures were called for, two participants wondered whether they could still host a birthday party for over fifty people.

Next, participants stumbled upon gaps relating to the nature and implications of containment measures and governmental policy. Albeit nuanced, two ends of a spectrum can be observed. Most participants wondered if the measures were proportional, given potential negative impacts. To quote participant 2, '*what does it help if you stop the disease when you crash the economy completely and mental illness goes to the ceiling*?' Participant 6, a student, considered what online education would be like and whether it would be good enough. Participant 3 (who is originally from France) was the only one who seriously considered whether the measures taken are sufficient, and more broadly speaking if the moderate Swedish stance towards the pandemic was appropriate. She noted that it was really hard not having a clear strategy from the government about schools (which were kept open), '*I was home and*



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*felt safe, but my child was in preschool. Almost every day for the first three weeks, we thought that the schools would close, but it never happened.'*

After having discussed the gaps that were identified in the Swedish sample, we will now consider how such gaps became apparent. This occurred predominantly through *interaction with others*, and to a lesser extent through being confronted with *contradicting information* and *personal needs.*

First of all, looking at interaction with others, gaps emerged through personal contacts. Participant 4 mentioned conversations about how risky it is to get together. Participant 3 (the French mother) recalled a tough discussion with her boss about taking immediate vacation, enabling her to keep her child at home. This participant was also the only one who mentioned contradictory information. She noted a 'strong dissonance' in the initial handling and the rhetoric of the pandemic in Sweden compared with France, '*we became really worried about nothing happening in Sweden, because the French president was talking about war, but here it was very calm.*' Due to this dissonance, she was concerned about what information was reliable and whether it would be safer to give birth to her baby in Sweden or in France. Last, participant 1 and 4 were very outspoken about how personal needs raised dilemmas: should I throw a party (both participants)? Should I travel? '*I really want to sneak out of the country to go to my summer house in Greece. It's not comfortable to talk about since there are clear directives against unnecessary trips. So even though it hasn't happened yet, it takes up a lot of my thoughts - How can I make it to Greece*?' (Participant 1).

### *4.6.3 BRIDGES*

Looking at the bridging strategies employed, we observed the following: *abiding with governmental advice and policy, experiencing how society dealt with the pandemic, the use of information,* and lastly the importance of *emotions.*

First of all, almost all participants felt comfortable in abiding governmental advice and policy. Participant 4, living on an island that is visited by tourists in specific periods, gained confidence by witnessing how well and quickly stores adapted by introducing distancing measures and offering hand disinfectants. Furthermore, participants referred to making use of information (mostly in terms of information passively received), albeit scarcely and briefly, in spite of the interviewer asking about this. Next to participant 3 who was actively comparing French and Swedish information, participant 1 was perhaps most outspoken, recalling the impact of communications from the government and health authorities for her understanding of the situation. Due to her background as a global health researcher



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she ran into information that is less widely covered, noting, '*it's so hard to know what to base your opinions on. I am currently doing research on gender-based violence in Southern Africa. It is a total disaster with increasing abuse when the communities are shutting down there*.' Participant 2 ran into a VENN chart on Facebook he found useful in helping him to better understand his own position, '*one circle of those worried about the disease itself, one of those who are worried about the economic consequences, and one of those who are concerned about increased power taken by the state. And I'm in the middle where those circles meet.*' This VENN diagram thus aided him in better formulating the ideas that shaped his assessment of the governmental response to the pandemic.

Last emotions played an important role in the Swedish sample. In contrast to other countries, here we also heard accounts of *positive* emotions that helped in bridging gaps. Participant 2 felt *pride* in how the unemployment agency he was working for, adapted its work and priorities, knowing how big the issue of unemployment might become in this period. Participant 6 (student) expressed *empathy*. In spite of hearing on the news that children don't spread the disease to the same extent as adults, he explicitly mentioned to feel understanding as to why authorities decided that virtual teaching would become mandatory.

### 4.6.3 Sources & relevances

Two observations can be made here: *trust in institutions* and the weight assigned to the *perspectives of friends and family*. Generally speaking, there was considerable *a priori* trust in official recommendations from authorities. Some participants indicated to be somewhat sceptical towards the media, in general. Yet, in the context of the pandemic we observed overall trust towards the media, as illustrated by the following quote, '*I was one of those that underestimated this considerably* [...] '*The media has been screaming wolf before. And now when the wolf really came, you couldn't believe it.*' Furthermore, the views of friends and family were mentioned. Participant 1 considered hosting a birthday party prior to the official lockdown measures, but was criticized by invitees and most noteworthy her husband (a surgeon), '*the crucial thing for me was that my husband was mad at me and said that I can't have a party and gather people here. It's crowded and people are sick.*'

### 4.6.4 Outcomes

We will now focus on the outcomes that were reached using the aforementioned bridging strategies, these will be discussed in terms of *adopting a certain gap, guiding actions and decisions.* Lastly, we consider the role of *finding relief, preventing stress and acceptance.*



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With regards to views on the virus, we see that the Swedish sample takes the pandemic very seriously and there is considerable trust and support regarding the Swedish authorities and the way they handle the situation. To cite participant 1, '*rather than the death rates, an eye opener for me has been the sharpened recommendations from the government and authorities. As a citizen, this makes me forced to understand the seriousness,*' and also participant 2 believed that we should '*make sure that there is no second wave in August or in the fall. Rather a sour medication now than stretching it longer through time.*' In spite of such support, some also expressed broader concerns about the implications of containment measures. Participant 2, who works at the Swedish employment agency (who was supportive overall) noted, '*if there are no jobs, there will be no tax revenue and then the health care will really crack.*'

In terms of guiding actions or decisions, we see that the two participants that intended to host a birthday party adapted, by either hosting a small outdoor party or by only inviting the closest family. Participant 3 eventually leaned most towards a more cautious approach, inspired by the French information streams, which meant that she took vacation and had temporarily shortened work days to keep her child home from preschool. Interestingly, this participant also described how she consciously postponed a decision. She and her husband were still unsure whether it would be most sensible to give birth to her baby in France or in Sweden and therefore decided to wait and see if things would get worse in France or in Sweden.

In terms of helps and hindrances, we saw three clear examples of finding relief, preventing stress and trying to accept the situation, which will be discussed with respective examples. Participant 1 felt the deep need to go to her summer house in Greece, and in this context also considered that, '*I also know how dependent they are on the income from tourists during the summer months.*' Against this backdrop she still seriously considered going there. Furthermore, participant 4 ran into critique for wanting to plan a birthday party by several invitees and did not want to increase any stress, '*I have no energy for those kinds of conflicts, then I thought: this party is not happening.*' Last, participant 3 also felt stress due to the intense sensemaking processes, and therefore strived towards acceptance, noting that, '*I have accepted the situation. So, I'm less angry, still disappointed but less angry.*'

### *4.6.5 Observations*

Taking stock from the Swedish sample a couple of overarching observations can be drawn. First of all, in comparison to the other countries there is remarkably little distrust and discussion about the



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legitimacy of measures. On the one hand, we observed support towards the measures that were taken in the face of the pandemic (which as mentioned in the introductory paragraph differed from the other countries discussed in this report). On the other, it also seems that the Swedish authorities enjoyed a great degree of trust from the outset. Furthermore, there was strikingly little reference to actively looking up information. It seems that the advice and measures of the Swedish authorities provided sufficient grip for the participants we interviewed.

