

Research Article

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What Do Science and Historical Denialists Deny – If Any – When Addressing Certainties in Wittgenstein’s Sense?

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Abstract: In this article, I show that, when denialists attempt to deny a certainty in Wittgenstein’s sense, they do not even deny anything at all because they are articulating mere nonsense. To clarify this point, I start by providing a brief introduction to Wittgenstein’s conception of “certainty,” paying particular attention not only to the distinction between seeming and genuine doubt, but also to the nonsense generated when violating a certainty. Then, I analyze why we cannot even understand denialists when they try to deny certainties about the existence of the Holocaust and the sphericity of Earth. To this end, I consider the consequences of delegitimizing research procedures, regarding the case of doubt as the normal case, and formulating the denialist doubt through words whose use is incompatible with such doubt. Subsequently, I describe the main tactics used by denialists to try to substitute scientific certainties with alternative ones. Lastly, although denialism concerning certainties cannot even be refuted because it is nonsense, I propose to make deniers as well as the general public aware of such nonsense by asking questions that revolve around incongruences such as those I have previously noted concerning Holocaust denialism and the flat-Earth “theory.”

Keywords: Wittgenstein, certainty, hinge, denialism, Holocaust, flat-Earth

1 Introduction

Scepticism aims at preventing dogmatism by casting doubt on statements that are ordinarily regarded as trivially true, as a result of which it has traditionally constituted one of the driving forces of philosophical reflection. Yet scepticism also plays a key role in the scientific process, where findings must be tested by other researchers in order to discern – by systematically casting doubt on such findings – whether they are rejected or finally reach scientific consensus.¹ There is an overwhelming consensus on the evidence that supports a number of scientific claims: for instance, the existence of the COVID-19 pandemic, the link between HIV and AIDS, the health risks of smoking, the efficacy of vaccines, the theory of evolution, or the human impact on global warming, to name but a few.² However, the consensus on these claims has been rejected by commentators who use rhetorical tactics “to give the appearance of argument or legitimate debate, when in actuality there is none.”³ These commentators have been called “denialists,”⁴ but they prefer to be considered as

1 Merton, “The Normative Structure of Science;” Merton, “Science and Technology in a Democratic Order.”

2 Diethelm and McKee, “Denialism.”

3 Hoofnagle and Hoofnagle, “What is Denialism?,” 1.

4 Oreskes and Conway, *Merchants of Doubt*.

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“sceptics” – thus attempting to resist stigmatization, as well as emphasizing their alleged positive epistemic role as a necessary counterbalance to what they regard as a dogmatic scientific community.⁵ This position has been described as a “special interest” scepticism which may be business, political, or religious in nature.⁶ In order to prevent this rejection of scientific consensus based on ideologically driven reasoning from being confused with scientific scepticism, Torcello coined the term “pseudoskepticism.” According to Torcello, pseudosceptics ignore how rigorous methodological scepticism informs scientific consensus, despite which they attempt to appropriate the epistemological authority of science while critiquing “scientific consensus as uncritical, or fraudulent” and regarding “mainstream scientists as credulous dogmatists.”⁷ As a result, denialism – the term I will use here instead of “pseudoscepticism” – has given rise to problems as serious as the loss of hundreds of thousands of lives due to AIDS denialism,⁸ the influence of climate change denialism on voting patterns and socioeconomic outcomes,⁹ and the impact of COVID-19 denialism on health decisions such as vaccine acceptance,¹⁰ to which it should be added the extent to which denialism has contributed to many people not only becoming suspicious of science, but also misunderstanding how it actually works.¹¹

Keeping in mind that denialists often address certainties in Wittgenstein’s sense, in this article, I take as a reference Ludwig Wittgenstein’s *On Certainty* to show that when denialists attempt to deny a certainty, they do not even deny anything at all because they are articulating mere nonsense.¹² To clarify this point, I start by providing a brief introduction to Wittgenstein’s conception of “certainty,” paying particular attention not only to the distinction between seeming and genuine doubt, but also to the nonsense generated when violating a certainty. Then, I analyze why we cannot even understand denialists when they try to deny certainties about the existence of the Holocaust and the sphericity of Earth. To this end, I consider the consequences of delegitimizing research procedures, regarding the case of doubt as the normal case, and formulating the denialist doubt through words whose use is incompatible with such doubt.¹³ As denialists cannot therefore provide compelling grounds to justify their position, I explain how they use persuasion in Wittgenstein’s sense to try to substitute scientific certainties for alternative ones. Lastly, although denialism concerning certainties cannot even be refuted because it is nonsense, I propose how to make deniers, as well as the general public, aware of such nonsense by asking questions that revolve around incongruences such as those I have previously noted concerning Holocaust denialism and the flat-Earth “theory.”

