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Manufacturing ignorance: think tanks, climate change and the animal-based diet

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ABSTRACT

Despite the evidence concerning the substantial greenhouse gases emissions resulting from animal-based food production, climate policies and institutions around the world have barely made an issue of this link until very recently. To better understand this lack of attention, we focus on the discursive role of think tanks as prominent but under researched actors attempting to shape public policy. This contribution examines whether European think tanks have discussed animal-based diets regarding climate change policies and mitigation actions. We conduct a frame analysis study of 110 European think tanks, encoding all their available online output in English related to the link between global heating and animal-based food. We conclude that European think tanks have contributed to a manufacturing of ignorance regarding the impact our dietary choices have on the climate. Ideological reasons related to economic, anthropocentric and patriarchal worldviews explain this role.

KEYWORDS Think tanks; climate change; animal-based diet; ideological denial; ignorance; speciesism

Introduction

In 2008, science historians Robert Proctor and Londa Shiebinger published Agnotology: the making and unmaking of ignorance, a collection of essays about the enduring issue of how information flows are manipulated to maintain ignorance to protect particular political interests. The current post-truth era, with its expanding fake news culture, is not a recent practice; deliberate disinformation and confusion have been commonplace throughout the history of humankind. The word agnotology, coined somewhat earlier than Proctor and Shiebinger’s book and deriving from the Greek agnōsis (not knowing), refers to what we do not know and why we do not know it. As the study of ignorance, agnotology reminds us that ignorance is often more than just an absence of knowledge; it is also the outcome of ideas and interests.

One of the most effective recent strategies of concealment, misinformation and confusion has occurred in the last two decades over climate change...
policy agendas. This new chapter of ignorance promotion has been led by a network of conservative United States (US) organizations, including think tanks, which have orchestrated a very successful worldwide climate change denial campaign (Dunlap and McCright 2015). This very important episode in our recent history has correspondingly attracted a lot of media and academic attention, producing a paradoxical wealth of knowledge regarding how these organizations have sown doubts about knowledge. However, in this contribution we show that the manufacturing of ignorance has gone far beyond climate denialists, skeptics or contrarians. Although the denial countermovement has been the main culprit for climate inaction in conservative US spheres, it would be too simplistic to consider the denial campaigners as solely to blame for the US incapacity to mitigate climate change. Climate inaction has been indeed a global trait across countries, as the IPCC (Intergovernmental Panel on Climate Change) has been reflecting through their regular assessment reports since 1990. Widespread climate inaction – even in regions like Europe, where the awareness and concern for global heating is high – needs further scrutiny, since it highlights the fact that disinformation and confusion is not only related to the so-called denial countermovement. Accordingly, to fully grasp the clues to climate inaction, research must include not only climate denialists but also all other generators of knowledge and discourse on climate change in general. We contribute to this task by studying climate denialists and non-denialists alike. Accordingly, we have studied discourses created by European think tanks, regardless of their climate stance, in relation to one of the major global heating drivers as reported by governmental and non-governmental organizations (NGOs): human diet, and more particularly the animal-rich Western diet.

The severely high levels of carbon emissions linked to animal-based food production have been known at least from the early 1990s (Rifkin 1992), while the report Livestock’s Long Shadow by FAO (Food and Agriculture Organization) made the topic widely known since 2006. However, it was not until 2019 that the IPCC explicitly, if timidly, called for a reduction in animal-based foods and an increase in plant-based options. In the intervening years, society’s main institutions – and that includes the most influential media and green NGOs (e.g., Laestadius et al. 2013, Graham and Abrahamse 2017, Kramcsak 2020, Kristiansen et al. 2021, Moreno and Almiron 2021) – have barely made any issue of the connection between climate change and the animal-based diet.

The role that think tanks play in concealing or discussing such information so relevant for climate change mitigation has not been studied previously. The prominent role of these organizations in constructing public narratives (Rodrigo-Alsina 2020) means that think tanks have become a necessary object of study in discourse research. For this reason, it is imperative not only to verify think tanks’ contribution in relation to the
discourse concerning the climate impact of diet, but also to discover the extent that organizations not considered climate denialists have contributed to this knowledge gap. Our aim is therefore to contribute critically to the knowledge on the discursive role think tanks have played in the dissemination of the link between diet and global warming – regardless of their stance on climate issues.

To this end, we conducted a framing analysis of output issued by the most influential European think tanks to examine their narratives regarding how the animal-based diet impacts the climate. Our hypothesis was that we would find not only a deficit of information but also a certain degree of manufacturing of ignorance by non-denialists and denialists alike. The results confirm this assumption to a varying extent.

