Anticipating a plausible future of disinformation for the Ministry of Health

Master Thesis Design For Interaction Delft University of Technology Ties Schotel

Appendices

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Appendix 1 -Original project brief

DESIGN FOR MU

IDE Master Graduation

Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

ŤUDelft

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

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STUDENT DATA & MASTER PROGRAMME ave this form according the format "IDE Master Graduation Project Brief_familyname_firstname_studentnumber_dd-mm-yyyy". omplete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 5703 family name Schotel Your master programme (only select the options that apply to you): initials <u>TMD</u> given name <u>Ties</u> Dfl) () SPD) IDE master(s): () IPD) student number _4459474 2nd non-IDE master: individual programme: street & no. - -____ (give date of approval) zipcode & city honours programme: () Honours Programme Master specialisation / annotation: Medisign country) Tech. in Sustainable Design phone email Entrepeneurship SUPERVISORY TEAM ** Chair should request the IDE Board of Examiners for approval dept. / section: DOS/MOD ** chair Peter Lloyd of a non-IDE mentor, including a dept. / section: HCD/DCC ** mentor Roy Bendor 0 motivation letter and c.v.. 0 2nd mentor Sebastiaan Van Lunteren Second mentor only applies in case the

organisation: Ministerie van Volksgezondheid, Welzijn en Sport country: Nederland

city: Den Haag

	section, please explain why.

Ω

assignment is hosted by

an external organisation.

Ensure a heterogeneous team. In case you wish to include two team members from the same

Page 1 of 7

Procedural Checks - IDE Master Graduation

APPROVAL PROJECT BRIEF To be filled in by the chair of the supervisory team.

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- working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

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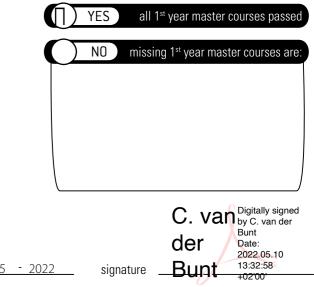
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Anticipating alternate futures of disinformation for the Ministry of Health project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 21 - 04 - 2022

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INTRODUCTION **

The Ministry of Health, Welfare and Sport (HWS) has a big responsibility in dealing with the covid-19 pandemic. One of the teams working on the pandemic within the corona-crisis organization is the data and design team. Through design thinking, they help policy makers shape their policy and they are responsible for several initiatives during the corona pandemic, such as the websites prikkenzonderafspraak.nl and guarantainecheck.nl. During their work, they encountered a big problem: disinformation, "false information deliberately and often covertly spread in order to influence public opinion or obscure the truth" ("Disinformation," n.d.). This is a complex problem that needs a response from the Ministry of HWS both in the short and long term.

The spread of disinformation around the virus is dangerous for the health of people (Barua et al., 2020). Currently, the design team is focussed on tackling current disinformation around the pandemic. Researching the present problem and thinking of concrete solutions for that problem.

However, the current ways of disinformation and the pandemic will be in the past soon. Instead of reacting to developments, being on the backfoot and maybe even being too late with tackling disinformation on Covid 19, we need to take a proactive stance and investigate what might happen in the future. Instead of being reactive the ministry needs to be anticipatory, that is, to build the capacity to deal with the unknown (Guston, 2014). This is in line with new developments in dealing with the Covid-19 pandemic overall as outlined in the letter to parliament this spring (Kamerbrief over Langetermijnstrategie COVID-19, 2022).

We need to ask ourselves: how might disinformation manifest itself in the mid to far future (in my project I use a timeline of 11 years, 3 terms)? What might health challenges be in 11 years? What might be the influence of disinformation on those health challenges? What are other views on good health practices? What are other views on truth? How might these views change the current prominent view on health and truth?

Thinking about these questions will help us create a better understanding of how disinformation could impact people's health, how it might develop, what the role of the Ministry of HWS could be and to design interventions now that are anticipating possible futures.

Personal Project Brief - IDE Master Graduation

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Personal Project Brief - IDE Master Graduation

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Page 5 of 7

Personal Project Brief - IDE Master Graduation

PROBLEM DEFINITION **

The Ministry of Health, Welfare and Sport is concerned about the impact of disinformation on current and future public health issues. The design team needs a catalyst to kick start 1) conversations in the whole organization, and 2) interventions for tackling disinformation that anticipate possible futures of disinformation within the health domain.

PLANNING AND APPROACH **



ASSIGNMENT **

J will develop future scenario's on disinformation within the health domain to create intervention concepts that anticipate possible futures. I will do this collaboratively with internal and external experts and non-experts.

In this graduation I loosely follow the futuring method as described in Smith's book 'How to Future' (2020) combined with ideas from anticipatory government (Guston, 2014) and causal layered analysis (Inayatullah, 1998). I'm going to develop possible future scenarios through environmental scanning, which entails finding trends and drivers. I will gain knowledge with a mix of (internal and external) expert interviews, citizen interviews and literature review (both popular and academic).

Then, I will make those future scenarios tangible and experiential with future prototypes. These are artifacts that 'come from the future', such as a newspaper, a product or a press conference from 2033. With these artifacts I will start conversations with stakeholders in the Ministry and with citizens to investigate hopes, fears and concrete ideas for interventions to tackle disinformation.

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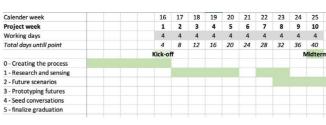
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My final deliverables will be the future prototypes, design criteria and (non detailed) intervention concepts that anticipate the future of disinformation on health.

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Anticipating alternate futures of disinformation for the Ministry of Health Title of Proiect



Phase 1: Research and sensing

Literature review and interviews with internal and external experts and non-experts on the future of disinformation about health. I will deliver a small scale system map of (dis)information on health in the present and a trends and drivers map

Phase 2: Creating future scenarios

First I will identify themes and storylines, making sense of the trends and drivers and then creating future scenario's.

Phase 3: Prototyping futures

I will get feedback from a few internal and external experts to validate my future scenario's and then start prototyping those futures, creating experiential artefacts of the future.

Phase 4: Seed conversations

In this phase I will show scenarios and artefacts to citizens and discuss them. I will analyze those interviews and distill design criteria and, if possible, solution spaces. Lastly I will discuss scenarios and artefacts with internal stakeholders to create design criteria and intervention concepts (short description and quick sketches of the concept, to use as a starting point for further development).

Phase 5: finalize graduation

In the final phase I will finish the graduation project, writing a report and doing the graduation presentation.

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or the Ministry of Health

Personal Project Brief - IDE Master Graduation

MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, ... Stick to no more than five ambitions.

We often hear how designers 'want to make an impact'. I too want to contribute to a better world and have a positive impact. Personally, I feel that to achieve this, I need to be in a place of 'power'. Such as a Ministry. In this graduation project, I want to learn how the Ministry of HWS is organized and how design thinking and futuring can help society with the backing of power the Ministry has.

I strongly believe in proposing new, hopeful, futures. I've been doing this, working with my design company Komovo, where we create visions and strategies and make them tangible in brand, products and services. I want to become more knowledgeable in the field of futuring and to gain the skills, capabilities and vocabulary of this field. This will help me to improve my design practice.

In terms of the topic, I'm very interested in the health domain. With my design work I want to make people feel valued and in their strength. Most often when we are sick, we feel the weakest and the least in our worth. We don't feel who we actually are or could be. This graduation is another project where I hopefully can help people feel valued.

The other aspect of the project is disinformation. A complicated topic, especially in the world we live in now. Questions like 'what is truth' and 'what are different worldviews on truth' trigger me to think deeper and philosophical. An interest I want to develop further in this project.

I look forward to having deep and insightful conversations with stakeholders. To open up my own, but also their, worlds. It's going to be challenging, but that's what I thrive on. Looking forward.

Sources used in this document:

Barua, Z., Barua, S., Aktar, S., Kabir, N., & Li, M. (2020). Effects of misinformation on COVID-19 individual responses and recommendations for resilience of disastrous consequences of misinformation. Progress in Disaster Science, 8, 100119.

Bendor, R. (2021). Course Manual Envisioning The Future. TU Delft.

Guston, D. H. (2014). Understanding 'anticipatory governance'. Social studies of science, 44(2), 218-242. Chicago

Inayatullah, S. (1998). Causal layered analysis: Poststructuralism as method. Futures, 30(8), 815-829.

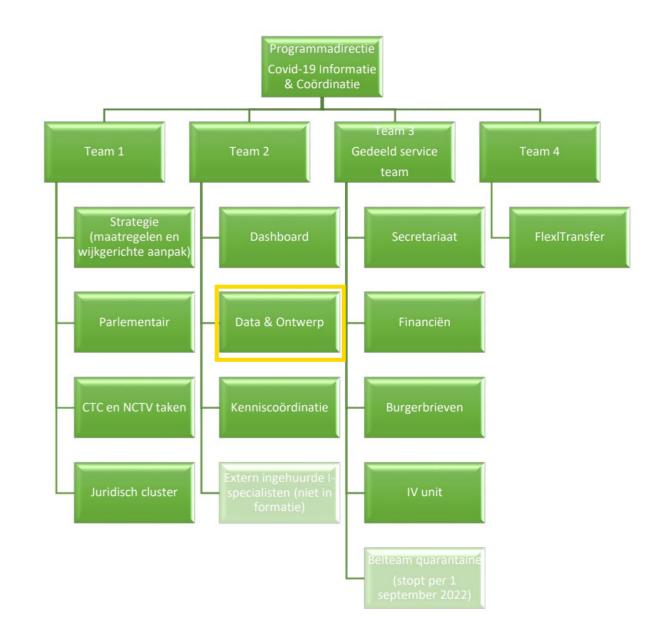
Kamerbrief over langetermijnstrategie COVID-19. (2022). Rijksoverheid.nl. https://www.rijksoverheid.nl/documenten/kamerstukken/2022/04/01/kamerbrief-over-lange-termijn-aanpak-covid-19

Marith, S., & Ashby, M. (2020). How to Future: Leading and Sense-making in an Age of Hyperchange. Kogan Page Publishers.

