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Climate Change Conspiracy Theories

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Abstract

Climate change conspiracy theories raise many questions. Some of the questions are philosophical in nature. They include issues such as how to define 'conspiracy theory' (a conceptual question), what the ethical status of conspiracy theorizing is (a moral question), and how decision-makers should deal with climate change conspiracy theories (a practical question). One way to define 'climate change conspiracy theory' is to say that they are explanations that (1) refer to conspiracies, (2) are not in line with more or less unanimous views of the climate scientists, and (3) offer clearly insufficient evidence in support of the alleged conspiracies: relevant experts find the evidence so bad that the theories are not considered even as competing explanations. Climate change conspiracy theories are ethically problematic. The theories tend to reduce individual persons' commitment to cut down their carbon footprint. More generally, conspiracy theories undermine trust toward epistemic authorities and social institutions generally. There is no agreement on what the right policy towards climate change conspiracy theories would be, but there are many options. Increasing social trust is among them.

Please notice: this is not the published version of the paper.

Keywords: *Conspiracy theories, conspiracy, climate change, denialism, ethics, policy options*

Introduction

There is a large consensus among climate scientists that global warming is a fact and that it has partly a human origin. There is also consensus that urgent measures are needed to mitigate the climate change. However, public discussion in many countries, especially in the U.S., has shown open skepticism toward the results produced by climate scientists. The denialist position that climate change is the "greatest hoax in the history" has been surprisingly common (cf. Powell 2011, 148). The skepticism about global warming has usually related to the rejection of policy

recommendations that encourage to lessen greenhouse gas emissions and take precautionary measures to mitigate forthcoming harms.

It is difficult to tell why many ordinary people reject established scientific findings. People's ideological backgrounds play a role, and two people with different ideologies (say, political opinions) can *interpret* the same information in very different ways (Uscinski et al 2017; Jylhä and Hellmer 2020). People also use strikingly different *testimonial sources* when they form their beliefs (Levy 2019). But why has the rejection been particularly visible in the case of climate science? After all, it is unlikely that the climate skeptics are exceptionally irrational or ignorant (Levy 2019). However, there are some explanations why climate science may appear to be a particularly tempting target for those who are ready to suspect results that almost all experts support. For instance, climate scientists are reported to *vote* about their results, and lay people may think that voting does not sound like a proper method for natural sciences. The findings showing that anthropogenic climate warming is true appear to *change* relatively often, and these changes (say, related to climate effects of the Amazonian rain forests) may give the impression that the results are not reliable (Qin 2021). Furthermore, during the Covid spring 2020 there was a clear reduction of CO2 emissions, but still the overall amount of carbon dioxide in the atmosphere went up, which may suggest that their root cause cannot be anthropogenic (Quéré 2020). These kinds of reasons do not justify climate skepticism – there are very good replies to these and similar worries – but they may explain it, at least to some extent.

However, not all who deny that human activities are causing the global climate change and who therefore oppose present policy suggestions literally *believe* what they say. Some opponents present skeptical arguments in academic debates and in public merely because defending those arguments is considered strategically wise, politically or economically. There are "merchants of doubt" who benefit from misunderstandings and confusions (Oreskes and Conway 2010). The creation of artificial disagreements and fake controversies is an important strategy of climate science denialism (Hansson 2018). Backlash campaigns against awareness of climate change have been common and well-funded (Lahsen 2013). Public resistance to policies intended to lessen or stop carbon emissions benefit many states and industries, including people who own the companies. Thus, an important explanation for the rejection of established scientific findings and policy recommendations connected to them is simply that some people are intentionally misled.

Climate change conspiracy theories form a special ground for skepticism. Sometimes they are created and distributed to mislead people; in other times conspiracy theorists seem to believe in the theories and take them to be true. Probably the most well-known climate change conspiracy theory is the claim that the scientific consensus about climate change is manufactured and based on a scientists' conspiracy to guarantee lavish research funding. The current section sketches some of the most prominent features of the philosophical debate on climate change conspiracy theories. There are many different conspiracy theories that are related to climate change or global warming. The empirical research on the effects of theories has been rich and fruitful in recent years. The philosophical debate includes questions such as how to define 'conspiracy theory' (a conceptual question), what the ethical status of conspiracy theorizing is (a moral question), and how decision-makers should deal with climate change conspiracy theories (a practical question).

Climate Change Conspiracy Theories: Examples

Usual climate change conspiracy theories aim to support at least one of the following claims: (a) climate change is not really happening; (b) anthropogenic climate change is not really happening; (c) climate scientists' policy proposals intended to mitigate (alleged) climate change are not acceptable. A conspiracy theorist may aim to argue for all the claims – by a conspiracy allegation – but she need not try to support them all. Although the view that climate change is not really happening implies that anthropogenic climate change is not really happening, the opposite is not true. Obviously, a person can deny the human origin of global warming without denying the warming itself. The claim that climate scientists' policy proposals intended to mitigate climate change are not acceptable can be defended by claiming that climate change is not really happening, but surely one can criticize the present policy proposals also *without* denying climate change. One can simply say that they are too costly (and that there is a conspiracy that explains the costs). Similarly, a person can *agree* with climate scientists' policy proposals intended to mitigate climate change, but still think that, actually, climate change talk is a great scam, based on a conspiracy. Perhaps he agrees with the policy proposals simply because he thinks (correctly) that their likely effects are welcome in terms of health and well-being.

