How to deliberate with people who believe in climate & energy conspiracy theories

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Executive Summary

Conspiracy theories on climate change and the energy transition have found a stronghold on the Internet. Many online discussions are dominated by a few users with extreme beliefs, such as attributing secret agendas to powerful elites, governments not telling the truth, or sinister intentions of activists and lobbyists. As such beliefs largely dominate online discussions, they do also disadvantages other, more average, and less vocal users. Studies have found that people who were exposed to conspiracy theories about climate change reported less intention to reduce their carbon footprint, because the effect of these theories sparked not only feelings of powerlessness and uncertainty towards climate change, but also feelings of disappointment in climate scientists. Conspiracy theories play thus also an increasing role in slowing down the energy transition and have even led to violent and destructive behaviour. This explorative study provides an overview of the occurrence of extreme beliefs regarding climate change and energy transition in the Dutch society, but it also sheds light into what can be done when one is encountering people who hold such beliefs. Particularly in the current digital age, this study examines deliberation approaches and interventions with regard to conspiracy beliefs. Our explorative study was conducted with a Dynata sample of 1200 Dutch citizens, that are representative of age, gender and education to the Dutch society. The data was collected via laptop, tablet and mobile from 24.06.2021 - 09.07.2021 in Dutch language. A follow-up video conversation with a group of four participants (which answered one or more conspiracy questions positively) to interpret the results was held on July 30. In accordance with Leiserowitz (2006); Bago et al. (2020) and Uscinski and Olivella, 2017), the survey intended to elicit extreme beliefs in the Dutch society (i.e. propositions that people believe to be true or not about the climate change and the energy transition).

Using these established scales confirms that a significant part of the Dutch society is open to believe in climate change and energy transition conspiracy theories. This survey shows that conspiracy rhetoric might be shifting from an unpopular social standpoint that 'climate change is not human made', to socially more accepted ones. For example, *46%* of the Dutch population agrees that "the official version of the energy transition given by the authorities very often hides the truth". And *one in three* participants beliefs that "climate change is being exaggerated by foreign countries that are doing little to prevent climate change [...]" is more likely to be true than that "foreign countries are concerned about the possible effects of climate change and are adopting costly policies to prevent these effects". Moreover, there is a cluster of committed believers in our panel that treat conspiracy theories as the literal truth. We recorded around 15% of participants as such believers, and membership of this cluster correlated with positively with social media use, negatively with education and is also influence by political party membership. This can be a challenge ahead for future, intensive climate and energy policies, since conspiracy theories can lead to confusion what to believe, distrust in scientifically sound reports, as well as own motivations to do more to reduce carbon emissions.

The results of the second part of this study shed light into deliberation approaches with people who believe in climate and energy conspiracy theories. The overall findings point to the fact that the average participants mostly values three things: that the people in online discussions try to convince each other, that there are clear distinguishable standpoints and that they use sufficient explanations. Another finding with regard to participants who are open for conspiracy thinking shows that they identify themselves more with what is said in discussions, and thus are more sensitive to attacks as these attacks might challenge their identity. Another interesting finding is that those who are more prone to believe in conspiracy theories also value the more extreme statements in online conversations. Problematically, there is an indication in our study that passive viewers of conspiracy content in climate and energy conversation get 'infected' to favour more extreme statements, in comparison when they were shown more nuanced discussions. What we can see in the absence of conspiracy content, participant favour more nuanced arguments, even arguments that appear to be outside of their core believe system. While the dynamics of such 'infections' should analysed more closely in future research, it is obvious that reducing the visibility of conspiracy content in online discussion can favour more balanced arguments, as well as that more viewers will actually use content to form their opinion, and might be more willing to participate in such conversations. Low intrusive but effective interventions, such as to reduce the visibility and virality of climate and energy conspiracy theories and adding moderators into polarized online discussion might thus help to make conversations more meaningful for passive participants. There is widespread support in our panel discussion interventions. On average, 72% prefer to have some sort of intervention, only 28% prefer no intervention at all. The preference for no-intervention increases only marginally for the group that is prone to conspiracy theories, to around 32%.

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1. Introduction

While strong and sustained reductions in CO_2 emissions and other greenhouse gases would limit climate change, it could take 20-30 years to see global temperatures stabilize, according to the latest IPCC report of August 2021. Arguably, this is a huge task given that society has become increasingly polarized over fundamental questions such as how to tackle human-caused global warming (Chinn et al. 2020; Cook, 2019). It is widely agreed that divisions over climate change stem not from the public's incomprehension of science but from a distinctive conflict of interest: between personal beliefs and collective welfare. It has long been accepted that personal beliefs concerning climate change vary according to a complex mix of social class, age, education, ethnicity, policy, affectedness, and the like, and that they can be in tension to collective effort towards low-carbon societies. One factor that has been only superficially touched so far is the influence of extreme beliefs on collective action, such as the belief in conspiracy theories. Statements referring to 'climate change as a hoax' or that 'climate change is not human made' are well known, but often dismissed as unserious and or right wing and industrial propaganda. However, recent polls and surveys in the Netherlands paint a different picture. For example, from research of a 2019 EenVandaag Opiniepanel appears that 31% of participants state that human play no or hardly any role in climate change or in a 2019 public opinion monitor of the Dutch Ministry of Economic Affairs and Climate Change are 33% not convinced that climate change is (partly) caused by humans. Moreover, according to a study by I&O research, the share that thinks the Dutch government should actually do less is rising: from 7% at the end of 2015 to 19% in 2019, as the authors note, skepticism about climate action is growing in the Netherlands. How can it be that such extreme beliefs are spread so widely?
Some answers point to the fact that climate deniers have garnered far more media attention in recent years than prominent climate scientists, fueling public confusion and slowing the response to global warming (Petersen et al. 2019). Others find that campaigns were long ago carefully designed to confuse the public, not only about the level of global warming, but also about the level of agreement among climate scientists (Cook et al. 2013),. Yet others points to the top social media content as being acutely polarized on climate change (Jang and Hart, 2015) and that such online polarization is fed increasingly by disinformation and conspiracy theories (Collins, 2013). Conspiracy theories once limited to fringe audiences have become commonplace in mass and social media (Sunstein and Vermeule, 2009). Today we can thus consider that the effects of conspiracy thinking on climate change attitudes are larger than previously argued (Uscinski and Olivella, 2017), which increasingly results in negative social effects on climate action. Or as Kahan et al. (2012) put it, if someone is eager to believe to climate change is a hoax, it is in principal costless for that person to hold such a belief, (if it fits into their social environment), yet it can be very dangerous to collective welfare if such beliefs are aggregated across societies.

This explorative study will give an overview of the occurrence of extreme beliefs regarding climate change and energy transition in the Dutch society, but it also sheds light into what can be done when one is encountering people who hold such beliefs. Particularly in the current digital age, examining deliberation processes with conspiracy beliefs is a promising avenue for research (Van Prooijen and Douglas, 2018). To add an important side note: We

as scientists hold the conviction that if we come across paths that lead into the abyss of humankind, there must also be paths leading out of there. Historically, the spread of conspiracy theories conjuncts with cyclical upheavals in societies, especially when people look for someone to blame (Douglas et al. 2019). This study might therefore also be interpreted as a mirror of how larger parts of the Dutch society witness climate change and the energy transition.

2. What are climate change and energy transition conspiracy theories?

Conspiracy theories can be commonly described as explanations for historical, current, or future events caused by a small group of powerful and/or treacherous individuals acting in secret for their own benefit or against the common good. Public accusations of conspiracies within the Inter-governmental Panel on Climate Change (IPCC) found their entries in the opinion pages of the Wall Street Journal (WSJ) as early as 1996 (Lewandowsky et al. 2013). Today's most common climate conspiracy theories are that the scientific climate change consensus is either fabricated or deceptive, and that an evil power - be it the World Economic Forum, the United Nations, or any other group - wants to use climate change as a cover to exert massive controls over the population (Uscinski et al. 2017). Conspiracy theories have also found their way specifically into the energy transition, arguing that phasing out fossil fuel or raising oil prices is done by powerful actors to suppress and harm local economies (Żuk & Szulecki, 2020; Etkind et al. 2020). Theories that green ideas and technologies are suppressed by the government and powerful lobbyists count as conspiracy theories as well (Uscinski et al. 2017). Conspiratorial thinking seeks immunity against falsification: when evidence is provided disproving their theory (e.g. that there is overwhelming scientific consensus), the theorist responds by broadening their conspiracy to include the source of the evidence (that consensus must be based on manipulated data) (Lewandowsky et al., 2015).

While climate change and energy transition conspiracy theories appear in similar fashion to other conspiracy theories, they are distinctly different. Major differences are that a) climate change and energy conspiracies are motivated by the desire to reject an undesirable and threatening scientific consensus[1]; b) they appear to be more contentious than other types of conspiracy theories; and c) people on both sides (left/right) of the issue succumb to believe in climate change and energy conspiracy theories (Douglas and Sutton 2015).

In the past years, besides studying a person's belief in a specific conspiracy theory, social scientists are focusing increasingly on conspiracy thinking, other times referred to as conspiratorial predispositions, or having a conspiracy mindset. Meaning, that a strong predisposition makes one more likely to believe in specific conspiracy theories (Uscinski et

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[1] According to Lewandowsky et al. (2015), rejection of science must be distinguished from the term skepticism, which may prompt the revision of a scientific claim on the basis of new scientific evidence. The term denial on the other hand is often reserved to describe an active denial of scientific facts for example to create the appearance of a balanced debate where there is none.

al. 2017). Also, people can come to believe in conspiracy theories the same way people come to believe in non-conspiratorial opinions: by accepting information from trusted sources (Uscinski et al. 2017).

3. Why might this be a problem for climate action and the energy transition?

Climate change and energy conspiracy theories present a significant challenge for governments and societal organizations. Although disinformation and conspiracy theories has always been a part of modern history, the wide-ranging scope of new technology raises serious concerns (Bradshaw and Howard, 2019). Conspiracy theories have found a stronghold on the Internet (Uscinski et al. 2017) and many online discussions are dominated by a few users with extreme beliefs, which disadvantages other, more average, and less vocal users (Jang and Hart, 2015). Undoubtedly, un- or less opinionated users are impacted by arguments presented in such a highly polarized context. Jolly and Douglas (2014) as well as Van der Linden (2015) have found that people who were exposed to conspiracy theories about climate change reported less intention to reduce their carbon footprint, because the effect of these theories sparked not only feelings of powerlessness and uncertainty towards climate change, but also feelings of disappointment in climate scientists. Conspiracy theories play thus also an increasing role in slowing down the energy transition (Żuk & Szulecki 2020). Some false conspiracy theories have even led to violence (Sunstein and Vermeulen, 2009).

