

Mapping the Terrain and Avoiding the Minefields

Identifying the antagonistic constructions and socio-emotional motives of climate change contrarianism in the United States

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Master Thesis Series in Environmental Studies and Sustainability Science,
No 2021:006

A thesis submitted in partial fulfillment of the requirements of Lund University
International Master's Programme in Environmental Studies and Sustainability Science
(30hp/credits)



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Submitted May 11, 2021

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Abstract: Since climate change reached public attention in the US, contrarian platforms have successfully established a counter-narrative to plant an illusion of deep controversy around the reality of climate change, effectively reproduced in conservative media. Despite growing scientific knowledge, a trend of enhanced, rather than decreasing, affiliation to contrarianism is paradoxically evident in the US.

Through combining Mouffe's political theories of antagonistic relationality and political affect with Lakoff's linguistic conceptualizations, an appealing framework to analyze the antagonistic constructions in the counter-narrative, and the socio-emotional dimensions these consequently activate, is outlined. Through narrative analysis, antagonistic constructions at play in the counter-narrative is reconstructed into dominant trends, revealing that doubt in antagonistic *characteristics* or dishonest *motives* attributed to the 'other', outshines scientifically rooted argumentations about climate change. The paper argues that facts alone, regardless robust scientific bases, could be insufficient to sway contrarian attitudes when socio-emotional identification at play are not considered.

Keywords: Antagonism, relationality, climate change contrarianism, polarization, counter-narrative, socio-emotional drivers

Wordcount: 11 998

Acknowledgements

For the two-year journey that I am about to conclude with this thesis, I feel deeply grateful and humble. Not only for the constant flow of wisdom, perspectives, and exchange alive amongst the people in the interdisciplinary setting LUMES facilitate, but also the continuous challenges of preconceived ideas over what is possible, both on a structural and personal level.

I want to thank my father, Rickard, for your support and wisdom, and all our long conversations during the thesis process about politics, emotions, and the value of constructive dialogue. And my mother, Tutt, with your adventurous heart and sharp mind – thank you for being my constant rock and source of inspiration, and, teaching me to trust my instinct and follow my guts. I love you both dearly. Ausi, for keeping my mind going with your injections of energy and knowledge. Beppe, for mathematical aid in the middle of the night. To Johanna, Lina and Felicia, for lending me your brilliant brains in countless hours of conversations over the topics encapsulated in this paper, you keep me inspired and brave. To The Really Wild Show: Parren, Stephen, Marthe, Judith and Sebastian, for creativity and playfulness, and the soft boarding to this process in your virtual company through endless of hours of films. And thank you Rūta, for the invaluable exchange we shared this spring, and your beautiful visual mind.

Pierre and Ina, it was a pleasure to walk the thesis walk in your company, and take part of your knowledge, ideas and process – I appreciate you both a lot. And of course, I want to thank David Harnesk, my brilliant supervisor whose diligent guidance allowed me to fully develop the thoughts and ideas manifested in this thesis, which have expanded my horizons on a personal level. A process and final result that left me feeling both proud and intrigued.

Thank you!

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List of Abbreviations

CC	Climate Change
NIPCC	Nongovernmental International Panel on Climate Change
IPCC	International Panel on Climate Change
RQ	Research Question

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1. Introduction

Since the Intergovernmental Panel on Climate Change (IPCC) was established 1988, a robust link between climate change and anthropogenic emissions of greenhouse gases has been established (Hoegh-Guldberg et al., 2018). More alarmingly, what was perceived to constitute a 'safe' level of warming as recently as the beginning of this century, is now, with a continuously growing body of scientific knowledge, evident to cause serious impacts on the planetary systems and the living conditions for future generations (Ventimiglia, 2019).

Ever since reaching the public eye, a societal confusion about the *reality* of climate change has been present in the US public sphere. A well-documented consequence of a few influential and elite-driven individuals and organizations insistent work to construct counter-narratives to undermine the unison scientific message, seeking to foster and amplify the societal confusion (Anshelm & Hultman, 2014; Oreskes & Conway, 2010a). The counter-narrative brought into the conversation on climate change intensifies the notion of scientific uncertainty, while narrating a conflict where 'we, the people', struggles against a powerful antagonistic 'other' (Mouffe, 2019). The tendency within a population group to disregard scientific evidence and consensus on specific issue(s) is popularly referred to as 'denialism', a phenomenon manifesting in complex interactions between epistemology, socio-emotional drivers and historical developments (De Cruz, 2020). Paradoxically, the trend of climate change denialism, or contrarianism which is the term used in this paper, seems to accelerate rather than diminish in the US, while the body of scientific knowledge steadily grows (De Cruz, 2020; Dunlap et al., 2016; Pearson & Schuldt, 2018).

Multiple studies suggests that the contrarian counter-narrative have played a role in positioning climate change in relatively low priority in the US national agenda (Anshelm & Hultman, 2014; Dunlap et al., 2016). As ideology polarization has increased in US social sphere throughout the past decades, climate change currently tops the list of most polarized topics (Dunlap et al., 2016; Fisher et al., 2013; Hoffarth & Hodson, 2016). This public division is mirrored in the 74% of self-identified liberals who recognize climate change as a real threat, compared to only 30% of self-identified conservatives (Gladstone & Wing, 2019). Based on the US unparalleled global position as an economic and cultural hub, the risk of powerful counter-narrative on climate change making the way into populist-right milieus in other nations is evident (Kempin & Mawdsley, 2013). Furthermore, as the second-ranked nation of greenhouse gas emission (UCSUSA, 2020), while inhabiting 4.25% of the world's population (Worldometers, 2021), the increasing trend of climate change contrarianism in the US could demonstrate a challenge for the global community.

The undertaking to examining the climate change contrarian counter-narrative constructed in the US requires turning to a influential source where they consistently are being generated. Thus, I analyze editorial pieces from the Heartland Institute, the highly influential public-policy think-tank with an overarching focus on debunking climate change (Heartland Institute, 2021). In this endeavor, I draw on theory that conceptualizes the political construction of ‘us’ versus ‘them’ which continuously shapes the socio-political sphere, developed by the Belgian political theorist Chantal Mouffe (2005). Complimentary, I turn to the US cognitive linguist George Lakoff (20XX), and his work on mental structures, metaphors, and frames, to deconstruct the counter-narrative and provide insights in the relational ‘traps’ they entrench. Innovatively combining these two perspectives, my approach offers a holistic socio-emotional approach to reconstruct the relational dimensions of the contrarian narrative, accounting for the dominant trends and their appeal to emotional identification. These concepts will be introduced in-depth under the theoretical framework.

1.1 Research objective, aim and questions

While there already exists a substantial amount of studies unfolding the ideological roots and political implications of climate change contrarianism (Anshelm & Hultman, 2014), the objective of this paper is to contribute to this body of work by accounting for how emotional identifications within the contrarian counter-narrative and its associated framings are manifested in relational terms on a socio-emotional level.

I argue that the counter-narrative constructed from climate change contrarian platforms centralizes around relational constructions around the antagonistic ‘other’ before scientific argumentations, mobilizing strong socio-emotional which subsequently motivates affiliation. How the counter-narrative is constructed and what specific representations they include matters, because of their influence over the social sphere and their ability to obscure the political and public debate over climate change. Consequently, the counter-narrative can undermine the momentum for global mitigation and adaptation actions for reaching sustainable trajectories.

The aim of this paper is to provide an account over the antagonistic constructions in the climate change contrarian counter-narrative, and the socio-emotional dimensions these consequently activate. This reconstruction of the contrarian counter-narrative could aid in navigating the *relational* traps intensifying the polarized debate, while inform communication strategies to convey knowledge around climate change and support bridging the divide. To pursue this logic, the following research questions will guide my analysis:

- RQ.1** *Which portrayal of scientific uncertainty in regard to climate change is contained within the contrarian counter-narrative?*
- RQ.2** *Who is the ‘other’ in the editorial pieces from Heartland Institute, and what attributes are associated with these constructions?*
- RQ.3** *Which ‘emotional identifications’ is the contrarian counter-narrative appealing to activate?*
- RQ.4** *Which foundational myths/metaphors are legitimizing the contrarian counter-narrative within the editorial pieces?*

1.2 A note on structure and justifications

The paper is divided into three parts: Firstly, the scene for climate change contrarianism in the US is introduced; secondly, the theoretical framework and the epistemology guiding the analysis is unfolded; thirdly, the contrarian counter-narrative is reconstructed and elaborated. Structurally, the research questions appeal to four different levels of representation contained in the narrative, adopted by Inayatullah (2004). These layers are; (1) Litany; (2) The political; (3) Worldview, and; (4) Metaphor, which allow a movement between the concrete to more abstract nuances in the narrative, allowing new complementary insights to emerge within the different layers (Bishop & Dzidic, 2014).

The application of narrative analysis utilizes a movement between the *general* and the *specific* to maintain the complexity of the emerging story (Daiute & Lightfoot, 2004). The turn to narratives is motivated by their role in shaping and transforming culture, and the collective stories capacity to interlink socio-emotional drivers towards a political context (Daiute & Lightfoot, 2004; Hammack, 2011). Furthermore, narratives are strategically used for political purposes, with power to both frame and camouflage occurrences to mobilize the public towards specific agencies (Hammack, 2011; Lakoff, 2008). Thus, reconstructing the counter-narrative entailed in the editorial pieces from Heartland Institute will expose both particulars for that setting, as well as general trends contained in the contrarian counter-narrative.

1.3 Contribution to sustainability science

The interdisciplinary and still emerging field of sustainability science has since the early 2000s sought to understand and address problems rooted in nature-society interactions (Clark & Dickson, 2003; Kates et al., 2001). The prospect to mobilize societies towards democratic and inclusive sustainability transitions requires significant actions, including strengthening capacities to inform and educate non-experts in the public about scientific knowledge (Fazey et al., 2020; Kajikawa, 2008).