What kinds of climate change conspiracy theories are there? *Climategate* conspiracy theory has gathered a lot of attention. Climategate refers to an incident that started on November 19, 2009, when an anonymous hacker stole and published e-mails from the Climate Research Unit of the University of East Anglia. The e-mails included sentences that suggested that scientists aim to

silence their critics by boycotting certain journals and corrupting peer-review processes, forge information about climate change, and manufacture the forthcoming report of the Intergovernmental Panel on Climate Change. The news was published in Britain's *Daily Telegraph, Wall Street Journal* and elsewhere (Powell 2011). At the beginning, the question was about a gross misunderstanding rather than a conspiracy theory. The sentences were interpreted out of their context. However, when it became relatively clear that there was no orchestrated cover-up, some people continued to claim that scientists conspire, as suggested by the e-mails. According to Climategate conspiracy theory, the original interpretations of the e-mails were correct and show that climate scientists are lying to secure research funding. Their data is fake. They want money and are willing and able to engage in extreme scientific misconduct (Uscinski et al 2017).

According to some surveys, the Climategate incident and the debate that followed weakened public trust in climate science and scientists. Consequently, people were less confident that anthropogenic climate change is happening and requires serious concern and political action (Lahsen 2013, 548). Perhaps merely cloud coverage is responsible for global temperature changes and the idea of manmade global warming is a hoax (Merlan 2019).

Climategate conspiracy theory says that scientists are the bad guys. But there are climate change conspiracy theories that blame industry, political parties or ideological groups rather than scientists. These theories include a set of wild claims. Oil companies are intentionally hiding technologies that would totally stop global warming, as these technologies would be disastrous for business (Uscinski et al 2017, 5). Environmentally oriented people have put their money on the green energy companies, and they bribe authorities to doctor the data to save their investments. The United Nations wants to overpower member nations and uses the climate change trick to convince people that there is a problem that countries cannot solve on their own (Kennedy 2016). Left-wing activists want to centralize power and undermine local sovereignty by using the global warming hoax. Climate change is a communist ploy (Uscinski and Olivella 2017). Climate change talk is a sneaky way for governments to tax ordinary citizens more and more (Kennedy 2016). The concept of climate change was created by the Chinese to make products from the United States less competitive in global markets (Schulman 2018).

Climate engineering has created many conspiracy theories. Climate or geoengineering refers to an intervention that aims to change the planet's climate system, for instance, by regulating sunlight (Goodell 2010; Hamilton 2013). The most common conspiracy theory related to geoengineering is

(somewhat surprisingly) the so-called chemtrails conspiracy theory. According to the theory, airplanes are spraying a toxic mix of chemicals through contrails to control weather and possibly people's minds. According to one version, the intention is to destroy humankind. Another version says that chemtrails are responsible for climate change. Chemtrails conspiracy theory accuses geoengineering, although dreams of weather modification and the plans to change the climate system are not the same thing (Hamilton 2013, 107; Tingley and Wagner 2017).

Empirical Studies

Empirical studies about climate change conspiracy theories concern mainly their social and psychological background and their real or likely consequences. These studies are not philosophical, but they are in many respects relevant to philosophical questions – for instance, to the ethics of climate change conspiracy theorizing. Karen Douglas, Stephan Lewandowsky and Joseph E. Uscinski are well-known researchers in the field.

What kinds of empirical results there are? Probably the key finding is that conspiracy thinking has a positive correlation with climate change denial (Douglas and Sutton 2015; Uscinski et al 2017, 19). But there are many other, more subtle, results. One need not believe in one of the climate change conspiracy theories to be vulnerable to climate denialism: endorsement of a cluster of *any* conspiracy theories (concerning, say, the Moon landing and Princess Diana's death) predicts rejection of climate science (Lewandowsky et al 2013). Those who think that climate change is a hoax are more likely to reject many other scientific propositions, which are not related to climate (Lewandowsky et al 2015). Endorsement of free-market economics ideology predicts rejection of climate change (Lewandowsky et al 2013). The effects of conspiracy thinking on climate change denial are conditional on individuals' party identification, at least in the United States (Uscinski and Olivella 2017). Elsewhere, people's political attitudes, in particular conservative attitudes, do not predict climate skepticism that clearly. Conspiratorial ideation need not make a person denialist, although it can (Hornsey et al 2018). Males are more likely to deny human influence on climate change (Jylhä et al 2016).

In the future, it would be important to add interdisciplinary collaboration to empirical research projects and to gather still more valuable and diverse data. Also, the notion of "conspiratorial thinking" needs further clarification, and researchers should strive to agree on how to *measure* underlying conspiracy thinking and climate change conspiracy beliefs (Uscinski et al 2017).

Conspiracy Theory: A Definition

Climate denialist claims are sometimes based on conspiracy theories, but not always. In order to know when there is conspiracy theorizing in the background, we need to know what conspiracy theories are. However, there is no consensus on how the concept 'conspiracy theory' should be understood, although we can list examples of them – including examples of climate change conspiracy theories. The claim that Elvis Presley conspired with his doctors and fabricated his death certificate is a conspiracy theory. The view that climate scientists have decided to lie about global warming is a climate change conspiracy theory.

In his *Discources on Livy* (1531), Niccolò Machiavelli points out that conspiracies are often made by those who are not very powerful, and that some conspiracies are made for morally valuable reasons, for instance, to fight against tyranny. Both observations are correct. Conspirators need not be particularly powerful (for they can be ordinary medical doctors), and there are many historical examples of welcome conspiracies (such as Operation Valkyrie to assassinate Adolf Hitler). When it comes to conspiracy theories, they tend to attribute conspiring to powerful and morally corrupt groups. Hence social psychologists and social scientist often *define* conspiracy theories as explanations that refer to "powerful persons" who act in secret "for their own benefit" (Douglas and Sutton 2011; Uscinski et al 2017). This is an acceptable way to think about conspiracy theories, as far as one is interested in an important subgroup of them. However, generally speaking, conspiracy theories are not limited to alleged actions of powerful and selfish people. The claim that Paul McCartney died in 1966 and a replica took his place in the Beatles is a conspiracy theory (if something is), but the theory attributes conspiracy to a group of young artists who were not particularly powerful at that time. A person who thinks that the first Moon landing was framed need not think that the operation was morally blameworthy. She may think that it was a clever move, given the space race between the United States and the Soviet Union (Räikkä 2009).