While the spreading of conspiracy theories has amplified online, literature is still catching up to provide evidence what works in tackling conspiracy content and engaging with users who are open to such theories. Flagging, fact-checking or debunking misleading information (partly automated, partly human) are the most common interventions to date (Graves, 2016; Sessa, 2020; Cook, 2017). Yet, their effects are limited in their success of curbing conspiracy content (Zollo et al. 2017; Pluviano et al. 2017; (Lorch, 2020). Other avenues such as citizens deliberations on the accuracy of claims and arguments have been argued to be more effective interventions (Pennycook et al. 2018; Dryzek et al. 2019).

While the latter has been largely been applied to small-group offline settings, it is not clear how deliberative strategies work in an integrated online environment, as political discourses via live chat for example are of significant low deliberative quality (Fournier-Tombs and Di Marzo Serugendo, 2020).

Moreover, it is observed that social media comments influences readers' endorsement of the post symmetrically, meaning that whenever the comments agreed with the post, readers supported the argument in the post more, regardless of its content. (Lewandowsky et al. 2019). Thus, even though social media comments that endorse or reject the contents of a post can influence public perception, the way individuals asses and interpret extreme opinions that surface in climate and energy online discussions is clearly an understudied question. Moreover, it is unclear how helpful interventions are for moderate and less optioned discussants or the majority of silent readers that do not engage in polarized discussions.

The first goal of our research is to detect and map the occurrence of extreme believes such as beliefs in conspiracy theories related to climate and energy issues in the Netherlands. We investigate how large this group is compared to the silent majority. We also try to identify different sub-groups within those that believe, or are open to believe in climate and energy conspiracy theories.

Our second goals is to research what kind of behaviour and arguments average citizens, in contrast to citizens with extreme believes, value in discussions about climate change and the energy transitions as well as their willingness to participate in those discussions. We present alternative discussions where conspiracy thinking is either absent, occur one-sided or dominate both sides of the discussion.

Our last research object were the intervention mechanism brought forward in literature. We were interested if participants favour low-intrusion strategies such as flagging, debunking or high intrusion intervention such as reducing visibility of discussion posts or deleting them, or if they prefer no intervention at all. It was also inquired what kind of facilitative interventions they prefer. Also here, we seek to highlight differences of average citizens and those with more extreme believes.

4. Methodology of the explorative study

Our explorative study was conducted with a Dynata sample of 1200 Dutch citizens, that are representative of age, gender and education to the Dutch society. The data was collected via laptop, tablet and mobile from 24.06.2021 - 09.07.2021 in Dutch language. Eligibility criteria for this study included being 18 years of age or older. A follow-up video conversation with a group of four participants (which answered one or more conspiracy questions positively) to interpret the results was held on July 30.

The first part of the survey were a number of cross-sectional questions to elicit extreme beliefs in the Dutch society (i.e. propositions that people believe to be true or not about the climate change and the energy transition) in accordance with Leiserowitz (2006); Bago et al. (2020) and Uscinski and Olivella, 2017). To test whether participants are open for conspiracy thinking, two proven questions were inserted at the start of the survey. The first one is a generic single-item conspiracy belief scale taken from Lantian et al.(2016): How much to you agree with that "The official version of the Energy Transition given by the authorities very often hides the truth"? (1 = *Not at all*, 5 = *Very much*) with higher ratings signaling higher belief in conspiracy theories. The second questions was take from Clifford et al. (2019.), that presents respondents with an explicit choice between a conspiratorial and a conventional explanation for an event. The choice format used was: Which of these two statements do you think is most likely to be true?

- "Climate change is being exaggerated by foreign countries that are doing little to prevent climate change. These countries are trying to get the Netherlands to adopt costly policies that will harm the Dutch economy and businesses."
- "Many foreign countries are concerned about the possible effects of climate change and are adopting costly policies to prevent these effects. These

countries have simply been trying to encourage the Netherlands to adopt these policies."

Another battery of conspiracy belief questions (Bruder et al. 2013) was asked at the end of the survey.

The second part of the survey presented the participants with various animated discussion scenarios, with one or more person stating an extreme belief about the energy transition. Participants will then be asked to choose between various intervention options and have to state what they find helpful or not in these online discussions.

We present four types of animated climate and energy discussions, one where extreme beliefs were absent and nuanced statements dominated. One where nuanced beliefs were absent and extreme ones dominated. And two discussions where one discussant used nuanced and the other extreme statements, differentiating that in one case these statements included conspiracy theories in one person not. Discussions where programmed to imitate online forum or app-discussions. To prevent any prejudices, people in the discussions where look-a-likes and using similar language styles.

Figure 1: screenshots of discussion scenarios

After the discussions, participants were asked to state which of a series of deliberative ideals[2] (taken from Mansbridge et al. 2012 and Steenbergen et al. 2003) they valued the most in the given discussion. Moreover, they should also pick the one argument in the discussion they perceived as the most useful for them.

Lastly, participants in the survey were asked about their choice of intervention, if would they be in charge of running discussion platform. They were given the five most prominent practices accompanied with an explanatory illustration. They were:

- Flagging (saying this statement is misleading)
- Using an algorithm to decide if a statement is misleading
- Keeping discussion private (conversation cannot be seen by other users)
- Deleting a post from a conversation because it suggests harm, is rude or hostile
- Deleting a posts from the conversation because it contains a conspiracy theory
- Non-intervention

Figure 2: screenshots of discussion intervention

5. Descriptive results: conspiracy theories are a part of climate and energy transitions

Dutch citizens overwhelmingly acknowledge that climate change is real and that humans are causing it. Only around 6% of respondents would deny such a cause. Moreover, there is

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[2] That I could see myself in the discussion; That it helped me forming my opinion; That they tried to convince each other; That they used explanations; That there were nuances in the discussion; That there were clear distinguishable standpoints; That there were enough pros and cons; That there were appeals to a greater good; That I now better understand of what the opposite side thinks; That nobody dominated the conversation

widespread recognition that abandoning fossil fuels, such as coal, oil and gas are needed to tackle climate change.
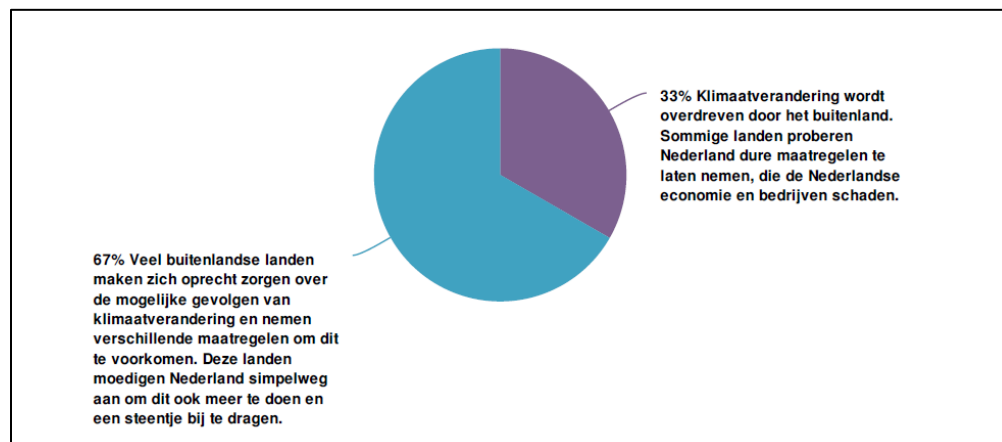
However, here is the catch: 46% of the Dutch population agrees that "the official version of the energy transition given by the authorities very often hides the truth".

Figure 3: Scale of climate change and energy transition believes

2. In hoeverre bent u het ermee eens dat	Redelijk eens tot zeer eens	Redelijk oneens tot zeer oneens	Neutraal	Responses
menselijke activiteiten wereldwijde veranderingen in het klimaat veroorzaken Count Row %	897 74.8%	80 6.7%	222 18.5%	1,199
de klimaatverandering voor de mensheid ernstig is Count Row %	892 74.4%	68 5.7%	239 19.9%	1,199
de klimaatverandering voor u zorgwekkend is Count Row %	744 62.1%	131 10.9%	324 27.0%	1,199
een omschakeling van olie, aardgas of steenkool naar hernieuwbare energie (zon, wind en aardwarmte) noodzakelijk is om de klimaatverandering aan te pakken Count Row %	820 68.4%	112 9.3%	267 22.3%	1,199
de Nederlandse overheid niet genoeg doet om klimaatveranderingen aan te pakken Count Row %	586 48.9%	196 16.3%	417 34.8%	1,199
de officiële versie van de energietransitie die door de overheid wordt gegeven vaak de waarheid verbergt Count Row %	559 46.6%	133 11.1%	507 42.3%	1,199
de energietransitie op dit moment in Nederland positief verloopt Count Row %	336 28.0%	258 21.5%	605 50.5%	1,199

And *one in three* participants beliefs that "Climate change is being exaggerated by foreign countries that are doing little to prevent climate change [...]" is more likely to be true than that "foreign countries are concerned about the possible effects of climate change and are adopting costly policies to prevent these effects".

Figure 4: Which of these two statements do you think is most likely to be true?

33% Klimaatverandering wordt overdreven door het buitenland. Sommige landen proberen Nederland dure maatregelen te laten nemen, die de Nederlandse economie en bedrijven schaden.

67% Veel buitenlandse landen maken zich oprecht zorgen over de mogelijke gevolgen van klimaatverandering en nemen verschillende maatregelen om dit te voorkomen. Deze landen moedigen Nederland simpelweg aan om dit ook meer te doen en een steentje bij te dragen.

Men, and right wing voters are more likely to answer these two test-questions positively but there is almost no difference in education, location (urban/rural) and age. These findings are in line with earlier research of Lewandowsky et al. (2015).

Figure 5: Political affiliation of those prone to believe in climate and energy conspiracy theories

46. Op welke politieke partij heeft u gestemd bij de vorige verkiezingen?

Filter: (Question "de officiële versie van de energietransitie die door de overheid wordt gegeven vaak de waarheid verbergt" is one of the following answers ("helemaal mee eens","eens") AND #3 Question "Welke van deze twee stellingen is volgens u het meest waarschijnlijk?" is one of the following answers ("Klimaatverandering wordt overdreven door het buitenland. Sommige landen proberen Nederland dure maatregelen te laten nemen, die de Nederlandse economie en bedrijven schaden."))