This paper adopts the position that enhanced awareness of underlying constructions and meaning-making active in the contrarian counter-narrative matters, through influencing knowledge-systems and obstructing effective support for cultural and societal transformations towards sustainable trajectories (Fazey et al., 2020). As cultural beings and 'story-telling animals', the narratives shaped around climate change represent one (of many) forces capable of generating social imaginaries of what futures is possible, desirable and preferable (Arnold, 2018; Hammack, 2011; Rudd, 2007). In the US context, the contrarian counter-narrative has a central position, obscuring the reality and undermining efforts to address the root causes of climate change, while holding critical political and societal influential power in the political arena. Therefore, I view it as desirable to engage with efforts to convey knowledge and awareness around climate change contrarianism, including recognition of socio-political, socio-cultural, and socio-emotional dimensions active in climate change in the US, and wish for my research to contribute to practice through mobilizing awareness of these dimensions.

This thesis seeks to uncovering relational traps embedded in the contrarian counter-narrative, thus, providing comprehensive points over how to navigate this antagonistic debate both collectively and individually. Further, it want to encourage critical thinking on how to improve constructive and meaningful respond and conversations with individuals on the contrarian spectrum by unfolding the underlying story to which they affiliate, both individually and through strategical measures. As I intend to demonstrate in my results and discussion, the pushback on scientific findings is only a small part of this narrative. Instead, the relational elements driven by reactionary political emotions and rejection of a constructed 'other'.

2. Setting the scene: the case of contrarianism

This chapter summarizes the literature review carried out to situate the case of climate change contrarianism in the current political setting, where the emotional dynamics of polarization, an important driver behind contrarianism, first is contextualized. The polarized dynamic is deeply interconnected with the antagonistic construction of the 'other', to which I will return in the theoretical framework. This is followed with locating contrarianism in US political arena through brief historical navigation over the political climate and the contest over climate change. This is followed with expanding on the motivations behind engagement in the climate change contrarianism, and finally, the central actor of my analysis, Heartland Institute, is introduced.

2.1 Two emotional dynamics of polarization

Here, two main emotional dynamics that contribute to social and political polarization, essential for the contrarian counter-narrative and the construction of the 'other' is unpacked.

First, one clue is located in the societal drive towards belongingness (Baldassarri & Bearman, 2016; Batel & Devine-Wright, 2018; De Cruz, 2020; Newman et al., 2018). According to Batel & Devine-Wright (2018), the political motivation built on perceived belongingness to a group, even so an imaginary, often transcend socio-political drivers. Baldassarri & Bearman (2016) follows this logic, by shedding light on our tendencies to seek out like-minded people to converse about matters close to our hearts. This mechanism reinforces a setting of homogeneity and confirmatively (Barth et al., 2018) which additionally boosts our feelings, worldviews and alliances, thus strengthening the experience of belonging. From this, a somewhat puzzling tendency emerges; polarization does not develop from enhanced emotionally charged confrontation or interaction, but rather, from increased disconnection (ibid.). Combined with the impact social media has on contemporary society, where physical connection is frequently replaced with online interaction and complex algorithms controls the kind of information we get handed (Bode & Vraga, 2015; Garimella et al., 2018; Gladstone & Wing, 2019), stronger emotional incentives to partake in polarizing discourses is not an surprising effect.

Second, belongingness is deeply entangled with experiencing trust and benevolence, where we are inclined to identify individuals who share our values (e.g. political or religious) as more benevolent towards us (De Cruz, 2020; Levy, 2019; Zhou, 2016), which in turn influence our willingness to listen to and consider their perspectives. This notion can give some explanation to the challenges of reaching out with scientific knowledge on complex, but also socially contested matters, like climate change. Based on the assumption that polarization stems from both epistemological origins as well as social settings, the emotional triggers activated when feeling trust towards the 'messenger', combined with

the messengers ability to demonstrate benevolence plays a fundamental role for bridging polarization (Bolsen & Shapiro, 2018; De Cruz, 2020).

2.2 Contextualizing the political landscape of the United States

To understand the dynamic of social and political polarization over climate change in the US, the historical duality between conservatives and liberals which constitutes the political discourse is key. The political sphere is influenced by hot-button-issues, splitting partisans through clashing worldviews and ideological conflicts (Boussalis & Coan, 2016). This divide is an expression of the antagonistic relationship of 'us' vs. 'the other' (Dunlap et al., 2016; Hoffarth & Hodson, 2016).

Since the Regan era, the US political climate has been profoundly shaped and developed under a neoliberal hegemony (Antonio & Brulle, 2011; Thomas-Smith, 2018): a free-market ideology that is in harmony with the values of personal and national freedom, an apparent feature within US culture (Hoffarth & Hodson, 2016). Fraser (2017) argues that the current US neoliberal hegemony consists of two distinct antagonistic and hegemonic blocs. On the one hand, *progressive neoliberalism*, which effectively has managed to combine liberal core struggles based on recognition (e.g. environmentalism, feminism and social justice within the liberal tradition) while involving strong financial interests, protective of the free flow of capital, laissez-faire, deindustrialization and a systematization of low-wage labour (ibid.). *Reactionary neoliberalism*, on the other hand, is equally built on agencies of recognition (but based on Christian values, anti-globalization, patriarchy) and financial interest which on surface-level claims support for small businesses and manufacturing jobs, while including an underlying drive to enhance finance, military and extractive energy production (ibid.).

Antonio & Brulle (2011) argue how the neoliberal ideology of freedom, continuously since its manifestation in the 1970s, has responded and repeatedly undermined environmental movements, since they are framed promote restrictions, bans and limitations to economic growth. Until the election of Trump, progressive neoliberalism has facilitated a common ground between the Democratic and Republican party, but reactionary neoliberalism has gradually mobilized across the conservative block, reactionary to Obamas presidency (Bolsen & Shapiro, 2018). Furthermore, reactionary neoliberalism's enhanced stronghold today relates to historical influences, coloured by a Marxist-communism fright, attached to characteristics of contemporary socialism (Hoffarth & Hodson, 2016). Thus, the significant and cooperative global measures required for mitigating climate change has the historical leverage to be framed as camouflaged communism (ibid).

2.3 The contestation over climate change in the United States

Climate Change entered the realm of public discussions in 1959 in the US, and has been a frequently debated subject from 1979 (Weber & Stern, 2011). The range of representation of climate change in televisions and news media has contributed to inciting polarized attitudes on the subject (De Cruz, 2020). Notions of uncertainty are emphasized in climate change contrarian communication, whose framing and counter-narrative frequently made its way into conservative news media in the US (Bode & Vraga, 2015; Bolsen & Shapiro, 2018).

For sustainability scientists, dealing with scientific uncertainty is a natural part of the research process, for example when predicting complex future scenarios based on information we access in the present. Yet despite a scientific consensus and an increasing body of scientific knowledge over the reality of climate change, scientific uncertainty has frequently been interpreted by the contrarian communication from *uncertainty on how* to effectively respond to the challenges, towards *uncertainty if* there exists a challenge to respond to (Gladstone & Wing, 2019). In turn, the public attention to aspects of uncertainty within climate research has pushed scientists to be over-careful in emphasizing the degree of (un)confidence within their findings and reports, which ultimately plays back in the basket of climate change contrarianism, the ‘the merchants of doubt’, who amplifies these notions in their communication (Oreskes & Conway, 2010a; Slater et al., 2020). Since climate change emerged into the public sphere, the matter was unceasingly framed as a political, economic and scientific *conflict*, with a close to equal representation between climate change sceptics and advocates in the news media (Bolsen & Shapiro, 2018).

Over time, the debate and framings of climate change has shifted, spanning from denying the factual bases of anthropogenic global warming to highlighting the ‘devastation’ that climate policies will have on the US economy (Boussalis & Coan, 2016). Further, a clear correlation between production of communication from contrarian think-tanks in response to releases in the science community has been established (e.g., IPCC reports, Al Gore, COPs), where frames like; ‘climate alarmism’, ‘childish panic’ and ‘junk-science’, have been successfully launched to spread the myths and misinformation fuelling the contrarian agenda (Boussalis & Coan, 2016).

2.4 Agencies behind the contrarian counter-narrative

To outline the current dynamics in climate change contrarianism, this section unfolds structural and socio-emotional motives for contrarian participation.

Lockwood (2018) elaborates three different *approaches* to understand different levels of motivations behind engagement in climate change contrarianism. The first approach is considering interest

(particularly regarding capital accumulation), where strong support for the fossil fuel industry is nourished through e.g., lobbying, with an overarching goal to undermine the credibility behind the scientific understanding of climate change as it threatens their interests. Secondly, there is a structural approach involving the 'left-behinders' (e.g., the industry and manufacturing workforce, largely male, white, middle-aged or older) whose works, income and overall livelihoods are threatened by socioeconomic developments brought forward through modernity, reinforced with the emergence of automatization and cosmopolitanism. For this grouping, a strong motivation is triggered by feelings excluded from advantages the progressive societal development provide for *others* (Nussbaum, 2018, ch.6). The third approach is ideological, stemming from interlinkages with worldviews and values. The unifying element across these approaches is anti-elitism. This is a trait in both left and right populist movements, but while left-populist turn their frustration to injustices propelled by the economic system and business elites, the populist-right constructs the elites as socialists and cosmopolitan (Lockwood, 2018).