Obviously, conspirators *themselves* do not usually think that they are doing something wrong. They tend to be ready to defend their decision to conspire. President Ronald Reagan surely did not think that Irangate conspiracy was problematic. In his view, it was patriotic.

However, there is something in the idea that conspiracies are morally suspect. A group's secret plan to organize a funny birthday party is not a conspiracy, possibly because there is nothing morally

wrong in the plan. In conspiracies, there *is* something wrong. However, conspiracies need not be wrong *all-things-considered*, but merely *prima facie* wrong, or they may go against the so-called conventional moral norms. Although a plan to assassinate a dictator can possibly be morally justified all-things-considered, people certainly have a *prima facie* obligation not to kill others, including failed political leaders. In this sense, conspiracies are indeed morally problematic. But not all morally problematic secret plans are conspiracies. For instance, secret military operations are not usually called conspiracies even when they look morally questionable. When a group conspires, it does or attempts to do secretly something that it should not do, given its *role and function*. Some groups exist to make secret military operations and when they do, they do not conspire – even if their actions do not meet appropriate moral standards (Ichino and Räikkä 2021).

Conspiracy theories refer to conspiracies. Climate change conspiracy theories refer to conspiracies related to climate science, geoengineering or something similar. Notice, however, that many ordinary explanations concerning historical events also refer to conspiracies. Brutus, Cassius and other conspirators killed their leader Julius Caesar in 44 BC. The Pazzi family conspired to assassinate Lorenzo ja Giuliano de' Medici in 1478 in Florence. It can be argued that *all* explanations that refer to conspiracies should be called conspiracy theories, and that we should not distinguish between ordinary historical explanations that refer to conspiracies and conspiracy theories (Dentith 2016, 581; Pigden 2007, 221). Possibly, such a redefinition of 'conspiracy theory' would free us from the pejorative meaning the concept has. That, in turn, would help us to study conspiracy theories open mindedly (Dentith 2019). However, it is clear that the redefinition would change the subject of the discussion concerning conspiracy theories. In ordinary language, conspiracy theories do not refer to incontestable historical explanations that mention some real conspiracy as a part of an explanation. When someone says that conspiracy theories are potentially dangerous, she does not mean that knowledge about past conspiracies is dangerous. Empirical studies show that in spoken language we distinguish between ordinary conspiracy explanations (concerning, say, Caesar's death) and conspiracy theories (Napolitano and Reuter 2021).

Conspiracy theories explain past, present or future events by referring to (alleged) conspiracies. What makes conspiracy theories special is that they are not in line with more or less unanimously accepted "official" explanations and that they rely on a low standard of evidence, regarding the alleged conspiracy. In spoken language 'conspiracy theory' refers to an explanation that satisfies not only the (1) conspiracy criterion but also the (2) conflict criterion and the (3) evidence criterion (Ichino and Räikkä 2021; Napolitano and Reuter 2021).

(1) Conspiracy criterion: an explanation of a given event refers to an actual or alleged conspiracy.
(2) Conflict criterion: the explanation is not in line with the received explanation of the event and provides an alternative to the "official view" (if there is one).
(3) Evidence criterion: the explanation offers insufficient evidence in support of the alternative explanation, so that it is not considered as a competing theory (Ichino and Räikkä 2021).

The conspiracy criterion is clear, but we need to look closer to the conflict criterion and the evidence criterion.

The conflict criterion separates conspiracy theories from ordinary historical explanations that refer to conspiracies (Räikkä and Basham 2018). An explanation that refers to a conspiracy is a conspiracy theory only if representatives of the "official view" find the conspiracy claim strikingly implausible or would find it strikingly implausible in case they considered it. The view that vaccines will kill millions of people and health authorities know it (but do not reveal the truth) is a conspiracy theory, as it is obviously unrealistic according to clear majority of the *epistemic authorities* on which we normally rely—such as scientific researchers, investigative journalists, various state authorities, and so on. Their view is the "official" view. The conflict criterion does not imply that new conspiracy theories that have not yet been evaluated by the epistemic authorities cannot be genuine conspiracy theories (Ichino and Räikkä 2021).

The evidence criterion helps to distinguish between conspiracy theories and explanations that may also refer to conspiracies and conflict with the received view. The claim that Grigori Yefimovich Rasputin was killed by the British intelligence service is not considered (or is not always considered) to be a conspiracy theory, but a competing historical theory about the death of Rasputin. Those two kinds of theories—conspiracy theories and "rival theories" that refer to conspiracies—differ with respect to the quality of the evidence they provide. Conspiracy theories offer relatively little good quality evidence in support of the conspiracies they talk about. Competing historical theories, in turn, offer a good amount of good quality evidence in support of their claims (Martin 2010). They may not convince most of the experts, but they are taken seriously, because of the evidence they provide (Ichino and Räikkä 2021). Whether evidence is good or bad depends on the view of epistemic authorities. In principle, although it is unlikely, an explanation

which is conspiracy theory today may be a competing theory tomorrow and finally, someday, the official truth of the matter.

The definition based on three criteria does not mean that conspiracy theories must be false: epistemic authorities can make mistakes. Notice also that the definition does not imply that a person who would be considered one of the epistemic authorities could not be a conspiracy theorist. A biologist or a historian may well defend an explanation which refers to an alleged conspiracy, but which is non-sense according to most other experts (Ichino and Räikkä 2021).