- 11.3% All Others
- 12.2% VVD
- 5.6% Ik wil deze vraag niet invullen
- 5.6% D66
- 6.1% Ik heb niet gestemd
- 11.7% Een andere politieke partij
- 3.6% JA21
- 4.1% SP
- 4.1% CDA
- 35.7% PVV

Figure 6: Education level of those prone to believe in climate and energy conspiracy theories

45. Wat is uw hoogstgenoten opleiding?

Filter: (Question "de officiële versie van de energietransitie die door de overheid wordt gegeven vaak de waarheid verbergt" is one of the following answers ("helemaal mee eens","eens") AND #3 Question "Welke van deze twee stellingen is volgens u het meest waarschijnlijk?" is one of the following answers ("Klimaatverandering wordt overdreven door het buitenland. Sommige landen proberen Nederland dure maatregelen te laten nemen, die de Nederlandse economie en bedrijven schaden."))
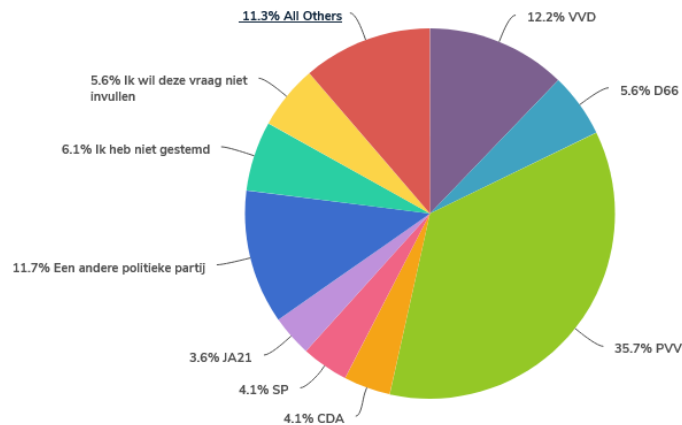

- 12.8% Hbo master, Universiteit master
- 4.1% Basisonderwijs
- 27.6% Vmbo, Havo-onderbouw, vwo-onderbouw, mbo1
- 18.9% Hbo bachelor, Universiteit bachelor
- 36.7% Havo, vwo, mbo 2-4

Figure 7: Gender of those prone to believe in climate and energy conspiracy theories

44. Wat is uw geslacht?

Filter: (Question "de officiële versie van de energietransitie die door de overheid wordt gegeven vaak de waarheid verbergt" is one of the following answers ("helemaal mee eens","eens") AND #3 Question "Welke van deze twee stellingen is volgens u het meest waarschijnlijk?" is one of the following answers ("Klimaatverandering wordt overdreven door het buitenland. Sommige landen proberen Nederland dure maatregelen te laten nemen, die de Nederlandse economie en bedrijven schaden."))
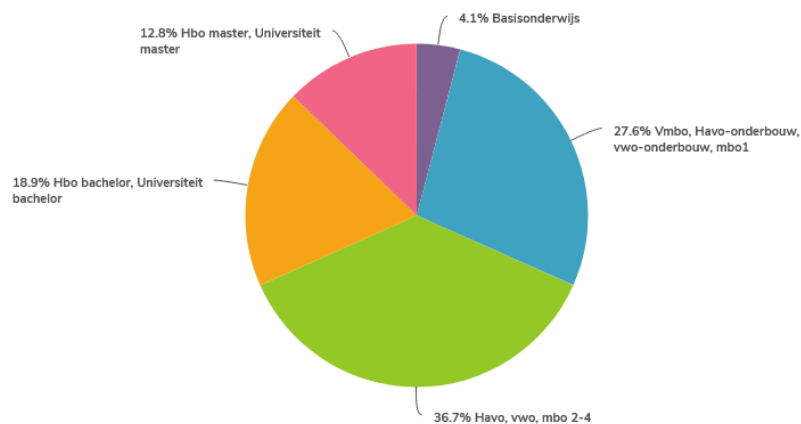

Figure 8: Age distribution of those prone to believe in climate and energy conspiracy theories

43. Wat is uw leeftijd?

Filter: (Question "de officiële versie van de energietransitie die door de overheid wordt gegeven vaak de waarheid verbergt" is one of the following answers ("helemaal mee eens","eens") AND #3 Question "Welke van deze twee stellingen is volgens u het meest waarschijnlijk?" is one of the following answers ("Klimaatverandering wordt overdreven door het buitenland. Sommige landen proberen Nederland dure maatregelen te laten nemen, die de Nederlandse economie en bedrijven schaden."))
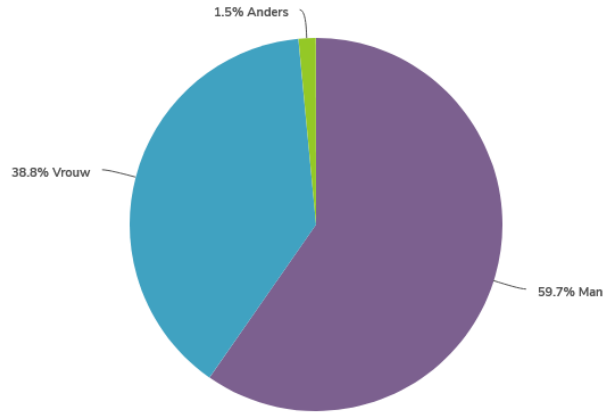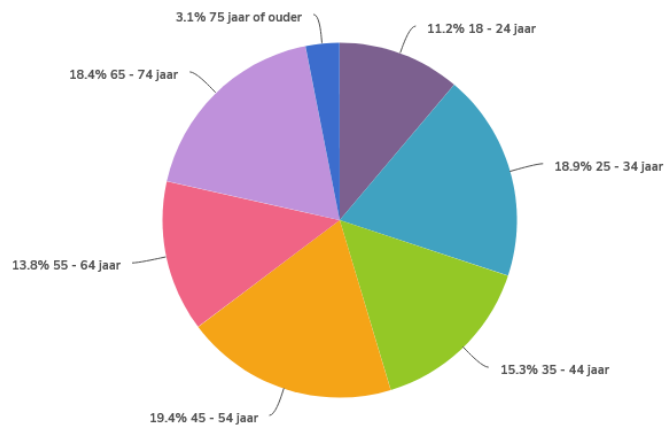
Figure 9: Living environment of those prone to believe in climate and energy conspiracy theories

47. In wat voor omgeving woont u (geef uw beste inschatting)?

Filter: (Question "de officiële versie van de energietransitie die door de overheid wordt gegeven vaak de waarheid verbergt" is one of the following answers ("helemaal mee eens","eens") AND #3 Question "Welke van deze twee stellingen is volgens u het meest waarschijnlijk?" is one of the following answers ("Klimaatverandering wordt overdreven door het buitenland. Sommige landen proberen Nederland dure maatregelen te laten nemen, die de Nederlandse economie en bedrijven schaden."))
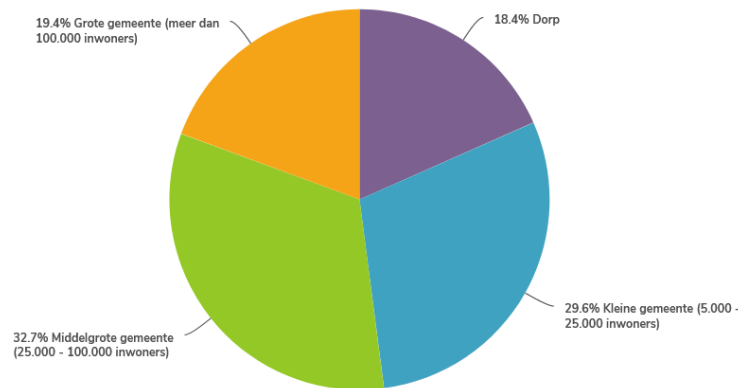
- 19.4% Grote gemeente (meer dan 100.000 inwoners)
- 18.4% Dorp
- 29.6% Kleine gemeente (5.000 - 25.000 inwoners)
- 32.7% Middelgrote gemeente (25.000 - 100.000 inwoners)

To be prone to believe in climate and energy conspiracy theories is thus as normal for a high educated, as it is for a low educated and for young and old, urban and rural people alike. When the follow-up conversation group was asked to interpret this finding, it was extraordinary to see how they agreed with each other that the idea of 'exaggerating climate change by foreign agents' came from a lack of knowledge. They thought that if someone that answered would see the facts, they wouldn't think that anymore. Hence, contrary to scientific evidence, we can assume that it is still a widespread understanding in society that conspiracy thinking is associated with low literacy or low interest in a subject.

6. News sources that inform climate change and energy discussion

We've also asked participants where they get their news about climate change and the energy transition from. In average, TV is still the most cited source (71%) followed by digital and paper newspaper (combined 58%) and Social Media[3] (51%). The group that answered the two climate conspiracy test questions positively, consumes most of their news via Social Media (62%) followed by Newspapers and TV (both 56%). Hence, similar to other global trends, news-consumption and discussions about climate change and the energy transition are also in the Netherlands increasingly found on Social Media. While Social Media is a valuable news source for many users and keeps them informed (Allcott et al. 2020), it is also a harbor of fake news and conspiracy theories. Latest findings highlight people who get the majority of their news vial social media tend to have stronger beliefs in conspiracy theories. Moreover, the more conspiracy thinking increases, the more social

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[3] This answer includes: Facebook, YouTube, Twitter, WhatsApp, Instagram, LinkedIn, Snapchat and TikTok

media use becomes tightly associated with conspiracy beliefs (Enders et al. 2021). (see also next section).