2 Two Examples of the Consequences of Denialism Concerning Certainty

Whenever we act or speak under normal circumstances, we are implicitly showing that there are countless things about which we are absolutely certain, e.g., the meaning of the basic words we are using, the existence

⁵ Slater et al., “Denialism as Applied Skepticism.”

⁶ Sim, *Empires of Belief*, 10.

⁷ Torcello, “The Ethics of Belief,” 24.

⁸ Chigwedere and Essex, “AIDS Denialism.”

⁹ Abudu et al., “Does Political Propaganda Matter?”

¹⁰ MacDonald, “Fake News and Science Deniers Attacks.”

¹¹ Holbrook and Rannikmae, “The Meaning of Scientific Literacy.”

¹² In this article, I will focus on denialism concerning certainties, but, in saying this, I am not ruling out that denialism can also address consensuses that have not yet crystallized into certainties. By way of example, and concerning climate change denialism, the Intergovernmental Panel on Climate Change warned that “[h]uman influence on the climate system is clear” (IPCC, *Climate Change*, 13), yet it should be noted that, despite the overwhelming consensus of 97% among climate scientists that humans are causing global warming (see Cook et al., “Quantifying the Consensus”), 3% of them still disagree about this. Hence, there are different degrees and types of denialism (see Jaspal and Nerlich, “Social Representations of COVID-19 Sceptics”), to which I would add that not all those degrees and types must necessarily concern certainties.

¹³ Since denialists do not at all appear to doubt because they always emphatically deny, it may seem strange that I refer to a “denialist doubt.” Yet, as I will later explain, the first step in the denialist strategy consists in trying to downgrade a scientific certainty to a mere opinion which, as such, could be put into doubt.

of physical objects, or our being alive, among many others. From Wittgenstein's standpoint, certainty is "an ungrounded way of acting"¹⁴ insofar as we could give many seeming grounds to justify it, but none of them would be as certain as the very thing it was supposed to be a ground for.¹⁵ It is remarkable that Wittgenstein describes certainty as a direct taking hold of something – for example, his own towel – without thinking of grounds or verifications, i.e., "without having doubts."¹⁶ Indeed, the main feature of certainty is the logical exclusion of the possibility of mistake – and, by extension, of doubt.¹⁷ Yet, if we are to understand someone's "signs of doubt as such"¹⁸ – instead of considering them as mere "behaviour of doubt"¹⁹ or as seeming doubts that "don't make sense at all"²⁰ – some conditions must be necessarily fulfilled. Taking as a reference Wittgenstein's *On Certainty*, Coliva claims that genuine doubts presuppose certainty; must be based on grounds; can be raised only within some language-games; manifest themselves only in specific circumstances; and must have consequences in practice.²¹ Although certainty can seemingly be expressed through an empirical proposition – e.g., "There are physical objects" – it cannot be meaningfully negated because certainty never constitutes a move in our language-games. This is what Wittgenstein calls "nonsense" (OC §35), for these kinds of sentences "have no use within a language-game – that is, there is no recognized context or circumstances in which the expression functions."²² As certainties make the language-game – and, by extension, sense – possible, they "do not therefore make sense," as is the case with what violates or contravenes certainty.²³ As a result, if someone seemed to seriously call a certainty into doubt, we could regard such nonsense as madness.²⁴ Yet in this context Wittgenstein does not consider madness as a mental disorder, but as a way of making reference to the grammatical void that would then be opened up between the concerned individual and all of us.²⁵ For, in such a case, we "would not know what such a person would still allow to be counted as evidence and what not."²⁶ Indeed, our certainties make up a "world-picture" which constitutes "the inherited background against which I distinguish between true and false."²⁷ This means that, if someone calls a certainty – and, by extension, our whole world-picture – into doubt, there will be no judgment of which she can be certain.²⁸

14 Wittgenstein, *On Certainty*, §110.

15 Ibid., §307. The ungroundedness of certainty is "conceptual, not psychological or practical" (Moyal-Sharrock, *Understanding Wittgenstein's On Certainty*, 76). By way of example, I could seemingly justify my certainty of having a body by saying that I can see it or touch it, but none of these alleged grounds would be as certain as the mentioned certainty. For, if I could not see it or touch my body, I would not conclude that I had suddenly lost it, but that I was suffering from a perceptual disorder. Arguably, there may be room for the possibility of losing our bodies in the realm of science fiction; but the language-games characteristic of our human form of life do not admit such a possibility. According to Wittgenstein, a "language-game" constitutes "the whole, consisting of language and the actions into which it is woven" (Wittgenstein, *Philosophical Investigations*, §7).

16 Wittgenstein, *On Certainty*, §510. The indubitability of our certainties "does not result from our having confirmed them, but stems from their not being susceptible of confirmation or falsification at all" (Moyal-Sharrock, *Understanding Wittgenstein's On Certainty*, 74).