Lastly, the Swedish sample again illustrated the importance of one's personal situation. The sensemaking practices of the participant that is originally of French descent, completely differed from the others i.e. through the use of French information streams, raised different gaps, bridges and outcomes. The same holds true for one's professional occupation, i.e. the global health researcher [participant 1] is aware of the impact of lockdown measures for domestic violence, while many citizens are not. Similarly, it is not surprising that someone who works at an employment agency notes that, '*if there are no jobs, there will be no tax revenue and then the health care will really crack*' (participant 2). Indeed, the personal situation of the participants shapes the gaps we perceive, as well as the bridges established to overcome them.



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## 4.7 The Netherlands

On February 27th, the first COVID-19 infection was confirmed in the Netherlands. After the first fatal case on the 6th of March, strict rules and regulations were announced in a press conference on March 12th. The Dutch prime minister announced a stay at home policy and cancellation of all events with over 100 people. On March 15th, additional measures were taken: schools, cafes, saunas, and gyms were closed. In the Netherlands, 23 interviews were conducted during the first wave of the COVID-19 pandemic and slightly after (April-July 2020).

*Table 9: Overview of participants in the Netherlands.*

| Participant | Age | Area | Gender | Occupation |
|---|---|---|---|---|
| 1 | 56 | City | Female | Fashion sales woman |
| 2 | 57 | City | Male | Integrity officer in the field of criminal justice |
| 3 | 24 | City | Male | Medical intern |
| 4 | 24 | City | Female | News program editor |
| 5 | 33 | City | Male | Marketing |
| 6 | 25 | Rural | Female | Nurse student |
| 7 | 29 | Rural | Male | Marketing |
| 8 | 29 | Rural | Male | IT Consultant |
| 9 | 85 | Rural | Female | Retired |
| 10 | 51 | Rural | Male | Secretary of mayor |
| 11 | 23 | Rural | Female | Kitchen staff |
| 12 | 26 | City | Female | Midwife |
| 13 | 26 | City | Female | Banker |
| 14 | 47 | Rural | Female | Administrator |
| 15 | 59 | Rural | Male | Truck driver |
| 16 | 20 | City | Male | Student |
| 17 | 60 | Rural | Female | Wife of medical specialist |
| 18 | 76 | City | Male | Retired psychologist |



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| | | | | |
|---|---|---|---|---|
| 19 | 29 | City | Female | Researcher at university |
| 20 | 50 | Dutch | Female | Former communication specialist |
| 21 | 44 | Dutch | Male | Shop assistant in a wholesale shop for Construction work |
| 22 | 30 | Dutch | Male | Soldier |
| 23 | 29 | Syrian | Male | Tourism studies |

### *4.7.1 Personal situation & social context*

The personal situation and context determined which sensemaking situations came up in the interviews. The main themes that came up were *pre-existing health conditions*, *developmental path*, *closeness to COVID-19,* and *social conflict.* The personal starting points for micro-moments revealed that people having a pre-existing health condition (e.g. elderly, people with medical conditions, etc.) indicated to be more worried about the situation than for example younger people who took a more laid-back stance of 'we will see what this situation will bring'. Younger people did feel responsible for not transferring the virus to places or people where it could do harm and this resulted in overall compliance to the rules and regulations established by the government.

Another determining factor of the personal situation and context was the developmental path people had followed throughout their lives. Due to this developmental path, a predisposed trust or mistrust in the government was present. Previous experiences with the government determined how people view information and regulations articulated by the government. (Participant 10) *'My relationship with the government and law is not that good. There is always an underlying motive. Capitalism is always beneficial to someone.'*

The personal closeness to COVID-19 influenced to what extent people were willing to follow the guidelines of the government and how much trust there was in the given regulations. For example, staff working in a hospital, seeing COVID-19 patients pass away in front of their own eyes, were more compliant to follow the rules and regulations. Distance and closeness to COVID-19 cases and substantial experiences with COVID-19 in their lives greatly influenced how people regarded the restrictions and regulations.

Another factor important for sensemaking was *social conflict* which arose in personal situations (which can also be understood as a source of gaps). In these *social conflict* situations, people were confronted



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with contesting or opposing beliefs, attitudes, and opinions. These situations created friction within families or groups of friends and required people to make sense of the situation, giving rise to strategies and outcomes which were all relational concerning the opinions expressed in their personal social environment. *'Yeah, euh, you start the discussion, until a sort of fighting, and you could say to your partner I do not want this* [...] *So a conflict arises* [...]. *A friend of mine gives me a hug, and yeah, I do not think that is handy then. So, some social situations are quite stressful because yeah, people around you do not follow your rules'* (participant 18). It stood out that most participants mentioned situations in which polarization occurred. Instead of finding common ground, strategies of denying, avoiding, or accepting social conflicts were articulated.

### *4.7.2 Gaps*

The gaps prevalent in the sensemaking moments mainly focussed on *trust and distrust*, *conflicting interests,* and *inconsistencies*. Many gaps revolved around trust and distrust. There was a divide of participants: Some participants expressed their trust in the government and willingness to follow the 'rules' due to their belief in the expertise of the experts. Therefore, apart from practical questions, for example, how will this work with my festival tickets? Or can I still perform my side job? Only some uncertainties and doubts were mentioned. The other participants were more distrustful. Participants who expressed this distrust experienced gaps and uncertainties regarding the motives of the government, questioned about the origin of the virus, the role of the pharmaceutical industry, the upcoming vaccine, how the virus is going to develop, and how the virus is truly spreading. Regarding all these questions and doubts, great emphasis was laid upon the inconsistencies in the information corroborating the distrust in the media and government.

Furthermore, gaps came up about what regulations to follow with emphasis on the *conflicting interests* of the parties involved. The interplay between science, media, and the government was emphasized by stating the *different interests* of these parties. And that these interests do not always align with their personal interest, *'Look Rutte* [Dutch prime-minister] *says, we must make sure that the intensive care numbers will stay low. That is his interest and that is why he is taking these measures. I do not follow these measures because of the numbers of the IC, but I do it for myself, for if I will or will not contract COVID-19'* (participant 18).

Furthermore, *inconsistencies* were found in the media portrayal of certain events during the coronavirus pandemic, further diminishing the trust in the information presented, '*Well, see, I also saw the live images of the street view camera in Scheveningen.* [usually a crowded beach site in the Netherlands]



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[...] *and it never got so busy. So, they are trying to make you see things, and that is why I do not watch mainstream anymore'* (participant 22). The people who distrusted the media and government all mentioned their belief in alternative narratives then presented by the media, such as intuition and astrology. These aspects will be further explained at the bridge section.

### *4.7.3 Bridges*

This section presents the strategies that were used to make-sense of the gaps. The main strategies were relying on the *government regulations*, *their own belief system*, their *understanding of science* and actively looking for *information*. The trust-distrust divide took place on a continuum. In this report the two extremes are highlighted, to which two different bridging strategies correspond: namely, people with predisposed trust in the government relied on the regulations of the government as a way to make-sense of certain situations. While a predisposed mistrust in the government made people rely on their own belief system, which ranged from believing in the fate of god to trusting your own intuition and astrology.

Others mentioned their understanding of how science works as their way to make sense of certain situations. This made the participants understand under which conditions and uncertainties decisions had to be made. And therefore, found less difficulty in dealing with uncertainty and inconsistencies. *'In one country you were allowed to gather with a certain amount of people and in other countries, this was not the same. So, I realized that what in social sciences is always the case, but at the beta-side, there also isn't one right or wrong that can be distilled from science. And experts have all kinds of insights and you just follow how this country decides, well to find a middle way with a little bit of common sense, so I try to take a picture of that without knowing if it is an all-encompassing view'* (participant 19).

Some participants indicated that they actively looked for scientific information. One participant mentioned that he researched whether COVID-19 aerosols can stay on surfaces and mainly trusted scientific articles. These articles made him construct a mental model of how this virus might be spreading. Based on this mental model, which aided him in sensemaking, he took extra safety measures.