This contribution proceeds as follows. First, we provide some theoretical background regarding (i) the link between human diet and the climate crisis, (ii) the think tank phenomenon, including the climate change denial campaign, and (iii) the critical discourse theory framing and grounding our research. Second, the methods section reviews the main details of our research into European think tanks. Finally, we provide a summary of the main findings and a section with discussion and conclusions.

**Theoretical framework**

**The animal-based food issue**

Since the Food and Agriculture Organization’s publication of *Livestock’s Long Shadow* in 2006 (Steinfeld *et al.* 2006), an increasing number of governmental and nongovernmental organizations and independent researchers have identified animal agriculture, and, by extension, animal-based diets, as a primary contributor to global heating (e.g., Scarborough *et al.* 2014, Springmann *et al.* 2016, Đekić and Tomašević 2017, UN News 2018, IPCC 2019). According to the research, most of the GHG emissions of the animal agriculture industry result from methane (released from enteric fermentation and animal manure), fossil fuels burned to produce mineral fertilizers (for feed production), and the consequences of deforestation (loss of carbon stored in forests and soils from land-use change and degradation). At the same time, over the last few decades, animal advocates, animal rights organizations, and many scholars and experts from a wide array of fields have revealed the cruelty and misery inflicted on nonhuman animals in industrial farms throughout the world, as well as the immorality of animal exploitation even on so-called ‘humane’ farms (e.g., Gruen 2011). Extensive and intensive animal exploitation have proven to be both ethically problematic and environmentally unsustainable.
The agrifood industry has attempted to neutralize the problematic environmental impact of other animal exploitation through the circulation of several counterarguments (Stanescu 2020). These include, for example, pointing out the importance of animal waste for healthy agricultural environments and asserting the possibility of sustainable animal farming by improving waste management and food technology. Yet the agroindustry has clearly shown that it is possible to grow food without using manure (Philpott 2013). Nevertheless, the argument for a clean exploitation of other animals implies blind faith in a future technological solution that may never arrive and leaves the ethical issue of exploiting sentient beings unresolved. Only in vitro meat seems to allow for a true abolition of animal agriculture as we know it today, although as yet it remains unclear as to whether this is really a sustainable or ethical option (Lynch and Pierrehumbert 2019). Likewise, shifts from one type of animal-based food to another (to poultry and aquaculture, for example) run into the same problem as moving from intensive to extensive systems – e.g. moving from industrial animal farming to a grazing system. Once analyzed in depth, it is fairly clear that they are not a solution, but rather part of the problem. They have more drawbacks than benefits, including, for example, their tremendous impact on deforestation and erosion (Henders et al. 2015, Thorstad et al. 2015).

An estimated 23% of total anthropogenic greenhouse gas emissions derive from agriculture, forestry and other land use, and the largest activity related to these emissions is the production of animal-based food (IPCC 2019). For this very reason, the link between human diet and the climate is a topic that deserves the serious attention of anyone interested in discussing ways of reducing emissions and mitigating global heating – as is the case of think tank organizations discussing climate change.

**Think tanks as disseminators of narratives**

Over the past two decades, the fields of political science, sociology and communication have increasingly researched think tanks. The term think tank refers to different types of organization that, despite their varied profiles, share a common main trait: the attempt to shape public policy and public opinion through knowledge, expertise and discourse generation. Trying to provide a single definition for think tanks beyond this is a difficult task. This is not only due to their differing and ample array of stances (from organizations exhibiting clear attempts at manipulation to others applying stricter academic research routines), but also because of the difficulties in interpreting these stances without reflecting one’s own views of what democracy is and should be.

To those authors who defend and define think tanks using a pluralistic approach, the proliferation of these organizations in recent decades is a sign
of democratic progress. Viewed from this stance, think tanks are actors devoted to the progress of knowledge, playing a very relevant role in shaping public policies. One purveyor of this pluralist view, for instance, is James McGann (2011), who heads the University of Pennsylvania team that has contributed most to the academic literature on think tanks, thanks to the annual publication of the Global Go to Think Tank Index Report.

At the opposite ideological pole, the most critical stance on think tanks includes authors inspired by the elite theory tradition posited mostly by US political sociologist C. Wright Mills (1956). According to this framework, think tanks are not neutral organizations, but rather tools of capitalist ruling class power. This elitist perspective highlights the fact that the pluralist view does not reflect reality and that think tanks and the public relations industry in general are antidemocratic. The works of Dinan and Miller (2007) and William G. Domhoff (2010) can be linked to this critical school.