If the definition based on three criteria is adopted, then climate change conspiracy theories are explanations that (1) refer to conspiracies, (2) are not in line with more or less unanimous views of the climate scientists, and (3) offer clearly insufficient evidence in support of the alleged conspiracies: relevant experts find the evidence so bad that the theories are not considered even as competing explanations. However, it is important to keep in mind that the question of the appropriate definition is still open, and that some definitions are based on conceptual engineering of 'conspiracy theory' rather than on descriptive conceptual analysis of the spoken language (Napolitano and Reuter 2021). Authors who have done valuable and pioneering work on the definition issue include Lee Basham (2001), Steve Clarke (2002), David Coady (2003) and Brian Keeley (1999), among others.

Ethical Issues

Climate change conspiracy theories raise many ethical questions. Some questions concern the ethical acceptability of climate conspiracy theorizing, while others are related to issues of responsibility. A further question is about the ethics of belief: given that climate change conspiracy theories are unlikely to be justified – this follows from their definition – is it *ethically* problematic to believe in them?

There are many arguments against conspiracy theorizing in general and against climate change conspiracy theorizing in particular. Conspiracy theories can include libels and they can stigmatize certain groups. Relatively many conspiracy theories are created and distributed merely to gain something questionable (Räikkä 2014). These are serious moral costs of those theories. However, the most common argument is the consequentialist objection that conspiracy theories and *especially* climate change conspiracy theories lead to undesirable outcomes. On the individual level, an

exposure to climate change conspiracy theories tends to reduce a person's commitment to cut down her carbon footprint (Jolley and Douglas 2014). People who really believe in climate change conspiracy theories and who act on the basis of their beliefs are likely to make morally problematic choices (Merlan 2019). On social level, political decisions are unlikely to serve peoples' interests, if the selection of political representatives is based on erroneous beliefs (Uscinski et al 2017). More importantly, widespread bizarre and libelous conspiracy theories ("Hillary Clinton and her conspirators abused children in satanic rituals") compromise the value and authority of democratic practices and institutions (Muirhead and Rosenblum 2019, 7). As conspiracy theories in general, climate change conspiracy theories can be bad for democracy.

Conspiracy theories undermine trust toward epistemic authorities and social institutions generally. By manifesting distrust, conspiracy theories weaken the grounds of the default stance that institutions and information provided by them are trustworthy. Climate change conspiracy theories do not make an exception. Thus, it is ethically problematic to create and distribute them: surely our moral obligation is to try to increase rather than decrease social trust, at least in stable liberal-democratic countries. In a sense, conspiracy theories and lack of trust form a vicious circle. Conspiracy theories feed distrust in social institutions and usual sources of information, but one of the reasons why many people support conspiracy theories in the first place is lack of trust and a tendency to find alternative sources for testimonial knowledge (that is, knowledge we learn from others). Some people do not find mainstream media trustworthy, as it is considered a part of the elite establishment that does not *deserve* trust (Levy 2019). If the elite does not show any goodwill and willingness to distribute well-being to all members of the society, why should a person trust it and the information it provides? This question shows that the ethics of conspiracy theorizing is closely related to difficult issues concerning trust and testimonial knowledge. (Increasing social trust does not mean that we reject healthy skepticism toward powerful actors in our societies.)

There are arguments in favor of conspiracy theorizing. It can be argued that conspiracy theorists watch and monitor media who should watch politicians and financial elites. Possibly, conspiracy theories can lead to further investigations (as early rumors of the Climategate did) and wake up epistemic authorities. They can sharpen the official truths, and in any case, they are part of the democratic civic discussion, even when they are not warranted (Clarke 2002). To criticize conspiracy theories too heavily is to create a smoke screen for those who like to conspire (Pigden 1995, 4). Perhaps conspiracy theories could *deter* likely conspirators (Coady 2003). These arguments are interesting, but at least in the case of climate change conspiracy theories, on which

we are focusing, the negative aspects (that are listed above) seem considerable. Overall, we should think twice before we share conspiracy theories and murky rumors that question climate scientists' alarming findings.

Given the moral undesirability of climate change conspiracy theorizing, it is in place to ask who are responsible for the spread of those theories. Possibly, we can name some individual agents such as lobbyists of the oil industry and certain conservative politicians. But it is likely that different actors are *collectively responsible* for the popularity and expansion of the theories. To understand what the sense of "collective responsibility" here is, it is helpful to distinguish between (1) ordinary believers and disseminators and (2) developers and publishers of conspiracy theories. The distinction between these two groups is useful, although not completely clear (as the developers and publishers tend to disseminate their theories). (Räikkä 2020.)

The dissemination of unverified information is not morally unproblematic. This is especially so, when the disseminator should be aware that the information conflicts with what is told by the relevant epistemic authorities, and when it is likely that the information will be taken seriously so that it will have an influence on behavior. The ordinary dissemination of climate change conspiracy theories can be compared to littering. Litterbugs may appreciate a clean environment but refuse to do their own share. They do not care about the bad example they provide. Although a single litterbug's contribution can be small and harmless in her own eyes, the overall effect may be quite unpleasant. Both the ordinary disseminators of climate change conspiracy theories and litterbugs are responsible for their conduct, for they should realize what they are doing. Although the question is of the overall impact of the actions committed by individual persons, we can talk about "collective responsibility" here (Räikkä 2020). The undesirable effect is produced together, and participants *share* the responsibility for the undesirable outcome. Shared responsibility does not require shared intentions or shared goals (May 1992).