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Appendix 2 -Organogram of Department of Covid-19 Information and Coordination



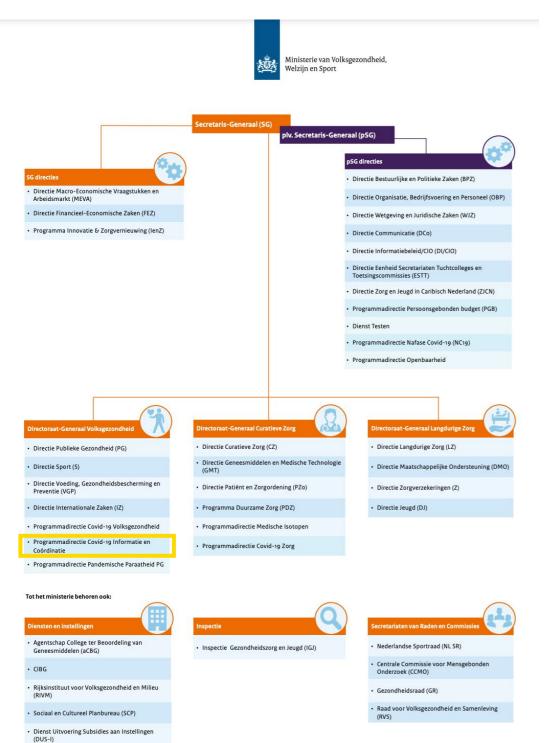
FINAL COMMENTS In case your project brief needs final comments, please add any information you think is relevan

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Title of Project Anticipating alternate futures of disinformation for the Ministry of Health

Appendix 3 -Organogram Ministry of Health, Welfare and Sport

https://open.overheid.nl/repository/ronl-403e04b1-225d-49fd-b86a-4edb3655a9c2/1/pdf/220601%20 Organogram%20VWS.pdf



Appendix 4 literature consultation research setup

Goal

Gain understanding of the disinformation system

Find patterns of change in the disinformation system

Research questions

- 1. What are the mechanisms that influence disinformation
- 2. What are patterns of change that influence disinformation?

Setup

My literature review consists of focussed and active searching for and reading of material, but is mostly an ongoing activity of reading the news, social media, articles and more.

I've made sure to have a breadth and depth of sources: variety, type, viewpoint, scale (Smith, 2020). A quick overview of sources:

- → Scientific publications
- → Online news articles from 'mainstream media' like NOS, Volkskrant and NRC, but also from 'alternative media' like Weltschmertz and Nine for News
- → Governmental publications from the EU and The Netherlands
- → Internal reports
- → Social media posts on Twitter and LinkedIn
- → Books
- → Organisation websites
- → Videos

Analysis

For research question 1, the results of the literature consultation are used as a supplement to the interview results. For research question 2, the results are placed and clustered in a database of signals, trend and drivers (Appendix XX). The literature consultation is an ongoing process and new literature is used to strengthen the found clusters.

Projectdirectie Anthonie va

Appendix 5 - Expert interviews

Goal

1. Gain understanding of the disinformation system

2. Find patterns of change in the disinformation system

Research questions

- \rightarrow What are the mechanisms that influence disinformation
- → What are patterns of change that influence disinformation?

Setup

- → Semi-structured
- → Specific questions per participant according to their expertise and/or perspective
- → 1 Hour long
- → 1:1
- → Online
- → Recorded when consent is given
- → Transcribed only when deemed useful
- → Data processing explained in chapter X 'System mapping' and chapter X 'Processing signals, trends and drivers'.

Ethics

Research approved by the Human Research Ethics Committee at TU Delft. For the Data Management Protocol, Checklist and Consent Form, contact the author.

Participants

See table XX.

Analysis

An iterative analysis is done, resulting in the system map and description in Chapter 4. Some of the data is used to supplement the data for the driver/trend analysis. See Appendix XX.

Code	Description	External/ internal
А	Communication advisor for COVID-19 in the Communication department of the Ministry of HWS	Internal
Jaron Harambam	Assistant Professor of Participatory AI at the Athena Institute, VU University Amsterdam. He is expert on conspiracy theories, news and platform politics.	External
С	Professor of Genetics	External
Catarina Dutilh Novaes	Professor at the Department of Philosophy of the VU Amsterdam, working on disinformation	External
F	Scientific researcher at a government research institute	External
G	Stakeholder disinformation at the Ministry of Health	Internal
Ginny Mooy	Expert in anthropology of infectious disease & public health crises	External
J	Data researcher doing research on disinformation on Twitter	External
Stijn Sieckelinck	Lector HVA on youth radicalisation	External
Michael Hameleers	Assistant Professor in Political Communication at the Amsterdam School of Communication Research (ASCoR)	External

Table 1. List of expert participants

Appendix 6 -Interviews distrusting citizens

Goal

Improve understanding of doubting and distrusting citizens

Research questions

What are the personal stories of doubting and distrusting citizens?

Setup

- → Semi-structured
- → Specific questions per participant according to their expertise and/or perspective
- → 1Hour long
- → 1:1
- → Online
- \rightarrow Recorded when consent is given
- \rightarrow Transcribed only when deemed useful
- → Data processing explained in chapter X 'System mapping' and chapter X 'Processing signals, trends and drivers'.

Ethics

Research approved by the Human Research Ethics Committee at TU Delft. For the Data Management Protocol, Checklist and Consent Form, contact the author.

Participants

See table XX.

Analysis

An iterative analysis is done, resulting in the system map and description in Chapter 4. Some of the data is used to supplement the data for the driver/trend analysis. See Appendix XX.

Code	Description
Н	Covid-sceptic
E	'Alternative' opinion on health

Table 2. Distrusting citizens participants

Appendix 7 - Consent form interviews

Consentformulier voor de studie 'Anticiperen op mogelijke toekomsten van (des)informatie voor het Ministerie van Volksgezondheid, Welzijn en Sport'

U wordt uitgenodigd om deel te nemen aan een onderzoek genaamd 'Anticiperen op mogelijke toekomsten van (des)informatie voor het Ministerie van Volksgezondheid, Welzijn en Sport'. Dit onderzoek wordt uitgevoerd door Ties Schotel van de TU Delft in samenwerking met Dr. Roy Bendor (TU Delft), Prof. dr. Peter Lloyd (TU Delft) en het Ministerie van Gezondheid, Welzijn en Sport.

Het doel van dit onderzoek is om inzicht te krijgen in de ontwikkelingen van desinformatie rondom gezondheid. Het interview duurt ongeveer 60 minuten.

De data zullen gebruikt worden voor het creëren van mogelijke toekomstscenario's die gebruikt zullen worden om het gesprek over (des)informatie in de context van gezondheid en om nieuwe handelingen op het gebied van (des)informatie te laten anticiperen op mogelijke toekomsten. U wordt gevraagd om aan de hand van enkele vragen in gesprek te gaan over de ontwikkelingen van desinformatie rondom gezondheid.

De data worden gebruikt in academische presentaties en publicaties.

Wij doen ons best om uw antwoorden in deze studie **anoniem en vertrouwelijk** te houden, behalve wanneer u ons hieronder expliciet toestemming geeft om uw data identificeerbaar te houden aan de hand van uw naam, rol en/of organisatie. We minimaliseren de risico's door uw anonimiteit te waarborgen en de data op beveiligde manier op te slaan.

Uw deelname aan dit onderzoek is volledig vrijwillig, en u kunt zich elk moment terugtrekken zonder reden op te geven. U bent vrij om vragen niet te beantwoorden.

Ties Schotel, +316 4238 2651, tm.schotel@minvws.nl.

Vink de juiste vakjes aan

Ik heb de informatie over het onderzoek gelezen en begrepen, o heb de mogelijkheid gehad om vragen te stellen over het onder tevredenheid beantwoord.

Ik doe vrijwillig mee aan dit onderzoek, en ik begrijp dat ik kan v en mij op elk moment kan terugtrekken uit de studie, zonder ee

Ik begrijp dat deelname aan deze studie betekent dat ik een ope vragen heb met de onderzoeker.

Ik begrijp dat de studie ongeveer 60 minuten duurt.

Ik begrijp dat mijn deelname aan het onderzoek niet wordt geco

Ik begrijp dat de audio van het interview wordt opgenomen en gemaakt tijdens het interview door de onderzoeker.