New empirical findings and theoretical approaches suggest a far more complex reality than the one pluralist and elitist authors provide. For instance, Thomas Medvetz (2012) stresses that American think tanks have strong bonds with political, economic and media clients as well as with academia. According to this author, think tanks have almost usurped academia’s role as producer of independent knowledge. McLevey (2014, p. 71) summarizes the complex ties of current think tanks in Canada as neither ‘the pawns of corporate-political donors nor representatives of many competing interest groups’. From climate change denialists to animal rights defenders, think tanks cover a very wide spectrum of interests which, in the case of organizations related to profit and capitalist interests, have exhibited great skill in creating discourse coalitions (groups of actors that share the usage of a particular set of storylines), transnational networks and constellations (Plehwe 2011).

A number of think tanks have been essential in the successful dissemination and consolidation of conservative-aligned narratives like neoliberalism (Plehwe and Walpen 2006), financial austerity (Parrilla et al. 2016) and climate change denial (Jacques et al. 2008). At present, organizations devoted to the free market and liberalism remain numerous and very influential after their boom in number during the 1990s. However, they currently coexist with hundreds of organizations devoted to a long list of issues from a wide range of ideological stances. What they have in common is that they are not neutral actors promoting ideas merely for the sake of it, but rather advocates aiming to influence policy makers, the media and public opinion. According to McGann (2018), several thousand of them wield a large worldwide influence.

Among the various cases in which think tanks have contributed to shaping public opinion, the case of the ‘climate change denial machine’ stands out. This refers to the coalition of interests made up of conservative think
tanks, front groups established by the fossil fuel industry, contrarian scientists, conservative politicians and conservative media (joined since the mid-2000s by bloggers). The role played by think tanks in constructing a denial narrative has proven to be essential in the US (Dunlap and McCright 2015, Cann and Raymond 2018), while in Europe it would seem that a number of organizations also gain inspiration and support from the US countermovement, even if they have not as yet had the same impact (Almiron et al. 2020). Interestingly, as the literature shows, both the US denial movements and the European denial think tanks share strong links with neoliberalism and right-wing populist ideologies.

However, the role of denial in climate inaction does not boil down solely to the denial countermovement as defined above. Through implicatory discourse, denial may be shared both by denialists and believers of anthropogenic climate change alike.

The manufacturing of ignorance through discourse

In 2001, Stanley Cohen, a Professor of Sociology at the London School of Economics, produced one of the best-known categorizations of denial. If applied to climate change, we can identify three types of denial: first, there is sheer denial of the facts and evidence of climate change (literal denial). Then there is denial of the logical consequences derived from facts and evidence (interpretative denial). Finally, although many people and organizations do not deny the facts, evidence or consequences of climate change, they do deny the psychological, political and moral implications that conventionally follow (implicatory denial). This latter dimension is very important with regard to the solutions adopted (or not adopted) by non-denialists, and shows that, in the issue of climate change, rejection is much more complex than simply pointing a finger at the right-wing denial countermovement.

Scholars have identified four key dimensions of literal and interpretative climate change denial (McCright 2016): (1) the warming of the earth and climate change (trend skepticism), (2) attributing climate change to human activities (attribution skepticism), (3) the severity of the consequences of climate change (impact skepticism), and (4) strong scientific agreement on the reality and human causes of climate change (consensus skepticism). The study of these dimensions at the political economy level has unveiled the denial machine organized by the US right-wing countermovement and its extensive influence (e.g., McCright and Dunlap 2010, Dunlap and McCright 2015, Boykoff 2016).

As for implicatory denial – denial of the changes needed in our behavior and practices to mitigate global heating – sociologists and psychologists have provided answers from different perspectives, including the communicative (i.e., the information deficit model), the psychological (i.e., cognitive
dissonance) and the sociological (i.e., what Norgaard (2011, p. 374) has called the ‘social organization of denial’, a ‘collective distancing from disturbing information’).

Implicatory denial can be therefore directly connected to the lack of acknowledgement in public discourses of the human diet’s role in the climate crisis. By discourse we understand here, following Maarten Hajer, the capacity to ‘assemble ideas, concepts and categories through which meaning is given to phenomena’ and the capacity of giving more salience to certain ideas and concepts (Hajer 1993, p. 45–46). This neglect in discourse may lead to climate inaction through what some authors have called the production of ignorance (Proctor and Schiebinger 2008, De Sousa Santos 2019). We already mentioned Proctor and Schiebinger’s work at the beginning. As for De Sousa Santos (2019), he highlights three modes of ignorance production: arrogant ignorance, which describes those who do not know there are other modes of knowledge and hold sufficient power to impose their own epistemology; indolent ignorance, which consists in the collective production of forgetting and silence on matters that may question our perceptions of reality; and, finally, malevolent ignorance, which is the active and conscious production of false knowledge.

Because think tanks can play a relevant discursive role in the definition of the climatic problem, we wanted to check whether they have contributed to a manufacturing of ignorance as far as diet is concerned.