Further, Grušovnik (2012) identifies three different individual *drivers* for engaging in climate change contrarianism. The first is based on conspiracies, where the scientific results are depicted as being produced under biases, thus, delegitimizing scientists and researchers, framing them as individuals working to push specific agencies and interests (e.g., that of the 'establishment'). Secondly, a selectivity trend is evident in contrarianism communication where scientific literature containing weaknesses are amplified and circulated, but also literature which confirm bits and pieces of the contrarianism worldview (e.g., the scientific ability to create reliable measurements of CO₂ over time). This leads up to the third driver, an overall unwillingness to accept a 'wider picture' in the foundation provided by climate science, and instead lean towards selected part of the evidence. Parts which can make sense in isolation but falls out of context when the complex causal relationships are incorporated. When orienting the stream of news and information, the motivation to search out knowledge to become better form opinions through correct facts (accuracy goals) is not widely different between denialist attitudes compared to others (Newman et al., 2018). Although, individuals tend to simultaneously search out information contributing to maintenance or reinforcement of one's own identity, values, and worldviews (directional goals). Thus, the pursuit to be informed have a tendency to wind-up in specific 'filter bubbles' which promotes existing believes, expectations and desired conclusions (Newman et al., 2018).

Finally, multiple studies demonstrate an overrepresentation of men in climate change contrarianism. With middle-aged (or older) males from influential positions in neoliberal business developments being the loudest voices, and framing themselves as marginalized, oppressed and banned from free

speech (Anshelm & Hultman, 2014; Pearson et al., 2017). With hegemonic masculinity defined by industrial modernity now on decline, these trend can be understood as an attempt to defend its value against an emerging ecomodernist hegemony (Anshelm & Hultman, 2014).

2.5 The Heartland Institute as Merchants of Doubt

The central actor in my analysis is Heartland Institute, founded in 1984, and strongly association with the tobacco industry during the 90s, lobbying to discredit the health-risks of smoking (Oreskes & Conway, 2010b). The tactics developed in these campaigns has later been implemented in their discreditation of climate science (ibid). According to Oreskes & Conway (2010, p.233) Heartland Institute are relentless promoters of false 'experts', with little (if any) roots in peer-reviewed climate research. Rejecting the existence of a scientific consensus on anthropogenic caused climate change, while arguing that economic implications to mitigate climate change are unjustifiable, with claims that global warming, if it happens, most likely benefits the environment (Heartland Institute, 2006, 2021). Joseph Bast, the president of Heartland Institute, 2016 introduced the fundamental philosophy which the organization is founded on by recalling the philosophy of its original founder David. H Padden:

“David H Padden was an idealist. He had one passionate idea, and that was Freedom [...] That freedom could be the organizing principle for a civilization. Dave felt that the opposite of this was a society based on tyranny and force, and in our era, government is the main instrument of coercion and force [...] Dave saw the world as a choice; either you are in favour of a free Society, or, you are in favour of one that is based on coercion”
(Heartland Institute, 2016; 1.48)

Through their communication, they 2018 reached more than 112 million readers (Heartland Institute, n.d). In 2008, Heartland Institute partnered with the Nongovernmental International Panel on Climate Change (NIPCC), formed 2003 as a response to IPCC with the objective to undermine the notion of a scientific consensus on anthropogenically caused global warming. Heartland Institute is the 31st most influential think-thank in US in terms of online outreach (TBS, 2020), and recognized as the most influential platform for climate change contrarianism (Dryzek et al., 2011; The Economist, 2012), making the counter-narrative produced within their chambers a rich foundation for my analysis.

3.Theoretical Framework

In what follows, I will lay out a theoretical foundation that positions the contrarian counter-narrative contained in the data within the avenue of *cognitive linguistic* and *socio-emotional relationality*. The two levels of explanation, a societal as well as an individual, manifests in the following ways:

Firstly, through the political theories of Chantal Mouffe the relational dynamic on what constitute ‘the political’ becomes visible. Specifically, I apply Mouffe’s theories on political frontiers, the relational construction of an ‘us’ versus the ‘other(s)’, and the antagonistic or agonistic possibilities these dynamics activate (Mouffe, 2002, 2005). Secondly, I turn to the work of George Lakoff who provides conceptual explanations on how mental structures, frames and metaphors informs and constrains our rationalities and reason. His understanding of the cognition of individuals provides insight to the mechanisms behind rejecting scientific evidence based on how our mental structure frequently entertain the worldview one possesses, even when the attempt is focused on reaching a ‘truth’ by reflection and reasoning (Lakoff, 2010, 2014a, 2016).

By combining insights from Mouffe and Lakoff, the theoretical foundation goes beyond the obvious political representations and argumentations found in the data, setting the focus on identifying patterns appealing to *emotional identifications* and *engagement* within the contrarian counter-narrative. The theoretical framework and subsequent analysis is informed by social constructivism, that is to say, it approaches the emergence of truth, knowledge and meaning making as an ever changeable aspect of the social life, as a result of human interactions and relations (Given, 2008).

Before entering the explanatory levels, it is necessary to clarify the distinction made between discourse and narrative, as both concepts entangles to shape the social world while holding multiple definitions (Livholts & Tamboukou, 2015). Discourse, in the context of this paper, explicitly refers to language role in shaping social relations in the socio-political sphere, while narrative considers the role of language in shaping an overarching coherent story of the world at the individual level, including socio-emotional dimensions (see. 3.2.1). Thus, the counter-narrative analysed for this paper is influenced by the socio-political discourse on climate change, while appealing to the formation of meaning-making, worldview, and identity at an individual level.

3.1 Explanatory level I: Chantal Mouffe and the political relationality of contrarianism

3.1.1 Constructing ‘the other’

Mouffe (2005) argues that an inescapable dynamic of politics is the construction of a distinct ‘I/we’, which serves as the base for identification and identity creation. The distinct ‘we’ requires a corresponding and charged counterpart found in a constructed ‘other’ (Jones, 2014; Mouffe, 2005).

Dualistic relationships are thus understood as an engine for political and societal change, where debates, contestation and alternative pathways dynamically manifests. Jensen (2011) argues that identities are always conditioned by particular social and political contexts (norms, values, and worldviews), and *othering* appears in a variety of forms to underpin specific social differentiations. Importantly, the 'othered' in this sense are always conceptualized as an 'inferior', and never as 'equals'.

For Mouffe, the discursive role in societal construction is essential, emphasizing that meaning always emerges *relational* (Mouffe et al., 2013, ch.1). All discourses are distinct constructions which manifests in relation to contemporary events (Mouffe et al., 2013). For the development of discourse, the 'other', or the constitutive antagonist, is required to shape meanings, since meanings emerge through a synchronised construction between binary positions (Mouffe et al., 2013).

3.1.2 Antagonism and agonistic pluralism

Inseparable from shaping political frontiers through identifications in discourse, worldview and meaning making is *antagonism - struggle between enemies*, making politics an arena for conflict and contestation (Martin, 2013; Mouffe, 2005). Antagonism is not understood as a settled relation between an inside and an outside where both sides inhabit particular qualities, but instead as an ever-changing dynamic which is never settled or completed in its form, but instead reshaped through discursive practices (Mouffe et al., 2013). The antagonistic dynamic rest heavily on the construction of 'us' versus the 'other';

Mobilization requires politicization, but politicization cannot exist without the production of a conflictual representation of the world, with opposed camps with which people can identify, thereby allowing for passions to be mobilized politically within the spectrum of the democratic process. (Mouffe, 2005, pp24-25)

Competing hegemonic projects continuously risk promoting antagonistic relationships where radical emotions take over, and it is therefore within the interest of democracy to foster a different alternative to political deliberation – the agonistic. Respectful dialogue between political oppositions is needed to ensure and maintain a resilient democracy, where the 'rules of the game' can be renegotiated to foster a movement from political antagonism towards agonistic pluralism - *struggle between adversaries* (Jones, 2014; Mouffe, 2005). The polarity between left and right in the US political landscape currently risk exacerbating antagonistic relationships. Instead of rethinking political alternatives, moral divisions between 'good' and 'bad' people, groupings, or positions are emerging, where individuals gets generalized in terms of 'enemies' or 'friends', differences which eventually are conveyed as absolute truths (Martin, 2013; Mouffe et al., 2013).

3.1.3 Populism and political frontiers

Competing hegemonic discourses are essential for the practice of democracy (Mouffe, 2005). Yet in the contemporary political order which Mouffe (2005) describes as 'post-political', the competing goals of the contemporary left and right blocks are blurred, which deprives the population of their democratic influence on real political alternatives. When hegemonic struggles are being undermined, so is the population's democratic right to engage in the world of politics with passion and desire. As a result, a flourishing ground is opened for populist alternatives to mobilize the passion, affect and desire within the population (Mouffe, 2019).

Populism, according to Mouffe (2017), "is not an ideology, not a political regime, and consist of no particular political concerns"(32:19). Instead, populism is driven by the constitution of a political frontier ('we', the people) challenging a perceived political elite (the 'other'). The rise of far-right populism is often attributed a simplistic and essentialist explanation from left-leaning media, synchronized with a construction of a moral frontier seeking to disempower and often demonize far-right populist partisans (Mouffe, 2019). Thus, a more analytical understanding of the emerging right-wing populist movements, based on concepts like political passion and emotional identification (before ideological motives), is needed (Mouffe, 2017). Moral condemnation will never be an effective way to address populist groupings fuelled by political reactionary passion (Martin, 2013. ch.11), where moral objectives is the main driver in contemporary politics for antagonistic formations (good vs bad). Instead, moral responses are expected to deepen the antagonistic dimension in the political arenas and reduce possibilities for fostering common ground and solidarity for reaching sustainable trajectories.

3.2 Explanatory level II: Georg Lakoff, the cognitive pathway and limits to reason

To understand how climate change contrarianism materializes on the individual level, expanded insight can be gained when examining the 'sense-making tool-kit' our brain and its mental models provides, which organize of our lived experiences in relation to narratives, frames, and metaphors.