17 Wittgenstein, *On Certainty*, §194. Despite appearances, it is not traditional logic that is excluded here, but a logic that emanates from our usual linguistic practices or language-games. See Ariso, "Negative Certainty."

18 Wittgenstein, *On Certainty*, §154.

19 Ibid., §255.

20 Ibid., §310.

21 Coliva, *Moore and Wittgenstein*.

22 Moyal-Sharrock, *Understanding Wittgenstein's On Certainty*, 94. Certainties are ineffable just because there is no room for them in our language-games.

23 Ibid., 90–4.

24 Wittgenstein, *On Certainty*, §674.

25 Ariso, "Unbegründeter Glaube bei Wittgenstein und Ortega y Gasset."

26 Wittgenstein, *On Certainty*, §231.

27 Ibid., §94.

28 Ibid., §490, 494. Since certainties are neither acquired (Ariso, "Can Certainties be Acquired at Will?") nor lost (Ariso, "Wittgenstein and the Possibility of Inexplicably Losing Certainties.") at will, none of these cases is the outcome of a decision. The acquisition as well as the loss of a certainty is therefore something that merely happens to the individual, so that sometimes there may be unexpected changes in his world-picture (Ariso, "Some Variations of the Certainty of One's Own Death;" Ariso, "Is there an Internal Link between Seeing a Human and Seeing One to Whom Moral Consideration is Due?").

As could not be otherwise, scientists must also take as a basis a world-picture – made up of certainties – or background that allows them to distinguish between true and false. Yet it does not follow from this that the scientific method is designed to collect certainties. This has been systematically ignored by denialists: for they usually demand from scientists absolute certainty, which constitutes an obsolete conception of science.²⁹ Indeed, usually, scientists are extremely sensitive to doubts and caveats, “outlining what they don’t know before proceeding to what they do.”³⁰ Hence, science advances by carefully gathering evidence, so that scientific consensus concerning a new finding is by no means guaranteed. There are occasions where scientific consensus is so overwhelming that it ends up giving rise to a certainty.³¹ But this certainty is not always shared by the entire population: in fact, such certainty may be denied by denialists. Two clear examples of this are the certainties about the existence of the Holocaust as well as the sphericity of the Earth. There are two reasons as to why I have chosen these examples. On the one hand, I will next analyze both of them in order to show that the consequences of a case of historical denialism and another of science denialism turn out to be very similar when they are aimed at violating a certainty. On the other hand, both analyses should contribute to a better understanding of the characteristics of the grammatical gap opened up by the denialist due to the nonsense generated when denying certainties that are fully established among the research community.

2.1 Nonsense of Holocaust Denialism

After the Second World War, the first author who denied the existence of the Holocaust was Bardèche, whose arguments were largely adopted by subsequent denialists. Specifically, Bardèche held that witnesses were unreliable, that atrocities were carried out by deportees, that Nazi camps were in disarray after the first German defeats, that prisoners died because of their weakness and the epidemics, and that no one was gassed in Auschwitz.³² Denialists have also tried to offer explanations for the alleged invention of the Holocaust: thus, they have claimed that it was propaganda to conceal the atrocities of the Allies, defame Germany, and justify not only that the United States went to war against Germany, but also that a Jewish homeland was created in Palestine.³³ However, the evidence is overwhelmingly in favor of the existence of the Holocaust, to the extent that “the Holocaust is a uniquely well-documented historical event.”³⁴ Proof of this is that the American Historical Association stated that “[n]o serious historian questions that the Holocaust took place.”³⁵ From this statement, it follows that the possibility of doubt regarding the existence of the Holocaust is excluded among historians. It is true that the statement refers to “serious” historians, so that it admits that some other historians call the existence of the Holocaust into question; still, the proofs and arguments provided by such “historians” are manipulated with the aim of supporting the denialist cause. Hence, strictly speaking, there can be no doubt about the existence of the Holocaust, so that it constitutes a historical certainty. But this does not mean that such certainty is shared by the entire population. By way of example, nearly two-thirds of American young adults remain unaware that 6 million Jews were assassinated during the Holocaust.³⁶ And, as if this

²⁹ Peat, *From Certainty to Uncertainty*.

³⁰ Oreskes and Conway, “Defeating the Merchants of Doubt,” 687.

³¹ If we have evidence, we have grounds; and if we have grounds, we have knowledge, not certainty (see Wittgenstein, *On Certainty*, §243). Therefore, I do not mean that scientists hold certainties when they have overwhelming evidence in their favor. Far from this, I think that many knowledge-statements – such as “I know that $2 + 2 = 4$ ” or “I know that the Earth is spherical” – which were based on grounds – of the kind of “The teacher told me so” or “This is supported by evidence” – end up being assimilated as certainties when they are shown or enacted as ungrounded ways of acting. See Moyal-Sharrock, *Understanding Wittgenstein’s On Certainty*; and Ariso, “Should Business Organizations Be Blind to Anomalies?;” Ariso, “They Just Say so! Second Language Teaching and the Acquisition of Certainties.”