**Method**

The aim of our inquiry is to examine whether think tanks in Europe, regardless of their ideological stances, have contributed to the lack of discussion in society regarding the impact human diets rich in animal protein have on the environment. In order to avoid the difficulties in defining what is and what is not a think tank, we have adhered to the Think Tanks and Civil Societies Program’s (TTCSP) Global Go To Think Tank Index Report for this.

Accordingly, we consulted the 2017 TTCSP Global Go To Think Tank Index Report (McGann 2018). In 2017, up to 7,815 think tanks were catalogued in this index. In spite of its limitations – influence is scored according to individuals’ opinions – this effort certainly results in interesting output, which may not be fully comprehensive but is very representative of the world’s leading think tanks. From this source, we took all of the think tanks included on the Western, Central and Eastern European lists and all the European think tanks listed on the Environmental ranking. After discarding those which were not active online, did not have a search engine on their website and did not have output in English, we ended up with a sample of 110 think tanks ($N_t$) in 27 European countries. The countries with most
think tanks were the United Kingdom (21), Germany (14), Belgium (10) and France (8). The organizations comprised all types (multi-focus and single-focus) and included different ideological stances – conservative, neoliberal, social democrat, progressive, pro-market, environmentalist, climate change deniers, etc.

Secondly, we carried out searches on the 110 websites using the keywords ‘climate change AND meat’, ‘climate change AND animal’, and ‘climate change AND dairy’. We did the same for ‘global warming’. We looked for all kinds of written texts: reports, opinion articles, papers, and blog posts, among others. This produced 29,739 unfiltered hits. After discarding irrelevant texts (duplicates, keywords used as metaphors and those not including any meaningful comment), we ended up with 1,408 ($N_t$) relevant texts from 1984 to 2019 for our analysis (Figure 1) – that is texts including mentions of

Figure 1. Texts including mentions to climate change and global warming and mentions to the animal-based food ($N^1 = 1,408$) and think tanks ($N^t = 110$) per country in %.

<table>
<thead>
<tr>
<th>Think tanks</th>
<th>European think tanks from the TTCSP 2017 report: $N_t = 238$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Think tanks studied (after discards): $n_t = 110$</td>
</tr>
<tr>
<td></td>
<td>Countries of origin of $n_t$: 27</td>
</tr>
<tr>
<td>Texts</td>
<td>Texts including mentions to the two variables (animal-based diet and climate change/global warming): $N_t = 1,408$ (1984–2019)</td>
</tr>
<tr>
<td></td>
<td>$N_t$ texts linking the animal-based diet to climate change (FO1 and FO2): $n_{t1} = 254$ (2001–2019)</td>
</tr>
<tr>
<td></td>
<td>$n_{t1}$ texts negatively linking the animal-based diet to climate change (FR1): $n_{t2} = 230$ (2004–2019)</td>
</tr>
<tr>
<td></td>
<td>$n_{t1}$ texts including a mention to the vegetarian or vegan diets: $n_{t3} = 29$ (1997–2019)</td>
</tr>
</tbody>
</table>
the animal-based diet and mentions of global warming and/or climate change (see Table 1 for a summary of texts analyzed).

Then we conducted three analyses:

(a) We encoded N1 according to their thematic focus (see Table 2) to identify which texts were effectively relating the animal-based diet to climate change and which ones were not. To decide on the main focus of the texts we used the headline and the lead paragraph. The topics stressed there where considered the main focus of the article. We found 254 texts (n11) effectively connecting the animal-based diet to global warming (that is, including the focus FO1 and/or FO2, see Table 2). This sample included an 18-year time span – the oldest text found was a report by the British think tank DEMOS from October 2001, while the most recent was an article published by German think tank Mercator Institute for the Global Commons on 16 March 2019.

(b) Then we carried out a frame analysis on n11 based on the tradition put forth by Goffman (1974) that suggested that how something is presented to the audience (the frame) influences the choices people make about how to process that information. The importance of frame analysis in environmental issues has been stressed by Lakoff (2010). The frames chosen measured whether the texts made a positive or negative correlation between the animal-based food and the environment/climate (there was no neutral option since the texts coded were all including a correlation). We found 230 texts (n12) making a negative correlation. To enhance the results, we also coded if any relevant link was made to ethical issues including human health problems, social justice problems and nonhuman animal suffering. Overall, these frames represent the main impacts of the animal