3.2.1 Narratives and the construction of reality

Narratives can be understood as the human predisposition to interpret life and construct ourselves within the social and political complexity. MacIntyre proposes in *After Virtue* that "man is in his actions and practice, as well as in his fictions, essentially a story-telling animal. He [...] becomes through his history, a teller of stories that aspire to truth" (1981: p.274). The lifelong process of narrating our lived reality into a coherent story is inseparable with how we experience ourselves and shape our worldviews and values (Lakoff, 2008; Rudd, 2007). Narratives are regularly utilized strategically for

political purposes, through shaping, informing and expanding the greater social 'story' (Hammack, 2011; Lakoff, 2008). In this lays a power to obscure the social and political reality, a notion evident in the climate change contrarian counter-narrative examined in this paper (Oreskes & Conway, 2010). The power in these counter-narrative is founded on the base they provide for identification, meaning-making and truth, elaborated by Lakoff & Johnson (1980, p215-216); "The issue of truth [...] is whether the coherence provided by the narrative matches the coherence you see in your life. And it is the coherence that you see in your life that gives it meaning and significance".

3.2.2 Frames and the unconscious mind

Cognitive frames can be understood as the brain's sense-making apparatus, reflexively and automatically connecting our lived experiences to pre-existing knowledge banks, which informs the construction of a coherent narrative aligned with our worldview (Lakoff, 2010). Mostly, frames are evoked and activated without us noticing, in the 98% of the brain working unconsciously (Lakoff, 2008). The concept emerged in cognitive linguistic, as a way to explain how thoughts and reasoning rests on the pre-set information stored in the physical brain, both limiting and condition our ability to comprehend and reason over any given topic (Chilton, 1987; Lakoff, 2011; Lakoff & Johnson, 1980). Frames relates to ideological constructs (e.g. neoliberalism, free markets, communism), since they are activated to conceptualize our reality aligned with our pre-set worldviews (Chilton, 1987; Lakoff, 2010). Frames can evoke two modes; (1) the frames evoked can be familiar (old) which gives us consolidation in rightfully interpreting the world; (2) the frame evoked is unfamiliar (incomplete, problematic or unthinkable) which commonly led to dismiss the meanings the frame seeks to evoke. Interestingly, if an individual is challenged through inductive reasoning over the unfamiliar frame, the effort could lead to (re)structuring the entire setting of familiar frames (Chilton, 1987). This transformative ability carries importance in understanding how climate change contrarian attitudes can be addressed. Changing frames by only changing language is inefficient, since frames need to make sense in relation to the current mental structure of individuals. But more importantly, this process needs to work in accord with emotions (Lakoff, 2010).

3.2.3 Myths, metaphors and meaning making

Metaphors and myths are not only linguistic language games, but concepts which helps us understand complex structures and communicate experiences and feelings among each other (Lakoff, 2014b). In other words, metaphors allow us to make connections between e.g. systems, events or emotions by attributing these new, more comprehensible representations. Myths and metaphors functions as shortcuts for the mind to comprehend our social and political reality, particularly relevant for understanding socio-political issues (Lakoff, 2008, ch.1). When an issue is partly represented through

a dominant (widely recognized) metaphor, the issue is easily understood as obvious, objective, or natural. Consequently, this gives metaphors a power to camouflage political motives (Chilton, 1987; Lakoff & Johnson, 1980).

3.3 Combining Mouffe and Lakoff

The two levels of explanation interweave by placing emotional motivation, identity recognition and personal identification as central aspects in the ideological and relational dynamic of politics. To visualize and structure my analysis (Fig. 1), I have adopted four layers of representation: litany; the political; worldview, and; metaphor. These were originally developed by the future researcher Sohile Inayatullah (2004), as an instrument to holistically deconstruct different layers of representations embedded in narratives. The layers relate directly to the research questions and guides the application of the theoretical framework, allowing me to deconstruct the data while preserving different types of perspectives and evidence emerging from the contrarian counter-narrative.

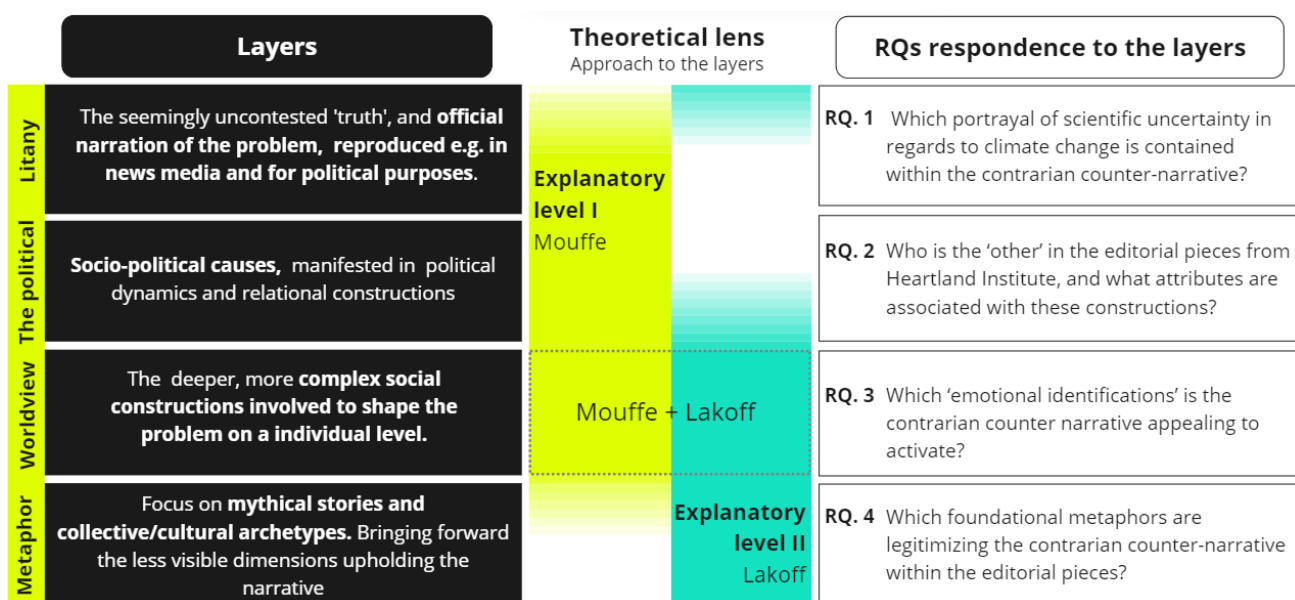


Figure 1. Visualizing the research questions relationship to the layers of representation litany, the political, worldview and metaphor (vertically), and how the two theoretical levels of explanations apply. The application of *explanatory level I* is represented in yellow, while the application of explanatory level II is represented in turquoise. The explanatory levels explicitly combines on the representative layer of worldview and RQ.3, while working complimentary to answer the remaining RQ.

3.3.1 Emotion, reason, and political activation

In opposition to many of the enlightenment thinkers declaring rationality as the optimal political tool while dismissing emotions as a political instrument, Lakoff and Mouffe both understand emotions as a critical ingredient for engagement in the political.

According to Lakoff, “reason, in the enlightenment interpretation, is not sufficient to understand politics”, but instead, cultivating the “understanding for understanding itself has become a political

necessity”(Lakoff, 2008, pp.14-15). Progressives in the US political arena are caught in what Lakoff (2006, p17) refers to as the ‘rationalism trap’, where the logic relies on the idea that hard facts, under the metaphor that ‘truth will speak for itself’, will lead to rational choices among the public. A logic neglecting the weight of how a framing and narration of an issue is carried out, where “truths need to be framed appropriately to be seen as truths” (ibid). When accepting thoughts as physical manifestations, reasoning and common sense relies on the mental structures already at place. Reasoning is only indirectly connected to the world, since it is only possible to reason to the extent your physical mind allows (Lakoff, 2008, 2016), where nobody are capable of understanding ‘anything’ (Lakoff, 2016). More importantly, one cannot reason without emotion as emotions guide the perception of our goals and desires, where Lakoff (2008) even goes as far as to say that without emotions, reason would be completely random.

Instead, political engagement should be seen as powered through affect, desire and passion (Mouffe, 2017), situating emotion before intellectual reasoning as the drive behind our political values and action (Lakoff, 2016; Mouffe, 2017). Mouffe highlight the risk of missing the dimension of power, duality and antagonism when politics is recognized as a process based on rational negotiation, elements that should be seen as the very nature of politics (1993, p.187). Even if ideology, based on individual worldviews, can partly explain climate change contrarian engagement, a greater motivation behind formations of political identities is personal and collective *identification* (Mouffe, 1993). It is through identification a ‘we’ emerges, establishing a collective political ethos which reinforces the sense of belonging (Mouffe, 1993, p118-119).

Through adopting the two explanatory levels in my analysis, a plausible connection between the socio-political dimensions at a societal level, and the socio-emotional dimensions at an individual level is established, both essential to deconstruct the relational elements entailed in the contrarian counter-narrative.

4.Methodology

4.1 Narrative analysis

I have set out to unpack the antagonistic constructions embedded in the counter-narrative produced by Heartland Institute, and socio-emotional dimensions these consequently activates while providing a collective source for identification. For this reason, I will be conducting narrative analysis, allowing me to identify patterns and reconstruct the counter-narrative in my data which underpins climate change contrarianism (Daiute & Lightfoot, 2004). It does so by granting the analytical logic to follow an interpretive path, while necessitating a movement in-between the representative layers to reveal different forms of meanings embedded in the counter-narration (ibid).

To be clear, I am not set out to unpack the sole *ideological* motivations behind climate change contrarianism, but instead, seek to provide a comprehensive and critical entry to understand the relational constructions the counter-narrative bring forth, which mobilize the socio-emotional dimensions of identification, affect and political passion. For these reasons, the analysis moves between the general to the particular, while relying on the theoretical framework to shape the initial themes for my analysis.

4.2 Data collection and analysis

4.2.1 Sampling strategy

In the preparation phase, the contrarian counter-narrative was explored in a range of media outlets, particularly Twitter and conservative news media (Fox News and Breitbart). Quickly, a pattern emerged where many of the leading voices in the debate was traced back to positions at libertarian think-thank Heartland institute, motivating the decision to centralize my sampling directly at their channel.