### *4.7.4 Sources & relevances*

Participants in the Netherlands mainly focussed on who they *trusted* and who they *distrusted*. A wide array of sources was mentioned like the NOS news [a well-known Dutch news platform], press



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conferences from the prime minister Rutte (Dutch prime minister), but also research journalism, RIVM, and videos sent around through the network on Twitter/Facebook. Another way of gathering information was through family and friends, especially for non-native Dutch speakers.

In some cases, the confusion and inconsistencies in information presented by the 'mainstream media' resulted in a diminishing trust in government, science, and media. Contrasting information and mainly the change of information over time, which in some cases was seen as 'mistakes', made people doubt the RIVM (The Dutch National Institute for Public Health and the Environment), *'Okay perfect, they are the 'experts', but they concluded the wrong thing four times in a row. Shouldn't we start thinking: okay, should we put different people in those places or at least do something. If I make mistakes like that 4 times in a row in my job, I am fired*' (participant 22).

In other cases, it was made clear that the interest of the government and the interest of the individual are not necessarily aligned, therefore the information spread by the government was under scrutiny. Due to which some participants turned to more scientific information which they found more legitimate. At the same time, the media was strongly coupled to the government and was not seen as an individual actor.

### *4.7.5 Outcomes*

The varying degree of trust in government and the doubts, confusions, and questions resulted in different outcomes. When people expressed trust in the government, they also said that they closely follow the rules, trying to minimize their contribution to the spreading of COVID-19. But also, individuals indicate taking even more extreme measures than what was advised by the government, taking their own interest into account.

Many participants mentioned micro-moments in which they were confronted with people holding opposing ideas to their own, about the regulations or what is or isn't a responsible thing to do. These people were often family members, friends, or other acquaintances. Participants indicated that they usually avoided conversations about these topics to prevent getting into fights or unpleasant situations. Furthermore, they often found a middle way by respecting the other person's beliefs, and therefore, following certain rules they did not agree on themselves.



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### 4.7.6 OBSERVATIONS

Taking stock of the Dutch sample, we observe a comparable picture to Germany in which a divide of on the one hand 'science trusting' participants and on the other hand participants 'distrusting of government, science and media'. Through the whole sample, all positions on this spectrum of extremes were present. Yet it stood out that great emphasis was placed upon social conflict which participants encountered in their personal situation and often gave rise to gaps. This shows the polarization that is taking place in the societal debate in the Netherlands.

Participants located more towards the science trusting side put emphasis on the mechanism of science and placed trust in the government, therefore these participants often followed regulations closely. Participants who identified more with the 'distrusting of government, science and media' often expressed their doubts about the severity of the situation and returned to their own belief systems to reach conclusions.



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## 4.8 United Kingdom

The United Kingdom consists of England, Northern Ireland, Scotland and Wales who all have their own government and systems of healthcare. In March all governments announced a 'stay at home' order. People with high risk or illnesses were advised to 'shield'. The UK has been hit severely by the pandemic. It is number eight in the word for death rate per hundred thousand inhabitants and has the overall highest deaths in Europe. At the time of writing, national lockdowns have been introduced across the UK. Six interviews were conducted in the UK after the first wave of COVID-19 (August-September 2020).

*Table 10: Overview of participants in the United Kingdom.*

| Participant | Age | Area | Male/female | Occupation |
|---|---|---|---|---|
| 1 | 70 | Scotland, country side | Male | Retired scientist |
| 2 | 39 | South-England | Male | Undergraduate degree biology, works in the music industry |
| 3 | Late 20s | England | Male | Graduated in environmental health |
| 4 | Mid 30s | - | Female | Primary school teacher |
| 5 | 40 | - | Female | PhD candidate, nurse |
| 6 | 22 | Bristol area | Female | Sport technology |

### *4.8.1 Personal situation & social context*

In the United Kingdom, the following themes regarding personal situations and context were relevant for micro-moments. The *living area, having a pre-existing health condition*, *developmental path,* and *mental health.* The *living area* namely the location where people live and if this is in a city or the countryside contributed to how sense was made. This was for example one of the factors contributing to how regulations were interpreted based on which people decided what actions to take. One participant



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living in the countryside made the following remark on this topic, *'But for people that live near the countryside, it just seemed completely pointless, you know, try to stop them going out. So, I am afraid I ignored that'* (participant 1).

In addition, the living area played a role in what gaps arose. For example, one participant living in Wales who often travelled to England mentioned the confusion about wearing face-masks due to the differences in regional policy, *'I look on the Welsh government website and UK government website and they both said in Wales you don't have to wear it on public transport and in England you do. And so, I thought, well, that doesn't help at all!'* (participant 6).

A great difference in sensemaking was seen between people having a pre-existing health condition and those who did not. People with pre-existing health conditions emphasize the difficulty for people with health conditions to comply with certain regulations. For example, due to the limited number of people allowed in supermarkets many people have to queue before entering. This proves difficult for people with health conditions and even more for people with invisible health conditions. People with pre-existing health conditions also indicated that they were more worried about contracting the virus and mentioned that their precautions and worries sometimes clashed with the opinions of 'healthy' people, who had a harder time understanding their concerns. This theme also showed a difference between elderly people, who more often have pre-existing health conditions and therefore were more worried about falling ill, and younger people, who were not so worried *'*[...] *but younger people even if they've got coronavirus are very unlikely to suffer from it. It's like one in a million chances of them actually dying. Inevitably they don't worry as much'* (participant 1).

Sensemaking was also dependent on the path that people followed throughout life. This developmental path in the UK participants was mainly characterized by their science background and therefore all participants put emphasis on their ability to interpret scientific information and saw this as an important aspect of their sensemaking. *'You know, I wanted to kind of see what the latest information was about that. I am lucky because of my research. I also know how to go and look for information, through a stage in that sort of thing, which you know other people are not also to interpret, I'd say 50% of that information'* (participant 5).

Another theme that was brought up frequently was the importance of mental health. Which mainly triggered gaps regarding the regulations, and uncertainties whether to follow the rules or not. *'I do what I can do [to follow the regulations] but obviously, that isn't an approach that helps my mental health!'* (participant 3).



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### 4.8.2 Gaps

When making sense of certain moments, participants arrived at gaps, from which they started building a bridge to make-sense of this situation. The main gaps faced in the sensemaking were *uncertainties,* the *nature and implications of measures/policy, social conflicts,* and *falling ill.*

Gaps regarding *uncertainty* fell into different categories. People indicated uncertainty over the general situation, preventative measures, and information. General uncertainties about the whole COVID-19 situation were expressed, *'I just feel, there's a bit, slight nervousness, and it's... I mean, there's always the fear for the unknown, mainly'* (participant 1). *Preventative measures* such as the development of a vaccine caused many uncertainties dealing with questions of safety and how this vaccine could be developed so fast. *'How much do I trust that it has been done properly, knowing that in the past it takes a very long time. And how could suddenly you... how can they say we can fast track this vaccine, but you can't fast track another vaccine'* (participant 4). Furthermore, uncertainties regarding face masks were articulated, *'Exactly like with the masks. I am going to wear it, or isn't it? You know, is it yes or is it no?*' (participant 4). *Uncertainties* about the trustworthiness of *information* were mentioned, *'I mean, for me… I just think that is appalling and disgusting that, you know you would add COVID to their death certificates when it isn't that, you know?* [...] *There are so many questions!'* (participant 3).

Participants indicated to have difficulties and questions regarding the nature and implications of the measures/policies introduced to control the virus. Participants expressed that some regulations were not possible to carry out in real life. Which made questions arise like, how can we do this? How can the government expect this from us? *'If we were to adhere to all the guidelines that the government had set out, we physically can't'* (participant 5). Other participants expressed their anxiety about falling ill and contracting the virus. *'I was suffering from anxiety at the time because I didn't want the virus to come to the UK'* (participant 3).