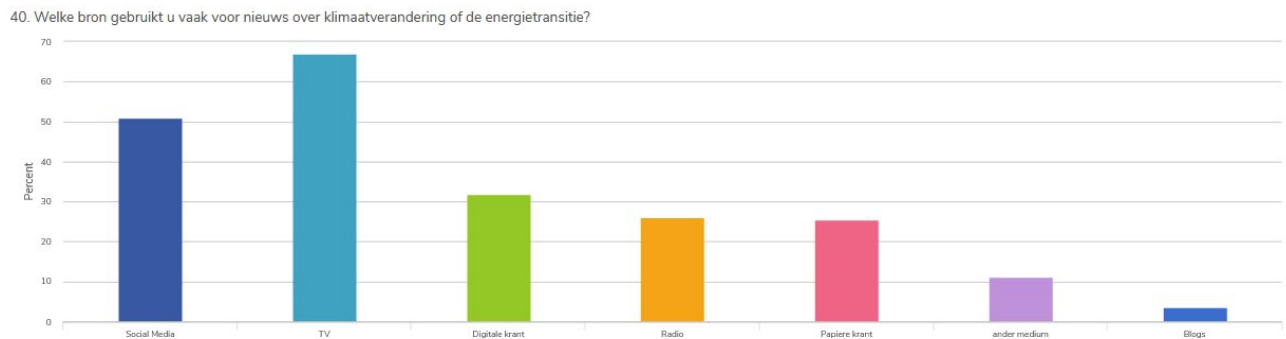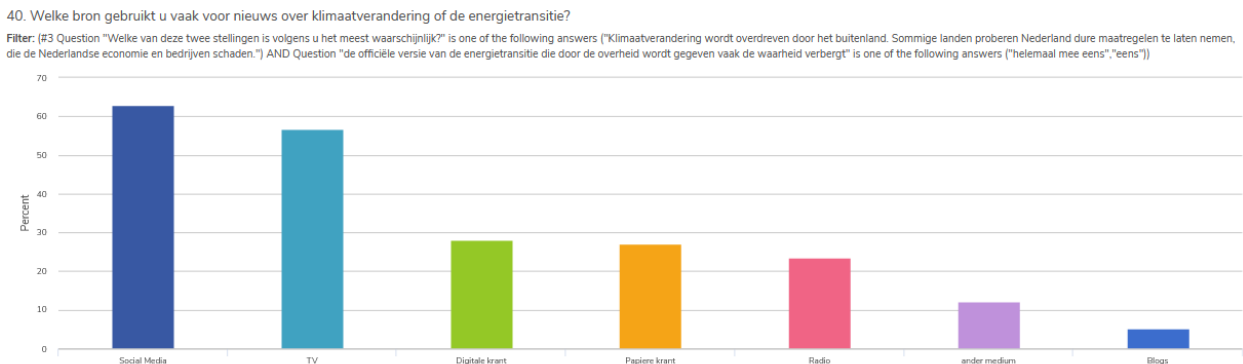*Figure 10: Sources of news about climate change and the energy transition*

Figure 10.1.: Sources of news about climate change and the energy transition of those prone to conspiracy theories

7. Correlation with other conspirational beliefs

To test how widespread conspirational dispositions are in the Dutch population, we investigate how those conspiracy test questions positively or negatively correlate with other beliefs (see figure 8 and 9). We also add a brief cluster analysis in the next section.

First of all, from literature we can expect a strong link with distrusting political leaders. 82% of the group that answered the two conspiracy test questions believes it to be rather true than not true that "politicians usually do not tell us the true motives for their decisions" (compared to the average Dutch 69%), 80% believes that there is "a global elite who runs the world for their own interests" (average 54%) and 71% believes that "government agencies closely monitor all citizens" (average 52%).

Suspicion and secrecy are also important characteristics. Conspiracy theorists are naturally concerned with matters that are inherently secret, which powerful forces in the world are supposedly seeking to suppress (Byford, 2014). This is also visible in our survey: 75% who answered the test questions positive believe it to be rather true than not that "there are secret organizations that greatly influence political decisions" (Dutch average 49%) and

63% believe that "events which superficially seem to lack a connection are often the result of secret activities" (average 42%).

And similarly matching with previous research, there is also waning acceptance of scientifically sound insights (Van der Linden, 2015; Lewandowsky et al. 2013). On average half of the Dutch population thinks it rather to be true than untrue that scientific conclusions about climate change are dictated by those in power. This sentiment increases for the group that answered the two conspiracy test questions positively to 72% (see for comparable research Garret and Weeks, 2017).

Once you start believing certain theories, openness for other theories increases: 66% of the group that answered the two climate conspiracy test questions positively, also believes it to be rather true than not true that a "global plan called the Great Reset is underway. Its architects are a global elite, including Klaus Schwab of the World Economic Forum (WEF) who want to enslave all of humanity by imposing coercive measures" (average 36%), 53% believe that "the corona lockdowns were introduced under the false pretexts of climate change protection" (average 30%), and 40% that "the COVID-19 vaccination program is a pretext by Bill Gates to implant microchips to monitor and suppress the population" (average 25%).

What we can learn of these results is, according to Byford (2020), that they tap into broader, often well-grounded concerns about the world such as the concentration of financial and political power, mass surveillance, inequality or lack of political transparency. As one participant rightly remarks: "*I hope you didn't put in the questions about The Great Reset etc. to show 'how many people believe in dangerous conspiracy theories' but to show that maybe this is alive in society and is a worrying thing for many people.* " - which is of course worrying it worries such a substantiated part of the Dutch population. Agreeing with Byford, we need to make sense of these broader concerns, because conspiracy theories offer a less chaotic world, and a clear answer about who is accountable for these concerns.

As one participant in the follow-up conversation noted, *"People are afraid of their future, but they are also afraid that everything will cost too much money, and they don't take any steps. We need to offer them small-step solutions, subsidies rather than pointing finger at other countries."*

Figure 11: Conspiracy belief scale of the average participant

34. Welke stellingen acht u waarschijnlijk of onwaarschijnlijk? Ik denk dat:

	onwaarschijnlijk	waarschijnlijk	Responses
Er veel belangrijke dingen gebeuren in de wereld, waarover het publiek nooit wordt geïnformeerd. Count Row %	329 27.4%	870 72.6%	1,199
Politici ons meestal niet de ware motieven voor hun beslissingen vertellen. Count Row %	371 30.9%	828 69.1%	1,199
Overheidsinstanties alle burgers nauwkeurig in de gaten houden. Count Row %	571 47.6%	628 52.4%	1,199
Gebeurtenissen die oppervlakkig gezien geen samenhang lijken te hebben, vaak het gevolg zijn van geheime activiteiten. Count Row %	692 57.7%	507 42.3%	1,199
Er een globale elite is die de wereld bestuurt voor hun eigen belangen. Count Row %	552 46.0%	647 54.0%	1,199
Globalisering en kapitalisme de belangrijkste aanjagers zijn van de verwoesting van het milieu en het klimaat. Count Row %	336 28.0%	863 72.0%	1,199
Er geheime organisaties zijn die grote invloed hebben op politieke beslissingen. Count Row %	601 50.1%	598 49.9%	1,199
Er een globaal plan genaamd de Great Reset in uitvoering is. De architecten zijn onder meer Klaus Schwab van het World Economisch Forum (WEF) die de hele mensheid wil onderwerpen door dwangmaatregelen op te leggen. Count Row %	762 63.6%	437 36.4%	1,199
We momenteel leven in de eindtijd zoals voorspeld door verschillende profetieën. Count Row %	804 67.1%	395 32.9%	1,199
De corona lockdowns zijn ingevoerd onder de valse pretext van de bescherming van de klimaatverandering. Count Row %	834 69.6%	365 30.4%	1,199
Menselijke activiteit geen invloed heeft op veranderingen van het wereldklimaat. Count Row %	788 65.7%	411 34.3%	1,199
Het COVID-19 vaccinatieprogramma een excuus is van Bill Gates om microchips te implanteren om de bevolking te controleren en te onderdrukken. Count Row %	888 74.1%	311 25.9%	1,199
Wetenschappelijke conclusies over klimaatverandering worden bepaald door de politiek. Count Row %	597 49.8%	602 50.2%	1,199

Figure 11.1: Conspiracy belief scale of those prone to believe in conspiracy theories

34. Welke stellingen acht u waarschijnlijk of onwaarschijnlijk?Ik denk dat:

Filter: (Question "de officiële versie van de energietransitie die door de overheid wordt gegeven vaak de waarheid verbergt" is one of the following answers ("helemaal mee eens","eens") AND #3 Question "Welke van deze twee stellingen is volgens u het meest waarschijnlijk?" is one of the following answers ("Klimaatverandering wordt overdreven door het buitenland. Sommige landen proberen Nederland dure maatregelen te laten nemen, die de Nederlandse economie en bedrijven schaden."))

|	onwaarschijnlijk	waarschijnlijk
Er veel belangrijke dingen gebeuren in de wereld, waarover het publiek nooit wordt geïnformeerd. Count Row %	36 18.4%	160 81.6%
Politici ons meestal niet de ware motieven voor hun beslissingen vertellen. Count Row %	35 17.9%	161 82.1%
Overheidsinstanties alle burgers nauwkeurig in de gaten houden. Count Row %	57 29.1%	139 70.9%
Gebeurtenissen die oppervlakkig gezien geen samenhang lijken te hebben, vaak het gevolg zijn van geheime activiteiten. Count Row %	74 37.8%	122 62.2%
Er een globale elite is die de wereld bestuurt voor hun eigen belangen. Count Row %	40 20.4%	156 79.6%
Globalisering en kapitalisme de belangrijkste aanjagers zijn van de verwoesting van het milieu en het klimaat. Count Row %	60 30.6%	136 69.4%
Er geheime organisaties zijn die grote invloed hebben op politieke beslissingen. Count Row %	47 24.0%	149 76.0%
Er een globaal plan genaamd de Great Reset in uitvoering is. De architecten zijn onder meer Klaus Schwab van het World Economisch Forum (WEF) die de hele mensheid wil onderwerpen door dwangmaatregelen op te leggen. Count Row %	69 35.2%	127 64.8%
We momenteel leven in de eindtijd zoals voorspeld door verschillende profetieën. Count Row %	106 54.1%	90 45.9%
De corona lockdowns zijn ingevoerd onder de valse pretext van de bescherming van de klimaatverandering. Count Row %	93 47.4%	103 52.6%
Menselijke activiteit geen invloed heeft op veranderingen van het wereldklimaat. Count Row %	88 44.9%	108 55.1%
Het COVID-19 vaccinatieprogramma een excuus is van Bill Gates om microchips te implanteren om de bevolking te controleren en te onderdrukken. Count Row %	117 59.7%	79 40.3%
Wetenschappelijke conclusies over klimaatverandering worden bepaald door de politiek. Count Row %	56 28.6%	140 71.4%

8. Cluster analysis

The conspiracy belief scale provides a useful comparison for social clusters in the panel. When the dependent variables of Q34, the 14 conspiracy statements, are linked to four covariates: news source, age, education and party affiliation (city size and gender are found to be insignificant), we find that five very clear different clusters appear. This indicates that there is a significant heterogeneity amongst people regarding which conspiracy statements they believe to be true and not true. A 5-cluster model statistically best explains the data. Cluster 4 is the highly distrustful "conspiracy cluster". In this data we find that 15 percent of the sample are genuine "conspiracy thinkers. How big this group of genuine conspiracy thinkers in reality is, is of course hard to tell. But what it does tell us is that this group is present at this panel. We means that conspiracy thinkers do not withdraw en

masse from participation in such panels/surveys. Furthermore, also cluster two is moderately distrustful, but in contrast to cluster 2 does not believe in secret agenda's as in Q34_4 and Q34_8. This is also depicted in the graph of figure 9. Overall, this compares our descriptive findings, that there is a smaller group which is highly convinced in conspiracies of all sorts, and there is a larger group in our survey that shows to possess conspirational tendencies. Cluster one and three are less likely to be drawn into conspiracy arguments, but once in a while they might find there is some truth in certain statements. It can only be said of cluster five not to be affected at all of conspiracy content.