My sampling consists of editorial pieces selected on the reasoning that the editorial format present the authors an amount of freedom to subjectively elaborate over a chosen topic, which hypothetically includes richer nuances and stronger emotional narration than those found in e.g., policy documents or news media.-The sampling was carried out in February 2021, using google advanced search, where I had the possibility to assort editorial pieces from the two different sites Heartland Institute publish op-eds; the official website under '*News & Opinions*' and their blog '*The Freedom Pub*'. The sampling targeted editorial pieces which explicitly involved 'scientific uncertainty' and 'climate change'. The google advanced search gave 154 initial hits, which was narrowed down to explicitly consist of op-eds, resulting in 73 editorial pieces. The op-eds were reviewed, and further narrowed down after restricting the timeframe 2016 to present time. The timeframe was restricted based on the Trump

administration installation, which influenced the narration of the pieces while amplifying post-truth and conspiracy tendencies. Further, the timeframe is motivated based on an increase in right-wing populist affiliation interlinking with climate change contrarianism, parallel with the Trump administrations installation 2016 (Sismondo, 2017). These motives led me to a consistent dataset with 31 editorial pieces from Heartland Institute.

4.2.2 Constructing and analyzing data

First loop – Main Analysis

The main analysis utilized Nvivo in combining deductive content analysis, referring to deliberately searching for expected trends guided by concept from the theoretical framework, and inductive content analysis, allowing unanticipated new trends to emerge throughout the analysis. The layers of representation (litany, the political, worldview and metaphor) was utilized as the organizing principle. Visualized in fig.2, the text initially was coded deductively in-between the layers (b), followed by detailed coding (deductive and inductive) within each layer, where dominant patterns embedded in the counter-narrative emerged (c). Using the coding pattern, the counter-narrative was deconstructed(d), and consequently reconstructed into salient trends, corresponding with the RQ's (e).

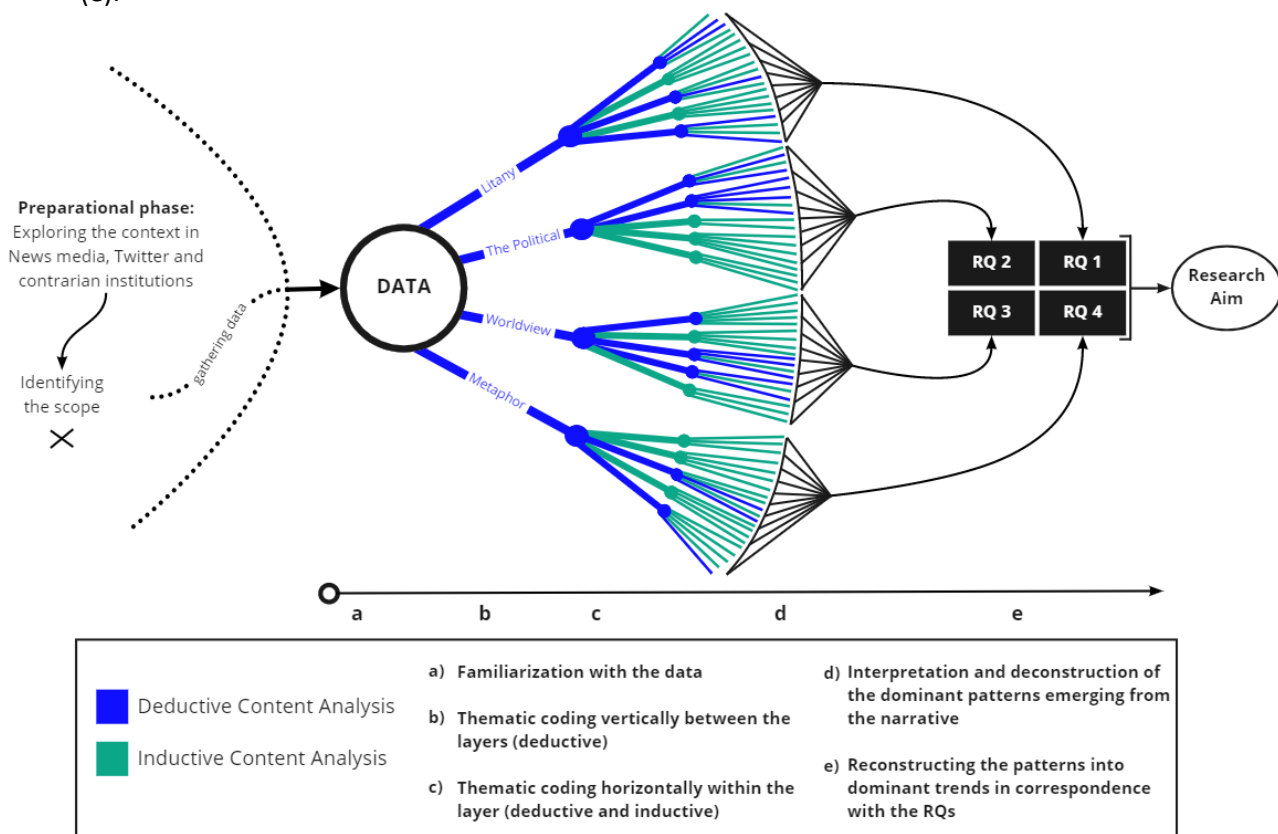
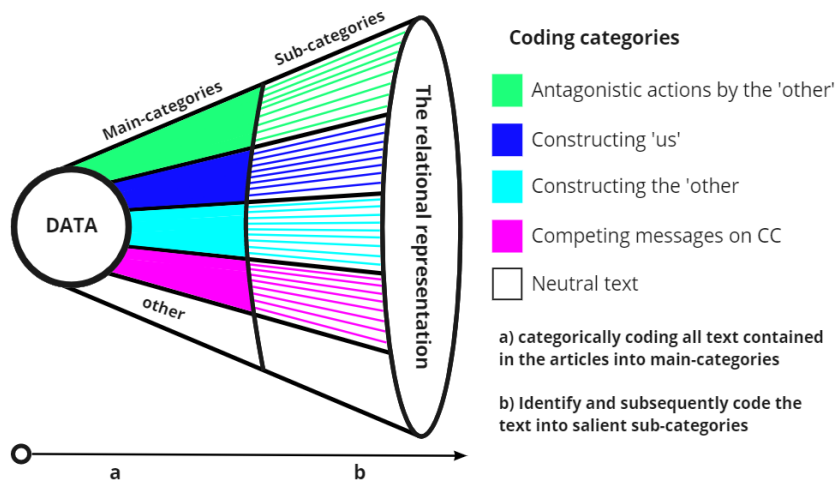


Figure 2. Visualization of the research-design to construct and analysis of the data, carried out in two stages: firstly, a deconstruction of the narrative followed by a reconstruction of the emerging trends and patterns.

Second Loop – Complimentary Set of Analysis

After finalizing the first interpretive loop of analysis, a complimentary set of analysis was conducted, which entailed a detailed coding of the full amount of text comprised in the articles, where the codes entail a range between phrases, sentences, or paragraphs, determined by the content. Firstly, the text was coded into five overarching categories, and thereafter subsequently coded into salient sub-categories (fig.3).



categories (fig.3). The purpose was two-fold; firstly, providing a visual overview of the dataset, and secondly; demonstrate the text quantity of relational constructions entailed in the data. The overview is visualized in fig.5.

Figure 3. The complementary loop of analysis included the full set of sampled text, coded into 5 different categories, representative of the level of *relational narration* located within the data set.

4.2.3 The Data Set

The selection of the data set analyzed in this paper is based on Heartland Institutes demonstration of outreach and influential power, as the coherence located in the narrative. The editorial pieces (fig.4) are not only directed to the public, but to the political and policy sphere with individuals holding power to weaken the priority for climate actions.

Notable for the data set is the socio-geographical attributes of the authors, with a vigorous majority of white, middle aged (or older) males, with long-term careers in the public policy sector. Thus, they can be assumed to know the 'rules of the game' in constructing forceful and engaging narrations. Reviewing the articles, multiple authors occur frequently, and a systematic referencing back to each-other (dominantly blogs) as the scientific reference becomes clear. The 2016-2021 timeframe is motivated by an intention to capture the counter-narrative closest to present, which encapsulates current socio-political and socio-cultural nuances developing alongside the Trump administration. A time where reinforced reactionary politics in the path to 'restore greatness' developed incompatible with sustainable trajectories (Ferree, 2020; Fraser, 2017).