<table>
<thead>
<tr>
<th>FOCUS (Animal-Based Food: AB-F; CC: Climate Change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FO1. AB-F &amp; CC-E focus: Animal-based food IS the main topic related to climate change and the environment</td>
</tr>
<tr>
<td>FO2. AB-F &amp; CC-E not focus: Animal-based food IS NOT the main topic but it is mentioned related to climate change and the environment</td>
</tr>
<tr>
<td>FO3. AB-F &amp; Others focus: Animal-based food IS the main topic but not related with climate change or the environment (it can be related to anything: ethics, economics, technology, animal welfare, but NOT CC or environment)</td>
</tr>
<tr>
<td>FO4. AB-F &amp; Others not focus: Animal-based food is NOT the main topic and it is not mentioned in relation to climate change or the environment (it can be related to anything: ethics, economics, technology, animal welfare, but NOT CC or environment)</td>
</tr>
<tr>
<td>FO5. Animals without Food: Nonhuman animals are either the main focus or only mentioned but not for food reasons but other reasons (hunting, pets, animal ethics, habitat loss, etc.)</td>
</tr>
</tbody>
</table>

To discard: all articles mentioning the keywords (animal, dairy, meat) as metaphors, other contexts, jokes, phrases, etc. not making any statement that can be coded in F1 or F5.
agriculture as identified by the literature (e.g., Steinfeld et al. 2006) (see Table 3).

(c) Finally, we conducted an analysis of the texts from $n_{11}$ explicitly referring to vegetarianism or veganism ($n_{13} = 29$), since examining mentions of these diets could provide more fine details regarding the studied organizations’ stance towards animal and these diets. To identify those texts, we used the keywords ‘vegetarianism’ or ‘veganism’. The 29 texts found comprised all the mentions to these diets we could find within texts that linked the animal-based diet to climate change in the 18-year span examined. For them, we encoded whether a positive, negative, or neutral view was given about these diets and identified the main arguments used in each case.

Only the presence of a frame was encoded for each article ($1 = \text{appears} / 0 = \text{does not appear}$), but not the number of times each frame appears in each text. In cases where various frames appeared, all of them were encoded since the same fragment of text can be interpreted differently by different readers or can include contradictory or opposing views (the same text can include arguments in favor of positive and negative impacts of animal-based food).

The authors of the article conducted a pilot test and recruited and trained a postgraduate student to collect the whole sample and to undertake the encoding process until a reasonably good overall agreement (90% of

Table 3. Frames (for texts with focus FO1 and FO2).

<table>
<thead>
<tr>
<th>FRAMES (Animal-Based Food: AB-F; CC: Climate Change)</th>
<th></th>
</tr>
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<tbody>
<tr>
<td><strong>FR1. AB-F is a CAUSE of CC/POLLUTION:</strong></td>
<td>1 = The text explicitly or implicitly acknowledges animal-based food has a negative impact on climate change and/or environment</td>
</tr>
<tr>
<td></td>
<td>0 = The text doesn’t make this correlation either explicitly or implicitly</td>
</tr>
<tr>
<td><strong>FR2. AB-F is NOT a CAUSE of CC/POLLUTION:</strong></td>
<td>1 = The text explicitly or implicitly acknowledges animal-based food hasn’t a negative impact on climate change and/or environment</td>
</tr>
<tr>
<td></td>
<td>0 = The text doesn’t make this correlation either explicitly or implicitly</td>
</tr>
<tr>
<td><strong>FR3. AB-F is actually GOOD for CC/ENVIRONMENT:</strong></td>
<td>1 = The text explicitly or implicitly acknowledges animal-based food has a positive impact on climate change and/or environment</td>
</tr>
<tr>
<td></td>
<td>0 = The text doesn’t make this correlation either explicitly or implicitly</td>
</tr>
<tr>
<td><strong>FR4. AB-F is a cause of HUMAN HEALTH PROBLEMS:</strong></td>
<td>1 = The text explicitly or implicitly acknowledges animal-based food has a negative impact on human health</td>
</tr>
<tr>
<td></td>
<td>0 = The text doesn’t make this correlation either explicitly or implicitly</td>
</tr>
<tr>
<td><strong>FR5. AB-F is a cause of SOCIAL JUSTICE PROBLEMS:</strong></td>
<td>1 = The text explicitly or implicitly acknowledges animal-based food has a negative impact on social justice (including food sovereignty, poverty, hungry, etc.)</td>
</tr>
<tr>
<td></td>
<td>0 = The text doesn’t make this correlation either explicitly or implicitly</td>
</tr>
<tr>
<td><strong>FR6. AB-F is a cause of NONHUMAN ANIMALS SUFFERING:</strong></td>
<td>1 = The text explicitly or implicitly addresses or mentions the suffering of nonhuman animals exploited for humans’ interests</td>
</tr>
<tr>
<td></td>
<td>0 = The text doesn’t make this correlation either explicitly or implicitly</td>
</tr>
</tbody>
</table>
coincidence) was achieved with the pilot test (Stemler 2001). All articles found matching our criteria on the websites were collated until 16 March 2019. The additional framing analysis of vegetarianism and veganism mentions was conducted by one of the three authors.