Many participants mentioned the occurrence of social conflicts through which gaps became apparent. One participant mentioned a confrontation with family members who did not understand that he wanted to remain socially distanced because he felt vulnerable due to his Multiple Sclerosis. While his family members believed to already be immune to COVID-19. *'We had different views even within our own household'* (participant 2). Other participants mentioned coming into contact with people holding different beliefs, or not respecting the regulations, and breaking social distancing rules. *'I did get quite upset yesterday by a chap... pushing his religious observations through the door that it said it was all a hoax and that this is actually... God retribution coming down upon us?'* (participant 2). And in the supermarket, *'I'll have some people, like beside me and you know, some of them would say excuse me,*



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*and they would just reach out? I'm thinking, come on, what's going on? Don't you know there is a pandemic here? Why are you reaching? Wait for me to get my bits! You know? Just seeing it, just behaving like that!'* (participant 3). These interactions with others gave rise to questions and confusion about the COVID-19 situation.

### *4.8.3 BRIDGES*

To make-sense of situations and bridge, the previously described gaps people used different strategies. These strategies were: *interpretation by their own situation, taking precautions, comparing with other countries and people, doing your own research and staying open to other opinions.* Participants emphasized the importance of interpreting information and regulations concerning their own situation and personal context. *'*[...] *Where it's not being: yes or no. There's no black or white is all really 'willy washy' grey areas that... it's up for interpretation'* (participant 4). To deal with the general uncertainty and anxieties of the COVID-19 situation participants indicated that they *took precautions* to feel more secure. *'But we just have to be armed with sanitizers, and masks, and scarfs, and gloves and all of those things. We just have to be prepared really'* (participant 5).

Other participants mentioned the strategy to *compare* regulations from the UK with the regulations in different countries, to make sense of the situation. *'You've got family so you've got relatives who are in a different county, well our schools are doing it in this way! And our schools… you know!'* (participant 4). In addition to comparing with other countries, participants also indicated that they compared their opinions with those of other people. For example, one participant who falls in the risk category herself compares her choice of not shielding with the choice of others. *'I am quite cynical when it comes to some people that are saying they are shielding'* (participant 4).

Another sensemaking strategy that arose was *doing your own research*. People emphasized that they researched information themselves, which they found important, and came to their own conclusions. [...] *I am lucky enough to be... blessed some kind of intelligence… I can do the research myself'* (participant 5).

One participant mentioned the importance of *staying open-minded* to other opinions to make sense of social conflict. Emphasis is put on a change of perspective over time and the respect that is needed by understanding the situation of others. *'We are all in different stages of this, we all need to respect that and try to understand that'* (participant 2).



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### 4.8.4 Relevances & sources

Participants reported having used a wide range of information sources in micro-moments. These were mainly scientific information, BBC, Radio 4 and newspapers. Many participants indicated that they have stopped watching the 'regular news' as the amount of contradicting information increased and therefore the ability to determine what was true or not became more difficult, '*only... have myself and my husband who stopped watching the news because... it's just well... well actually... not sure what to believe or more, not to believe anymore... so let's just not bother... so, yeah, I think…'* (participant 4).

For these sources and relevances, participants indicated that *meaningful statistics, scientific information*, *communication of uncertainty*, and *experiences of friends and relatives* were important topics for sensemaking.

It was emphasized that for statistics to make a real impact, or be of real importance for sensemaking they should be put into a relevant context. '*I keep hearing meaningless statistics. Like, there are 46 thousand deaths in the UK, but meaningless. When you say we have 600 deaths per million and the USA has 400 per million and Japan has 7 per million, then that makes sense. I just think there is far too much meaningless stuff out there'* (participant 1).

All participants in the UK indicated that their trust in the *government* was very low and therefore did not solely rely on information through this channel. *'The trust that we have, especially that I have in the information that we are given from the government is… has gone! Basically…'* (participant 4). This loss of trust is mainly attributed to the inconsistency of measures and information sharing. *'I think the UK government, in particular, was very inconsistent'* (participant 1). In addition, participants realized that politicians had different interests than for example scientists. *'I believe in what the scientists are doing… They're doing everything they can. They are on the frontline. They are trying their hardest. But I just think the pressure they have been put under, by people who are... basically they haven't got a clue'* (participant 4).

Furthermore, participants regarded *scientific information* as important for sensemaking. *'So, I did look into the research, more about how the virus works, how long it lasted on surfaces, that sort of thing'* (participant 5). This also relates to the personal situation and context of the participants in which they indicated to have followed scientific education in their *developmental path*.

Another important topic was *the communication of uncertainty* in which participants emphasized the importance of knowing the risk of certain actions. A participant articulated his need for certainty: *'I*



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*think the only thing that would help us is if somebody could say "ok, traveling on this boat is 100% safe. We have everything in place, everybody is socially distancing'* (participant 1). But also, regarding the regulations and how these were communicated. A school teacher mentioned that these regulations would affect her in her profession and yet they found out in the same way about the regulations as everybody else in the country. *'We found out information the same way as the general public found out that information. Right, so... That was a big moment for me that all of this... with the whole situation, the fact that it impacted also my family but also me... as in my profession'* (participant 4). Other participants highlighted that certain decisions and changes in views were not explained well in the media, '*I don't think that was portrayed very well in the media. And I don't think they have shown the science behind it very well either. I don't think they have explained why they made that U-turn'* (participant 5).

Trust is also put in *experiences of friends and relatives*, '*Yeah, I think, for me... it would probably come from my friends and family who work in the NHS, who are... haha you know, I trust them a lot more'* (participant 4).

### *4.8.5 Outcomes*

The main outcomes of sensemaking were *not following the rules, avoiding young people, leaving uncomfortable situations,* and *relying on your own conclusions.*

Participants who indicated at the bridging strategy to rely on their own research, said that this in some cases led to not following the rules, but doing what they thought to be 'responsible'. *'I may have broken the rules, but I thought I was justified'* (participant 1).

Outcomes of sensemaking moments in which social conflict arose often ended in participants leaving uncomfortable situations or avoiding young people. These outcomes were directly related to the gaps of *social conflict*, where participants were confronted with opposing opinions, and bridging strategies *staying open*, which eventually resulted in action. *'I think my single conclusion was that I was uncomfortable in that environment and as such, I wasn't going to stick around'* (participant 2) and,'[...] *but younger people even if they've got coronavirus are very unlikely to suffer from it. It's like one in a million chances of them actually dying. Inevitably they don't worry as much. I think that is a problem so we are taking a risk by going and staying with them. Even if we distance ourselves from them… that is a slight risk'* (participant 1).



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Another outcome was *relying on your own conclusions*, this outcome is directly related to the bridging strategy of *doing your own research*. Participants indicated that with so much information available and much opposing information, they turned to interpreting and making sense of the situation by relying on their own context, situation, and research. *'I think at the end of the day, you have to make up our own conclusions…* [...] *the relevant people that are behind COVID itself? Knowing it inside and out?* [...] *And that's how I determine "has it going down? Has it been going up?" You know… has it stagnated? Yeah… that's how I come to my conclusions…'* (participant 3).

Furthermore, many participants indicated that they concluded that there is much *uncertainty* due to contesting information surrounding the COVID-19 debate and changing regulations. *'And I think that's, at the end of the day, that's where we are, we don't know. The tests might be effective, they probably are 99% of the time. But you are never going to have anything in this world that is 100% accurate'* (participant 4).