³² Bardèche, *Nuremberg ou la terre promise*.

³³ Lipstadt, *Denying the Holocaust*.

³⁴ István, *Essays on Hitler’s Europe*, 67.

³⁵ American Historical Association, “AHA Statement on Holocaust Denial.”

³⁶ The Guardian, “Nearly Two-Thirds of US Young Adults.”

were not enough, reading denial propaganda can lower people's Holocaust belief scores despite their former Holocaust awareness.³⁷

In view of the above, it seems clear that Holocaust denialists should be replied to by providing one evidence after the other; yet, as soon as elements of evidence started being listed, deniers would consider them as doubts that, as such, and given the particular importance of the subject, should still be clarified. Stated otherwise, denialists will harness each specific evidence to regard it as a statement that can and must be empirically verified. Once this first essential step has been taken, deniers will denounce the lack of objectivity with which, according to them, the issue in question has been investigated. Nonetheless, the existence of the Holocaust constitutes a historical certainty. Hence, if someone attempted to provide grounds as to why the Holocaust did not exist – or even as to why it existed – no ground would turn out to be more certain than the existence of such tragedy: stated otherwise, no evidence would make it possible to conclude that the Holocaust did not happen. To this it should be added that there are at least three reasons as to why the denialist doubt would saw off the branch on which it is sitting, so that such doubt would not make sense. Let us see these reasons. First, Holocaust denialists call into doubt all historical research procedures through which irrefutable evidence in favor of the existence of the Holocaust has been found, thus also ruling out all those very procedures that they might subsequently require to find out what had actually happened instead of the Holocaust. As a result, it would not make sense to deny that the Holocaust had taken place, for, if the denialist position turned out to be consistent, it would force us to accept that we can know absolutely nothing about what happened – or what did not happen – to people involved in this tragedy. Second, if we ended up putting into doubt the certainty of the existence of the Holocaust, we could no longer discern what is true and false about this issue.³⁸ According to Kern, denialists are not aware of having regarded the case of doubt as the normal case, so that they lack the concept of a normal case in which, I would add, we can distinguish between true and false.³⁹ Yet the lack of this “normal case” also prevents the denialist doubt from fulfilling the conditions of genuine doubt explained above. Third, Holocaust denialists create a scenario in which the basic words used to express their doubt become meaningless, so that such doubt cannot be meaningfully stated.⁴⁰ Thus, there are several certainties associated with the use of the term “Holocaust,” e.g., it is an event that actually happened. Therefore, if someone wished to use the term “Holocaust” in a sentence with the aim of denying its existence, such sentence would be, despite appearances, as incomprehensible as denying that the Second World War happened. Neither can we understand how the denialist was employing verbs like “to doubt” or “to deny,” for they do not make sense when they are used to doubt or deny certainties. Similarly, it is not clear at all what terms like “killing” or “gas chamber” mean when the denialist decouples them from Nazi concentration camps. Nor can we know what denialists mean when they use terms like “historical” or “history,” for their manipulation of historical events has nothing to do with what we consider as “historical research” or simply “history.” As a result, Holocaust denialist statements are nonsense, so that, strictly speaking, we cannot discuss or analyze them because they are unintelligible.

2.2 Nonsense of the Flat-Earth “Theory”

In ancient Egypt, Mesopotamia, China, and Greece – until Pythagoras – it was believed that the Earth is flat. Once it was clear that the Earth is spherical, there were many spherical-Earth denialists, but the first one in the modern era was Rowbotham, who claimed that the Earth is a flat disc centered at the North Pole and

³⁷ Yelland and Stone, “Belief in the Holocaust.”

³⁸ As Wittgenstein pointed out, we cannot depart from some judgments “without toppling all other judgments with it” (Wittgenstein, *On Certainty*, §419). Likewise, he wonders why we should trust any evidence if we did not trust elemental evidence (*ibid.*, §672).

³⁹ Kern, “Understanding Scepticism.”