As a limitation of the study, the fact that we only analyzed think tanks with output in English resulted in some important organizations missing from the sample. One such example is the German EIKE (Europäisches Institut für Klima und Energie), which is also missing from the McGann list. This is probably for the same reason, German being EIKE’s main publication language.

**Findings**

The results reveal that, for the 36-year span analyzed, 45 European think tanks (40.91% from our \( n_t \) sample whose texts contained FR1, see Table 3) have published 230 texts including acknowledgment to the negative impact of the animal-based food on the climate/environment (what represents 16.34% of \( N_t \) with all the texts found mentioning the two variables). This meager attention is concentrated in organizations based in two countries: over half of the think tanks acknowledging the negative impact are based in Germany (12 organizations) and the UK (12) while the remaining 21 think tanks are based in 13 other European countries. This attention is furthermore very recent, manifested in the last 6 years (2014–2019). In two of the organizations that mentioned the impact of the animal-based diet on global heating, we have also found 12 texts explicitly denying a negative impact (FR2 plus FR3, 0.85% of \( N_t \)). A total of 65 organizations (59.09% of \( n_t \)) did not connect the topics, in spite of mentioning both in their texts.

Also, the number of texts explicitly discussing vegetarianism or veganism in the publications making a connection between our two variables is very low (29 texts or 11.41% of \( n_t \)), and only half of these provide positive arguments for them. Finally, the largest proportion of the texts did not acknowledge the problems created by human diet in further areas like human health, social justice and the exploitation of nonhuman beings. More details are provided below.

**On the attention paid**

The first outcome of this research is the confirmation that the relationship between animal-based food and global heating is a barely addressed discussion by European think tanks. The number of texts found including the two variables (animal/meat/dairy and climate change/global warming) in a relevant way was 1,408 (\( N_t \)). Of these, only 254 (\( n_{t1} \)), or 18.04% of all texts, connected the two variables in a positive or negative way–
only 4.9% as the main topic (FO1), 13.14% as a secondary topic (FO2) (Figure 2).

46 think tanks from 16 different European countries were involved in the publication of these 254 texts. Details on who they are can be found in the next section according to their assessment of the impact of the animal-based diet on the climate.

Regarding the publication period of the texts making a connection between climate change or the environment and the animal-based diet, 61.42% of them were published from 2014 onwards (Figure 3), meaning that the mention of the link is recent.

Figure 2. Focus and frames of the texts with FO1 or FO2 (Nt = 1,408).

Figure 3. FO1 and FO2 texts by years of publication (%).
The vast majority of the texts linking animal-based food with global heating (230 or 90.55% of \( n_{11} \)) explicitly or implicitly acknowledges that animal-based food has a negative impact on global warming and/or climate change (Figure 4). These texts represent 16.34% of all texts found including both variables in a relevant way (\( N_{t} \)) (Figure 2).

In total, 45 organizations (40.91% of our sample) were involved in the publication of the 230 texts negatively assessing the impact of the animal-based diet. 53.34% of them were located in Germany (12) and the UK (12) and the rest in Italy (3), Belgium (3), Austria (2), Spain (2), Switzerland (2), and there was one organization per country in the cases of Latvia, Sweden, Poland, Ireland, Czech Republic, Norway, Finland, Romania, and France. In spite of this regional dispersion, three countries concentrated 75.54% of texts: Germany (81 texts), United Kingdom (63) and Austria (29). For the data per think tank see the Supplementary file on the website.

Amongst those think tanks that addressed the topic, the Austrian-based International Institute for Applied System Analysis, British Chatham House and German Hiernich Böll Stiftung stand out with 28, 19 and 18 texts published respectively acknowledging the negative impact of the animal-based diet on the climate. Chatham House excels, in particular, because of it issuing some of the clearest messages regarding the negative impact (starting in 2014 with the report ‘Livestock – Climate Change’s Forgotten Sector’).

In contrast, up to 10 texts (3.94% of \( n_{11} \)) explicitly or implicitly state that animal-based food does not have a negative impact on climate change (FR2) and/or the environment, and two texts (0.79% of \( n_{11} \)) explicitly or implicitly
report that animal-based food has a positive impact on climate change and/or the environment (FR3), or that it is good for the environment. Those think tanks denying the negative impact were the Adam Smith Institute (UK) and the Ludwig von Mises Institute (Romania). The two texts that reported a positive impact of the animal-based diet on the environment were both published by the Adam Smith Institute. It must be noted that both think tanks also published texts acknowledging the negative impact, thus allowing for both positions in their output.

**Other focuses**

While, as stated, only 18.04% of texts including the two variables addressed the link between both, 88.35% did not address the link, in spite of including both variables in a relevant way. In particular, 54.33% mentioned the animal-based diet without connecting it to climate change (FO3 & FO4) and 34.02% included nonhuman animals for reasons other than food (FO5).