	Ja	Nee
of deze is aan mij voorgelezen. Ik rzoek en mijn vragen zijn naar		
weigeren vragen te beantwoorden en reden op te hoeven geven.		
en gesprek aan de hand van enkele		
ompenseerd.		
dat er aantekeningen worden		

Vink de juiste vakjes aan	Ja	Nee
Ik begrijp dat identificeerbare informatie zoals mijn naam, telefoonnummer of email adres niet wordt gedeeld met mensen buiten het studie team.		
Ik begrijp dat binnen de Algemene verordering gegevensbescherming (AVG) een deel van deze persoonlijk identificeerbare onderzoeksdata als gevoelig wordt beschouwd, namelijk politieke standpunten.		
Ik begrijp dat na het onderzoek de geanonimiseerde informatie gebruikt zal worden voor het maken van academische presentaties en publicaties.		
Ik geef toestemming om mijn antwoorden, ideeën of andere bijdrages anoniem te quoten in resulterende producten		
Ik geef toestemming om mijn rol/positie te gebruiken voor quotes en referenties in resulterende producten		
Ik geef toestemming om mijn organisatie te gebruiken voor quotes en referenties in resulterende producten		
Ik geef toestemming om mijn naam te gebruiken voor quotes en referenties in resulterende producten		

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Appendix 8 -Typologies transmission

Traditional (print and broadcast) and new (digital) media (Thoughtful Learning, 2014)

We can distinguish between printed media like newspapers, books and billboards. Also traditional media is broadcasting: television and radio. New media consists of examples like websites, apps, email, blogs, ebooks, social media networks, streaming platforms. Access to these media is important in the transmission of information. You could need a subscription, to be in the right place, own the right devices, or have internet access.

Text, image, audio or video based

Different media types are used to transmit disinformation.

Mainstream vs Fringe

Some media are considered to be 'mainstream', like large newspapers and television networks. On the fringes, the outer sides of society, we see 'alternative media' like Ninefornews, blckbx.tv or Cafe Weltschmerz. Some social media platforms are more tied to alternative media than others, for example Telegram, which is actively used to spread disinformation.

Wide vs niche

Some media cover a wide variety of topics, like the main news outlets, however, there are also niche information sources, for example on health like thuisarts.nl.

Direct vs word of mouth

Information can come directly from a source or via other people like family, friends or your doctor.

Advertisements vs organic

Information can be transmitted through paid advertisements.

Governmental vs private

Information can come from the government, for example quarantainecheck.nl, covid facts or travel website. On the other hand, information can also be private.

Social media types (Cavazza, 2021)

6 categories are distinguished:

- → Publishing: Medium, Wordpress, Twitter, Facebook.
- → Sharing: Youtube, Tumblr, Wikipedia.
- → Networking: LinkedIn, Tinder, Omegle.
- → Collaborating: Teams, Slack, Zoom.
- \rightarrow Discussing: Reddit, Discord, Snapchat.
- → Messaging: Whatsapp, Signal, Telegram.

Appendix 9 -Driver/Trend database

See the database in Airtable: https://airtable.com/shrmN1eVuolJUeCsE

Appendix 10 -Scenario evaluation

Goal

Checking the scenario on the design fiction criteria

Research Questions

What is the quality of the scenario tested on the design fiction criteria?

Setup

Send the scenario and an online form with evaluation questions to experts

Typeform link: https://0znvq027gfh.typeform.com/to/ge9fdSaR(english version)

Participants

- → Lector HVA on youth radicalisation
- → Data researcher at Tilt, doing research on disinformation on Twitter
- → Data researcher at Tilt, doing research on disinformation on Twitter
- → Assistant Professor of Participatory AI at the Athena Institute, VU University Amsterdam. He is expert on conspiracy theories, news and platform politics.
- → Scientific researcher
- → Organisation mentor
- → Roy Bendor mentor of this graduation
- → Two fellow IDE students with knowledge of the project, having read the scenario, without expertise in disinformation.

Data

The form will consist of likert scale questions, to get an indication of the quality per criteria, then there are open questions to get more information about the experts view on the quality of the scenario per criteria.

The questions

What is your name?

- → How clear is the scenario on a scale of 1-5?
- → If lower than 2: What makes the scenario unclear?
- → How likely do you think this scenario will happen?
- \rightarrow If lower than 2: What makes the scenario unlikely?
- → How useful is it to anticipate the events outlined in the scenario?
- \rightarrow If lower than 2: What makes the scenario unuseful?
- \rightarrow Do you want to say something else about the clarity, plausibility or usability of the scenario?
- → What are scenarios or events that could be more important to anticipate?

- → How inspiring is the scenario to create new anticipatory interventions or policies?
- → If lower than 2: What makes the scenario not inspiring?
- → What are ideas for interventions and policies to deal with the events posed in the scenario?
- → Which concerns and ideas does the scenario raise?
- → What goals should the government set in reaction to the scenario?

Analysis

The quantitative data for understandability, plausibility, relevance and persuasiveness gives me a rough idea of the quality of the scenario per criterion. I won't do any statistical analysis, as the N-value is too small and is not of added value to the evaluation.

The qualitative data from the answers to the open questions will help me to get a more nuanced understanding of the quality of the scenario and will give me concrete points for improvement. Questions 9, 12, 13 and 14 give me an idea about the persuasiveness and revealingness. Interestingly, these questions also provide reflections on the scenario and input for interventions and policies for the final deliverable.

The results are interpreted in Chapter 7.

Results

Clarity									
Respondent	1	2	3	4	5	6	7	8	Average
Answer	3	4	3	4	5	5	4	3	3.9
Plausibility									
Respondent	1	2	3	4	5	6	7	8	Average
Answer	3	3	3	3	5	3	3	2	3.1
Relevance									
Respondent	1	2	3	4	5	6	7	8	Average
Answer	2	4	4	4	5	3	3	4	3.6
Persuasiveness									
Respondent	1	2	3	4	5	6	7	8	Average
Answer	3	4	4	5	3	3	4	4	3.8

Clarity

One of the respondents answered with a four and said 'The 'driving forces' that can be identified in paragraphs 1 and 2 respectively seem to be independent from one another ([1] polarisation and [2] global warming.' This is positive to read, as these are indeed the two driving forces in the scenario. However, they do seem 'independant' to the participant, which is not the goal, this should be improved.

Another respondent mentioned 'While reading I noticed that I immediately had a lot of questions about this 'new society' that you describe here. That means that I have given a '3' for clarity, but I also don't know whether this can be prevented, because that is also a bit what you want to bring about I think.' The goal of clarity is not to remove all questions, because questions are just the reflections I need, however, there are some aspects that need to be answered better in the scenario. The following questions or remarks were one offs, but nevertheless important to address:

- 'I don't understand ourfo and theirfo fully.' 'How do you enter a splinter? Do you officially or unofficially belong to a splinter?'
- 'Does the mainstream move towards the splinters?' 'Why is it so [that the splinter specific health care centres don't really help people?'
- [give] an extra example of how people react to a piece of 'theirfo' of another splinter. What does that information look like? Do you receive that via email? Do you see that on the street in holograms? How do you know who is distributing which information stream?'
- 'How do you show that you are part of a splinter?' 'Are these bubbles really completely cut off from the mainstream? And how does that work in practice in a city? Do they also live in different neighbourhoods? Will segregation continue in that area? And does it have to do with education level or do you inherit it from your parents?'

Plausibility

The respondents seemed to be in agreement of a high plausibility for the splintering aspect of the scenario. 'Plausibility for splintering, ourfo and theirfo is high' and 'the sociological effects are very plausible, even more so, they are partly reality already in the present'. For the danger of heat waves, there were a bit more doubts: 'I think the climate aspects are more suitable for Spain, south of France or India' or 'Whether it will be most applicable to the heat scenario seems to me less likely for NL. I think that the Netherlands is well placed to adapt to climate change (at least enough for the next ten years until 2033)' and 'People still have largely positive associations with heat, I don't see it as the most polarising theme.' Others were positive overall: 'The developments described in the scenario are plausible enough' or 'It sounds like an absurd version of our present reality, but it is a future scenario that is in line with the plausible.'

Interestingly enough, if we look at the numbers, we see a 3.1 average, with 6 respondents answered with a 3. The following remark gives a hint at why this is: 'Plausibility is difficult to evaluate, it is of course subjective and based on my feeling.' It seems like respondents find it hard to evaluate plausibility. Another aspect could be that of the two main storylines, one of them (splintering) was more plausible than the other (climate-change), which made the participants go for the middle option.

Relevance

The respondents were overall positive of the relevance of the scenario. Some remarks: 'When you push something into the absurd, sometimes things get clearer, so it's definitely useful', 'I think you've outlined the biggest threat: Climate change and our inability to work together on this issue', 'The developments described in the scenario are certainly important to prepare for'

It doesn't seem there are more important issues I should focus on for this project. With the guestion for more important trends and drivers, the participants mentioned trends that are not necessarily more important. A list of trends mentioned started with 'Not necessarily more, but...', a participant said 'I think you have outlined the biggest threat.' and another noted down'l agree that the two driving forces of polarisation and global warming are very important ones." Others talked about trends that flowed out of or were in agreement with my scenario: 'Democratic constitutional country collapsing under pressure from disinformation and disasters', 'Distrust of government, politicians, elite, institutions, media, science and corporate power. But this is of course already in the different ourfo's and theirfo's apart

from the heat scenario.' and finally questions like 'What happens if a power shift takes place? What happens when no one knows what is real or not anymore?'. This all makes me certain that the scenario I have made is useful to prepare for. However, I did find a bunch of other trends that could be interesting to investigate more in the future.