Developers and publishers are active conspiracy theorists, and their responsibility is different than that of the ordinary believers and disseminators. However, both groups are collectively responsible. The question about the origin of climate change conspiracy theories varies case by case, but often active conspiracy theorists get ideas for their theories by following other active conspiracy theorists. In some cases, conspiracy theorists work together in groups (Sunstein and Vermuele 2009). The groups, in turn, may be connected to one another. (An example would be the 9/11 Truth Movement that consists of various groups.) Although the dissemination of climate change conspiracy theories

happens largely in ordinary people's personal networks on the internet, or in the "alternative media", the active conspiracy theorists get support from each other and share the attitude of distrust. They then transmit the attitude to others. Since conspiracy theorists act jointly, they are collectively responsible in that sense. Collective responsibility does not necessarily entail group responsibility; active conspiracy theorists who develop and publish climate change conspiracy theories can be collectively responsible without being responsible *as a group* (Räikkä 2020).

Climate change conspiracy theories are ethically problematic, and many actors are jointly responsible for their spread. But what is the ethical status of *believing* in non-existent climate change conspiracies? Suppose that a person is convinced that that the scientific consensus about climate change is manufactured and based on a scientists' conspiracy to guarantee research funding, but that she does not tell about her view to anyone or distribute the claim to others and that she does not act on the basis of her conviction. Not everyone who supports climate change conspiracy theories believes in them, but she does (Ichino and Räikkä 2021). Should we blame her morally?

It can be argued that people are free to believe whatever they wish about anthropogenic global warming – whether it is real or a ruthless lie that is based on a conspiracy (Uscinski et al 2017). Opinions, however wrong they happen to be, have no impact on the Earth's climate. It can also be said that "intellectual vices" are not within people's control and that, therefore, we should refrain from being excessively moralistic toward climate change conspiracy theorists (Cassam 2016, 169). "Ought" implies "can", and people cannot directly choose their beliefs and control what they happen to believe. However, there are famous views that, in fact, we *are* in some measure morally responsible for our beliefs and that beliefs are appropriate targets of both epistemic and moral criticism. According to a doctrine called evidentialism (that derives from 19th century), "it is wrong always, everywhere, and for anyone to believe anything on insufficient evidence" (Clifford 1996/1877). Notice also that in our everyday practices we do evaluate morally other people's inner life, even when we know that they do not have direct control over it. For instance, we tend to condemn (tacitly, at least) overly jealous emotions and attitudes. We feel that people are ethically accountable for their involuntary sins (Adams 1985).

At this point, however, we need not settle issues on the ethics of beliefs. Two observations suffice here. First, the conclusion that dissemination of climate change conspiracy theories is morally problematic does not imply that we should condemn people's beliefs. There is something deeply disturbing in the idea we have strong moral obligations that should govern our mental life, although

some mental states (such as willingness to help others) are good and some others (such as excessive jealousy) are bad. Our well-being and mental health require that we are free to think, dream and feel without a mental hygienic program that tells what should happen in our inner life. It is one thing to say that a person's belief in climate conspiracy is unwarranted and another thing to claim that it is morally reprehensible. Second, people are able to control their belief formation processes, to some extent at least. They can try to evaluate the evidence open-mindedly and in an unbiased way. They can respect arguments even when their conclusions seem unpleasant. They can try to double check that their own interests do not influence their reasoning. They can be careful when they choose the sources they rely upon. A person who fails to do these things and ends up supporting a climate change conspiracy theory is responsible for her failures. She lacks intellectual virtues and, possibly, this is a moral failure too. Believing in a climate change conspiracy theory need not be morally wrong, but it is likely that a person who believes in such theory has done something wrong in the process that *preceded* the belief.

Policy Options

In recent years, there has been a lot of discussion on how we should deal with conspiracy theories. Climate change conspiracy theories have received a special attention in the debate, as they are problematic in ways many theories are not. For instance, theories that are made for fun ("Finland does not exist"") or which are related to artists ("Elvis faked his own death") do not probably require public reactions. Climate change conspiracy theories do – insofar as the analysis that they are morally problematic and harmful for democracy is correct. But what would be the right policy towards climate change conspiracy theories? The options include the following strategies all of which have some merits but also drawbacks.

One option is that climate change conspiracy theories are left to the "marketplace of ideas" and state actors do not actively intervene in the debate. According to this proposal, public discussion will eventually bring out the problems of the theories – if they have any. It is important that climate change conspiracy theorists are free to defend and introduce their theories, as that will sharpen the "official truths" and make epistemic authorities present their data in a clearer way. The defenders of the passive approach also remind us that although conspiracy theories can be dangerous so can conspiracies, and one way to prevent conspiracies is to allow conspiracy theorists to act freely, without state intervention (Clarke 2002; Pigden 2007). This option has defenders, but a problem is

that total passivity in the face of harmful climate change conspiracy theories does not sound appropriate. Surely *someone* should do *something*.

Perhaps the dissemination of climate change conspiracy theories should be prohibited by the law? States should act. This suggestion may sound extreme, but it has its supporters. According to them, climate denialist rumors and fake news that cause serious harm and aim to produce doubt are not protected by the freedom of speech. Climate change conspiracy theories belong to this category. Proponents of the proscription line distinguish between critics who act in good faith and believe what they say, and opponents who are insincere and spread false claims intentionally. Only the latter should be silenced by laws (Lavik 2016). In the time of fake news, the idea of using prohibitions or taxes to govern public debates has not been uncommon (Douglas & Sutton 2015, 216; Wood and Ravel 2018; Cibik and Hardos 2020). However, the problem with the hard line seems rather obvious. Although it is unlikely that a climate change conspiracy theory is true, it is still possible that it is (Räikkä 2020). Permitting the dissemination of conspiracy theories is risky, but so is their eradication by legislation and force. In democratic countries, freedom of speech can be restrained of course, but it is unclear whether claims that challenge climate scientists' findings should be on the proscription list. When it comes to policy recommendations that scientists offer, there is no question that they should be open to public evaluation, including evaluation which is not of the best quality.