⁴⁰ Kusch, “Analysing Holocaust Survivor Testimony.”

surrounded by a wall of ice.⁴¹ Subsequently, many denialists – called flat-earthers – benefited from the rise of social networks and conspiracy theories to keep denying that the Earth is spherical. Broadly speaking, there are three rhetorical strategies used by flat-earthers. Thus, one faction takes as a starting point that knowledge can only arise from a close reading of the Bible, which leads it to conclude that science – or the so-called “unholy trinity”: evolution, the Big Bang, and also the spherical Earth – has been used by atheists to suppress religion and make Christians believe that God is an abstract and intangible idea. Another faction claims there is a sinister and corrupt elite that suppresses knowledge to remain in power by hiding the truth about many deceptions, as a result of which such elite lies about what the world is because if it can make people believe that the Earth is spherical, say flat-earthers, then it can make people believe anything. Lastly, a third faction holds that real-world knowledge should not arise from authority, tradition, or dogma, but from personal experience and observation. Hence, these flat-earthers require to verify for themselves whether the Earth is spherical or flat: and since their observations and experiences make it appear as if we all lived on a flat surface, they reverse the burden of proof by asking for evidence that proves their experiences wrong.⁴² However, the sphericity of the Earth has long become a basic certainty within the scientific world-picture, for absolutely all evidence speaks in favor of such certainty, while absolutely no evidence speaks against it. After all, expertise resulting from astronauts’ testimonies, satellite information, air navigation, building engineering, meteorology, oceanography, ballistics, and any evidence that may be brought up, clearly show that the Earth is spherical. Yet this scientific certainty has not been assimilated by the whole of society either: for instance, 2% of Americans believe that the Earth is flat, whereas 5% claim they used to believe that the Earth is spherical, but now have doubts.⁴³

Flat-earthers could have also been replied to by listing countless proofs of the sphericity of the Earth, but this would immediately seem to open a debate in which their reluctance might suffice to convince many people that the sphericity of the Earth is not a certainty, but a debatable issue that will not be brought to a successful close until the flat-earthier acknowledges having been convinced. Yet the burden of proof cannot fall on the scientist because it is a certainty that, as such, is not only ungrounded but also immune to mistake. As Wittgenstein pointed out, we should not understand someone who said that she might be wrong about this, for “[w]e should ask ‘What is it like to make such a mistake as that?’ – e.g., what’s it like to discover that it was a mistake?”⁴⁴ In this case, it should seemingly suffice that astronauts flying in a spacecraft acknowledged that they were seeing the Earth as a flat disc, yet this would not lead us to conclude that we were wrong. Even if the Earth appeared as a flat disc in the images shared by the astronauts, scientists would seek to explain this phenomenon, but they would not call the sphericity of the Earth into question: instead, this would be one of the unquestionable principles around which their research should revolve. To this it should be added that, as was the case with Holocaust denialism, the flat-earthier’s doubt saws off the branch on which it is sitting because of the following three reasons. First, if denialists call into question – and, by extension, rules out – each and every research procedure that reveals the sphericity of the Earth, there will be no available methods to find out what the true shape of the Earth is. Hence, denialists will have no access to any procedure that allows them to prove that the shape of the Earth is flat – or any other – so that it will make sense neither to deny that it is spherical, nor to affirm that it is flat. Second, and closely linked to the previous point, if the certainty about the sphericity of the Earth were called into question, we would not be able to distinguish between true and false concerning this issue. Since we could not trust any evidence about the shape of the Earth, flat-earthers could not even conclude that it is flat, although they already utter this without any qualms.⁴⁵ Third, the denialist doubt about the shape of the Earth is formulated with words that are

⁴¹ Rowbotham, *Zetetic Astronomy*.

⁴² Diaz-Ruiz and Nilsson, “Disinformation and Eco Chambers.”

⁴³ YouGov, “Most Flat-earthers Consider Themselves Very Religious.”

⁴⁴ Wittgenstein, *On Certainty*, §32.

⁴⁵ Flat-earthers utter this because they can distinguish between true and false but not in the same way we do it, for they do not share our world-picture. Indeed, flat-earthers still use a circular two-dimensional map of the Earth in which the Antarctica is represented as an ice wall around the disc, while the North Pole appears at the very center. As a result, and unlike us, they still believe it cannot be true that someone has travelled in a straight line from South America to Australia through Antarctica, for they

incompatible with such doubt. For example, the spherical shape is part of the concept “Earth” in much the same way as it forms part of such concept that the Earth has existed for a long time, or that there are oceans and continents on its surface. Regarding the notion of “shape,” when the shape of something has already been assimilated as certain – as is the case of the Earth’s – it is out of place to verify whether that is the true shape. Just as it is not necessary to check the shape of our eyeballs, the spherical shape of the Earth cannot currently be put into question without altering the meaning of the concept “Earth.”⁴⁶ The flat-Earther’s position constitutes therefore “a denial of the very practice in virtue of which her concepts do have content, and hence a denial of that which allows her to say anything at all.”⁴⁷ In other words, if someone persisted in claiming that the Earth is flat, we could not understand her whatever our efforts because she would be uttering nonsense, so that in this case we would have nothing to refute.