- → Vulnerability to pandemics due to greater global interconnectedness.
- → Presence of institutional avenues of cooperation in matters of health between national governments and with the private sector' seem relevant.
- → Degree of content-moderation policies (online censorship) within Europe
- → Degree of cooperation between the government and social-media platforms
- → Unemployment
- → Looking for new forms of value/interpretation/ meaning
- → Tension between atomizing vs. dependency of society
- → Increasing climate migration
- → Tension between private companies that are taking more and more risks. Government, which will therefore act increasingly cautiously and preventively
- → What happens if (among other things through splintering) a power shift takes place (political vacuum / chaos, government without mandate and resources)?
- → What happens when no one knows what is real or not anymore (e.g. public figures are constantly accused of cases but defending becomes almost impossible. Won't people withdraw?)
- → The fact that AR/VR makes people literally live in different realities from each other.
- → Implications for mental well-being are also interesting. What if people become mass trust issues/paranoid?
- → The technologization of society and a large online world.
- → Great power for hackers who can blackmail companies or governments.
- → Lack of privacy, data of people out in the open
- → Deep-fakes that increase mistrust.
- → Greater individualization.
- → Food supply problems due to climate change.

- → Big separation between the haves and have nots. Polarisation between rich and poor with the result that the appropriation of other people's property (looting) is becoming more common.
- → Rather climate problems in other countries where we notice an impact (refugees, high food prices, etc)
- → Water level rise.
- → Democratic constitutional state collapsing under pressure from disinformation and disasters

Persuasiveness

We see that the respondents score the scenario high on persuasiveness. In the following, I will elaborate more on the ideas that the scenario provoked.

Revealingness and persuasiveness

From the reactions that I've categorised below, it is clear that the scenario reveals a lot of ideas and concerns with the participants. Of course, these participants are very knowledgeable and the issues raised are in their area of interest. Nonetheless, I'm confident that my scenario is revealing for most participants.

Suggestions for interventions and policies

Information from the government

- → Negative effects of polarisation and splintering may be mitigated by (1) transparency and continuous proof of the effectiveness of government-measures
- → Clear indications of the negative effects [...] of splintering movements.
- → Transparency, building of trust: Transparent and honest policies, open to the public and journalists. Also where online contentmoderation is concerned.
- → I think 'the conversation' remains an important one. The 'open government' is now of course a major objective and they are working hard on that with the introduction of all those laws such as the WoB and the 'immediately clear brigade', but I am curious what the effect of this will really be on the population, what do we notice about this and how do we react to it?
 Ultimate transparency

Debunking

No remarks

Prebunking / education

- → The general public may be made more aware of the dangers and tactics present in splintering movements.
- → Prevention through education: through modernization and forward-thinking education about misinformation, polarising (online) movements, and anti-scientific thinking.
- \rightarrow Mixed splinter education.

Regulation to discourage the production and transmission of disinformation

- → Generate definite disincentives (punishments) for alignment with splinter-movements. But this kind of policy could have considerable blowback and may not be in line with democratic values.
- → Criminalise spreading disinformation (war on fake news)

Regulation to support information

No remarks

Regulations of production technologies

 → I think that we should more actively slow down certain technological developments, such as deepfakes, but on the other hand, those are also individual decisions that have to be made by people.

Regulation of transmitting technologies

- → The relative openness of the internet and the possibility to start and become part of relatively isolated online communities. Within a European framework, this can only be mitigated with laws prohibiting hosting sites to host certain kinds of content. Governmentsceptical, isolationistic, or unscientific contents are not likely to become part of the scope of those laws. Furthermore, it is not unlikely that some hosting platforms neglecting those laws will always exist (e.g. with their HQs outside the EU).
- → Stronger liaisons, cooperation, with (or pressure on) the largest social media platforms: To ensure that these platforms actually keep to their official content-

moderating policies with regards to Dutchlanguage content.

Participation in truth finding

- → Citizens' Council, a third chamber (derde kamer) to involve citizens more in politics to increase trust and reduce polarisation.
- → Bottom-up informed interventions, prompted by independent external experts.
- → Good to see how you could connect with groups that are still seen as dangerous to the state (eg extinction rebellion). they are already acting on these scenarios
- → I think it is important that people can express their opinion and have the feeling that they are being listened to. Goals such as 'every civil servant must have a weekly discussion with 5 citizens from different backgrounds' or 'policy and implementation must have a cup of coffee with each other at least once a day to compare practice with theory', I think are quick examples of this.
- → Invite radical activists and innovative scientists to keep issues on the agenda through in-depth conversations

Law enforcement / Security

No remarks

Crisis management

→ The effects of global warming may be mitigated by thorough (technological) preparation.

Social cohesion

- → More focus on bringing groups from different splinters together (e.g. in hiring policy, events, online tools)
- → There must be a society wide dialogue
- → Splinter filters. "Colour stamp" if ourfo and theirfo overlap.
- → Free zones in cities without interference from filters.

Behavioural change methods

No remarks

Organisation of government on disinformation No remarks

New: 'Good government'

- → One intuitively feels that a lot of anger and isolationistic tendencies are 'sublimated' reactions to stresses with a completely different origin (e.g. job loss, feeling disconnected from local society). Many of these stressors are located on policy-terrains different from that of the ministry of Health.
- → Removing stressors: removing or mitigating factors of stress on the populace of many different sorts.
- → Replacing technocracy with a value driven government

Concerns

A concern that is often mentioned is the tension between freedom of speech and regulating disinformation. 'An option would be to generate definite disincentives (punishments) for alignment with splinter-movements. But this kind of policy could have considerable blowback and may not be in line with democratic values.' and 'It is not easy to think of interventions, taking into account the freedom of citizens. [...] You quickly think of interventions that will restrict personal freedoms. That almost scares me.'

A participant says her concern is 'that more and more sub-societies will emerge that are completely disconnected from the mainstream and create their own structures. Alternative societies.' Another says 'I mainly envision a government that has completely lost control and is becoming smaller and smaller. Care is also declining as a result, with the result that the vulnerable in society are left behind.' A third participant: [The scenario] makes me a little gloomy. I'm afraid of the polarisation that is outlined. And the realisation that certain foundations of society seem to be in jeopardy. Like free debate.'

25

Appendix 11 -Evaluation of future prototypes

This pilot simultaneously evaluates the objects, as well as the simulation. For the sake of storytelling, I will only describe the evaluation of the objects here and in chapter 7 about the evaluation of the simulation.

Goal

Evaluate future prototypes and speculative artefact

Research questions

- → Clarity: Does the set of objects convey the scenario to the users?
- → Plausibility: Do the users believe the set of objects? Are the objects in diegetic consistency?
- → Relevance: Are the users reflecting or ideating on aspects of the scenario that are not relevant in the researcher's opinion?
- → Persuasiveness: Do the users get new ideas for interventions and policies?
- → Revealingness: Do the users reflect on the scenario?

Setup

In this pilot I will ask the participants to try out the future prototypes and react to them.

Data gathering

During the simulation I will look for and note down:

- → Remarks and questions about the objects
- \rightarrow Reflections sparked by the objects
- \rightarrow Ideas for interventions and policies
- After the simulation I will note down:
- \rightarrow Ideas for improvements

Participants

One colleague at the Ministry of Health, Welfare and Sports, without any knowledge of the project or expertise in disinformation.

Two fellow IDE students with knowledge of



Figure 1. First iteration of future prototypes and speculative artefacts

the project, having read the scenario, without expertise in disinformation.

Results

Overall the pilot participants were enthusiastic about the objects. An interpretation is done in chapter 8.

Clarity and plausibility

The participants gave overall positive feedback on the objects. 'The props were very clear, I didn't have big questions, they were really helpful and made the future tangible'; 'This could really happen'; 'The tone of the message seems like something from the government'; and 'I love these artefacts'. Furthermore, comments like 'ah this is



Figure 2. Pilot in process

the cooling gel' showed that the objects are linked to each other. To improve clarity and plausibility, I also gained insights, either directly from the participants or through observation.

Overall

- → The pilot comes from very concrete and about the experience of an individual to more meta in the newspaper, maybe I should introduce less of the story and more in the pamphlets. Things become clear already.
 - → Add theirfo and ourfo analysis in the newspaper, maybe with an illustration
 - \rightarrow Add sizes and percentages to the newspaper

FREENL Starter kit

- → 'Add to 'services': 'Now you have access to these services!"
- $\rightarrow~$ 'Make it even clearer that FREENL is against

climate action and doesn't believe climate change'

- → 'It is hard to estimate how large the splinter is, add "X many people are already a member" or "You are joining a group of X bright individuals"
- → 'Make it clear that it's the first time for a heatwave of this magnitude'
- → 'It seems illogical for the splinter to ask followers to use deepfakes'
- → 'Add "remove mainstream newspaper subscriptions". To create a better link to the newspaper'
- → Option: 'certified by 'Free Scientist Association'.
- → 'Nuance "Brainwashing mainstream schools"
- → ""Reconfigure your e-ink screen" is too complicated'

Rijksoverheid Health Kit

- → 'Shouldn't the light [of the HeatAlarm] be red?'
- → 'Switch step 4 and 5, that makes more sense'
- → 'lt's not clear how it works with the fallout and that the alarm is meant for that.'
- → 'HeatAlarm is not clear yet, maybe use an icon in the flyer'
- → 'Add "Look for your nearest AC-hall at..."