Another interesting finding is the widespread agreement across clusters on Q34_6: *"Globalization and capitalism are the main drivers of the destruction of the environment and the climate."* (In the original: "Globalisering en kapitalisme de belangrijkste aanjagers zijn van de verwoesting van het milieu en het klimaat."), even though it might be related to different convictions. This might indicate that this statement is not a conspiracy theory after all.

Figure 12: Cluster analysis conspiracy beliefs[4]

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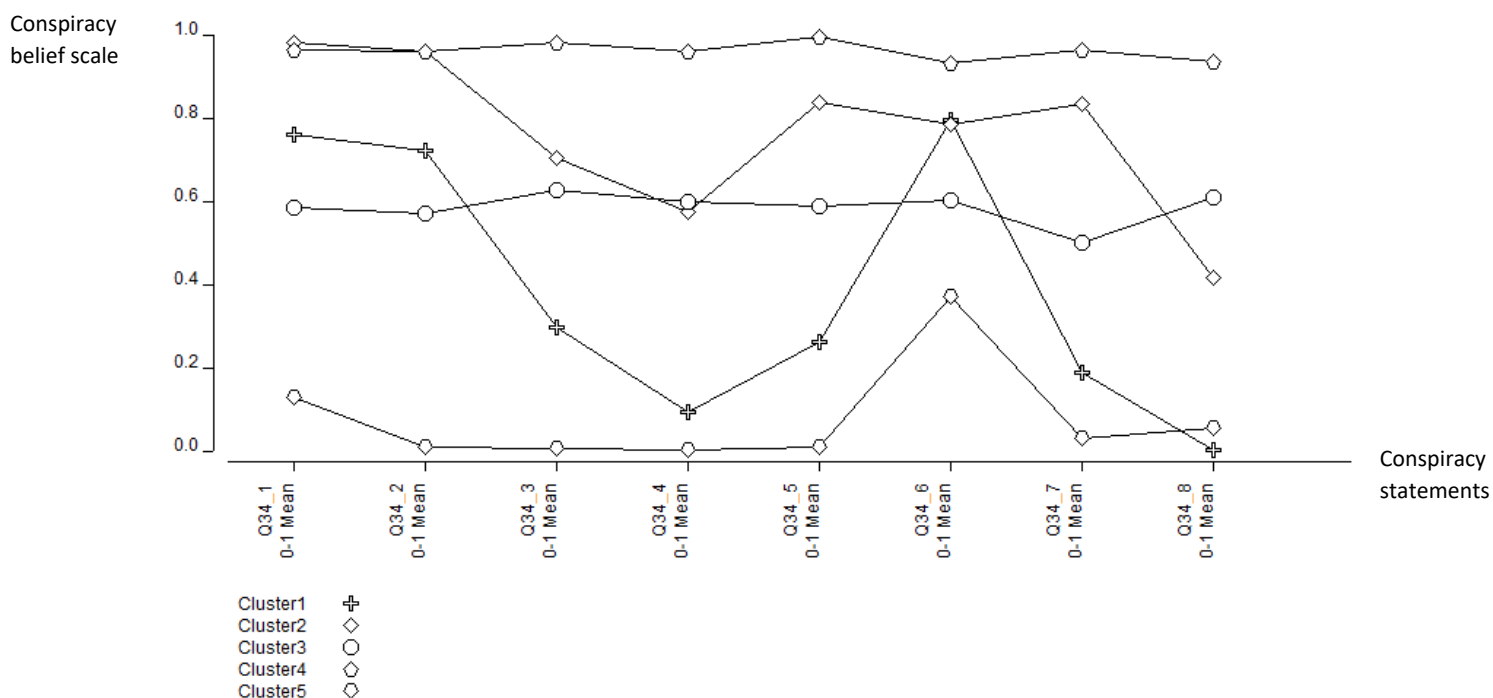
[4] Note that the profile plot does not show the variables Q34_9 to Q34_13. These can be plotted manually.

What covariates associate with cluster membership? With regard to cluster membership of cluster 4 (the conspiracy cluster), as expected we see strong positive association with social media (Q40) – and strongest negative association with education level (Q45). Hence, while it is possible to be caught by a climate conspiracy once in a while independently of the education level, education still plays an important role to beware one of sliding into a genuine at conspiracy theories on a very high level.

With regard to political party association, we see Volt, GL and CU to negatively associate with membership of the "conspiracy cluster", while DENK (and JA22, SGP) strongly positively associate with this cluster.

Table 1. Covariates for cluster membership

Model for Clusters Intercept	Cluster1	Cluster2	Cluster3	Cluster4	Cluster5	Wald	p-value
	-0.2437	-0.6865	1.3483	0.6857	-1.1038	2.3507	0.67
Covariates	Cluster1	Cluster2	Cluster3	Cluster4	Cluster5	Wald	p-value
Q40_Social_media							
	-0.3755	0.2801	0.1171	0.4454	-0.4672	22.8977	0.00013
Q43_Age							
	0.1468	0.2948	-0.4088	-0.1022	0.0694	84.1559	2.3e-17
Q45_Education							
	0.1788	-0.1069	0.0098	-0.2417	0.1600	19.1162	0.00075
Q46_Party							

Q46_Party	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
VVD	-0.1223	-0.4855	0.5061	-0.1914	0.2932
D66	-0.1613	-0.9356	0.4683	0.1937	0.4349
PVV	-1.0224	0.413	0.3974	0.75	-0.538
CDA	-0.757	-0.3278	0.6314	0.1269	0.3264
PvdA	-0.0728	-0.5682	0.4442	-0.3323	0.5291
SP	0.3016	0.1774	-0.2291	-0.2613	0.0114
GL	0.5182	-0.8346	0.2211	-1.4905	1.5857
PvdD	0.2036	0.1544	-0.5081	-0.0549	0.205
CU	0.5142	-0.1841	0.5618	-1.041	0.1491
SGP	1.4902	1.8541	-4.9489	0.9294	0.6751
DENK	-4.1063	1.4916	2.445	3.3453	-3.1756
Volt	2.9278	-4.1246	2.1265	-3.7403	2.8105
JA21	1.3211	1.9903	0.1621	0.9443	-4.4178
Other	-0.5789	0.5838	-0.729	0.4802	0.2438
No Vote	-0.3485	0.5489	-0.7601	0.0991	0.4605
No respon	-0.1073	0.2466	-0.7887	0.2427	0.4067

9. Online deliberation on climate change and energy transition policies

In order to reducing polarisation, extremism and citizens' susceptibility for conspiracy theories online, deliberation has been identified as a potential solution to engage with different cultures and worldviews (Dryzek et al. 2019). However, most users are not engaging in online deliberation actively, as most often these are read passively behind many screens at home. Moreover, Bago et al. (2020) found that only getting people to think more carefully about climate issues will not simply make them to be more accurate in thinking about climate change. It depends how entrenched or opinionated they are, and how good their faith is in assessing novel information.

Our data shows, that almost 60% have not participated actively in any climate or energy discussion in the past year. 36,5% had one or two conversations, and only around 3,5% of the participants is very active in discussing such topics. The most frequent qualitative answers for non-participation that are given by participants can be summarized into five categories:

1. Negligence: *"I can't be bothered."*
2. Cynicism*: "It's pointless. You're talking to a wall."*
3. Conflict avoidance*: "It could possibly lead to an dispute."*
4. Non-interference: *"Everyone is entitled to their opinion."*
5. Lack of confidence: *"I don't know enough about this stuff." – "I don't have the discussion skills"*

As mentioned in the beginning, we presented the participants with four types of animated climate and energy discussions (see annex for script), one where extreme beliefs were absent and nuanced statements dominated. One where nuanced beliefs were absent and extreme ones dominated. And two discussions where one discussant used nuanced and the other extreme statements, differentiating that in one case these statements included conspiracy theories in one person not.

10.   Key discussion values: 'Clear standpoints', 'convincing each other' and 'using explanation'

The overall findings point to the fact that the average participants mostly values three things: that the people in the animation try to convince each other, that there are clear distinguishable standpoints and that they use sufficient explanations, independently of which discussion scenario they rated.

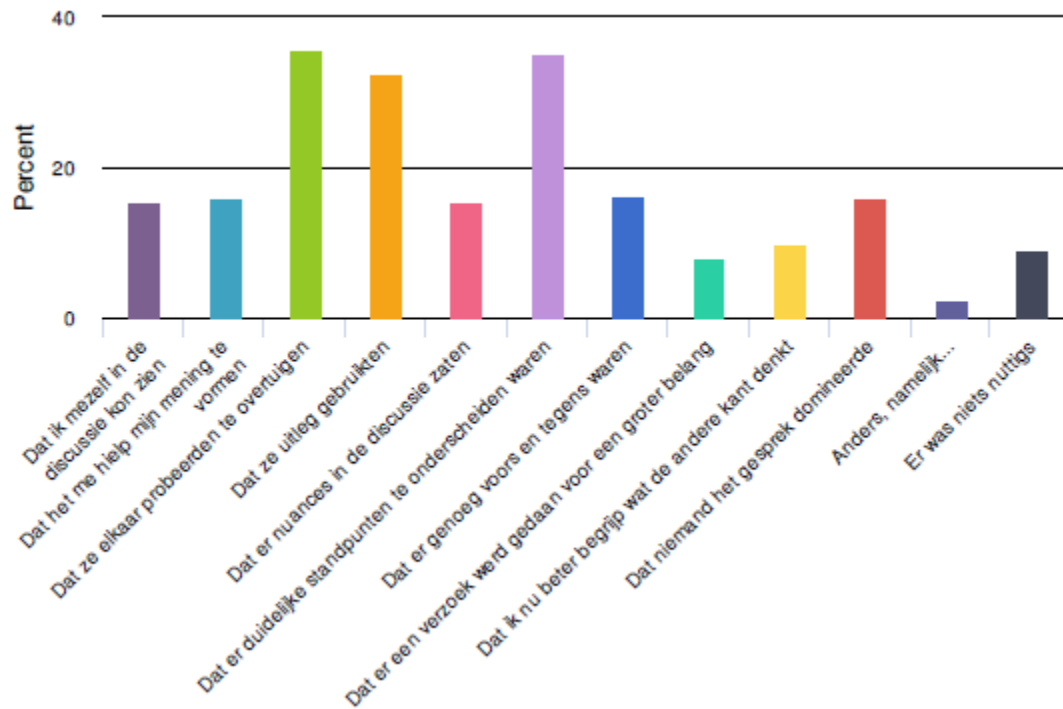Figure 13: *Discussion scenario: Climate change (nuanced – extreme)*