### *4.8.6 Observations*

Taking stock of the United Kingdom sample, we can make several observations. Firstly, it stands out that trust in the government was absent for all participants. Emphasis was placed on the changing of regulations and inconsistencies through which the government had lost its credibility. All participants in this sample were educated in science and indicated that scientific information played an important role in sensemaking. In addition to scientific information, interpreting information and regulations according to personal context and situation also played an important role in sensemaking. Overall there was much emphasis on the societal debate and views and opinions of fellow citizens.



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# CHAPTER 5: CONCLUSIONS

The aim of this report was to analyse how European citizens make sense of the coronavirus pandemic. In order to do so, we conducted in-depth interviews with citizens in eight different European countries during the first wave of the pandemic, in which we explored how they made sense of specific micro-moments in which they stumbled upon questions and uncertainties. The results of these interviews were outlined per country in the preceding chapter. In this chapter we take stock of the results and share our conclusions. We recall that our intention was *not* primarily to assess how science communicators or governments should communicate about the coronavirus or containment measures taken in response, but rather view the complexity of the pandemic as an opportunity to learn about the challenges that occur at the science-society interface and what this means for science communication.

Before we elaborate on this, we first remark on a number of limitations of this study. First of all, the interviews were conducted by different researchers which - in spite of using a joint research protocol and a joint training moment - may have led to discrepancies. Second, the sample size was small on average, while the sample size was larger in the case of the Netherlands and Germany. In any case, we do not claim to have reached any form of data saturation. Accordingly, we do not have the pretence that our findings are representative for any particular country. Last, we note that the developments relating to the pandemic, containment measures, as well as individual sensemaking practices are highly dynamic. Accordingly, the findings should be understood as a 'snapshot' regarding the first wave.

Our goal was to show *the diversity of mechanisms that play a role in citizen sensemaking practices,* related to an issue where the connections between science and society have been brought into sharp view. In spite of the limitations mentioned above, the total sample allows us to do so. Accordingly, in this chapter we take stock by first sharing key observations that we can draw on the basis of the sensemaking methodology as outlined in chapter 2. Second, on the basis of this we identify learning opportunities for science communication and lastly, we consider future perspectives, notably for RETHINK, the project in which this study was carried out.

## 5.1 KEY OBSERVATIONS

In this first section of our concluding chapter we elaborate on key observations, looking at the total of results from the eight country reports, still using the SMM framework on sensemaking as our conceptual lense.



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### 5.1.1 PERSONAL SITUATION: DECISIVE FACTOR IN SENSEMAKING

First of all, our analysis shows that one's personal situation is one of the most important factors in our sensemaking practices. We elaborate four recurring elements of one's personal situation. First of all, *closeness to COVID-19* is evidently of great significance. If participants fell ill with the disease themselves, or witnessed others in their local environment getting sick, this made a fundamental impact on their understanding of the pandemic. Undoubtedly, the immense harm COVID-19 caused in (Northern) Italy made an enormous impact on how the Italian participants understood the pandemic. Secondly, the *(perceived) vulnerability of ourselves and loved ones to coronavirus* was important. Mostly this entailed concerns relating to pre-existing health conditions, but also to being more vulnerable due to older age. Furthermore, one's *professional occupation* (or more broadly, one's *developmental path*) is a key element. Evidently participants that have experience in the health care sector took the pandemic very seriously from the beginning and expressed support towards containment measures. Participants with such experiences either have experienced more closeness to COVID-19, or acknowledged their respect and trust regarding the healthcare workers in general. Looking deeper we continue to see the relevance of one's professional occupation. Drawing for instance, from the Swedish country report, it is not surprising that a civil servant of an employment agency is particularly worried about the unemployment that may result from drastic containment measures, and also gauges such measures from this particular perspective. Similarly, a global health researcher is aware of an increase of domestic violence due to lockdown measures, while many citizens are not. Lastly, against this backdrop, the participants' *circle of friends and family* carries great weight, meaning that if we have - or do not have - a family member or friend that for instance works in the healthcare sector, this will impact our sensemaking practices.

In conclusion, as human beings that need to make sense of the COVID-19 pandemic, our personal situation is a decisive factor: to a large extent it shapes the gaps we perceive and the bridging strategies we - consciously or unconsciously - employ. Also, the outcomes that we reach often mirror our personal situation. Indeed, for the practice of science communication it is a sobering insight that, when looking at our results, elements that make up one's personal situation often outweigh information and insights provided by science communicators.

### 5.1.2 GAPS: UNCERTAINTIES AND AMBIGUITIES

Next, we consider the recurring gaps that the participants ran into and how such gaps become apparent. The types of gaps can be grouped into two overarching categories: fundamental *uncertainties* and



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*ambiguities*. Starting with the uncertainties, participants evidently had numerous questions about the nature, characteristics and origin of the virus. How does it transfer? How harmful is it? How did it originate and what impact will it eventually have? Some even wondered whether it was human-made and what the intentions of its creation were. Uncertainties were also experienced regarding effective prevention from getting infected, for instance concerning the contested effectiveness of masks. Also, on a policy-level they wondered to what extent containment measures would be effective. Next to uncertainties about the situation, most participants experienced fundamental ambiguities. They often expressed doubts and worries about the appropriate response to the pandemic, notably from the government. Many participants raised concerns about the proportionality of containment measures for instance, in relation to their potential economic damage and the negative impact on societal wellbeing. In short, they worried whether the cure might be worse than the disease. Relatedly, in varying degrees, many participants questioned the legitimacy of the measures, i.e. to what extent governmental restrictions of freedoms of citizens are justified. Some outspokenly worried whether the imposed measures were in fact misused by their respective government to gain more power and control over their citizens.

When looking at how gaps emerge, the two most important sources were being confronted with (the abundance of) information, notably in the case of *changing and contradicting information and policies,* and secondly, *interactions with others.* Particularly relevant for science communication is the observation that given the uncertainties concerning the virus and the pandemic, participants are continuously confronted with new information that, in turn, often raises new questions. Moreover, participants found contradictory information one of the most frustrating issues when trying to make sense of the pandemic. In this context some participants even expressed feeling angry with science being unable to provide the certainty they were hoping for. This was amplified when (sudden) policy changes were made on (perceived) uncertain scientific insights, while having the pretence that there was scientific certainty. A recurring example hereof is the effectiveness of masks. While their effectiveness was - and still is - contested by part of the scientific community, several governments made the use of masks mandatory in public places, which participants often found insufficiently motivated. Against this backdrop, it seems that on this issue transparency and openness about uncertainties in the end is most fruitful for a constructive relationship between citizens and scientific and governmental authorities. Next, *interaction with others* was prone to reveal gaps. Interaction with others was understood as (direct) personal contact but also observing the behaviour and choices of others. Such interactions often revealed gaps relating to what level of cautious behaviour is warranted. For instance, in the context of the pandemic, something as commonplace in personal contact as hugging - or not hugging - a loved one has been a frustrating cause of fundamental questions; some participants



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would find this unproblematic, while others would consider this as irresponsible and potentially dangerous. Less directly, related gaps also emerged through observing the behaviour of others in public, such as witnessing fellow citizens paying little attention to social distancing or advice to wear masks. Such interaction with others effectively reveals different sensemaking practices of citizens, which in turn may cause citizens to question their own sensemaking practices.