DATASET				
Ref:	Article Title	Authour	Year	Publishing location
Art.1	On Climate, Ad Hominem, Funding and Facts	H.S Burnett	2016	News & Opinion
Art.2	Obama's Attorney General Says She's Considered Using An Old Law To Silence Global Warming Critics	H.S Burnett	2016	News & Opinion
Art.3	Open Letter to Attorneys General about Climate Change	Calvin. E. Beiser	2016	News & Opinion
Art.4	A Few Facts For Climate Alarmists Waging War Against Astrophysicist Willie Soon	Ron Arnold	2016	News & Opinion
Art.5	Tell a Big Lie and Keep Repeating It	Norman Rogers	2017	News & Opinion
Art.6	Alarming Climate: Expert Opinions and Government Funding Versus Scientific Forecasting	K. Green, W. Soon & S.J. Armstrong	2017	News & Opinion
Art.7	Sustainability Is Not Sustainable, Climate Panelists Say	H.S Burnett	2017	News & Opinion
Art.8	Climate Alarmists Push Panic Button	H.S Burnett	2017	News & Opinion
Art.9	When Environmentalists Oppose Science	Jeff Stier	2018	News & Opinion
Art.10	Climate Scientist Spencer Describes Corrosive Role of Government Funding	H.S Burnett & Roy Spencer	2018	News & Opinion
Art.11	Trump Points Out Political Agenda Behind Climate Change Activism	H.S Burnett	2018	News & Opinion
Art.12	Reforming the Culture of Science at EPA	H.S Burnett	2018	News & Opinion
Art.13	EPA's Non-Politicized Science Benefits Americans	H.S Burnett	2018	News & Opinion
Art.14	California Sues Over Global Warming, Judge Orders Climate Lesson	William Briggs	2018	News & Opinion
Art.15	Is Climate alarmist Consensus About to Shatter?	Calvin. E. Beiser	2018	News & Opinion
Art.16	The Good, the Bad, and the Missed Opportunities of the 'Climate science Tutorial' in San Francisco	Joseph Bast	2018	News & Opinion
Art.17	A Post-modern 'Nonsense' Critique of NIPCC	Joseph Bast	2018	News & Opinion
Art.18	Green Activists Hate Trump More Than They Love Animals	Jeff Stier	2019	News & Opinion
Art.19	Study suggests no more CO2 warming	David Wojick	2020	News & Opinion
Art.20	Crisis Looms in Alarmist climate science	David Wojick	2020	News & Opinion
Art.21	Climate Science is NOT Settled	Viv Forbes	2016	The Freedom Pub
Art.22	Five Stages of Climate Grief	Paul Driessen	2016	The Freedom Pub
Art.23	Earth Day has Become Polluted by Ideology and Ignorance	Jeff Stier	2017	The Freedom Pub
Art.24	Don't Call Climate Skeptics 'Deniers,' Call Us 'Correct'	Christopher Monckton	2017	The Freedom Pub
Art.25	We Need Some Climate Skeptics	John Hunt	2018	The Freedom Pub
Art.26	Let the Climate Debate Begin!	Tom Harris	2018	The Freedom Pub
Art.27	Dr. Willie Soon versus the Climate Apocalypse	Jeffery Foss	2018	The Freedom Pub
Art.28	Evidence of Climate Model Misuse	H.S Burnett	2018	The Freedom Pub
Art.29	The Global Warming Cult is Polluting Children and Adult Minds	Nancy Thorner	2019	The Freedom Pub
Art.30	Climate Hysterics Skyrocket	Paul Driessen	2019	The Freedom Pub
Art.31	Free Speech? Forget It.	Jane Shaw	2021	The Freedom Pub

Figure 4. Table over the data collection organized according to posting location and year, including authors and title.

4.3 Justification of research design

The complex socio-political and cultural drivers behind climate change contrarianism illustrated in the background chapter requires a methodology with ability to approach the data holistically, while structuring the analysis and deconstructing the texts. Narrative analysis emphasizes the need to remain in the totality of the 'story', and lean on the theoretical concepts to encompass and focus the analysis. Further, and importantly for this endeavour, narrative analysis recognizes the researcher's subjectivity in interpretation of the emerging narrative and thus, never validated the findings as the objective 'truth', but as a complementary perspective on the subject (Daiute & Lightfoot, 2004). This position strives to provide transparency to the reader by assuming that some degrees of biases, consciously or unconsciously, is brought into the analysis, inevitable when examining climate change contrarianism from the side of sustainability science. The holistic and interpretive foundation narrative analysis provide, combined with inductive and deductive content analysis provides an appealing methodology to follow the research aim of this paper. Namely, to offer an explanation to the socio-emotional drivers that engages individuals in climate change contrarianism, by turning the focus to the underlying antagonistic and relational constructions embedded in the counter-narrative entailed in the Heartland Institutes editorial pieces.

4.4 Limitations

The greatest limitation to examine the topic of climate change contrarianism rest on my biases as a sustainability scientist, where my position is to unpack the counter-narrative and seek to explain how it manifests in relational terms. By applying Mouffe's conceptual understanding of the 'other', it is clear to me that from the position of sustainability science, contrarianism constitutes a dominant antagonistic 'other', toward I as an individual undoubtedly carry feelings of affect. Therefore, the analysis has required increased awareness of my personal biases, particularly when pursuing to interpret and categorize the data. Secondly, the decision to use a single platform and format for the data collection to ensure a coherent narrative is on the cost of alternative depictions which could emerge if the sampling would be complemented with e.g. social media platforms or interviews, resulting in more nuances results. Yet, for the purpose of this study, the homogeneity of my scope was justified. Further, my scope doesn't account for new influences into the counter-narrative, in consequence of the 2021 presidential administration shift, as with Trumps and other influential populist blockage from multiple social-media platforms after the January 6th storming of US Capitol.

5. Reconstructing the narrative – ‘Mapping the terrain’

Building on the previous chapters, the results from the analysis of the editorial pieces from Heartland Institute will now be accounted for to unfold the relational construction and dynamics activated in their narrative. The results are presented as a reconstruction of the dominant trends that emerged in the analysis, structured to respond to the RQs and guided by the conceptual foundation outlined by Mouffe and Lakoff. An overview of the quantity of relational constructions represented in the text categorically coded is provided in *fig.5*.

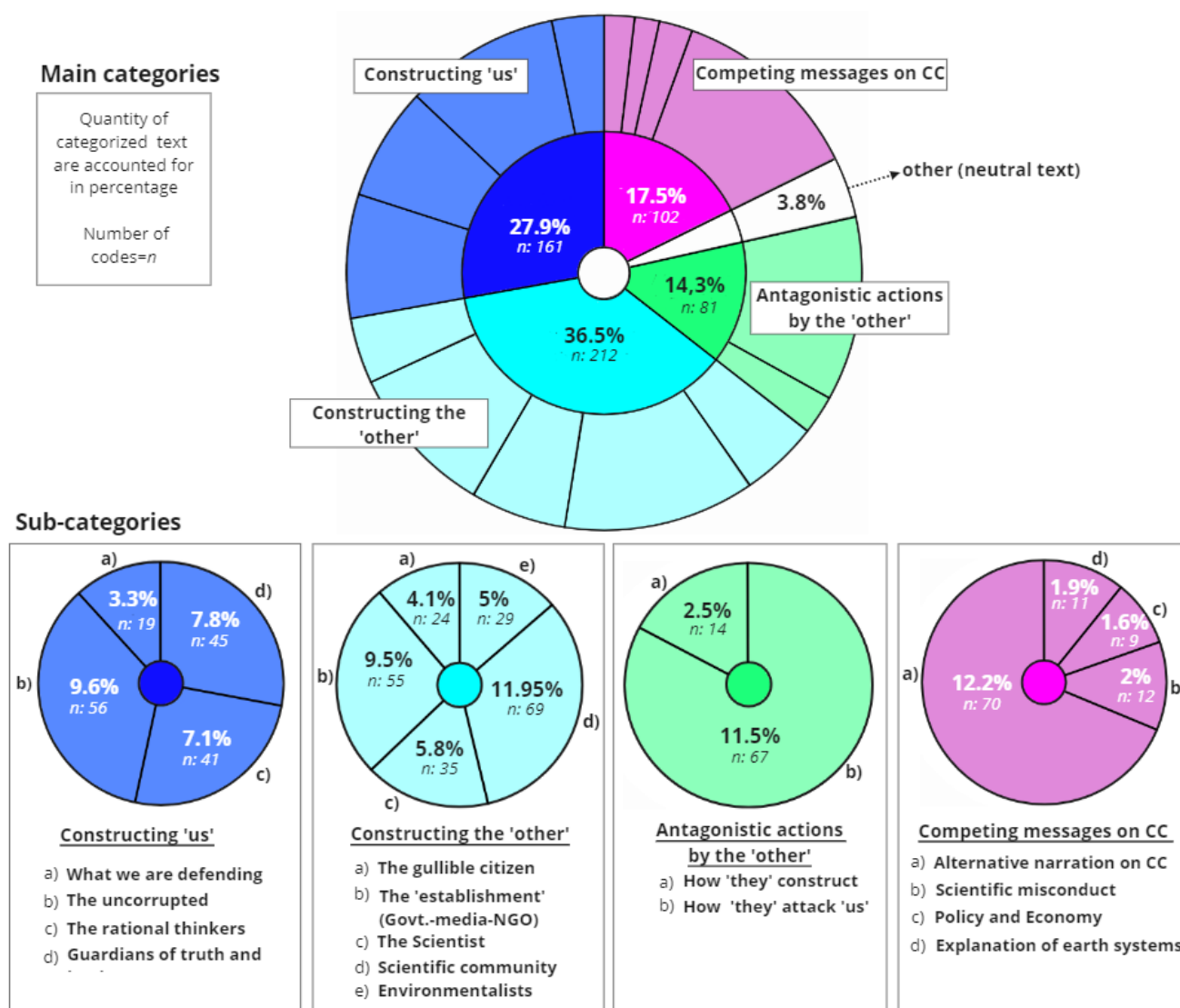


Figure 5. Visualization of the full text amount from the articles categorically coded. The charts exhibit the quantity of relational ('us' vs. 'them') constructions embedded in the contrarian counter-narrative. 50,8% of the content in the dataset centralized around constructing the antagonistic 'other' (*constructing the 'other'* & *antagonistic actions by the 'other'*), 27,9% of the content focused on *constructing 'us'*, while only 17,5% of the content focusing on scientific or policy argumentation around climate change.

5.1 (RQ.1) Which portrayal of scientific uncertainty in regards climate change is contained within the contrarian counter-narrative?