If prohibition is too harsh an option, how about using secret means and adding "cognitive diversity" to the groups that create and disseminate climate change conspiracy theories? This strategy would not restrict people's freedom of speech. The option is "cognitive infiltration of extremist groups, whereby government agents or their allies (acting virtually or in real space, and either openly or anonymously) will undermine the crippled epistemology of believers by planting doubts about the theories and stylized facts that circulate within such groups, thereby introducing beneficial cognitive diversity" (Sunstein and Vermeule 2009, 219). The idea of using secret agents in the fight against harmful and false conspiracy theories has gathered a lot of attention. Not surprisingly, the comments have not always been favorable. Critics have pointed out that it would be very risky and ironic to make a conspiracy against citizens to lessen the popularity of conspiracy theories. Such conspiracy would warrant the claim that there *are* conspiracies operated by the state (Hagen 2010, 154; Hagen 2011, 17).

A liberalist option is to educate people so that they can critically and rationally select the information sources they use and avoid the usual logical mistakes and fallacies of reasoning (such as confirmation bias). When people's general knowledge and media literacy is in an appropriate level and their reasoning skills are well developed, they have good tools to notice the most obvious errors in conspiracy theories (Douglas et al 2016). Sometimes the evaluation of conspiracy theories requires expertise – this is also true of many climate change conspiracy theories – and in these cases it is important to educate people to identify real experts. This may be difficult, but not impossible. However, a challenge for the liberalist strategy is the fact that it assumes that the supporters of the climate change conspiracy theories always or typically *believe* in those theories. The assumption can be contested, even when we leave out the lobbyists of the oil industry and others who have strategic interest to support climate change conspiracy theories. By supporting a conspiracy theory, a person can manifest her disappointment in the social elites and the official system, although she may not have any firm view of the plausibility of the theory she supports (Ichino and Räikkä 2021). This raises the question how to fight against such "supporting attitudes". If a person does not really believe that a climate change conspiracy theory she supports is *true*, it is pointless to try to correct her *beliefs* about it.

All kinds of people can support conspiracy theories. But social psychological studies have shown that conspiratorial thinking is especially correlated with certain things, including radicalism, unemployment, low education, and superstition (Cassam 2019, 52; Douglas & Sutton 2015, 104). One option is to try to eradicate these things to mitigate the spread of climate change (and other) conspiracy theories. Radicalism and other phenomena on the list are usually considered undesirable in any case, so why not eradicate them? Of course, the correlation does not say much about causal relations: does radicalism cause conspiracism or vice versa or do they just share a common background, say, general distrust toward social institutions and epistemic authorities? Be that as it may, there is a problem in the suggestion that we should first study what the correlates of conspiratorial thinking are and then try to eradicate those correlates. The problem is that that it is very difficult, in real life, to eliminate radicalism or unemployment, for instance. Were these policies easy, they would have been implemented already.

Let us consider one more option. According to the *trust strategy* states and other actors should do their best to increase trust in social institutions in general and epistemic authorities in particular (Harambam 2021). Climate change conspiracy theories arise partly from distrust; therefore, it is important to try to get rid of it. Policies that advance equality and social justice in society tend to

advance trust as well. Fight against climate change conspiracy theories may require economic resources and redistribution. A media environment which is pluralistic and allows many voices increases trust. The state should secure that truly diverse views can be published and get publicity in civic debate, so that there would be less need for specific conspiracy theory forums. The state can certainly enhance diversity, say, by supporting newspapers and other media that cannot survive without financial backing (Räikkä and Ritola 2020). Scientific practices should be open and inclusive, encouraging people to citizen science, and all the research data should be publicly available when possible (Lewandowsky and Bishop 2016).

The trust strategy sounds potentially effective, although it is likely that many means should be used at the same time concurrently. Increasing trust is probably one of the policies that would be advisable to carry out. But relying merely on the trust strategy would not help much: many supporters of the climate change conspiracy theories have a good economic position and some of them are politically powerful (Powell 2011). Getting them on board demands something else than economic resources and showing of goodwill.

Conclusions

Climate change conspiracy theories are conspiracy theories that typically challenge climate scientists' findings about global warming or the policy recommendations that are based on those findings. Not all climate denialist claims are conspiracy theories, for denialists need not refer to an alleged conspiracy in their criticism. But when they mention a conspiracy or conspiracies, their explanation is a conspiracy theory rather than an ordinary conspiracy explanation that refer to an actual, historical conspiracy. For instance, Climategate theory is a conspiracy theory, as it gives low-quality evidence for the existence of scientists' alleged conspiracy and provides an alternative to the "official view", explaining climate change talk as a scam.

Climate change conspiracy theories are ethically problematic. There is evidence that an exposure to those theories tends to reduce a person's commitment to cut down her carbon footprint. On social level, conspiracy theories that are widely distributed tend to *delegitimize* democratic procedures. False claims are presented in public debates, as if it were indifferent whether the views are true or false. Delegitimation includes a tacit statement that democratic institutions are not valuable (Muirhead and Rosenblum 2019.) Furthermore, conspiracy theories undermine trust toward epistemic authorities and social institutions generally. This raises the question who is responsible

for their spread and popularity. Perhaps we all are, as we all can do something to further equality, justice, and a sense of belonging that increases trust in society. Trust, in turn, would lessen the popularity of the theories. In any case, the responsibility is collective. Both (1) ordinary believers and disseminators and (2) developers and publishers of conspiracy theories are responsible. They share responsibility, even if they may not be responsible as a group but only as individuals.

The question whether believing in climate change conspiracy theories is wrong, is difficult. But two points are important to notice. First, the conclusion that dissemination of climate change conspiracy theories is morally problematic does not imply that we should condemn people's beliefs. Their behavior is more important than their beliefs. Second, people can control their belief formation processes, at least partly. Although believing in a climate change conspiracy theory need not be morally wrong, it is likely that a person who believes in such theory has done something wrong in the process that preceded the belief.