3 What Denialists Can Do to Disguise Nonsense: Persuasion

If the existence of the Holocaust as well as the sphericity of the Earth are currently certainties immune to doubt, it is not due to an alleged plot carried out by historians and scientists, but to the fact that in the present context it cannot even be imagined what kind of evidence might prove that there had been no Holocaust or that the Earth is flat.⁴⁸ Indeed, if it were possible to imagine which criteria should be fulfilled by such evidence, historians and scientists would have already taken all efforts to obtain this evidence. For, in such a case, neither the existence of the Holocaust nor the sphericity of the Earth would constitute deeply entrenched certainties in the research community, but key issues that remained to be elucidated. Arguably, denialists should also know those criteria, so that they would be expected to focus all their efforts on attempting to convince us that they had already gathered evidence that fits such criteria, for we should then be forced to acknowledge that they were right. Yet denialists, after years of social media activity, have provided nothing beyond irrelevant pseudo-scientific arguments as well as allusions to alleged conspiracies. Most importantly, I have explained why historians, scientists, and denialists should be heavily involved in searching for the criteria that should be fulfilled by the proofs that should seemingly prove the flatness of the Earth and the fact that the Holocaust did not happen. To this day, however, neither historians, nor scientists, nor denialists even seem to be missing the search for – or, at least, a discussion about – these criteria. For, if someone tried to find out such criteria, she could, at the very most, raise criteria that would only make sense if the existence of the Holocaust and the sphericity of the Earth were still issues to be empirically verified.

Therefore, when denialists attempt to deny the existence of the Holocaust and the sphericity of the Earth, a grammatical gap is opened up between them and historians, scientists and most of the population. Due to this grammatical gap, whose implications were outlined in the previous section, denialists can provide no compelling evidence to convince scientists, historians and most of the population that established certainties are false. Given this circumstance, denialists must resort to what Wittgenstein called “persuasion,” i.e., the transmission

take for granted that this travel can only be made through the North Pole. Thus, flat-earthers’ way of distinguishing between true and false has no influence on our way of doing it, so that they do not achieve their objective.

⁴⁶ As said above, for many centuries and in different civilizations around the world, it was believed that the Earth is flat. Nonetheless, and within the evolving process of the concept “Earth,” the spherical shape of the Earth is currently shown as a certainty in whatever we say and do.

⁴⁷ Kern, “Understanding Scepticism,” 213.

⁴⁸ Arguably, as shown by the example of the astronauts acknowledging that they were seeing the Earth as a flat disc, it seems extremely simple to imagine what kind of evidence might prove that the Earth is flat. But I have said that this would be considered an anomaly to be investigated without questioning that the Earth is spherical. Regarding Holocaust denialism, we might easily imagine that a witness or a document indicated that all prisoners had been hidden and carefully protected, so that none of them was tortured or killed. However, and unlike issues that remain to be elucidated, I cannot even imagine how such a statement might actually put into question the certainty of the existence of the Holocaust. Likewise, I cannot imagine how someone might try to deny the existence of the Second World War either.

of certainties, as was the case with the natives converted by missionaries,⁴⁹ and as might allegedly be the case with a hypothetical man who had been taught that the Earth has existed for only fifty years.⁵⁰ As these examples indicate, persuasion in Wittgenstein's sense is not aimed at someone – like a child – who “acquires a world-picture for the first time,”⁵¹ but at “people who already have different world-pictures, or rather, different certainties about the particular point on which they disagree.”⁵² The question that arises here is how denialists persuade. Keeping in mind that the main characteristic of certainty is the logical exclusion of the possibility of mistake – and thus also of doubt – denialists endeavor to include the possibility of mistake in the certainties they wish to deny, while they attempt to exclude the possibility of mistake concerning those aspects they want to be assimilated as certain. Next, I will expound some procedures used by denialists to achieve these aims. Such tactics have already been explained by other scholars, but exposing them in terms of certainties may help us to highlight some peculiarities.

A key factor in this persuasion process is the intense emotionalization generated by denialists.⁵³ In this case, emotions can be generated implicitly because, even though denialists expressed themselves calmly, they would be communicating something that, if it were – or rather, if it could be – true, would reveal a lie of utmost importance. By way of example, their catchphrase allegedly might have made it possible to save many lives, in addition to which it would denounce a culprit that could not go unpunished. Just because of the relevance that seems to be attached to the denialist slogan, it is also easy to trigger an intense emotionalization explicitly by using tones and wordings that powerfully attract everyone's attention. A clear example of this can be found in a message written by Kate Shemirani, a well-known conspiracy theorist and anti-vaccine activist who claimed in support of COVID-19 denialism: “Murder. Genocide. The NHS is the new Auschwitz.”⁵⁴ Although not all denialist statements are as radical as this one, it serves to illustrate at least four aspects of the denier's strategy. First, the fact that Shemirani's message is so categorical indicates weakness, for it is out of place that someone expresses himself emphatically about something that allegedly could not be called into doubt.⁵⁵ In comparison with the calm and respectful style of scientific discourse, denialist slogans are categorically formulated with the aim of leaving no room for any doubt, so that they are expected to be assimilated as certainties instead of as statements to be pondered. Second, Shemirani's message is extremely simple because it is intended to incite to action rather than to foster reflection.⁵⁶ After all, many denialist slogans are of the kind of “They use vaccines to kill you and your family,” which may give rise to high levels of stress that, in turn, may lead many people to drastically refuse vaccination and emphatically stand up against vaccine advocates. Third, the emotional polarization created against the opposing side is extreme. Thus, emotionalization contributes to create an “ontology” in which experts as well as guidelines of one's own side are presented and perceived as heroic and infallible, while those of the opposing side are considered as undoubtedly evil and perverse.⁵⁷ For instance, throughout the COVID-19 pandemic Joseph Mercola and Andrew Wakefield were seen as live-saving heroes by the vaccine-distrusting publics, who irrevocably condemned Anthony Fauci and Bill Gates as evil perpetrators. Likewise, the total refusal to get vaccinated and to wear masks is often assimilated as a certainty by the COVID-suspicious, for they regard all doubt about it as aberrant as well as characteristic of cowardly and misinformed people. Fourth, it should be noted that when