As for the texts with ethical frames, we found that 5.89% of all the texts including both variables (N1) framed animal-based food as a cause of human health problems (FR4), 4.26% as a cause of social justice problems (FR5) and only 2.56% of the texts in the sample framed animal-based food considering its negative impact on nonhuman animal wellbeing (FR6).

Thus, we can state that very little issue is made of the Western diet rich in animal protein beyond its impact on the climate and, in the few instances where it is, priority is given to human health and social justice rather than (animal) ethics.

**Mentions of vegetarian and vegan diets**

Only 29 texts (11.41% of the sample N11 including and connecting our two variables) were found to make explicit mention of ‘veganism’ and ‘vegetarianism’ over the 35 years of the sample (the oldest from 1997 by British think tank Demos). Of these, half (15 texts) framed vegetarianism or veganism in a positive light, 31.03% in a negative light (9 texts) and 17.24% were neutral (5 texts).

Those texts that depict a positive image propose vegetarianism as an alternative to meat production to reduce global heating. Furthermore, they consider meat production to be ineffective in feeding the world population, while also claiming that vegetarianism could solve the problem of world hunger. Finally, they provide multiple reasons for choosing vegetarianism, from environmental protection to animal ethics, via health and sustainability. These texts therefore show the advantages of vegetarian or vegan diets for both human and non-human animals, as well as for the planet.
As for the negative image, two failures are reported. One text comments that the defense of non-human animals has not been successful, and another reports that the vegetarian diet found important psychological barriers in the unsuccessful attempt in 2013 by the Norwegian armed forces to implement a reduction of meat. Different strategies are used to purvey the negative image, from downplaying vegetarianism and considering it a passing fad to warning that the vegan or vegetarian diet is a danger to the meat industry. Still, other arguments point out that these diets are traditional, while the Western diet based on animal protein is modern. Finally, other texts state that vegetarianism is an imposition, violating the freedom to choose other diets.

In the case of the neutral image, vegetarianism or veganism are framed as one more food option, such as Kosher or Halal food. Some texts state that we have the freedom to choose as consumers when deciding on our diet, while it is also noted that the ecological cost of one diet or another is the consumer’s personal decision and responsibility. Lastly, some equivalence is drawn between meat, fish, or vegetarian products by noting that the latter can occasionally replace meat or fish. In these texts, no clear position is taken on the benefits or problems related to vegetarianism or veganism. It is depicted as just another type of diet that comes down to each individual’s choice. Thus, the decision is personalized without debating the general repercussions for the planet.

Summary of findings

The main findings of this study can be summarized in the following highlights.

*The majority of the studied European think tanks (60%) paid no attention from 1984 to 2019 to the relationship between the animal-based diet and climate. Those that did (40%) are concentrated in two countries (Germany and the UK) and started reflecting on the issue very late in the period (from 2014 onward).* The 45 organizations acknowledging the link do not have a homogeneous political stance, that is, they have different ideological orientations. However, two of them have also explicitly or implicitly denied that animal-based food has a negative impact on the environment, and they are both aligned with neoliberal positions.

*The discourse of European think tanks has made the relationship between the animal-based diet and climate invisible.* In the think tanks studied, fewer than 5% of the texts (Nt) included the relationship between the animal-based diet and climate change as their main focus. In fact, it is the least common focus of all those studied – 88.35% of texts (Nt) mention the animal-based diet without connecting it to climate change or for reasons other than food (in spite of mentioning climate change in the same articles). However, the
large majority of texts connecting the two variables do acknowledge the negative impact of the animal-based diet. Only 4.73% of the texts connecting the variables do not acknowledge the negative impact.

The discourse of European think tanks has also made the relationship between the animal-based diet and human health, social justice and animal ethics invisible. The vast majority of these think tanks approach the animal-based diet or animals being exploited for this purpose without linking it to climate change, and only in a few isolated cases is it negatively related to human health (5.89%), social justice (4.26%) and animal welfare (2.56%).

European think tanks barely make any explicit reference to vegetarianism and veganism and its impact on the climate (29 texts or 11.41% \( n_{11} \)) or do so in an ambivalent way. Only half of the texts that address the link between animal-based food and climate change mention that vegetarianism or veganism has a positive impact on the climate. The other half denies that these diets have a positive impact on the climate or adopts a neutral position towards it.