### 5.1.3 BRIDGES: A PLETHORA OF BRIDGING STRATEGIES

Looking at the bridges that the participants - explicitly or implicitly - constructed, we identified four important elements that play a dominant role in the sensemaking practices of citizens. They are: different *worldviews, the use of information, abiding with advice and policy* and different (predominantly negative) *emotions.*

First of all, we saw that participants uphold different *a priori beliefs and ideas about institutions,* i.e. society, government, experts and the media, which we cluster under the heading of *worldviews.* Two ends of a spectrum became apparent. On the one end, a large cluster trusts the aforementioned institutions and therefore is prone to *trust and follow authoritative advice and policy.* This perspective was widely upheld in Sweden and Portugal. However, on the other end of the spectrum a cluster of participants had very sceptical ideas and beliefs about the government, experts and media. This perspective seemed dominant for instance, in the United Kingdom and Serbia. At the extreme of this end, many believed that the pandemic and containment measures were misused by their governments to exert power and control over the public. In turn, the experts and media are seen as a mere pawn in this grander scheme.

Furthermore, many participants made use of information to bridge gaps. In most cases this was 'passively received' information (for instance through television or while being active on social media). In some cases, participants actively looked up information in relation to the gaps they were facing. However, particularly relevant in the context of science communication, direct reference to dedicated science communication outlets were limited. Sometimes this took shape in the form of looking for analogies. A number of participants for instance, mentioned looking up information on the Spanish flu as a means to find some solace, given the fact that this pandemic also at one point disappeared, in spite of the lack of a vaccine and without the contemporary healthcare. Given that vaccines are available in this pandemic and the level of healthcare is considerably higher than in the beginning of the 20th century, some participants found hope that the COVID-19 pandemic will be halted.



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Last, emotions played a very important role in sensemaking practices related to coronavirus. The results make clear that citizens experience a multitude of emotions regarding the pandemic. Mostly these took shape in the form of negative emotions, such as anxiety, anger, frustration that played a fundamental role in reaching certain outcomes. Anxiety for instance strengthened cautious behaviour and anger and frustration fed into views about how the authorities were dealing with the pandemic. However, occasionally participants explicitly referred to positive emotions, such as feelings of pride and resilience, that provided grip in making the situation manageable.

### *5.1.4 Sources & relevances: (dis)trust towards institutions & perspectives of family and friends*

When considering different sources and relevances, two dominant themes emerged: *(dis)trust in institutions* and *perspectives and experiences of family and friends.* As already described in the former section, one cluster of participants demonstrated an *a priori* trust towards institutions that play a big role in the pandemic (notably [health] authorities and the media), while others distrusted such institutions from the outset. This directly influenced the participants' assessment of the reliability information that these institutions produce, as well as the actions they take. If we look at gaps relating to the legitimacy of governmental containment measures, we found that the participants that had the bleakest assessments of the intentions of government, already seemed to have a very sceptical view of the government. A noteworthy exception to this, was the obligatory use of masks, which was found insufficiently motivated by some participants. Yet, for participants that already upheld trust in the government and health authorities, this did not lead to a fundamental loss of support for governmental policy.

Furthermore, in conjunction with the observations already made under *personal situation, the perspectives and experiences of family and friends* are a crucial element in individual sensemaking practices. Most participants assigned great weight to the ideas, needs and experiences of their inner circle. Many participants referred to the importance of having a family member or friend that worked in the healthcare sector, in order to make sense of the pandemic. Similarly, knowing people falling ill with corona made an important impact. Such experiences made corona less abstract and thus more tangible. Lastly, we note that on many occasions participants explicitly referred to their inner circle, while science communication information outlets were not explicitly mentioned by them.



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### 5.1.5 Outcomes: viewpoints, actions & decisions

Finally, we consider the outcomes that the participants reached in light of the coronavirus pandemic. Broadly speaking they can be categorized in two overarching categories: *reaching and reinforcing certain viewpoints in relation to gaps* and second, *guiding certain actions and decisions.* Lastly, we elaborate on factors that played a role in terms of *helps and hindrances* in reaching outcomes.

First, we consider what overarching types of viewpoints were reached by the participants. As discussed in 5.1.2 the citizens we interviewed ran into fundamental *uncertainties* relating to the pandemic, for instance, concerning the nature, origin and potential impact of the virus. Generally speaking, participants formulated an understanding of symptoms of COVID-19 and how the virus spreads. Participants recognized the danger of the coronavirus and realized that the pandemic would have an enormous impact on society. The majority of participants therefore took the crisis very seriously and accordingly concluded that a response from the government and health authorities was warranted. At the same time, the participants also concluded that containment measures are likely to have (potentially drastic) negative impacts, for instance, potentially severely damaging the economy. Against this backdrop, participants experienced many *ambiguities* regarding these measures, which can be summarized as 'asking whether the cure is worse than the disease'. On the one hand, most participants seemed to trust the government and health authorities in their policies and advice. To quote a Swedish participant: '*Rather a sour medication now than stretching it longer through time'.* On the other hand, participants who already upheld a worldview characterized by distrust towards governmental and health authorities found that the measures taken were illegitimate and disproportional. At the extreme end of this spectrum, some participants concluded that citizens were being manipulated and the pandemic was used by politicians as a ploy to gain more power and control over their citizens and the experts and media were part of this scheme. Some participants even concluded that corona was man-made with a purpose.

Furthermore, outcomes were reached in the forms of *behaviours adopted, actions taken and decisions made.* Overall, participants adopted prudent behaviour, practically operationalized by *not* visiting loved ones – particularly if they are vulnerable – and cancelling get-togethers. Most participants indicated that they respected and behaved according to the advice of relevant authorities.

Lastly, as mentioned before, sensemaking is a dynamic and continuous process. Our study has shown just how emotional and tiring, making sense of the coronavirus is. Looking from the perspective of *helps and hindrances,* we see the importance of *finding relief and acceptance* as an important help in sensemaking practices, while *stress and fatigue* are important hindrances. Given the severity of the



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pandemic and the fundamental and often personal nature of the gaps participants run into, citizens hope that they find *grip* in their outcomes. We observe that most participants want to be assured that a certain understanding they adopted is indeed correct, or that a certain behaviour or decision is responsible. This particularly applies to gaps that relate to our personal needs: given the precautionary measures I have taken; can I now safely visit my parents? Can I give them a hug, even though the rules forbid it? Can I still travel abroad, because I have the desire to do so, even though the government advised against it? Indeed, to paraphrase a Polish participant, in addressing such fundamental questions, many participants resort to '*emotional analysis over purely rational analysis'*.

Yet, in spite of the relief many participants sought, participants mostly reached outcomes that affirmed the stressful nature of the pandemic. We observed two reactions in response. First of all, some participants indicated that they needed to come to terms with the situation to make it bearable, thus looking for *acceptance*. Furthermore, notably relevant for the practice of science communication, multiple participants indicated that they *stopped following news on the pandemic or stopped looking up information about this,* because it had become too stressful and tiring. This is important, since the uptake of science communication information streams was already fairly limited. *Avoiding information* may thus very much become an important element for future sensemaking practices relating to COVID-19.

## 5.2 LEARNING OPPORTUNITIES FOR SCIENCE COMMUNICATION

With this study, we have shown that the personal situation and contexts of individuals, the way in which citizens view the world and underlying emotions inform the sensemaking practices of European citizens on science. This study revealed important opportunities for improving science-society interactions and as such provides important learning opportunities for the practice of science communication. In this section, we will connect our insights into sensemaking practices of citizens on the Covid-19 pandemic to learning opportunities for the theory and practice of science communication.

The discourse in science communication is shifting from a deficit approach to more dialogical and interactive models (Trench, 2008). In the past decade great efforts have been made to convince scientists and science communicators of the importance to engage in dialogues with citizens, with a focus on two-way communication modes (Trench, 2008). A central notion in two-way communication modes is that the understanding of citizens on science is not only based on scientific knowledge alone, but also on individuals' underlying worldviews, emotions and cultural beliefs (Nisbet & Scheufele, 2009). With this report we have aspired to shed light on the diversity of the citizens – not in terms of demographic



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differences, but in the various and dynamic ways in which citizens make sense of science. This research demonstrates the role that emotions, trust and differing worldviews play in the process of making sense.