In recent years, there has been a lot of discussion on how we should deal with conspiracy theories, and climate change conspiracy theories have received a special attention in the debate. Total passivity does not seem an appropriate reaction, given that the theories are harmful when all the pros and cons are considered. Possibly, the best strategy to mitigate climate change conspiracy theories is to increase trust in social institutions in general and epistemic authorities in particular. This said, it is important to keep in mind that it is likely that many policies should be used at the same time, side by side.

It is sometimes argued that conspiracy theories "are too toxic" to be discussed publicly in forums of mainstream media (Basham 2018, 73). This is an interesting claim but, historically speaking, the ordinary institutions of public information have been willing to publish news that must have seemed very "toxic". Mainstream media, investigative journalists and historians have written about political corruption, targeted killings, questionable military programs and reported on outrageous frauds and insolent deceptions committed by people in high and honorable positions. Nothing seems to be too "toxic" (Räikkä and Ritola 2020). It is true, however, that in some cases conspiracies get publicity surprisingly slowly even if they are revealed. For instance, the NSA spying system (the Echelon system) was originally leaked out already in 1972 but got more publicity only after Edward Snowden's revelations in 2013 (Jansen and Martin 2015, 665). Whether the delay was due to the "toxicity" of the issue is unclear. In any case, climate change conspiracy theories have certainly not been too toxic for the media actors. On the contrary, their dissemination and analysis have been so

wide that it raises the question whether the overwhelming discussion has actually helped the denialist program. It is not impossible that it has.

Climate change conspiracy theories are very unlikely to be justified. This follows from the defining features of 'conspiracy theory'. However, even if those theories are implausible, worries that make people create and disseminate such theories can be real. Politicians contribute to debates that concern difficult and often technical issues of climate science, as the issues have immediate social, economic, and political impact at the scale of humanity. But politicians' statements make people ask whether climate science is a true science at all. And why there is so little debate about the distribution of costs that follow if the policy recommendations of the climate scientists are accepted? The silence around this issue makes people wonder not only whether justice will be done in this context but also whether relevant people are interested that it will be done. Climate science raises emotions. Therefore, the conspiracy theories that surround it will stay here for some time.

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References

Adams, R.M. (1985). Involuntary Sins. *Philosophical Review*, 94, 3-31.

Basham, L. (2001). Living with the Conspiracy. *The Philosophical Forum*, 32, 265-280.

Basham, Lee (2018). Joining the Conspiracy. *Argumenta*, 3, 171-290.

Cassam, Q. (2016). Vice Epistemology. *The Monist*, 99 (2016), 169-180.

Cassam, Quassim (2019). *Conspiracy Theories*. Cambridge: Polity.

Cibík, M. & Hardos, P. (2020). Conspiracy Theories and Reasonable Pluralism. *European Journal of Political Theory*, 19, 1-21.

Clarke, S. (2002). “Conspiracy Theories and Conspiracy Theorizing,” *Philosophy of the Social Sciences*, 32, 131-150.

Clifford, W. (1996). The Ethics of Belief. In Michael Peterson et al Eds.): *Philosophy of Religion: Selected Readings*. (pp. 66-71) New York: Oxford University Press.

Coady, D. (2003). Conspiracy Theories and Official Stories. *International Journal of Applied Philosophy*, 17, 197-209.

Dentith, M. (2016). When Inferring to a Conspiracy Might Be the Best Explanation. *Social Epistemology*, 30, 572-591

Dentith, M. (2019). Conspiracy Theories on the Basis of Evidence. *Synthese*, 196, 2243-2261.

Douglas, K. & Sutton, R. (2011). Does It Take One to Know? Endorsement of Conspiracy Theories Is Influenced by Personal Willingness to Conspire. *British Journal of Social Psychology*, 50, 544-552.

Douglas, K. & Sutton, R. (2015). Climate Change: Why the Conspiracy Theories Are Dangerous. *Bulletin of the Atomic Scientists*, 71, 98-106.

Douglas, K., Sutton, R., Callan, M.J., Dawtry, R.J. & Harvey, A.J. (2016). Someone Is Pulling the Strings: Hypersensitive Agency Detection and Belief in Conspiracy Theories. *Thinking and Reasoning*, 22, 57-77.

Goodell, J. (2010). *How to Cool the Planet: Geoengineering and the Audacious Quest to Fix Earth’s Climate*. New York: Harcourt.

Hagen, K. (2010). Is Infiltration of ’Extremist Groups’ Justified? *International Journal of Applied Philosophy*, 24, 153–168.

Hagen, K. (2011). Conspiracy Theories and Stylized Facts. *The Journal for Peace and Justice Studies*, 21, 3–22.

Hamilton, C. (2013). *Earthmasters: The Dawn of the Age of Climate Engineering*. New Haven: Yale University Press.

Hansson, S.O. (2018). Dealing with Climate Science Denialism: Experiences from Confrontations with Other Forms of Pseudoscience. *Climate Policy*, 18, 1094-1102.

Harambam, J. (2021). Against Modernist Illusions: Why We Need More Democratic and Constructivist Alternatives to Debunking Conspiracy Theories. *Journal for Cultural Research*, 25, 104-122.

Hornsey, M., Harris, E., Fielding K. (2018). Relationship among Conspiratorial Beliefs, Conservatism and Climate Scepticism Across Nations. *Nature Climate Change*, 8, 614-620.

Ichino, A. & Räikkä, J. (2021). Non-Doxastic Conspiracy Theories. *Argumenta*, 7, 1-18.