Discussion and conclusions

In this contribution, we have observed that the discourses issued by the European think tanks mostly ignore the effect of animal-based diets on the environment, which can be seen as a type of implicatory denial – denying proper attention to the relevant implications of our dietary choices or directly denying any implications whatsoever. Exceptions to this are 45 think tanks (40.91% of our sample) producing 69 texts (4.9% of \( N_t \)) focused on the negative impact of the animal-based diet on climate change. Though the topic needs further qualitative research, our study opens the door for reflecting on the reasons of such an implicatory denial by think tanks. To this end, we suggest three aspects impacting think tanks that allow for further exploration.

First, it is necessary to take into account the economic reservations that are usually cited to oppose a reduction in meat consumption and the difficulties that exist in carrying out effective campaigns to this end (Laestadius et al. 2014, p. 33). Not surprisingly, lobbying efforts promoting this opposition by some industries are extensive (in the case of animal agriculture, Almiron 2016). Think tanks have been typically associated with the defense of particular interests, amongst which the defense of business as usual is included in a number of cases (Almiron 2017). The most radical examples here are the neoliberal links of a number of climate change contrarian think tanks in Europe, but the majority of European think tanks are not climate change contrarian and still the problematization of capitalism is almost absent amongst them (Almiron et al. 2020).
Second, there is a strong public opposition not to a replacement but rather to the mere reduction of animal-based food consumption. In Europe, in 2019, only 19% of the population considered the need to make changes in their diet for tackling environmental problems (EU 2020). A study conducted by Scott et al. (2019) argues that solutions are not related to individual consumption by citizens because the causes of environmental deterioration are considered complex and requiring technological or political solutions. Other causes may be linked to health reservations (also mentioned in Laestadius et al. 2014, p. 33), but a number of critical scholars associate it to a psychological craving for animal-based food, that is an addiction mostly to meat and dairy (Joy 2010). Think tanks’ staff and collaborators may be as affected by this psychological barrier as the rest of society.

In this regard, climate inaction may be deeply related to a moral speciesist anthropocentric ethics, which awards unjustified preference to the interests of the human species over the interests of any other life on the planet (Almiron 2020). This ethics expresses in different ways, including using anthropocentrism for justifying personal interests (e.g., cruelty towards other animals is necessary so humans can consume animal products), anthropocentrism as a tool for justifying vested interests (e.g., corporate profits from animal agriculture and related business) or anthropocentrism as an underlying social value which allows for inaction (by justifying humans overpopulate the planet, grow at the expense of other species, and indulge in cruel, unhealthy and unsustainable food practices). The speciesist anthropocentric ethics blocks not only rationality but also, sadly, our natural empathy and compassion towards humans and nonhumans alike (Joy 2010).

A third reason widely documented by critical scholars is related to the dominance of a male worldview. Our results show that the frame of non-human animal suffering is the one receiving least attention. The lack of moral consideration towards nonhuman animals have been associated by the literature to the dominance of patriarchal values, of which think tanks, as interest groups dominated by the logic of influencing and thus of exerting power, are not an exception (Balfour et al. 2020). The patriarchal worldview may function as a promoter of implicatory denial by two means.

First, the notion of progress has been linked with a certain kind of masculinity referred to as industrial/breadwinner (Hultman and Pulé 2018), actually representative of a hegemonic Western patriarchy. This masculinity emanates from social norms regarding what it means to be a man, and is deeply bound to ideals of industrial growth, extractive industries, and fossil-fuel dependent practices. In this respect, Western conservative white males, who are present in European think tanks, have been found to be more likely to deny climate change (McCright and Dunlap 2011,
Anshelm and Hultman 2014, Krange et al. 2019). Second, the literature has shown a mainstay of this hegemonic masculinity to be the annihilation of other animals (Adams 2010), while several studies have demonstrated that men are more prone to justify animal-based diets than women due to a deep-lying identification between masculinity and meat (e.g., Rothgerber 2013, Love and Sulikowski 2018).

In conclusion, the majority of the discourse of the think tanks analyzed seems to align with a widespread, obsolete understanding of environmentalism that has been dominant until very recently. This view, we suggest, is shaped by political economy, human psychological barriers like health reservations and food addiction, and the dominance of anthropocentric and patriarchal worldviews. Overall, the link between animal-based food and global warming is almost invisible in the climatic discourse generated by the European think tanks. Only three organizations give attention to the topic, which achieves some salience thanks to the relevance of the output of Chatham House, arguably the most prestigious think tank in Europe (McGann 2018). Although the latter is a prominent exception, the overwhelming majority of European think tanks may be qualified as contributing to what De Sousa Santos called manufacturing ignorance (2019) – in particular the ignorance out of indolence as defined by this same author, a collective production of forgetting and silence on matters that may question our perceptions of reality. Nonetheless, we should not discard ignorance out of arrogance, as defined by De Sousa Santos, if we accept the silence of the majority of analyzed think tanks to be a product of the economic, anthropocentric and patriarchal dominant mindset.

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