Newspaper

- → Links between FREENL and Rijksoverheid pamphlets seem strong. Add a better relation with the newspaper: 'New AC-halls opened all over the country'
- → 'Add pictures that could also start conversations'
- → 'Validated information is not clear yet'

Relevance, persuasiveness and revealingness

During the exercise, the participants mentioned reflections and ideas that show relevance, persuasiveness and revealingness: 'Urgency goes way up with this depressing future scenario'.

Reflections on the future scenario

- → 'Urgency goes way up with this depressing future scenario'
- → 'This is just horrible, it is a society that is only staying inside'
- → 'Scarcity is going to be interesting, that's something the splinter will also endure.'
- → '[The pamphlet] makes me feel dumb, because it doesn't say why, its very parental. I want to know what's behind it'.
- → This is a great comment as it shows a leverage point that I want to get across (transparency) is understood, and more importantly, established by the participant itself, which makes it stick way more!
- → 'How are you going to check that people are adhering to the rules?'
- → Idea for the pamphlet: 'questions? go to this person'
- → 'This seems like censorship'

ldeas

- → 'How will it work with the police?'
- → 'This reminds me of open government'
- → 'Maybe the government should start an Information onion, first layer super comprehensive information and in the next layer more reasoning, in the next even more details'
- → 'When we talk about engaging, do we have presenters for the government, or podcasts?'
- \rightarrow 'An interpreter for each splinter'
- → 'Can support be financial? Or can it also be technical? Or with tools?'
- → 'Make peer reviews transparent'
- → 'Present facts and numbers, objective information: "This percentage says it works, it's tested by certified scientists'.
- → 'Start a certain AI that can test if information is true or not true, it helps that we are in 2033...'
- → 'We can improve social cohesion with less political parties'

Appendix 12 -Simulation research

Goal

- 1. Trigger a reframing of disinformation
- 2. Align different stakeholders on the broader frame
- 3. Identify intervention ideas that anticipate a plausible future
- 4. Evaluate the simulation on the ability to create a future and system oriented mindset

Research questions

- 5. What are responses to the future prototypes?
- 6. How do these responses link to the new frame as described in Chapter 6?
- 7. Are the stakeholders aligned on the new frame?
- 8. What are ideas for interventions?
- 9. How do the responses show a future and system oriented mindset?
 - → Did the simulation help to think about the future of disinformation?
 - → Is there a higher urgency to anticipate system and future problems of disinformation?
 - → Is there a higher awareness of the broader aspects of the disinformation system and its leverage points?
 - → Is there an interest to use futuring in other projects?

Setup

The simulation consists of letting participants interact with the future prototypes and having a conversation about the responses and reflections of participants on the future prototypes. During the conversation the simulation will be introduced in a concise and clear manner. Not the whole scenario will be explained, only the two important aspects of splintering and climate change. In the first part, the participant is asked to immerse oneself with the prototypes and talk out loud to reflect on the scenario. For the second part, the interviewer will give the unfinished newspaper to the participant. The ideation for interventions and policies starts. Not all leverage points have to be discussed, just the ones the participant finds interesting. The interviewer might ask the participant to look at certain leverage points if he finds that useful for the research. In the final section, a short feedback session is done with the participant on how the simulation went and how it helped. In the rounding off, the interviewer explains the use of the insights and thanks the participant. After the simulation, an online survey (https://0znvq027gfh.typeform.com/to/ JjNBfRH1) is sent to the participant to evaluate the simulation.

Script

Total length: 60 minutes

Introduction

5 minutes

'Thank you for being here, I'm Ties Schotel and I research disinformation in the Data and Design team.

First, I would like to ask you to fill in the consent form that I've sent to you. Thank you!

Today, I want to take you on a trip to the living room of Roel in 2033. You will still be yourself: policy maker / communication advisor / task force lead / lawyer / behavioural expert / manager. We will have two parts: first, we will reflect on a future scenario, secondly, we will think of interventions and policies to respond to the events in that future. This is a free space, every thought and idea is welcome. Unfinished, already far developed or just from emotions and intuition, everything is good. In 2033, we will live in a country with ideological splintering. Around 60% lives in the mainstream and 40% is spread over 10-15 splinters. Disinformation is not a used word anymore. We only have 'ourfo' and 'theirfo'. Ourfo is all information from the group and thus true. Theirfo is all information from outside the group and by definition untrue. Due to climate change, an extreme heatwave during the summer causes a great threat to public health, because of extreme temperatures in combination with high humidity.

Let's look at the objects on Roel's living room table, we see a health kit from the government that is sent out to every citizen and we see a welcome kit for the splinter Roel just joined.'

Part 1 - Reflection through the future artefacts 25 minutes

[Let the participant go through the objects, talking out loud]

Questions:

- → What do you think of this future? Are you afraid of it? Or looking forward to it? What makes it so?
- → What is the main aspect we should try to prevent?

Part 2 - Ideating interventions and policies to anticipate events

25 minutes

'This is a mainstream newspaper that Roel was subscribed to until recently. But as we've seen, he had to stop the subscription when he became a member of the splinter.

For the purpose of this exercise, I've left some of the articles in this newspaper empty. I would like for us to ideate on interventions and policies that you would think are valuable to respond to the scenario that is sketched with the objects. Let's go about this freely, we don't have to fill in all of the articles or all in the same details. It's just to inspire you to think about. There is also an empty page for ideas that don't fit!'

Part 3 - Finishing up

5 minutes

'We are at the end of the simulation, thank you for participating!

→ What did you think of the simulation?

 → Do you have anything more to share or ask?
I will send you an evaluation form, to reflect on exercises like these, it would be great if you could fill that in.

With the Data and Design team, we are setting up a disinformation taskforce to work on policies and interventions to regain a balance in the disinformation system and to anticipate plausible futures. With the results from my research we have starting points. I would also like to continue with creating future scenarios for disinformation and other themes so that we can anticipate more. If you are interested in that, let me know later on!

I'm almost at the end of my graduation, this is the last activity before finishing up everything. At the end of October I have my presentation. When the time comes, I will share my report and an invite for the digital or physical event. Feel free to come!

Again, thank you for participating, if you have any ideas, questions or remarks, you can always contact me.'

Evaluation form

- → How would you describe the exercise?
- → Did the exercise help to understand disinformation further? Why or why not?
- → Did the newspaper broaden your horizon of possible interventions and policies? Why or why not?
- → Did the exercise create a higher urgency to act on disinformation?
- → Would you use this method in the future? What is the value of this exercise?
- → Are there other things that you learned through the exercise or want to mention?

Data

All participants filled in a consent form, see Appendix XX

- → Recording
- → Recording the conversation
- → Notes from the conversation
- → Typeform

Processing

- \rightarrow Simulation and recordings:
- → Transcribe the conversations
- → Filter the reflections and cluster them
- → Filter the intervention and policy ideas and cluster them where possible
- → Filter the evaluations of the simulation Typeform
- → Cluster results from the typeform per question and add evaluations from during the simulation.

Analysis

Goal 1: clustering the intervention and policy ideas and describing them in a way that they can function as starting points for further development

Goal 2: clustering the answers from the evaluation questions and drawing conclusions

Participants

I'm looking for three profiles as participants, with the main overlap being they all work for the government, and most of them for the Ministry of Health. I choose to do this simulation internally, because I already got great insights from people outside of the government, and I now want to spark good ideas and perspectives in policy makers so they can act on disinformation.

The first group I'm looking for are people who work on disinformation policy or have dealt with disinformation in their work. Their perspectives and experiences will help to ideate relevant interventions and policies.

- → Policy maker disinformation at HWS
- \rightarrow Communication advisor disinformation at HWS
- → Expert disinformation, with 5 years of experience
- → Member of team vaccination, who had to answer a large number of questions from the parliament.
- → Member of juridical team, who worked on the lawsuits by Willem Engel

The second group consists of people who have a perspective that I want to use in the simulation to create a wider range of intervention and policy ideas.

- → Behavioural expert
- → Technological ethics expert

Appendix 13 -**Pilot of simulation**

Goal

Evaluate the simulation

Research question

How can I improve the simulation?

Setup

In this pilot I do the simulation as described above. After the simulation I will ask the participants for feedback on the simulation.

Data

- → During the simulation I will look for and note down:
- → Remarks and questions about the simulation itself
- → Observations on how to improve the simulation

Participants

One colleague of the Ministry of Health, Welfare and Sports, without any knowledge of the project or expertise in disinformation.

Two fellow IDE students with knowledge of the project, having read the scenario, without expertise in disinformation.

Results

- → Start the simulation by being clear that it is a free space and that reflections and ideas are more than welcome. These ideas can be thorough thoughts already, but can also be based on emotions!
- \rightarrow Introduce at the start what we are going to do: two parts, first a reflection, then an ideation.
- → The participants had questions about how parts of that future might look like, and were asking for more details. Instead of answering those questions, it was more interesting to ask how the participants looked at this and how they imagined it. From this came very interesting insights.
- \rightarrow Stay keen on the time!
- → In the introduction, mention that you are still yourself, in the same position. You see Roel's living room and his stuff. In the newspaper we see all the responses that you have offered.
- → Introduce the newspaper better: 'this is a mainstream newspaper that Roel was subscribed to until recently.'