The notion that personal situations, emotions and worldviews inform sensemaking or trust of citizens in science is not new. For decades, scholars within the social sciences and humanities and science communication have voiced their wish to shift towards more interactive and holistic interaction models (Bubela et al., 2009; Fahy & Nisbet, 2011; Nisbet & Scheufele, 2009; Trench, 2008). Moreover, scholars have raised the concern of adopting a rather monolithic perspective wherein interactions with widely diverse (online) audiences are placed under the same umbrella term of public engagement with science – and with less attention to individual differences (Stilgoe, Lock, & Wilsdon, 2014). In this study, we have tried to address these valuable critiques, and explore the individual sensemaking practices of a diverse group of participants. Herein, we tried to untangle the sensemaking practices of citizens in order to illustrate how diverse the personal situations, social context, world views, emotions and values are that inform citizens' view on science. We believe that this micro-empirical approach is needed to uncover the precise processes in which sense on science is formed by citizens.

This altered perspective on the precise workings of sensemaking practices and small-scaled situations help to identify larger learning opportunities for science communicators. For example, we believe that insights into the values, worldviews and emotions that citizens have when they make sense of science would help science communicators to establish meaningful interactions, wherein mutual trust and understanding is facilitated. Insights in sensemaking processes can help science communicators to adopt practices that connect to various sensemaking practices. Such science communication practices are necessarily focused on opening-up the sensemaking practices of citizens, as that facilitates science communicators to connect to citizens' underlying values, emotions and worldviews on science. Therefore, we suggest that science communicators in the future develop reflective practices (Roedema, Kupper & Broerse, forthcoming). In such a practice, science communicators could explore the sensemaking practices that they encounter in their audience, and at the same time reflect on their own actions and approach in reaching-out to these audiences (Roedema et al., forthcoming; (Schön, 1983). This might be especially important in online interactions, for differing opinions and worldviews have become more numerous and explicit there. At the same time, the online realm could provide opportunities. Online, audiences could be earlier and easier reached and science communicators and their audiences may interact in a more direct manner.

Lastly, this study into sensemaking practices of socio-scientific issues, and the notion that an individual's personal situation is a crucial factor for sensemaking – that is, reasoning from the one's



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personal background, as well as one's personal well-being – seems to play a bigger role than scientific information and insights. In fact, if we would ignore larger and mainstream news outlets, participants only rarely explicitly refer to science communication channels as crucial elements in their bridging strategies. Rather, it is the personal situation and/or social context that citizens predominantly referred to in making sense of science. This is a valuable and sobering insight for practitioners of science communication. At the same time, sensemaking practices are very dynamic by nature and every bridge constructed leads to a new gap in one's sensemaking process. Hence, every online interaction may lead to new questions, and subsequently, new bridges formed. Science communicators could play a constructive role in facilitating open and reflexive sensemaking processes online, when paying attention to the underlying ideas, worldviews and personal situations that lay the basis of citizens' sensemaking process on science.

## 5.3 FUTURE PERSPECTIVES

As presented under section 6.2, the exploration of sensemaking practices of citizens on science points towards valuable lessons for the practice of science communication. The RETHINK project will build upon these insights to form strategies for opening-up sensemaking practices, with the overarching goal to facilitate and build constructive and reflexive science-society interactions. For this, new roles that facilitate open and reflexive sensemaking practices are needed. We refer to our report on "barriers and opportunities for opening-up sensemaking practices", wherein these foreseen new roles are discussed (Ridgway, Milani, Wilkinson & Weitkamp, 2020). Secondly, the RETHINK project will continue with our work into sensemaking practices, by developing strategies for science communicators to open-up sensemaking practices. Subsequently, the RETHINK project will collect and analyse best-practices of science communicators that focus on openness and reflexivity with regards to sensemaking practices. Lastly, our local hubs in the seven participating European countries in the REHTINK project, the so-called 'Rethinkerspaces', and together with its members, will start small-scale experiments with professional science communicators to open-up sensemaking practices.

Herein, we would like to point towards some challenges for the practice of science communication that should be addressed in future activities. For example, one of the premises of the insights into sensemaking practices is that science communication ought to deal with individual and personal situations – and as such that science communication itself may need to be more personal or refined in its approach to audiences. A possible avenue is that scientists personally engage in science communication. Previous RETHINK research has shown that scientists and professional science communicators – from the same sample of countries – show great willingness to do this. At the same



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time, they run into fundamental obstacles, that need to be addressed (Roedema et al., 2020). Secondly, from the perspective of sensemaking practices, science communication on the Covid-19 pandemic may be a source to draw from in terms of bridging strategies. At the same time, given the uncertainties in the pandemic and the lack of scientific consensus, science communication often leads to new gaps – while science communicators aspire to actually address such gaps. This implies that perhaps we need to allow scientists and professional science communicators to be transparent about and aid in being comfortable with uncertainties, rather than claiming to know the truth. Ultimately, this may lead to the RETHINK projects overarching goal, which is to facilitate open, reflexive and meaningful science-society interactions, wherein the dialogue that society already has with itself is strengthened.



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# ANNEX I: INTERVIEW GUIDE

You can find the interview guide that you may use for your interview here below. It is important to note that this guide offers you a *structure*. However, we always encourage a naturally flowing exploration of the micro moments described by interviewees. We highly recommend following your intuition, for example when it feels more logical or natural to follow-up with a different question than the order of questions specified here below. The last column of the table may be used to tick off the question. In that way you make sure that you covered all the questions. We recommend at the end of the interview to check if you have asked all questions here below, and if the questions were answered sufficiently.

Part 1: Introduction

| | |
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| Before you start | · Introduce yourself<br>· Introduce the RETHINK project<br>· Relate the RETHINK project to sensemaking practices. For example: mention that we are confronted with a lot of information online, by experts, scientists, politicians, and that we talk about scientific information with friends, family, colleagues. Mention that we need to make sense of the information provided to us. And that this can feel uncertain, confusing and that we need to make sense of the situations we find ourselves in.<br>· Introduce the topic of today. Mention that you are going to talk about the corona crisis in your country and the ideas, thoughts, feelings of the interviewee on this crisis.<br>· Mention that you want to record the interviewee for research purposes. Mention that you will take careful care of this recording: all will be anonymised (by you) and no people outside of the RETHINK research team will hear or read the recording/transcript.<br>· Take extra time to build rapport with the interviewee. Comfort her/him. Explicitly mention that there are no good or bad answers, that it is about their own perceptions and ideas.<br>· Ask if there are any questions at this point |
| Part II: Introduction to interview | |
| | · Start the interview. *do not forget to start the recording*<br>· Ask the interviewee to briefly introduce her/himself. Find a balance between getting to know each other, comforting him/her (i.e. building rapport) and at the same time not let this part of the interview take too long.<br>· Give your example of a micro-moment. Tell the participant about a moment wherein you had to make sense of the corona crisis. Make sure that this example is simple and concrete, and clearly illustrates a moment wherein you were confronted with an aspect of the corona crises, and what made you feel confused, startled, change your perspective/opinion à or in other words, a micro moment in which you needed to make sense of the situation you found yourself in.<br>· Now, ask the interviewee to think about the Corona crisis. Ask the interviewee if they can think of such a moment, or similar experience.<br>· Through questioning and clarifying questions, make sure you end up with a concrete and specific micro moment. |