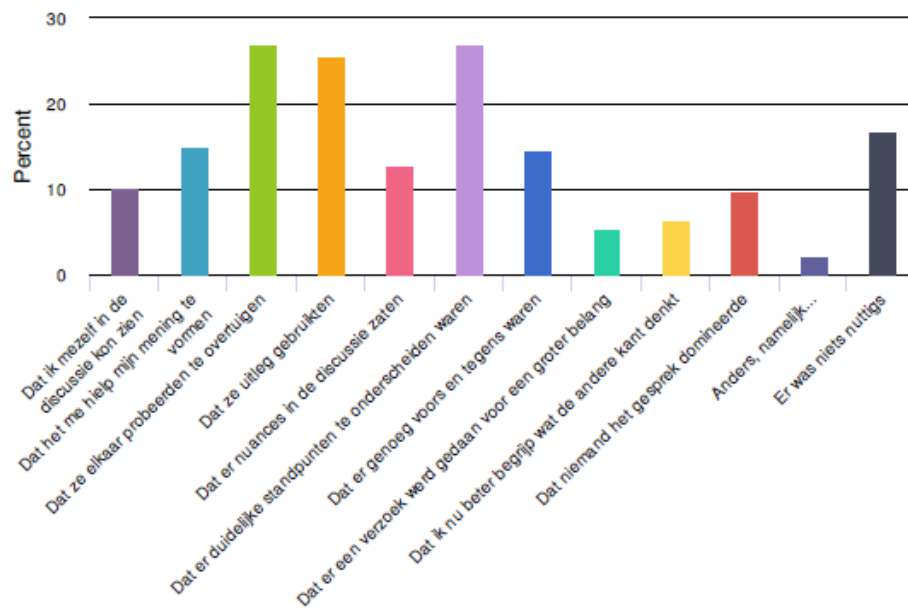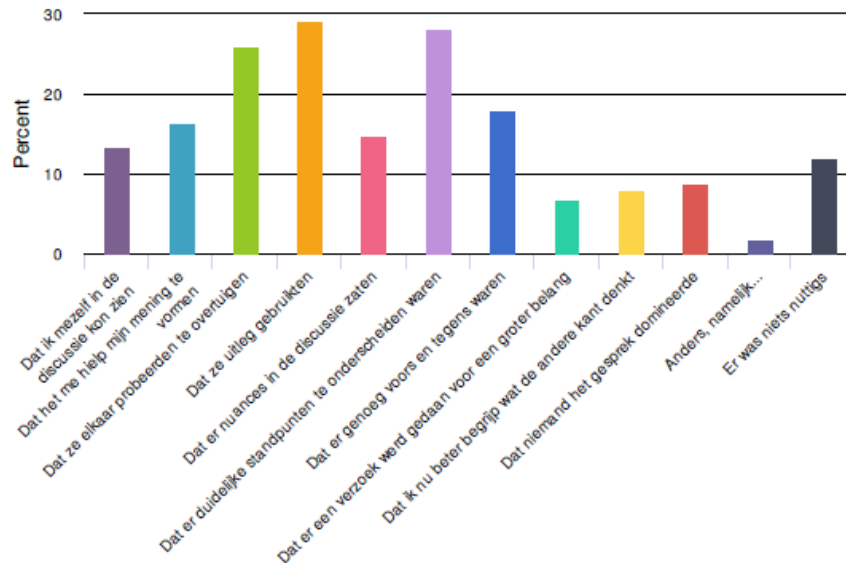Figure 14. *Discussion scenario: Green elites (extreme – extreme)*

Figure 15: *Discussion scenario: Electric cars (nuanced – nuanced)*

These top three equally hold for those who stand more open for climate conspiracy theories as for those who do not, however in different order (the competitive element 'convincing' is the most valued). Interestingly is the fact that those groups who are more open for conspiracy thinking also value more often than the average if they can see themselves in the discussion. That might be an indication that they identify themselves more with what is said in discussions, and thus are more sensitive to attacks against that challenge their identity. Those who are more open for conspiracy theories also value the more extreme statements given in the conversations, such as 'foreign exaggeration', 'mainstream media'. However, they do not value statements that encourage violence ('lock them up').

In the discussion scenario where both sides are using extreme points of view, more participants than compared to the other discussions state that they find nothing useful in such conversations. While still a majority sees some value in such discussions, it shows that viewers also choose more polarizing statements as their favourite than in other discussions. This might be an indicated that viewers get sort of infected by such extreme content, to value more extreme statements.

In the discussion scenario in which conspiracy theories were absent, participants noticeably stated higher values for 'sufficient pro's and con's' and 'help to form an opinion'. Moreover, arguments that reflected pros and cons of the energy transition were almost valued equally, something that was not visible in the more extreme discussions, meaning the absence of conspiracy theories lets them be more open to take also other arguments into account, than those favouring their own opinion. This finding indicates that breaking out one's echo chamber generally only works when one is not directly confronted with extreme content from the other side, but rather with nuanced and explanatory arguments.

An interesting side note, the appeal to a greater good that which was explicitly mentioned the nuanced-nuanced discussion did not attract much popularity. However, an explanation

for that could be that participant did not identify the comment as such, since they rated it as the fourth most popular argument made in the discussion (see figure 14).

When asked about the preferred platform for such discussions, a bit more than 30% favoured a platform of the Dutch government where citizens can give advice about climate measures. Private conversations in messengers such as WhatsApp are favoured by around 27% participants, whereas Social Media is only seen from around 18% as an appropriate place for climate and energy discussions. Many answers in the 'other' section (24%) prefer face-to-face talks.

11.   The necessity of discussion interventions

Intervening in discussion situations is a thin line that separates free speech from online harassment or spreading of disinformation and frequently being criticised as censorism. Yet, overarching research finds that moderation improves the quality of any discussion, since they can enforce social norms and deliberative ideals (Ito, 2018; Jhaver et al. 2017).

With regard to our representative sample, there is a minority of participants that is in favour of non-intervention, in average 28% choose this option. This number increases slightly for the group that is open to conspiracy theories, to around 32% (see following figure).

Figure 16: Preferences for discussion interventions

- 28.3% Geen interventie.
- 38.7% Vlaggen en markeren als een opmerking misleidend is.
- 27.0% Een algoritme beslist of een argument misleidend is.
- 26.2% Privé houden van de discussie (gesprek kan niet door andere gebruikers worden gezien).
- 24.4% Verwijderen omdat dat een opmerking pijn zou kunnen veroorzaken, kwetsend of beledigend is.
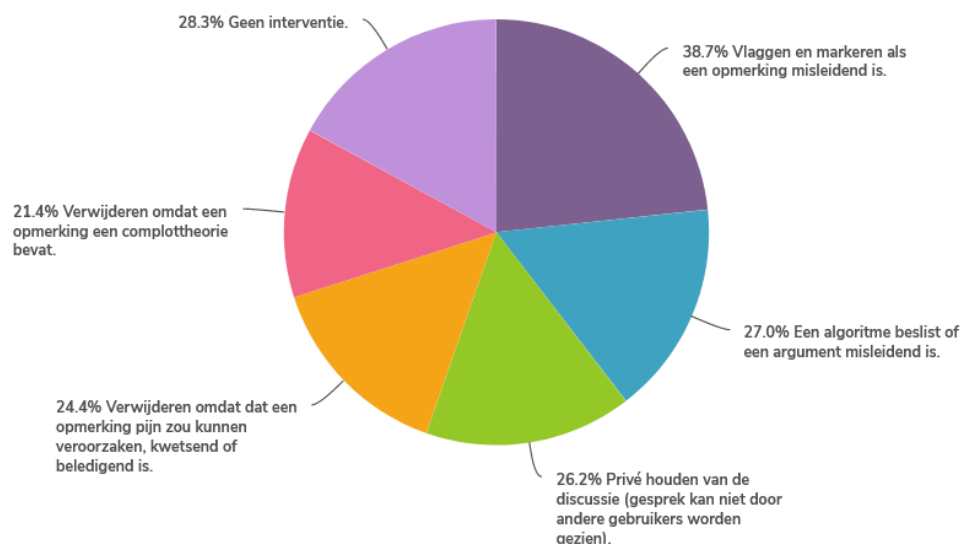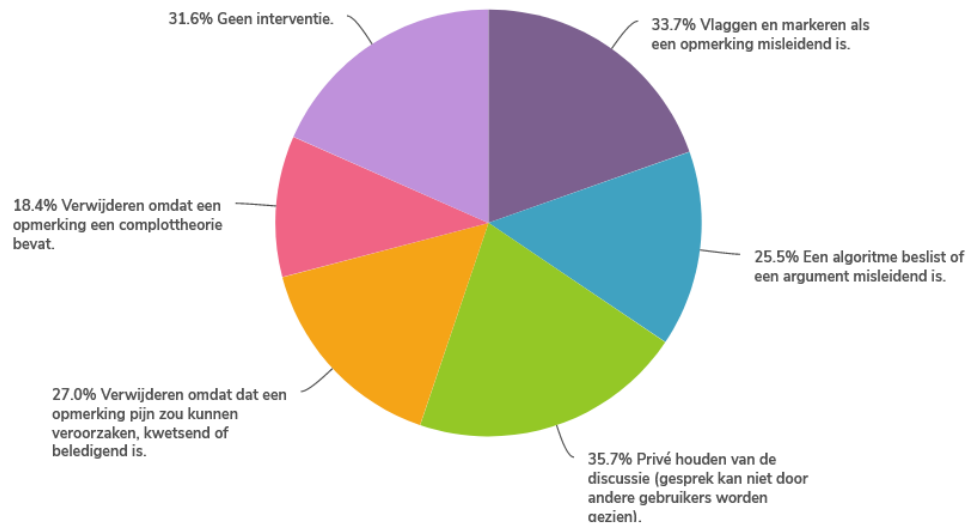- 21.4% Verwijderen omdat een opmerking een complottheorie bevat.