Appendix 14 -**Consent form simulation** experiment

Consentformulier voor de studie 'Anticiperen op mogelijke toekomsten van (des)informatie voor het Ministerie van Volksgezondheid, Welzijn en Sport'

U wordt uitgenodigd om deel te nemen aan een onderzoek genaamd 'Anticiperen op mogelijke toekomsten van (des)informatie voor het Ministerie van Volksgezondheid, Welzijn en Sport'. Dit onderzoek wordt uitgevoerd door Ties Schotel van de TU Delft in samenwerking met Dr. Roy Bendor (TU Delft), Prof. dr. Peter Lloyd (TU Delft) en het Ministerie van Gezondheid, Welzijn en Sport.

Het doel van dit onderzoek is om te reflecteren op een mogelijke toekomst en daarnaast om interventies en beleid te verzinnen die anticiperen op die toekomst. Het interview duurt ongeveer 60 minuten. Naderhand wordt er een online evaluatieformulier gestuurd.

De data zullen gebruikt worden om startpunten te identificeren voor nieuwe interventies en beleid op het gebied van desinformatie. U wordt gevraagd om aan de hand van enkele objecten en vragen in gesprek te gaan over een mogelijke toekomst en ideeën te verzinnen voor nieuwe interventies en beleid.

De data worden gebruikt in academische presentaties en publicaties

Wij doen ons best om uw antwoorden in deze studie anoniem en vertrouwelijk te houden, behalve wanneer u ons hieronder expliciet toestemming geeft om uw data identificeerbaar te houden aan de hand van uw naam, rol en/of organisatie. We minimaliseren de risico's door uw anonimiteit te waarborgen en de data op beveiligde manier op te slaan.

Uw deelname aan dit onderzoek is volledig vrijwillig, en u kunt zich elk moment terugtrekken zonder reden op te geven. U bent vrij om vragen niet te beantwoorden.

Ties Schotel, +316 4238 2651, tm.schotel@minvws.nl.

Vink de juiste vakjes aan

Ik heb de informatie over het onderzoek gelezen en begrepen, of heb de mogelijkheid gehad om vragen te stellen over het onderzo tevredenheid beantwoord.

Ik doe vrijwillig mee aan dit onderzoek, en ik begrijp dat ik kan we en mij op elk moment kan terugtrekken uit de studie, zonder een

Ik begrijp dat deelname aan deze studie betekent dat ik een open objecten en vragen heb met de onderzoeker.

Ik begrijp dat de studie ongeveer 60 minuten duurt.

Ik begrijp dat mijn deelname aan het onderzoek niet wordt gecom

Ik begrijp dat de audio van het gesprek wordt opgenomen en dat gemaakt tijdens het interview door de onderzoeker.

	Ja	Nee
deze is aan mij voorgelezen. Ik oek en mijn vragen zijn naar		
eigeren vragen te beantwoorden reden op te hoeven geven.		
a gesprek aan de hand van enkele		
npenseerd.		
er aantekeningen worden		

Vink de juiste vakjes aan	Ja	Nee
Ik begrijp dat er foto's van het gesprek worden gemaakt waarbij ik niet met mijn gezicht op de foto sta.		
Ik begrijp dat identificeerbare informatie zoals mijn naam, telefoonnummer of email adres niet wordt gedeeld met mensen buiten het studie team.		
Ik geef toestemming voor het gebruiken van de data (reflecties en ideeën) uit het gesprek voor het maken van academische presentaties en publicaties.		
Ik geef toestemming om mijn antwoorden, ideeën of andere bijdrages anoniem te quoten in resulterende presentaties en publicaties.		
Ik geef toestemming om mijn rol/positie te gebruiken voor quotes en referenties in resulterende presentaties en publicaties.		
Ik geef toestemming om mijn organisatie te gebruiken voor quotes en referenties in resulterende presentaties en publicaties.		
Ik geef toestemming om mijn naam te gebruiken voor quotes en referenties in resulterende presentaties en publicaties.		

Signatures		
Naam deelnemer	Handtekening	Datum
potentiële deelnemer heb ge	dat ik de <u>informatie en het instemm</u> presenteerd en, naar het beste van ar hij/zij vrijwillig mee instemt.	
Ties Schotel	Ischote	
Naam onderzoeker	Handtekening	Datum
Contactgegevens van de onde contact@tiesschotel.com, 064	erzoeker voor verdere informatie: T 42382651	ïes Schotel,

Appendix 15 -**Results simulation**

Reframing the problem

Information vacuum

As I made clear in my research, a lack of information, a vacuum, creates the opportunity for false and manipulated information. It is the cause for disinformation to grow.

The participants are aligned on this mechanism.

Participant 3: "We don't know everything about everything. That is also why alternative truths are attractive, because they provide answers to questions to which there is no concrete answer. Communication is essential, especially in times of crisis when a lot is unclear."

Participant 5: "It is above all the crisis and the uncertainty that make people doubt."

The idea of a crisis being a crisis is clear.

Participant 2: "A crisis is a crisis and there will always be a group that will question what is happening. That is made clear nicely here."

Although it is clear for some participants, participant 3 first didn't realise that any crisis amplifies disinformation, but after explanation during the interview, he also understood it:

Participant 3: "Ah, so you foresee that the same dynamics will arise from political or other motives [as during corona]. We are of course already seeing that with sunscreen and the shelters."

A new insight is that people can create their own information vacuum.

2

Participant 5: "These people [...] are being sucked into their own information vacuum. And also interesting [...] that the mainstream social media

apps such as Instagram, TikTok and WhatsApp should be removed. You can be super critical of [Social Media], but they are committed to combating disinformation and harmful effects."

The participants have empathy for people who are distrusting of the government and create their own information vacuum.

Participant 7: "I think it's very important to understand the motives [for splinters] to build those walls,"

Participant 5: "The government itself makes enough mistakes. I understand that if you have been a victim of the child benefit affair and your child has been removed from home because you were in debt, that you think that the government does not have good intentions with you."

Participant 6: "People have their own legitimate concerns, so you have to pay attention to them."

Splintering

Alignment

One of the broader themes that participants recognised in the scenario and adopted was splintering. Participant 2 showed an understanding of the scenario where truth is the differentiating factor between splinters.

Participant 1: "With all these algorithms and personal ads. You don't automatically receive any other information anymore."

Participant 2: "You can interpret this as a new pillarization. In the pillarization it was less about 'we know the truth and they don't', and more about 'we think this is important and they think that is important.""

Participant 5 explained: "Well, these bracelets are interesting too. I think that contributes to a kind of group feeling. Group formation, people you recognize. Because it is a social thing, it also means that there are very high social costs to get out of it." She continued: "And what you see here [in the scenario] is that they are actually establishing a parallel society. [...] As a government, you can no longer do anything with it."

Doubts

Participants took on the frame of splintering and understood the link with pillarization that the Netherlands experienced in the mid 20th century. They did have doubts if this could actually happen again.

Participant 2: "You make a split between them and us. Those who believe something else and we, who believe the truth, but I think In reality it's a little less black and white."

Participant 3 agreed: "It's not black and white. It's not a world where there's ourfo and theirfo, that doesn't exist I guess."

Besides doubts about the hard split between 'them' and 'us' in the scenario, more doubts were raised by participant 2:

Participant 2: "I don't think such a massive splintering is on the horizon right now." During other conversations, the underlying feeling of doubt about the Netherlands drifting this far away was noticeable.

Reframing

However, participant 2, with the most vocal doubts, corrected himself everytime he expressed those doubts. Notice how he doesn't see a black and white split and doesn't want to talk about 'them' and 'us', but does so anyway by talking about 'the other side'.

Participant 2: "We don't talk about 'them'. This happens on the other side for sure. As a government you should never go along with that, but at the same time I am fully aware that it is a sliding scale." And although he does not foresee the massive splintering, he did illustrate trends that point towards a future with great splintering.

Participant 2: "That eroding trust in government has been going on for much longer, that is really something that we must continue to pay attention to. Both in politics and in the government, you have to be aware that more and more people feel they are no longer taken seriously. And now that applies to all kinds of very large groups. [...] This is a continuous danger of the tower of The Hague [analogy for a distanced government]. A few of those things have just happened, which contribute to that [the diminishing confidence] in a negative way, so COVID-19 is of course a very big on, well such as the subsidy affair, Groningen gas, refugees. With those refugees, of course, you have two totally [different camps]. You can see absolute fragmentation there."

We saw this pattern too with other participants. First thinking the scenario is extreme and far away, but recognising aspects in the present.

Participant 3: "I find it shocking. But I think it is not that far away. [...] I find that scary. These are all elements that are already coming through. I just see it [in the screenplay] a little more together."

Participant 1: "Ignore the mainstream, we watch and listen to ourfo.' Well, that seems shocking to me, but not inconceivable."

Participant 4: "Yes this [splintering] is already partly in this world, except this is big."

Participant 5 even sees it growing: "The distrusting group is getting bigger and bigger. I think the scenario is extreme but imaginable. No, but honestly, I think this is what could happen if you don't do something."