5.1.1 Trend I: False Representation based on Flaw Computer Models

The coherent critique on climate change is turned to undermine the fundamental methods and findings utilized in contemporary climate science, particularly emphasizing the climate models regularly used in scientific reports, claiming these projections fundamentally fails to represent reality. Instead, climate models are framed to consist of assumptions, exaggerated through politicization and biases (Art. 26, Art.28), where scientists seek to confirm their theories rather than reflect reality. Instead, the narrative promotes observations. Further, the climate models are framed to lack quality controls, carried out under a veil of secrecy within the scientific community, and more importantly, repeatedly fails to correspond with ‘real’ observations of mthe earth systems. Questions aligned with *“how can alarmists ignore the powerful natural forces, focus solely on air emissions associated with fossil fuel use – and call it solid, honest, empirical, consensus science?”* (Art.22) is posed. The seed of doubt planted in uncertainty within the climatic models further validate to state the overarching assumption *“the failure of the IPCC’s temperature projections to match recorded temperatures provides ample reason for not trusting any of the organization’s other projections”* (Art. 11). Instead, the narrative appeals to trust the individual experience and ‘common sense’ (Art.29).

5.1.2 Trend II: Scientific Uncertainty Inside-out

The contrarian narrative frames the reality of climate change as a highly debated matter within academia, where peer pressure is constraining alternative views on the matter to be voiced. The state-of-the-art is that *“essentially nothing in science is a known fact. They are merely the current opinions of experts based on their interpretations of the observations and their understandings of today’s theory. And different experts have different opinions, even about issues that many scientists assume are settled”*(Art.26). The existence of a scientific consensus over climate change is continuously challenge, where one piece refers to *“the largest sample of academic papers on climate ever studied – an impressive 11,944 papers over the 21 years 1991–2011”* displaying merely a 0.3% scientific consensus *“explicitly supporting the proposition recent global warming was mostly manmade”*(Art.24). This trend concludes how the contemporary academic setting, founding system and research focus systematically silence and undermine critical voices, which drip over to the statistic regarding a scientific consensus on climate change.

5.1.3 Trend III: Fossil Fuel Scapegoat

The narrative further emphasizes the scientific community's role in systematic blaming fossil fuel for the climate crises, which from their narration instead should be acknowledged as the founding element to the industrial revolution and the past century's global development, framed as a key function for conserving the environment. Arguments like; *"had the use of fossil fuels in agriculture not become widespread, the amount of habitat needed to feed the current world population would have put an additional 70 percent to 78 percent of all species at risk of extinction"*, where *"fossil fuels have saved much of the rest of nature from humanity"*(Art.7). Severe consequences are expected if politicians would be *"calling for an end to fossil fuels and modern living standards before we actually have an honest, robust assessment of supposedly "settled" climate science"* (Driessen, 2019). Banning fossil fuel policies *"is a recipe for blackouts and starvation"*(Art.21).

5.2 (RQ.2) Who is 'the other' in the narrative constructed within the editorial pieces from Heartland Institute?

5.2.1 Trend I: The Totalitarian Socialist Project (the 'establishment')

A consistent narrative of the 'other' embedded in the analyzed texts is the socialistic establishment, where the media, academia and left political block is unifying under the environmentalist agenda. The notion of a politico-legal-media effort to replace military-industrial complex and retake control over public and financial sectors through mechanisms of fear, historically aligned with communist terror or nuclear holocaust is sewn as a red thread throughout the texts. This political regime constructs 'scare-stories' *"feeding the developed world's apocalypse addiction"*, with the purpose of reinforce their *"powerful global political agenda"* (Art.27). This elitist socialistic project is framed to encompass little sympathy for the 'ordinary folks' and people with worldviews incompatible with their own; *"liberals view government as their domain, their reason for being, far too important to be left to "poorly educated" rural and small-town voters, blue-collar workers or other "deplorable" elements"* (Art.22). The overarching economical motives further corrupts the academia to pursue the types of research which benefits the 'establishments' goals, metaphorically alike two mouth feeding each other. A fundamental motive behind the socialist establishments manufacture of the climate apocalypse is to legitimize large scale interference with the free market; *"because for them, environmental protection is not measured by outcomes, but by the severity of restrictions, regardless of the quality of science used to justify them"*(Art.9). This framing of the establishment activates metaphors aligned with oppressive regimes and military warfare, signaling intolerance and punishment for posing alternative or opposing perspectives, while restricting the democratic rights of 'the people' to engage in debate. The establishment are *"refusing to engage or debate, banning or forcibly removing books and posters,*

threatening and silencing contrarians, disinviting or shouting down conservative speakers, denying tax exempt status to opposing political groups, even criminalizing and prosecuting climate change “deniers” (Art.22). The manufacturing of the apocalypse is power fueling the establishment, in a system where “catastrophe is not their fear but their joy” (Art.23). The main instrument to legitimize the political project is the scientific community, that follows the money before objectively examine the proofs.

5.2.2 Trend II: The Establishment “climate-change” scientist (the ‘agent’)

In the core of the contrarian narrative is the skepticism and delegitimization of climate science located, ultimately reflecting characteristics of the individual scientist, backed up by the scientific community. The scientific evidence is framed to be produced with biased intent behind locked doors, without transparency. Moreover, scientific results are commonly referred to as an *everchanging body of assumptions*, shifting in relation to scientific trends and political incentives. The climate science arena is framed to lack space for contestation around the findings, fostering an environment where scholars criticizing findings gets silenced and shunned from the scientific community. The academia, with climate-science in its forefront, is narrated as a top-down hierarchy, where *“there are no young and upcoming climate scientists that oppose the industry. If a young scientist opposes fake science he will be unable to remain in the scientific field. He may not be able to get a Ph.D. and he certainly can’t get a job. Remember, an entire multi-billion-dollar industry is dependent on the public credibility of fake science. Dissent is not tolerated” (Art.22)*. The motivation for producing biased results is framed as two folded: one is reliant on the peer-pressure from within, and, one is to ensure a steady stream of founding poured into climate science, since *“catastrophe theories are the geese that lay golden eggs” (Art.5)*. To camouflage the true agency behind climate-science, the secrecy tied to the scientific community is required, which include refusal to debate with contrarians. The lack of transparency over how results are produced implies the systematically manipulation of data to produce one-sided results, shying from disclosing methods, assumptions, or underlying data. The scientist is thus framed as a pawn for the totalitarian socialistic project, active in an environment where *“we can’t underestimate the temptation to lie, perhaps by omission, when there is lots and lots and more than lots of money that can be taken from rich oil companies” (Art.14)*.

5.2.3 Trend III: The Hysteria (the ‘followers’)

A third trend is founded on the battle between rationality versus emotion. The framing of ‘the other’; the environmentalist as the ‘alarmist’, is underlying the irrational and fear driven motivation for engaging in the ‘climate change hysteria’. The environmental movement and public support for climate action is fundamentally based on the manufactured appeal to the publics emotions, and thus,

making the followers victims of *“ominous trends that are contrary to the principles of the Enlightenment, returning us to an era in which inherited dogma and superstition took precedence over experimental data (Art.23)*. Frames and metaphors traditionally associated with female or childish traits is frequently used to shape this narrative, like *“the two microbiologists adore “consensus” (Art.24)*, or *“it was a touchy-feely, consciousness-raising, New Age experience, and most activities were organized at the grassroots level” (Art.23)*. The followers are the ‘normally’ educated, gullible citizen, who falls for the establishments fabricated narrative of catastrophe, without applying critical thinking to the presumed contradictions and misrepresentation the science embodies. The ‘alarmists’ is an army of political correctness, with inability to cope with critique or alternative perspectives; *“those with defensive personalities will reflexively lash out with vitriol at an author of such an (sceptic) article, as if the author were an infidel, often without reading past the title” (Art.25)*. To engage in an *“ideological conversions by means of logical argument”* with an alarmist is framed as challenging task, since they *“form their opinions based on passion. Resort to logic and data is basically window dressing to support their previously adopted opinions” (Art.5)*. Moreover, the ‘alarmists’ are constructed aligned with characteristics of religious cult, evoking frames of ‘them’ being under absolute compliance to the messages communicated by the ‘priests’ , also known as the scientists. This narration contributes to building emotional identifications and strengthening the positioning and belongingness to a group, since the framing reinforces the conception of an ingroup and an outgroup.

5.3 (RQ.3) Which ‘emotional identifications’ is the contrarian counter-narrative appealing to activate?

5.3.1 Trend I: The Moral Frontier (against the oppressor)

A red thread which has spun across the data analysis is the appeal to a moral frontier, taking stance by opposing the ignorance and oppression which characterize ‘the other’. Instead, the contrarians are guided by logic, reason, courage and *“climate one-upmanship”* active in the fight to bring humanity out of the *“climate chaos rhetoric” (Art.30)*. The career of the Astrophysicist Dr. Willy Soon is frequently symbolizing and personifying the moral frontier, being *“a textbook example of speaking truth to power and bravery facing the consequences” (Art.4)*. The constructed ‘us’ consists of *“regular folks in developed and developing countries alike”*, who sees *“this politicized, money-driven kangaroo court process for what it is” (Art.30)*. While the science-media-NGO coalition is framed to run the errands of the political establishment, *“we the people hunger for truth, as does science itself. And that hunger will inevitably eclipse our romantic dalliance with the Climate Apocalypse” (Art.27)*. The contrarian narrative comes through as the rational, critical, and honest alternative, that do not bend down to the fear driven narrative brought forward by the establishment, with statements aligned

with; *"nobody pays me to ask scientific questions where so many others, bullied and hectored by a handful of bossy conformists, fear to tread"* (Art.24). The obligation of the 'we' identified through the moral frontier and courageous citizen, consist of an effort to habitually look beyond the obvious, remain critical, and never blindly accept the 'truth' which the establishment is feeding the population. The trick is to be one step ahead, since *"Policy makers, teachers, journalists, environmentalists...all of us...really know nothing about climate change other than what trickles down from the climate scientists' desk"* (Art.25). Furthermore, the contrarian narrative continuously highlight a range of severe consequences staying silent will result in, backpedaling global development, brainwashing the next generation and setting wheels in motion which cannot be revoked.