Figure 17: Preferences for discussion interventions for those prone to conspiracy theories

Filter: (Question "de officiële versie van de energietransitie die door de overheid wordt gegeven vaak de waarheid verbergt" is one of the following answers ("helemaal mee eens","eens") AND #3 Question "Welke van deze twee stellingen is volgens u het meest waarschijnlijk?" is one of the following answers ("Klimaatverandering wordt overdreven door het buitenland. Sommige landen proberen Nederland dure maatregelen te laten nemen, die de Nederlandse economie en bedrijven schaden."))

- 31.6% Geen interventie.
- 33.7% Vlaggen en markeren als een opmerking misleidend is.
- 25.5% Een algoritme beslist of een argument misleidend is.
- 35.7% Privé houden van de discussie (gesprek kan niet door andere gebruikers worden gezien).
- 27.0% Verwijderen omdat dat een opmerking pijn zou kunnen veroorzaken, kwetsend of beledigend is.
- 18.4% Verwijderen omdat een opmerking een complottheorie bevat.

However, worth noting is that those who are in favour of non-intervention show high tendencies to believe in far-flung conspiracy theories. For example, 76% of those against intervention also believe that Bill Gates implants microchips via COVID-19 vaccination, and 71% agree that the lockdowns were a pretext to mitigate climate change problems. In other words, when you are susceptible to conspiracy theories, you are still pretty much supporting interventions, but if you're a frank critic of interventions, it more likely that you are a true conspiracy believer or supporter. As can be seen in the qualitative answers, this group is very vocal and outspoken, mostly voicing free speech and censorship reasons. Here are some examples:

> *"We do not need censorship, we need openness and freedom to say what you want."*

> *"Any interference smells of censorship."*

> *"People should be able to express their opinions freely without being overly patronised."*

Some mention that there needs to be space for fringe believes:

> *"People are quick to call you crazy if you don't have the same view as most people."*

> *"It's not okay to just delete a certain comment, since everyone is ultimately entitled to their own opinion (no matter how bad that opinion is)."*

There are also more nuanced opinions stressing the trade-offs of non-intervention:

> *"It's a difficult discussion. I don't like censorship and I think that everyone should be able to express their opinion (even if it hurts others). It is precisely when you prohibit opinions that you create even more polarisation and distrust."*

Or that non-intervention has a limit:

> *"Every person has their own opinion and thought, freedom is very important so would let everything go, as long as no one is physically harmed or discriminated against it is good."*

Or that it's a source of learning:

> *"Conversations must be free and open. That is what a democratic forum is all about. Otherwise, it is a restriction on our right to learn from each other's mistakes and our own mistakes as human beings. Learning is done by discovery, as wisdom and freedom go hand in hand."*

What is worth noting is that 64% who are in favour of non-intervention have not participated in any climate or energy related discussion last year. Older generations are slightly more against interventions (30%) than younger ones (21%), as are lower educated (30%) than higher educated (26%). Also, there are significantly more center-right voters that are in favour of non-intervention than center-left. Yet, one must conclude, that even under the participants who voted for the right wing PVV are only 31% who favour non-intervention. Thus all in all there is large support in the Dutch population and its many sub-groups to intervene in online discussions, yet there are differences in what manner.

The most frequent chosen, and also the most common approach to date, is flagging or marking that a comment contains false information. Sometimes this is combined with a reference to a public organisation. Around 40% of the participants find this an appropriate way to intervene in online conversation, followed by more intensive interventions, such as using algorithms to determine if a post is misleading (27%), that the discussion cannot be seen by other users (26%), that a comment is deleted because it suggests harm, is rude or hostile (24%), or deleted because it contains a conspiracy theory (21%). For the group that is prone to conspiracy thinking, the most interesting finding is that they are way more open to reduce the visibility of a comment or a conversation. 36% give approval for this intervention, followed by flagging (34%). Less popular are interventions such as using algorithms (25%) and, naturally, deleting posts that contain conspiracy theories (18%).

Arguments brought forward by participants for using low-intrusive interventions such as flagging are focused on alertness, warnings, or simply a compromise between not doing anything against conspiracy theories or amplifying them due to deleting:

> *"I think it's wise to indicate by means of a certain marking that there is 'something' remarkable about the statement concerned. People who read it will then be more alert and (perhaps) less frightened by what it says. Hopefully, this will ensure that people do not simply believe what it says."*

> *"There are people who are open for conspiracy theories and believe in them. This can be dangerous and is something that should certainly be warned against."*

"Since it touches freedom of expression, it is more appropriate to mark it as not being truthful. That way people can decide for themselves what to do with it."

"I think most people know what is fact or fiction. A kind of warning or request to go private seems decent to me. By deleting it, you just stir up more resistance and you actually end up with what you don't want."

"Difficult to make a good choice. Removing a conspiracy theory can prevent it from spreading further, but it can also lead to "confirmation" of the people who believe in it being covered up, so perhaps marking misleading information is better. Or deleting if a comment really crosses a line better. But tricky."

Participants who advocate to reduce the visibility also draw the line between the freedom of speech and the necessity to limit the broadcasting of lies:

"You cannot destroy general freedom of speech, but you can make sure that unsubstantiated ideas cannot be read and taken for granted by everyone. An opinion within one's own circle is different from proclaiming an opinion to countless anonymous readers."

Participants who are pro removal point to dangers of disinformation: *"The comments can be misleading, and on the internet there are many people who immediately believe what they read, so it is better to remove such comments."*

"Because people often believe in conspiracies because they are poorly informed and know too little about a subject. The less these people see of such statements (presented as fact), the better."

As mentioned above there is quite some opposition to deletion. The use of algorithms is controversial too, both arguments in favour and against them point to the fact of biased decisions:

"Algorithm is the fairest. I'm not objective enough."

"Algorithm seems tricky but can be easily used with the right settings."

"I think that a real person can only determine properly whether a certain statement is misleading or not, I don't think that an algorithm can make that distinction properly."

"I find algorithm extremely dangerous, it is assumed to be true but is still made by human beings."

There is also a lot of overall reflection by participants on conspiracy theories. It is obvious that it is a highly topical, but also confusing and concerning issue for many citizens, as illustrated in the following statements:

"Unfortunately, conspiracy theories are of our times and I think we have to be alert for them especially in the media. We need to look at what is objective and contains facts versus what is subjective and made up in order to convince people of such a theory."

"That the conspiracy theories are slowly overshadowing the factual truth and that we should try to disprove them as much as possible in discussions."

"Climate change is happening a lot faster than some people think. It is not a healthy mindset to think that foreign countries or the government are behind certain things, because these days you quickly get caught up in an echo chamber and it only becomes easier to believe in conspiracy theories."

Another discussion evolved around why participants think the government is hiding the truth about the energy transition.

"There is never positive news. We're only hearing the cost, the cost, that there is delay and that we're not meeting the goals. The government doesn't express any urgency. If there is no urgency from above, you can't hold the citizens to account."

"The government should tell the whole story. The story that the world is about to break down. We don't hear that now. Government does too little to tackle climate change."

"If your house is 3 meters under water. This is a risk for everyone. The government does not talk about that now. We have to turn the discussion into "living room problems" of the future."

"After the benefits payments affair (toeslagenaffaire in Dutch), *the trust into the government is gone. They may also have to hide something in other domains."*

Others pinpoint the depth of the problem and propose to focus on common values and start helping people who believe in conspiracy theories.

"I think it is indeed important to first examine what the common values are in order to create trust. People often react on the basis of fear/concern and everyone does so in a different way. When it comes to the climate, you can assume that the general value is that everyone wants to live on a healthy planet and everyone wants our children to grow up on a healthy planet too. If you know that this is the starting point of all the participants in the discussion, the discussion might also be more friendly. After all, you have the same goal."

"I think we need to help people who believe in those kinds of conspiracy theories, because they are unlikely to come out of an echo chamber and do the research themselves as to why a certain viewpoint is wrong, or why a certain theory might seem logical as a whole, but it becomes illogical when you separate things out."

In contrast, there is also a notion of resignation among the participants to cope with disinformation or apathy about what to believe.

"What is true and what is not true? I don't know. There may be truth in everything, however little, I cannot make that distinction, so I keep my opinions to myself and do not pass judgment on those of others until I am certain, but that will never work to achieve certainty."

"Once again I don't think you really hear or see the whole truth so I'm not going to delve any deeper into it. The future remains uncertain anyway so I live from day to day without worrying too much about what's coming as you can't do much about it (at least I think so myself)."

"You don't know who to believe and who is telling the truth - that was the case with all those examples".

"I think it is good that I have heard and read different arguments. But this makes me doubt more and more what I should believe and what is really true."

Some participants also link this confusion to COVID-19 :

"It seems that there is something behind the whole thing with Corona. Because many questions I have just had, were exactly the kind of questions I was already working on. What exactly is behind this whole thing? But because so many people have different opinions about it, it remains difficult to know who is right and who is wrong.

"Corona has not done any good against conspiracy theories, because it is invisible. But also how the government handled that did not contribute to more trust."

The following to comments further nicely sum up the paradox that participant witness of the speed of spreading conspiracy theories and how fast they can be accepted as truths, yet how slow people change due to arguments of others.

"Everything that has been said here [in the discussion videos] *is within the limits of the law. What is still a conspiracy theory today can suddenly be the accepted truth tomorrow (see corona lab theory, aerosols etc.)."*

"I have seen the arguments that have been put forward [in the discussion videos] *hundreds of times and so far I have not seen anyone convince anyone else. Changes come at a snail's pace."*

Finally, most respondent experienced the study largely positive, some mentioned that they need to rethink arguments regarding climate change and the energy transition and that they would like to contribute more to bridging society in this matter:

"It made me think again! I'm going to read more about it and research how best to convince people that climate change is happening."

"It was a nice study. It is a pity that our society is so polarising. I want to make an effort to respect the other."

"I learned from study that we have to work together to restore the climate, endless quarrelling gets us nowhere. Good research, I would like to see more like it."

"That you also have to be more open to the other side and that many opinions help to find good solutions. I think that someone has to act as a bridge and bring people closer together."