Evaluations of reframing

The majority of the participants were already familiar with disinformation. This meant that for some of them, understanding about disinformation wasn't raised and their frame was harder to change. Participant 1, asked if her understanding grew: "I don't think so."

Participant 6 answered: "A bit. The options were largely known to me."

Other participants of those who are familiar with disinformation, did find a new perspective or insight:

Participant 3: "[The simulation] also made me realise that all interventions and policies on people who are convinced of alternative information sources may have the opposite effect."

Participant 7 gained a newfound urgency: "I don't know if [the simulation] has increased my understanding of disinformation, because I've been working on it a lot lately. It does make you think! If we don't get started on this in time, disinformation will only get bigger"

For most participants, the frame broadened. This was exactly my goal.

Participant 3: "[The simulation has created] the need to approach this not only from our own angle, but a broader approach is needed. [...][The simulation] has expanded [my horizons].

Participant 2: "It [the simulation] has helped me to look at a possible future differently, adding more facets to the approach to disinfo."

For participant 7: "It [the simulation] has further reinforced my view that polarisation contributes to the spread of disinformation and I really think we need to work on that in the future."

Participant 6: "[Increased understanding of disinformation?] Yes, good to look at this from "the other" perspective." Next to that, he added that it was good to have time to reflect: "Well a lot, because we are very active with each other, so we hardly ever reflect. We hardly ever talk, so this is a rare moment of reflection. [...] apparently I do have a lot of ideas."

Alignment on the vision: an open government

Freedom of speech

In my conversations, freedom of speech was mentioned by everyone, explicitly or implicitly, in reaction to the future prototypes. It is the most important cornerstone of democracy within the context of information. This firm belief in the freedom of speech is the first hint of a larger theme during my conversations, which is the urge to become an open government. First of all, to be open to the opinions of each and all citizens.

Participant 1: "Freedom of speech is of course a super, super important thing."

Participant 5 emphasises: "Freedom of expression is a right between government and citizens".

Participant 4 says: "We work within government frameworks such as freedom of speech."

Freedom of choice

A second aspect of an open government is freedom of choice. It is clear that this aspect is closely tied to freedom of speech, which is logical looking at the system map of chapter 4, where information leads to action.

Participant 4: "The problem for me [with the Splinter box] is that these things are imposed. I think the [government] box that you get is the freedom to use the things and the choices you make and this [Splinter box] is information imposed by the way they put it."

Participant 1: "Who are we to have an opinion [about harmless health alternatives]."

Participant 2: "While we actually say, especially if you look at vaccines, for example, just get well informed, you shouldn't feel obliged to take the vaccine, but make sure you know all facets of what is going on."

If we inform people, they will make the right decision.

Getting well informed is a prerequisite for citizens to make good decisions, say the participants.

Participant 4: "[...] we believe in the good of people [to make the right decision]. So we keep informing."

Participant 2: "What matters, of course, is that you provide all the information and that you give people a freedom of choice. If people then actively choose not to do that, then it will also be fine, we said: Fine. We live in a democracy."

But the opinion of participants is not as one sided and positive, where just giving freedom and information will create a perfect world. Notice how participant 2 said how he is ok with citizens ignoring information, for a second time, but then again, tensely, adds that he thinks making informed decisions is really important. This introduces a balancing act between freedom and the limits of that freedom.

Participant 2: "We just think it's really important to provide [citizens] with the right information in the right way so that they can inform themselves and if they choose not to take that information, that's their choice. But what we find very important in this is that people can make an informed choice."

Dangers of freedom of speech

Information can help make the right decision, but as the scenario showed, can also steer dangerous decisions for public health and safety. The participants struggled between these dangers of disinformation and the right for freedom of speech.

Participant 5 comments: "Where is the limit? Disinformation as a phenomenon is within the law, it is legal, but there are certain forms of disinformation that we can all say is just not acceptable."

Participant 3: "You don't want to limit the freedom of speech, but if it has substantial consequences for people, I think as a government you have to take the step to protect people against certain information."

The law is used as the limit:

Participant 2: "Of course we want to stay as far

as possible from censorship. Everyone should be able to say what he or she thinks within the limits of the law."

Participant 5 introduces a new way to limit the spread of disinformation, while staying away from censorship: "Freedom of speech, but not Freedom of REACH. [...] Then you are consciously manipulating the image, so then the intention is clear and then you can also say, then it is good to intervene, because that is a certain form of manipulation of other people. And I think everyone can agree on that, so that's not desirable."

Dangers of freedom of choice

There is also a balancing act between the freedom of choice and dangers of that freedom. When should the government limit choices?

Participant 1: "If those cooling pills, if there is chlorine in them and then everyone comes to the hospital. Yes, then there will be [actions] and I think that at least at the moment there is also a legal basis to tackle that. Because you're putting people's lives in danger."

Participant 3: "We are setting this up from the government to protect people and to provide certain action perspectives so that public health is not endangered."

Another way the participants doubted citizens to make the right decisions for public health is egocentrism in society.

Participant 2: "A lot of people just don't think it [following corona measures] is important enough. We do have quite an egocentric society at times. Do it for someone else. Yes, bye, I'm not going to possibly risk my well-being for other people."

Participant 3: "From the perspective of behavioral science, if something touches you personally and in the short term, you value it much more [...] then something that is far away and does not concern you directly." However, some choices for public safety are further away.

Open government

In conclusion, there is a balancing act between

freedom of speech and the dangers of disinformation, between freedom of choice and citizens not making safe choices and between trust in citizens and a doubt in citizens.

However, and this is important to emphasise, an open government with freedom of speech, choice and trust is the major and most prominent side of the vision.

The idea of an open government was further reinforced by the firm stance on not joining polarising frames. The participants are aware of the phenomenon of ourfo and theirfo in my scenario. Multiple mentioned the use of 'ourfo' in the government Health Kit.

Participant 1: "Can't imagine this would be used on such a folder at the moment."

Participant 3 said: "I don't really understand why the mainstream also uses those terms [ourfo and theirfo in the scenario]."

The participants actively distanced themselves from joining the frame of splinters. This is a third aspect of being an open government.

Participant 6: "[ourfo and theirfo] also puts all those people away as a group."

Participant 4 agrees: "This [ourfo and theirfo] is already pushing someone away, which I find very bad."

Mutual distrust

As we saw before, the government wants to be an open government, but does see dangers of the freedom that is given to citizens. There is a certain distrust towards citizens, but also towards the government.

Participants showed a distrust in citizens.

Participant 7: "That's the whole discussion about drugs: should it be banned? That's the same as with small children. Telling small children not to take candy will only make it more attractive to do so." Another idea that was underlying comments of participants was where citizens needed to be educated to handle the freedom of speech and choice.

Participant 2: "[Education] is something why the disinformation frame could lose its foothold, if people are a little more resilient and don't immediately run around when something is on fire and look up questioningly when they are rescued."

On the other hand, the government is not trusted by citizens either according to the participants.

Participant 2: "We pretend to have a very open government, but that is of course very difficult. If 5 party leaders have made an annoying A4 sheet, with 'function elsewhere' on it, that very much feeds distrust in the government, while that is not even necessarily related. This is the only way to create that frame that the government is not open at all. That everything here happens in back rooms and that you can never see what the government is doing. 'We have a lot of classified information' [these ideas] add to that frame: 'we are trying to suppress people, to keep people stupid, we have a hidden agenda, well, so on.""

Participant 6: "He who pays the piper [scientific research] calls the tune, is of course the saying. So yeah, of course that's just 'bribing the scientists to get your way' [distrustful citizens say]."

Participant 5: "If Facebook blocks their account, they're convinced that I'm behind it. I can keep saying: 'no, we're not behind this' [but they don't believe me anyway]."

Participant 3 adds that citizens don't trust the government to listen to them: "I think that's also one of the reasons people drop out of the mainstream, because they don't feel heard."

Starting points that anticipate a plausible future

Participants took a broader problem frame where the information vacuum and splintering and opened themselves up to intervention starting points from this broader perspective. Going through the newspaper, some interventions stood apart and were met with great enthusiasm. From the analysis, it became clear these interventions fitted in the shared vision of an open government. These interventions seemed to resolve tensions within the open government vision.

Transparency

Participant 2: "[An open government] is the goal."

Participant 1: "That [open source app development] just happens to be an example of if you want to be a government that shows openness and trust and decisions, that's just a really nice one."

Participant 3: "We have to take people by the hand, by being transparent. [...] People want to understand why we have to take serious measures, what is happening and how decisions are made. [...] The starting point is that you include society in the process. And showing the vulnerability as a government can also provide understanding. And of course I understand that it's not always possible, but I think it's a good starting point."

Participant 4: "Yes, I think you just have to be very honest with each other, also as a ministry, also as a government, so [communicate] much more honestly."

This transparency can be achieved with communication.

Participant 1: "You will really have to work on yourself as a government or as scientific institutions: how do you ensure that you are simply the most reliable source?"

Participant 1: "It's often about how you communicate things"

Participant 7: "A large part of the population also knows that this is good reliable information, but of course there is also a great deal of mistrust towards the government. [...] How can you reach people with the right message? However, we shouldn't just place information somewhere, we need to be active in our transparency.

Participant 2: "Everyone is free to choose where they get their information from, but you have to make sure you match to their information needs, because otherwise you will actually be depriving them of their information without the people knowing."