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| | · Note: It is okay if the interviewee comes up with several micro moments. Make sure to note down all the moments. Provide an overview. Ask the interviewee what moment she/he would like to discuss in more detail first.<br>· Note: It is also okay if the interviewee does not immediately come up with a (concrete and small/brief) micro moment. If the interviewee has trouble finding a micro moment, you can help by mentioning landmark moments, which you have described in your timeline. (For example: "Do you remember when…")<br><br>Questions to ask:<br>· Can you mention a meaningful moment to you relating to the corona crisis?<br>· Can you mention a moment wherein you were confronted with (an element from) the corona crisis? |

Part 3: SMM concepts

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| Personal situation and social context | Mention that you will continue with [summarise the micro moment that the interviewee mentioned in part 2]. Mention that together you will dive further into detail and explore what happened in that moment.<br><br>Questions to ask:<br>· Can you describe what happened when…? (you heard/saw/listened to/talked to/etc. etc.)<br>· What were you trying to deal with?<br>· What stood in the way?<br>· How did that connect with past events/experiences?<br>· How did that relate to:<br>o Your family?<br>o Your friends/community/work?<br>o Current dynamics/events in society? |
| Gaps | Questions to ask:<br>· What were the questions you had?<br>· What were you trying to figure out?<br>· What did you try to learn?<br>· What did you struggle with?<br><br>And to dig even deeper, ask…<br>· What was missing?<br>· How did that stand in the way?<br>· How did that prevent you getting more help? |
| Bridges | Questions to ask:<br>What emotions or feelings did you have?<br>· What beliefs were you (more or less) certain about?<br>· What ideas and thoughts did you have at this point?<br>· (relating to sources) What triggered you? |
| Outcome | Questions to ask:<br>· What did you conclude?<br>· What led you to that [insert here the mentioned conclusion/idea/emotion/feeling/belief]?<br>· How did that [refer to a personal situation/social context/bridge element] help you?<br>o Ask further: and how did this help?<br>· How did that hinder you?<br>o Ask further: and how did this hinder<br><br>And to dig deeper, ask… |



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| | · What led you to that assessment?<br>· How did that evaluation connect with your [personal situation]? How did that evaluation connect with [social context]?<br>· What was limited or incomplete about that? |
| Other | · Ask the interviewee if there is anything more that he/she can remember about this micro-moment, that you did not cover so far. |

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Do you feel that you have covered the micro moment sufficiently?

1. Quickly check if you covered all questions and got answers.
2. Maybe you did not completely understand something the interviewee talked about. Or, maybe the answer was not comprehensive enough. If not, summarise what the interviewee said on [that topic]. Then, ask the question you want to ask (again). Keep going until you're satisfied.

Move on to the next micro moment.
Repeat the same structure (questions in part 2 and 3).

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Closing:
It is very important to close the interview properly and with a positive feeling. Mention you have come to the end of the interview. But before you stop, ask the interviewee:

· Is there anything we did not discuss? Anything you want to add? Do you have questions for me?

Then check one last time if you have covered everything. Also check if you understood difficult or vague parts of the interview correctly, by summarizing and clarifying (i.e.: "when you said this, do I understand correctly that you meant…?").

Mention what your next steps are going to be. Close with mentioning what the interviewee has taught you. Make sure that the interviewee feels valued and listened to. Thank the interviewee thoroughly.



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# ANNEX II: OVERVIEW OF PARTICIPANTS

| Country | Participant | Age | Area | Male/Female | Occupation |
|---|---|---|---|---|---|
| Germany | 1 | 20s | City | Male | Technology and software consultant |
| | 2 | 50s | Suburb | Female | Coach and Mediator |
| | 3 | 20s | City | Male | Business consultant |
| | 4 | 50s | Rural | Male | Dentist |
| | 5 | 20s | City | Male | Innovation consultant |
| | 6 | 20s | City | female | Master student sustainability and transformation, social science background |
| | 7 | 20s | City | Female | Social worker |
| | 8 | 20s | City | Female | Secretary and volunteer worker |
| | 9 | 20s | Rural | Female | Kindergartner |
| | 10 | 30s | City | Female | Digital, international learning at large scientific institution |
| | 11 | 60s | Suburb | Male | Spiritual mentor |
| | 12 | 30s | City | Female | Self-employed acrobat/dancer/stuntwoman and small part time employments, aspiring natural health practitioner |
| | 13 | 60s | Suburb | Female | Housewife |
| | 14 | 30s | Suburb | Male | COVID-19 patient transport |
| | 15 | 40s | City | Male | Journalist |
| Italy | 1 | 50 | Trieste | Male | Craftsman, team leader of municipal civil protection group |
| | 2 | 35 | Lombary region | Female | Digital communication journalist and art exhibitions |
| | 3 | 40 | Piedmont region | Male | Social worker |
| | 4 | 66 | Milan region | Female | Housewife |
| | 5 | 23 | Trieste | Female | University student |
| Poland | 1 | Born in 90s | City | Male | DJ |
| | 2 | - | City | Female | Art and Culture |
| | 3 | Born in 90s | City | Female | Owner of a beauty salon |

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| | 4 | Middle-aged | City | Female | Molecular Biologist, Education |
| | 5 | Middle-aged | Rural | Female | HR |
| Portugal | 1 | 21 | City | Female | student |
| | 2 | 37 | City | Male | Flight attendant |
| | 3 | 51 | City | Female | Copyriter |
| | 4 | 51 | City | Male | Teacher and designer |
| | 5 | 56 | City | Male | TV Host |
| Serbia | 1 | 23 | City | Male | Engineering student |
| | 2 | 79 | City | Female | Retired nurse |
| | 3 | 52 | City | Male | Early retired manager |
| | 4 | 79 | City and rural | Female | Retired lawyer |
| | 5 | 25 | City | Female | Political science student |
| | 6 | 30 | City | Male | Lawyer |
| Sweden | 1 | Mid 40s | City | Female | Global health researcher |
| | 2 | 34 | City | Male | Public employment agency |
| | 3 | 30s | City | Female | Car industry |
| | 4 | 59 | Suburb | Female | Food production, taste tester |
| | 5 | 70s | Rural (Island) | Female | Retired dentist |
| | 6 | 18 | Town | Male | School student |
| Netherlands | 1 | 56 | City | Female | Low |
| | 2 | 53 | City | Male | High |
| | 3 | 24 | City | Male | High |
| | 4 | 26 | City | Female | High |
| | 5 | 33 | City | Male | High |
| | 6 | 25 | Rural | Female | High |
| | 7 | 30 | Rural | Male | High |



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| | | | | | |
|---|---|---|---|---|---|
| | 8 | 26 | Rural | Male | Low |
| | 9 | 80 | Rural | Female | Low |
| | 10 | 50 | Rural | Male | Low |
| | 11 | 23 | Rural | Female | Low |
| | 12 | 27 | City | Female | High |
| | 13 | 27 | City | Female | High |
| | 14 | 45 | Rural | Female | Low |
| | 15 | 57 | Rural | Male | Low |
| | 16 | 20 | City | Male | Student |
| | 17 | 60 | Rural | Female | Wife of medical specialist |
| | 18 | 76 | City | Male | Retired psychologist |
| | 19 | 29 | City | Female | Researcher at university |
| | 20 | 50 | Dutch | Female | Former communication specialist |
| | 21 | 44 | Dutch | Male | Shop assistant in a whole sale shop for Construction work |
| | 22 | 30 | Dutch | Male | Soldier in defense |
| | 23 | 29 | Syrian | Male | Tourism studies |
| United Kingdom | 1 | 70 | Scotland, country side | Male | Retired scientist |
| | 2 | 39 | South-England | Male | Undergraduate degree biology, works in the music industry |
| | 3 | Late 20s | England | Male | Graduated in environmental health |
| | 4 | mid 30s | - | Female | Primary school teacher |
| | 5 | 40 | - | Female | PhD candidate, nurse |
| | 6 | 22 | Bristol area | Female | Sport technology |



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