⁴⁹ Wittgenstein, *On Certainty*, §612.

⁵⁰ *Ibid.*, §262.

⁵¹ Persichetti, “Persuasion as Tool of Education,” 5.

⁵² Ariso, “The Teacher as Persuader,” 1624.

⁵³ Hughes et al., “Development of a Codebok.”

⁵⁴ Jaspal and Nerlich, “Social Representations of COVID-19 Sceptics,” 758.

⁵⁵ An example of this can be found in the inconsistency that Klemperer detected in many of Hitler's speeches. According to Klemperer, Hitler appeared to be all-powerful at times, but suddenly his voice and gestures expressed impotent rage, so that he clearly seemed to doubt what he was saying. After all, “[d]oes one unceasingly talk about a thousand years and enemies destroyed, if one is certain of these thousand years and this annihilation?” (Klemperer, *I Shall Bear Witness*, 31).

⁵⁶ Ariso, “What the Language of the Third Reich – as Described by Klemperer – Can Teach us about Certainties in Wittgenstein's Sense;” Ariso, “Is Critical Thinking Particularly Necessary when Using Augmented Reality in Knowledge Society?.” Indeed, the more detailed a denialist proclamation, the clearer and more numerous its incongruities.

⁵⁷ Rughinis and Flaherty, “The Social Bifurcation of Reality,” 16.

deniers attempt to cast doubt on a certainty, it will have already been widely disseminated by traditionally reliable sources, as a result of which it will be difficult that people become perplexed by such certainty. Hence, if denialists aim for people to end up perceiving this certainty as a bizarre idea, the former must react against it “with stunned bewilderment.”⁵⁸ Yet, if denialists cannot forget – or must make an effort – to react in such a way, this might mean they share the certainty that they are trying to deny. For certainties are shown spontaneously, thus without us having to remember them or making an effort of any kind.

In order to downgrade scientific certainty to a mere opinion, denialists must conduct an intense public sensitization campaign aimed at weakening a certainty derived from fact-based consensus.⁵⁹ From then on, some uninformed people may accept that a new doubt has arisen inasmuch as they contemplate the denialist position at the same level as the scientific one, so that both become equally exposed to the possibility of mistake. A clear example of an attempt to downgrade the scientific position could be found during the COVID-19 pandemic in the Brazilian mass media, which assumed that equal weight must be given to both sides of an event – even when one of them shows a denialist position toward science – so that the pursuit of neutrality in news coverage made it possible to spread false premises as if they were scientific, thus strengthening the denialist position.⁶⁰ Once the certainty has been downgraded to a mere opinion, the next step in the denialist strategy is to treat in a very different way the evidence presented by each side. Thus, denialists accept no evidence against their slogans, while they demand that scientists admit evidence against established certainties. Therefore, denialists implicitly reject the possibility of doubt and mistake concerning their position, so that they present themselves as infallible. To this end, denialist claims are often categorical – e.g., by saying “is not” instead of “might not be” – to the extent of leaving no room to the possibility of doubt.⁶¹ Meanwhile, deniers are sharply critical of the dogmatism they attribute to scientists, thus ignoring that scientific scepticism is fully “aware of its own fallibility and cautious in both rejecting unsupportable claims and accepting evidentially cogent and rationally sound conclusions.”⁶² In fact, denialists argue that science is not open to revision, for it resembles a traditional religion that demands faith from believers.⁶³ Conversely, denialists often base their arguments on religious dogmas just because they think that, in this way, such arguments become immunized against doubt.⁶⁴ In any case, denialists usually focus their criticisms on a specific power group – whether pharmaceutical companies, governments, or leading entrepreneurs – that have allegedly conspired to weave a perverse lie. This allows denialists to create an enemy – whose existence is assumed as certain – who not only makes it possible to trigger an emotionalization process to mobilize the population, but also contributes to promoting unified group consciousness against a huge danger whose existence is also assimilated as certain.