According to participant 1, the government thinks like this: "it's there somewhere, so we're transparent." She also says: "But there is also a difference in being actively transparent."

Participant 3 talks about how other ways of informing could work well: "For some people, changes in society go too fast and you will have to take a step back. So communicating information to people, in a trusted environment, by people they trust."

Participation

Participants went one step further, not only wanting to be transparent, but actively involving citizens in truth finding and decision making. All of the participants were enthusiastic about this idea.

Participant 1: "So really looking for more connection with citizens. Also getting off the high horse, where you, as a government, think you just know better."

Participant 2: "Participation could well contribute to people seeing: 'gosh well, okay, how does that work? Yes, that's how research works.' Well, that actually sounds quite interesting."

Participant 3: "I would like [participation] very much. Anyway, I think that's a good plan. To go through the steps together with the citizen, so it is part of that transparency perhaps? [...] But it can also be to create support in society for a difficult problem, where no solution would appeal to everyone, but you have to do it together as a society and this can be a means to show: we want to use different perspectives. We let everyone think along and we came to this outcome together." Participant 4: "I think you have to go find some kind of common ground. [...] You might want to involve that group [antivax] as well. Why [do they think things]? There is sometimes truth in what they say. That criticism is quite good sometimes and I think it is a shame that we as a government immediately try to flatten [the critique] out, but we should really just invite those people."

Participant 5: "And you see that now with nitrogen. That the measurements are disputed. Then let's agree together what is the right way to take measurements. But then we also have to trust the outcome together and adapt to it."

Participant 6: "We need to start the conversation"

Participant 7: "I think it is always good to include citizens, so that you also create more understanding and a look into such a black box [of science and government], how it works and how it is looked at. That can be valuable."

There were different concrete ideas to do this participation.

Participant 4: "Just a number of people sitting together on a moor. Add a sandwich, drinks and just start small. [We need to invite] a lot of different groups. Opponents, proponents, just really different groups."

Participant 5: "To conduct the public debate about the public debate, so a process of maybe two years, in which we have conversations with citizens and experts and politicians."

The participants acknowledged that there are difficulties with participation.

Participant 7: "I think [starting a conversation] is very difficult."

Participant 6: "I can always immediately come up with a counter-frame of the other person: 'How reliable is such a participation?""

So, when we organise participation, we need to do it right.

Participant 1: "A well-defined form of participation and not the 'just to do it' participation, as in we organise a support group, and then do nothing with it. But really if you can link back to people: 'this and this happened with your input'. Something that often doesn't really happen at the moment."

Participant 3: "It should be clear in advance what will be done with the findings. And that this is also adhered to from the government, so it must be based on trust. And, that trust also needs to be reinforced"

Education

Another way to deal with the dangers of disinformation, is to educate in critical use of information. Not as a government that imposes this on citizens, but as a government that stands next to citizens in an empowering role.

Participant 2: "[Education] is something why the disinformation frame could lose its foothold, if people are a little more resilient and don't immediately run around when something is on fire and look up questioningly when they are rescued."

Participant 3: "You have to give people tools to be critical. You just have to check, okay? People who write things down have certain interests and have a certain intention by writing something down and from science that is to sort of indicate what is going on and to know more about it, but politically or from other interests, there can always be others intentions and from an ideology."

Participant 1: "Looking critically at sources is of course not something you just learn, especially not in a primary or secondary school. Whereas, if you enter a world where that is almost a necessity, because you have so much information. And you have no idea where it's coming from, that's just a really important skill."

The core of what should be educated in the context of information, is to rely on different sources of information.

Participant 7: "Because you want people to learn, especially children, but also just people in general,

that you should not base your opinion on what one person shouts, but hear different things and then make your own assessment of what you believe and what you think is reliable."

Participant 2: "So that's why you're underscoring on using those different sources so much, because when you combine deepfakes with a media outlet that reiterates what is said in such a deepfake, yes, then you naturally tend to believe it all?"

The case of deepfakes

Deepfakes was one of the aspects in the scenario that was picked up on by the majority of the participants. A technological development that they were cautious about. In their reflections on deepfakes, we see the tensions between freedom and dangers of that freedom again. Thinking of solutions, an open government was the vision again.

Deepfakes can be used for good.

Participant 5: "There are very good reasons to make deepfakes. For example, it is used for trauma processing."

However, there can be dangerous uses of deepfakes.

Participant 2: "Often playful, sometimes on the border of some kind of influence, but that can of course turn into a very broad influence so that people make a certain decision because they see someone say it, while that person has not said it at all."

Participant 6: "Look, in that example of deepfakes, I think yes, that is of course deceit what you are committing and I understand that you want to do something about that."

Participant 4: "Yes, that's really a limit. You can say something yourself and that may be freedom of speech, but you are not allowed to say something as another person, I find that really objectionable." The participants mentioned how regulations can be created to counter the dangers of deepfakes.

Participant 1: "You could say with deepfakes: Well, certain official persons may not be depicted and then you are punishable. I could really imagine that."

Participant 2: "You could just say: 'deepfakes, we take action against that, we just remove them.""

More in line with the vision, there are also ideas where the government trusts citizens and gives them knowledge and tools to deal with deepfakes.

Participant 2: "If you tell people how you recognize [deepfakes] or that you simply have to realise that not all moving images are true anymore."

More technical opportunities are thought of by participant 1: "That you just have deepfake scanners that you put on your computer and that you as an individual choose that you are always aware of whether a video is a deepfake."

Participant 5 shares the technical aspect: "Obligation for the provider of software with which you can make deepfakes. They will be obliged to always include a transparency label."

A constructive government

Another aspect of an open government is to be a constructive government instead of a restrictive government. Creating solutions to empower citizens, instead of restricting behaviour.

Participant 4: "Well, that [health kit by the government] kind of feels nice, because at least you're taken care of. So they don't let those people just go 'just figure it out with your mess'. They're going to do something with it"

Participant 6: "Of course we had measures all the time, didn't we? So: 'this must be closed and that must be closed and only 10 people are allowed in'. There is also discussion of, can't you also solve the problem? So limiting the spread of COVID 19 through good ventilation? And how difficult that discussion has turned out to be for us, that we are much better in: 'we close things or allow 10 people to enter', than roll out something that improves ventilation. [...] We have very little In the supportive atmosphere. [...][It is better] that you will also help and give things. That is also very tangible of course."

Create, share and secure knowledge in the government

Next to solutions towards citizens, participants emphasised the importance of creating, sharing and securing knowledge in the government.

Participant 2: "I think the important thing is that you also have to look at: 'What have you learned from this? What things come out that you have to keep and secure?' You have to take action with that."

Participant 5: "It is really wider than the VWS. No way, everyone in central government should do something about this. [...] because that knowledge is so much needed [...] We have tried things. This is what works well. This is what doesn't work well. Just that not everyone is going to reinvent the wheel."

Evaluation

Alignment

Some participants found a higher urgency

Participant 1: "[Urgency?] I think it certainly fueled the conversation and the energy. The fact that a team has now been formed says it all!"

Participant 6: "Energising. [...][Disinformation] isn't my primary area of work, but [the simulation] has raised my focus. Especially the question of how best to approach that."

While others didn't

Participant 2: "There is no higher urgency, it was already and remains highly urgent"

The simulation and the future prototypes inspired participants to 'think outside the box':

Participant 2: Very nice to organise a brainstorm

in this way. The added value is looking differently at a known problem, so that new things stand out that sometimes remain implicit and need to be made explicit."

Participant 1: "It is very motivating to think about a subject from a future simulation. It stimulates creativity and drive. I would definitely do it again."

Participant 7: "[The simulation] forces you to think 'out of the box' and that can be very valuable in these kinds of subjects."

Anticipation; the ability to create a future and system oriented mindset

Imagining oneself in the future was difficult for participants and forgetting the present. Also, they found the scenario heavily linked to the present.

Participant 1: "So what I might just find difficult is, it's future, but it's not very distant future so to really move there and forget what's happening now.

Participant 2: "I find it very interesting how you did that of how you indeed make the link with the future, how it would be different, but it still reminds me of the current situation"

However, in most cases, the prototypes helped participants to think and talk about the future.

Participant 3: "I actually find it difficult to step out of the current context altogether. These kinds of products help by being able to visualize what a future image might look like right there. Giving handles and you help me to go along with it. But in your reflection you often shoot at what you know and have experienced."

Participant 4: "Because it is very concrete and it does something to you. You have something physical in your hands that you think is '***'. [...] Then we are a long way from each other. You really shouldn't want this."

Participant 5: "I think it's very realistic for what it might look like."

Participant 5: "Well, I think it made me realize

again, because we're really thinking about that anti-Institutionalism right now, what that might look like if it gets really bad and we would we let it get to that point."

Participant 7: "The items helped to make it a bit more realistic!"

Participant 7: "It is much more realistic, despite being a simulation, than just asking about situations."

Furthermore, the participants also showed that they were able to think in future terms. Through using aspects of the scenario like NLVRIJ (participant 2), the fact that the splinter is 200.000 members large (participant 5), protests the splinters are doing (participant 3) and the idea of exclusive healthcare to members of a splinter (participant 1).

During the conversations, the participants didn't finish the articles in the newspaper as I planned. The articles were more conversation starters about themes. Few concrete ideas came out of the conversations.