Last but not least, the study confirmed its own leitmotif. Whereas survey was carefully assembled to show random, balanced and objective discussion scenarios, a number of participants believed to see 'patterns' behind this research, like malicious intentions to manipulate people:

> *"I am curious to see whether there will be a campaign in which I recognise this research."*

> *"I take nothing away from this research, this is fuelled by environmentalists who want to force their way of thinking, fine that you think this way but stop forcing it on others."*

> *"It is not a very objective study; there is clearly some steering behind it. Something like that just stands out when you are a researcher yourself."*

> *"I notice that this research, although it showed both sides of the fictitious discussions, set it up in such a way that you are more easily charmed by the left."*

12.   How to deliberate with people who believe in climate & energy conspiracy theories

In accordance of literature and summarizing our own findings in this study, we have compiled a brief, hands-on guideline of nine steps to follow when deliberating with people who believe in climate and energy conspiracy theories.

Deliberate with people who believe in climate conspiracies

For example, the World Economic Forum wants to create a new energy system and dictate what people should consume, what car they should buy and so on.

1 — Where to talk

Don't argue on social media, TV or in public. They will do everything to perform for their followers. Private discussions allow people to be more open and responsive. Find a relaxed space or go for a walk. If online, use private calls or messages.

2 — What to avoid

Don't laugh at them and don't patronize them. They will feel personally attacked.
Do not start with presenting corrective information. It will only strengthen their view.

3 — How to start

Start with something appreciative or common ground. Once you shift to the topic, acknowledge that some conspiracies do exist. Tell them it is okay to ask questions and to have concerns.
Show the same compassion as to someone who is caught in a destructive relationship.

4 — Few basics

Tell them that you are interested in a meaningful conversation and you want to know how they define a credible source of information. Discuss also how they think about accuracy. Correct the misperception of perceived enemies: Ask them, how do you think, that they think about you?

5 — First zoom out

But not on the issue but on the information environment. Where does a certain news-item come from, what kind of information is it and how are posts and videos spread? In whose interest is that? Show them that you a collaborative 'researcher'.

6 — Then zoom in (really close)

Look after the concrete details. Think together about the very logistics of a conspiracy. Focus on living room issues.
Ask a lot of who, where and when questions.
Stay at a mechanistic level of explanation. Why questions may open an avenue to go off track. Suggest all the specifics that are not considered.

Observe their reactions and where they chime in.

7 — Proof that you listen

By now you should understand that their experiences are real. Tell them that you understand why they came about to draw those conclusions.
Summarize the explanation why they are seeing (and believing) things, but tell them that reality offers a different explanation.

8 — Co-explain

By then, you can try Lakoffs 'truth sandwich'. State what's true, debunk the conspiracy, and state what's true again. (Always repeat truths more than lies.)
Emphasize explanations to which they are responsive. If they feel a conspiracy harms their business, look for explanations how the truth might actually be good for businesses. If they feel forced, show them that in reality they have more freedoms.

9 — Avoid a dead end

You can ask them what it would take to change their mind?
Or what they would need to reconsider the situation?
Respect their answer and take them by their word.

TUDelft

13.   Conclusion

Using established scales to elicit conspiracy thinking in the Netherlands confirms that a significant part of the Dutch society is open to believe in climate change and energy transition conspiracy theories. Compared to earlier studies in the Netherlands, this survey did not confirm increasing scepticism that climate change is not caused by humans. Rather, it show that conspiracy rhetoric might be shifting from an unpopular standpoint, to socially more accepted ones, such as 'climate measures are harming the Dutch economy' and that 'the government is not telling the whole truth about the energy transition'. While such thinking can have a myriad of reasons, it shows that it permeated almost all layers of the Dutch society. Problematically, if climate and energy conspiracy theories understood as social beliefs are further aggregating, they will sustain to become a legitimate view for people to hold (Byford, 2014).

This can be a challenge ahead for future, intensive climate and energy policies, since conspiracy theories can lead to confusion what to believe, distrust in scientifically sound reports, as well as own motivations to do more for the climate. Hence, referring to Prooijen and Douglas (2018), climate and energy conspiracy theories in the Netherlands are consequential as we can assume they will have a real impact on people's wellbeing and collective climate action. They are emotional given that negative emotions and not nuanced deliberations increase the belief in conspiracies; and they are social they are closely associated with clusters in society.

The world is not divided into conspiracy "believers" and the rational majority of the people. According to Byford, (2020), only a minority of committed believers treat conspiracy theories as the literal truth and are particularly resistant to persuasion. In our representative panel, we recorded around 15% of participants as such believers. The good news is, many others are not categorized as "believers", but are willing to accept that conspiracy theorists might be onto something once in a while or that conspiracy theories are at least asking the right questions. Hence, it is important to reflect such boundaries in discussions and interventions to tackle the spreading of climate and energy conspiracy theories.

Similar to Lewandowsky et al.'s (2015) study about social media comments, there is also an indication in our study that passive viewers of conspiracy content in climate and energy conversation get 'infected' to favour more extreme statements in the discussion. This might partly be caused because these statements confirm their worldview more boldly and lash out to the others more heavily, but likely also that extreme statements linger longer in memory than nuanced ones. On the other hand, what we can see in the absence of conspiracy content, participant favour more nuanced arguments, even arguments that appear to be outside of their core believe system. While the dynamics of such 'infections' should analysed more closely in future research, it is obvious that reducing the visibility of conspiracy content in online discussion can favour more balanced arguments, as well as that more viewers will actually use content to form their opinion, and might be more willing to participate in such conversations.

Lastly, as this study showed, there is widespread support for intervening with soft measures, especially flagging or indicating warnings in online discussion. As literature shows however, the effect of flagging and debunking is mixed at best. Another approach, that seems to be a feasible solution to many Dutch citizens is reducing the visibility of conspiracy. It would still be allowed to post whatever fringe opinion is out there, yet the compromise would be to break its virality potential by reducing its visibility for instance to one's own friend groups.

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15. Appendix

Discussion script

Discussion 1 : Climate change *(nuanced – extreme)*

Have you seen on TV? The kids are striking again for the climate.

Look, climate change is being exaggerated by foreign countries. These countries are trying to get the Netherlands to adopt costly measures that will harm the Dutch economy and businesses.

You sure of that? I see it differently. Many foreign countries are concerned about the possible effects of climate change and are adopting measures to prevent them.

These countries have simply been trying to encourage the Netherlands to also do more.

That is what the mainstream media is selling you. Why don't we keep our Dutch natural gas? It's clean and cheap. But no, lets switch it off and buy energy from abroad.

Somebody must secretly profiting, Germany, China, Russia? I don't know.

Let's not give in to all these climate freaks. Lock them up and save our Dutch jobs and businesses.

I do recognize that sometimes things are kept secret. But eventually the truth comes to light.

If 'someone' secretly has a finger in the pie, that we Dutch will phase out natural gas, then this person must have arranged a lot of logistical details.

The reasons why we phase out natural gas are related to climate change and there are certainly no foreign powers behind it.

Discussion 2: Green elites *(extreme – extreme)*

The government is not doing enough to accomplish the energy transition. And you know why?

Because politicians are afraid it could hurt the economy. Big companies like Shell and Tata steel have too much power.

As a result, many green ideas and technologies are suppressed by powerful lobbyists.

I disagree. There is absolutely no proof for this.

Rather, these companies are waging a power struggle against new 'environmental elites' who want to control the system for their profit.

For example, the World Economic Forum wants to create a new energy system and dictate what people should consume; what car they should buy and so on.

Your accusation of 'environmental elites' seems pretty weak to me. If that were the case, why doesn't even 10% of the total Dutch energy production come from renewable sources? And why is only 4.5% of all cars electric?

In fact, the government is still sponsoring dirty oil and gas companies behind the scenes.

Discussion 3: Electric cars *(nuanced-nuanced)*

I'm thinking about buying an electric car because it's better for the planet. What do you think?

Really? I am very skeptical about electric cars. Recently I read that the CO_2 emissions during the manufacturing of electric cars are much higher compared to regular cars. Plus, there is no solution yet to recycle them. So don't tell me electric cars are better for the environment.

I get that you are skeptical, but I think your arguments are a bit outdated. Have you ever looked at the latest data on emissions from battery production?

In 2017, emissions were around 175 kg of CO_2 per kWh. In the 2019 update, it is 85kg per kWh. Besides, battery life is getting better and better.

Those outdated studies are probably why people get a wrong idea about electric vehicles.

Hmm, maybe I should start reading more about the production and reuse of batteries then. But I'm not entirely convinced yet.

There are also ecological problems in the countries where they dig up all the metals, and many human rights are violated in dubious factories.

If everyone is buying electric cars, the situation there will get even worse.

That's true, we shouldn't praise electric car manufacturers blindly for saving the planet. Some just have a good marketing strategy and are not really sustainable.

We should take a better look at them, but with actual arguments.

I think we can agree that the auto industry as a whole can do more to become more sustainable and more humane.

Discussion 4 : 100% renewable energy *(nuanced – extreme)*

Do you think we can ever live 100% off clean energy?"

No, definitely not. First of all, when the sun is not shining or when it is not windy, there is no renewable energy.

Second, one billion people around the world lack the energy they need. Wind or solar are never going to be enough to meet their needs.

As a result, we will still need oil, gas and coal for a very long time.

I understand your point, but I think it's different. Solar panels only need UV light. So even during cloudy or rainy days, energy can be produced. Wind energy has also improved greatly in recent years and is now quite efficient.

For the rest, energy storage systems will solve this problem.

Well, if that means that our country will be packed with ugly windmills and solar panels, then 'no thanks'. I prefer a beautiful view into nature. And I think I speak for the many.

If you knew anything about laws and regulations, you would know that there are many restrictions on building windmills and solar parks.

They really don't get put up everywhere. For example, nature reserves are protected.

Conspiracy scale

Adapted from Bruder et al. (2013), Lewandowsky et al. (2013).

Which statements do you consider likely or unlikely to be true:

I think that:

1 ... there are many important things happening in the world, about which the public is never informed.

2 ... politicians usually do not tell us the true motives for their decisions.

3 ... government agencies keep a close eye on all citizens.

4 ... events that seem superficially unrelated are often the result of covert activities.

5 ... there is a global elite that runs the world for their own interests.

6... globalization and capitalism are the main drivers of environmental and climate destruction

7 ... there are secret organizations that have great influence over political decisions.

8... there is a global plan called the Great Reset underway. Its architects include Klaus Schwab of the World Economic Forum (WEF) who wants to subjugate all of humanity by imposing coercive measures

9 ... we are currently living in the end times as predicted by various prophecies.

10 ... corona lockdowns have been introduced under the false pretext of protecting climate change.

11 ... human activity has no impact on changes in the global climate.

12 ... the COVID-19 vaccination program is an excuse by Bill Gates to implant microchips to control and oppress the population.

13... scientific conclusion on climate change and the energy transition are shaped by politics.