4 Conclusion

It has been denounced that research on ways to counteract denialism is still largely theoretical rather than empirical or centered on the efficiency of interventions.⁶⁵ However, I think theoretical – and specifically, philosophical – analysis of denialist claims is of particular relevance to decide what answer should be given to denialists and to the general population about this issue. My conclusion is that, paradoxical as it may seem, denialists do not deny anything at all when they attempt to deny certainties in Wittgenstein’s sense.⁶⁶ For,

⁵⁸ Ariso, “On Why ‘Trust’ Constitutes an Appropriate Synonym for ‘Certainty’ in Wittgenstein’s Sense,” 166.

⁵⁹ Godulla et al., “What is Denialism?”

⁶⁰ Malinverni and Brigagao, “COVID-19.”

⁶¹ Elsasser and Dunlap, “Leading Voices in the Denier Choir.”

⁶² Torcello, “The Ethics of Belief,” 22.

⁶³ Nerlich, “Climategate.”

⁶⁴ Björnberg et al., “Cornwallism.”

⁶⁵ Mendy et al., “Counteracting Climate Denial.”

⁶⁶ It should be highlighted that denialists are not satisfied with having a different or parallel world-picture, for they aim to deny certainties shared by historians and scientists – as well as by a large proportion of the population. It must therefore be analyzed how denialist claims affect this world-picture. And my conclusion is that their claims are nonsense within it.

despite appearances, the fact that their claims are nonsense entails that they are not expressing themselves through meaningful or understandable sentences. From this, it follows that it would be wrong to respond to the denialist's doubt, for this would involve attributing sense to it. Some scholars recommended that a response should be given to legitimate scepticism,⁶⁷ but I think we cannot reply to illegitimate scepticism – understood as scepticism whose queries put certainties into question. Yet, although denialism concerning certainties is nonsense, and therefore cannot even be refuted, we must help the denier – and the entire population – to become aware of such nonsense and its consequences.⁶⁸ However, it should be noted that openly tackling a denialist argument⁶⁹ as well as attempting to refute such argument once the denialist position has already “solidified”⁷⁰ may be self-defeating because it will likely provoke the denialist to take an even more radical stand. This is why I think the best way to show that the denialist doubt is nonsense would consist not in overwhelming him with arguments against his position, but in asking questions to make the denier aware that his claims saw off the branch on which they are sitting. These questions might revolve around incongruencies such as those I have noted concerning Holocaust denialism and the flat-Earth “theory.” Of course, I cannot in any way guarantee that denialists of certainties will renounce their claims due to such questions; yet these questions should break the vicious circle in which denialists treat scientific certainties as mere opinions, in addition to which the population at large might realize why the denialist doubt is incongruent.

Nonetheless, when anyone claims denialism, he will probably be seen as someone who tries to shut down a legitimate debate.⁷¹ Hence, in order to show the incongruencies of the denier's position, I think it is not necessary to explicitly qualify him as a denialist. And keeping in mind that his doubt will be regarded as nonsense, there are at least two reasons as to why his attempt to promote emotionalization should not be replied with even more emotionalization and radicalization.⁷² On the one hand, fostering emotionalization makes it harder to concentrate on the question raised and promotes impulsive reactions, which in turn may facilitate that the denialist redirects the conversation, thus finding loopholes to avoid awkward questions that might become him aware that his doubt is nonsense. On the other hand, bearing in mind that certainties are neither acquired nor lost at will, care must be taken to properly manage emotions because intense emotionalization might, to some extent, facilitate the acquisition and the loss of diverse certainties.⁷³ For the expansion of denialism concerning certainties reveals that the fact that its slogans lack sense does not prevent such slogans from being assumed by a significant proportion of the population.

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⁶⁷ Lewandowsky et al., “Science and the Public.”

⁶⁸ Hypochondriacal patients are encouraged to learn to live with their doubt – according to which minor symptoms can be signs of a severe illness although medical exams could not detect any disorder (Ariso, “Hypochondriacal Doubt.”): after all, any of us may be affected by a disease despite remaining undiagnosed. Conversely, it would not be reasonable to encourage a denialist – or the rest of the population – to live with a seeming doubt that puts into question fully established certainties such as the existence of the Holocaust or the sphericity of the Earth.

⁶⁹ Banas and Rains, “A Meta-Analysis of Research on Inoculation;” Pfau et al., “Inoculation and Mental Processing.”

⁷⁰ Nyhan and Reifler, “When Corrections Fail.”

⁷¹ Frank, “Disagreement or Denialism?.”

⁷² Soentgen and Bilandzic, “The Structure of Climate Skeptical Arguments.”

⁷³ Ariso, “Religious Certainty.”

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