Jansen, S.C. & Martin, B. (2015). The Streisand Effect and Censorship Backfire. *International Journal of Communication*, 9, 656-671.

Jolley, D. & Douglas, K. (2014). The Social Consequences of Conspiracism: Exposure to Conspiracy Theories Decreases Intentions to Engage in Politics and to Reduce One's Carbon Footprint. *British Journal of Psychology* 105, 35-56.

Jylhä, Kirsti, Cantal C., Akrami, N. & Milfont, T.L. (2016). "Denial of Anthropogenic Climate Change: Social Dominance Orientation Helps Explain the Conservative Male Effect in Brazil and Sweden", *Personality and Individual Differences*, 98, 184-187.

Jylhä, K. & Hellmer K. (2020). Right-Wing Populism and Climate Change Denial: The Roles of Exclusionary and Anti-Egalitarian Preferences, Conservative Ideology, and Antiestablishment Attitudes. *Analyses of Social Issues and Public Policy*, 20, 315-335.

Keeley, B. (1999). Of Conspiracy Theories. *Journal of Philosophy*, 96, 109-126.

Kennedy, K. (2016). The 10 Most Popular Climate Change Conspiracy Theories. *Inverse*, December 13.

Lahsen, M. (2013). Climategate: The Role of the Social Sciences. *Climate Change*,119, 547-558.

Lavik, T. (2016). Climate Change Denial, Freedom of Speech and Global Justice. *Etik I Praksis: Nordic Journal of Applied Ethics*, 2/2016, 75-90.

Lewandowsky, S., Oberauer. K., Gignac. G. (2013). "NASA Faked the Moon Landing – Therefore, (Climate) Science Is a Hoax: An Anatomy of the Motivated Rejection of Science", *Psychological Science*, 24, 622-633.

Lewandowsky, S., Gignac, G., Oberauer, K. (2015). The Robust Relationship Between Conspiracism and Denial of (Climate) Science. *Psychological Science*, 26, 667—670.

Lewandowsky, S. & Bishop, D. (2016). Research Integrity: Don't Let Transparency Damage Science. *Nature*, 529, 459-461.

Levy, N. (2019). Due Deference to Denialism: Explaining Ordinary People's Rejection of Established Scientific Findings. *Synthese*, 196, 313-327.

Le Quéré, C. et al (2020). Temporary Reduction in Daily Global CO2 Emissions During the COVID-19 Forced Confinement. *Nature Climate Change*, 10, 647-653.

Martin, B. (2010). How to Attack a Scientific Theory and Get Away with It (Usually): The Attempt to Destroy an Origin-of-AIDS Hypothesis. *Science and Culture* 19, 215-239.

May, L. (1992). *Sharing Responsibility*. Chicago: University of Chicago Press.

Merlan, A. (2019). On the Dark and Dangerous Underbelly of Climate Conspiracy Theories. *Literary Hub*, September 17.

Muirhead, R. & Rosenblum, N.L. (2019). *A Lot of People Are Saying: The New Conspiracism and the Assault on Democracy*. Princeton: Princeton University Press.

Napolitano, M.G. & Reuter, K. (2021). What Is a Conspiracy Theory? *Erkenntnis* (online September 24).

Oreskes, N. & Conway E.M. (2010). *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. New York: Bloomsbury Press.

Pigden, C. (1995). Popper Revisited, or What is Wrong With Conspiracy Theories? *Philosophy of the Social Sciences*, 25, 3-34.

Pigden, C. (2007). Conspiracy Theories and the Conventional Wisdom. *Episteme*, 4, 219-232.

Powell, J.L. (2011). *The Inquisition of Climate Science*. New York: Columbia University Press.

Qin, Y. et al (2021). Carbon Loss from Forest Degradation Exceeds that from Deforestation in the Brazilian Amazon. *Nature Climate Change*, 11, 442-448.

Räikkä. J. (2009). On Political Conspiracy Theories, *The Journal of Political Philosophy*, 17, 185-201.

Räikkä, J. (2014). *Social Justice in Practice*. Heidelberg: Springer.

Räikkä, J. (2020). Conspiracy Theories and Collective Responsibility. In S. Bazargan-Forward & D. Tollefsen (Eds.): *The Routledge Handbook on Collective Responsibility*. (pp. 472-485) New York: Routledge.

Räikkä, J. & Basham, L. (2018). Conspiracy Theory Phobia. In J.E. Uscinski (Ed.), *Conspiracy Theories and People Who Believe Them*. (pp. 178-186). New York: Oxford University Press.

Räikkä, J. & Ritola, J. (2020). Philosophy and Conspiracy Theories. In P. Knight & M. Butter (Eds.): *Routledge Handbook of Conspiracy Theories*. London: Routledge, 56-66.

Schulman, J. (2018). Every Insane Thing Donald Trump Has Said About Global Warming. *Mother Jones*, December 12.

Sunstein, C.R. & Vermuele, A. (2009). Conspiracy Theories: Causes and Cures. *The Journal of Political Philosophy*, 17, 202-227.

Tingley, D. & Wagner, G. (2017). "Solar Geoengineering and the Chemtrails Conspiracy on Social Media. Palgrave Communications, 3, 1-7.

Uscinski, J., Lewandowsky, S., Douglas, K. (2017). Climate Change Conspiracy Theories. In M.C. Nisbet et al (Eds.), The Oxford Encyclopedia of Climate Change Communication (pp. 1-37). Oxford: Oxford University Press.

Uscinski, J. & Olivella, S. (2017). The Conditional Effect of Conspiracy Thinking on Attitudes Toward Climate Change. Research and Politics, October-December, 1-7.

Wood, A.K. & Ravel, A.M. (2018). Fool Me Once: Regulating "Fake News" and Other Online Advertising. *Southern California Law Review*, 91, 1227-1287.