5.3.2 Trend II: The Protectors of the 'Free World'

Still, the most dominant emphasis throughout the analysis is put in the emotional identification evoked in rejecting the constructed 'other', to stand against and halt the agenda pushed forward by 'alarmists' under a totalitarian socialistic project. The step-back for the global progress induced by environmental movements is seen as *"the most destructive strains within environmentalism: alarmism, technophobia, failure to consider the costs and benefits of alternatives, and the discounting of human well-being around the world"* (Art.23). The science and politics of climate change is framed as a chaotic, power fueled and corrupt system, where facts are established to promote specific agendas and the public are excluded from the development scheme. The motivation to control and constrain the public is synonymous to the leftist political project throughout the narrative, where; *"liberals may not care what we do in our bedrooms, but they intend to control everything outside those four walls"* (Art.22). The political correctness and moralizing tendency associated with the environmentalist is framed to camouflaged the apparatus which seeks to constrain individual and societal freedom.

5.3.3 Trend III: Belongingness to a Political Frontier under Mobilization

A third trend emerges in the frequently used warfare rhetoric's, utilizing frames like 'launching attacks', 'dictate', 'control', and 'oppressing'. The tyranny the skeptics indue when voicing critique on climate science is eliminating their constitutional right of free speak and practice of democracy, which enforces the notion of an emerging totalitarian regime. The narrative frames the contestation over climate change as a battle for acknowledgement, where they; *"endure calls for an end to free speech for climate sceptics, smearing with derogatory terms like "denier", and even aggressive punishments like dismissal and legal action against sceptics for speaking out"* (Art.21). The contrarians battle is for a 'fair game', narrated as the peaceful and rational body in the chaotic debate, where they demand to receive acknowledgement and possibilities to air their critique. Demands, continuously turned down

by the establishment. The narrative gives steam to the notion of a political frontier which is mobilizing in the forefront to march against the establishment, with the objective to preserve and restore our values (freedom, democracy, prosperity, development, national interests).

5.4 (RQ.4) Which foundational myths/metaphors are legitimizing the contrarian counter-narrative within the editorial pieces?

5.4.1 Trend I: David vs. Goliath

In the narration of the establishment as producers of a harmful and corrupted mission, through a powerful alliance between news media, academia and the global political institutions, the resistance the 'we' constitutes to protect and preserve the free world appears metaphorically like a struggle alike that between David and Goliath. This mythological relationship reference back to the pop-cultural representation in movies and literature where the hero is the underdog, fighting back to the powerful evil. This representation is situated deep in the narration, and strengthen the emotional identification surrounding the 'us', while justifying antagonistic actions against the 'other'. The mighty Goliath is representative of the establishment, who produce 'scientific results' under false pretenses, within secret chambers to inflict fear and blind obedience into the public, motivated to advance their power and control over the global social and financial sectors. David unequal conditions are embodying the contrarian 'resistance', with the objective expose the 'truth' to the world and set the people free from fear and deception.

5.4.2 Trend II: They Keep Us in the Dark (the new enlightenment)

While the scientific community both are constructed as pawns on the establishment board, and as equally responsible to conceal or abstract the truth, a continuous call to confront and expose their 'real' objectives is emphasized. As augmented in Art.23; *Lord Taverne believes these are ominous trends that are contrary to the principles of the Enlightenment, returning us to an era in which inherited dogma and superstition took precedence over experimental data.* Metaphorically, this narration connects to 'they want to keep us, the people, in the dark'. This relationship constitutes a notion that science cannot be trusted, so instead, we need to trust ourselves. Pop-culturally, these drive to self-gained enlightenment links to the 'red-pill, blue-pill' metaphor brought forward in the 1999 sci-fi movie the Matrix, where choice between facing the unsettling truth of the 'power-holders' manipulation of reality by choosing to swallow the red pill, or, remaining trusting and ignorant by choosing the blue pill (Gunkel, 2008). When affiliating to the contrarian narrative, the appeal to 'make your own research' is continuously made. The individual research is possible through the technological development which made all information available to everyone through a simple 'click'. In this new

world, everyone can and should be a rational scientist. The appeal follows the principles of the Enlightenment era, where the search for the truth through reason and logic, to take charge of the narration and connect the dots individually.

5.4.3 Trend III: The Religious Cult (blind faith)

The final trend is manifesting in the myth of the religious cult, where the eco-fundamentalist makes out a new kind of sect, where 'true' objective science and reason is overshadowed by blind belief in the soon-to-come apocalypse. As stated in Art.19; *Ecofundamentalists have reinterpreted traditional Judeo-Christian beliefs and myths and made a religion of environmentalism. This religion has its own Eden and paradise, where mankind lived in a state of grace and unity with nature until mankind's fall, which came not after eating a forbidden fruit, but after partaking of the forbidden tree of knowledge — that is, science*". This new religion is keeping the gullible public fooled under a veil of emotions and scare stories, and it is up to the rational citizens to critically expose the misconceptions and deceptions planted by the self-serving establishment and produce antidotes for this belief system. This trend manifests in Art.24; *"the two hate-speakers tediously trundled through the history of challengers to the scientific establishment who were proven right ..., but they did so without appreciating that it is we climate skeptics today who are the scionoclasts, and it is the entrenched and generally totalitarian academic elite with which they pietistically identify themselves that is as wrong today..."*. The constructed 'other' found in the public are situated in the forefront of the eco-fundamentalist agenda, shepherded by the corrupted establishment false narrative. While the contrarian resistance constructed in the 'us' refuses to be the sheep's and blindly follow the masses.

6. Discussion

The reconstructed counter-narrative has exhibited the dominant antagonistic constructions in the dataset, displaying the significance of relational narration in climate change contrarianism. At first glance, the contrarian narrative could appear simplistic, but through implementing the four different layers of representation, a more comprehensive understanding of the constructed *reality* and socio-emotional drivers the contained in the counter-narrative emerges. The findings have demonstrated how the counter-narrative consistently utilizes antagonism towards a constructed 'other' to foster engagement, where the 'others' are represented in multiple forms and at different levels- The relational constructions outshine scientific counter-argumentations over climate change in the dataset. By scrutinizing and degrading the characteristics of the scientist, the scientific community and the 'socialistic establishment', a strong, rational, and courageous 'we' takes shape that constitutes solid ground for emotional identification and political activation.

To proceed into the discussion, I will pursue the objective of this paper, and unfold the socio-emotional identifications embedded in the contrarian counter-narrative, and their manifestation in relational terms on a socio-emotional level. Guided by my theoretical framework, I intend to forward this discussion from the *specifics* found in the reconstructed counter-narrative, to *general* implications associated.

6.1 Defending identities - masculine hegemonic privilege

In line with Anshelm & Hultman (2014) observation over the threat climate change embodies towards the position of industrial masculinity, the counter-narrative is attached to a glorified view of the enlightenment era and its boost of global development and prosperity, which sustainability proponents are painted to dismantle. The findings antagonistic constructions emphasize the environmentalists turn away from the enlightenment, both in terms of the maintaining a free-market society and rational thinking. As demonstrated in Art 23; “[...]“*the new kind of fundamentalism*” that has infiltrated many environmentalist campaigns — an indiscriminating back-to-nature movement that views science and technology as the enemy and as a manifestation of an exploitative, rapacious, and reductionist attitude toward nature. It is no coincidence, he believes, that ecofundamentalists are strongly represented in antiglobalization and anticapitalism demonstrations worldwide”. To expand the symbolic value the glorified enlightenment era represents in the counter-narrative, an aspect to consider is the separation between male and female the enlightenment era embodies, symbolized by men/culture ruling over women/nature (Anshelm & Hultman, 2014), substantiating the female characteristics attributed the 'other' (see section 5.3.3), characteristics further projected on male proponents of the environmental movement.

As Martha Nussbaum (2018, p.193-194) points out, feelings of fear and envy flares up when groups feel excluded from advantages, and undoubtedly, white men (particularly in the middle-lower class) are losing out on many levels in US today. These political emotions conditions a strong belief in personal privileged entitlement, where the foundational socio-emotional driver emerges from a notion of the 'others' unrightfully are replacing 'us' (ibid).

Expanding the binary relationship of man/culture and woman/nature, one apparent socio-emotional driver the contrarian narrative mobilizes is thus a *fear of irrelevance*, where the defense of white masculine privilege energizes the binary relationship with environmentalist, antagonistically constructed in terms of 'alarmists' and 'hysterics', both historically female characterized¹. Put in relation to the societal shift promoted in the environmental agenda, where the enlightenment conception is turned replaced with *nature rules culture*, the drive against 'environmentalist' control becomes entangled with a drive to preserve industrial masculinities position in a social hierarchy. This notion is strengthened by the metaphor of the underdog rising 'to power' on the mission retain/protect/restore the 'good world' (see 5.5.1).

6.2 Embracing the rational, reassuring narration

Indisputably, climate change is not a pleasant idea, which contributes to affiliating to a belief that reality is exaggerated and manipulated. The counter-narrative offers a comfortable truth, contrasting with the abstract, complex, and often dystopian aspects climate change embodies. A serious challenge in communicating climate change related issues to non-experts is the lack of frames appropriate for comprehending *systematic causation*, essential for comprehending the impacts associated with climate change. Currently, the majority of familiar frames relates to linear causation (where one frame activates another) (Lakoff, 2010), which makes the arguments brought forward in the counter-narrative largely comprehensible, thus, perceived as more rational. Represented in; "*The bigger mystery has always been why the Left would create a boogeyman of the weather. After all, we all experience the weather. We know if it's hot or cold. Who would have thought it was so easy to convince people that their own senses are lying to them and that the climate really has undergone calamitous changes over the past couple of decades?*"(Art.29).

Thus, the belief that 'facts will speak for themselves', robust enough to eventually sway the contrarian affiliates is a risky strategy. Facts' ability to convince the public is deeply undermined when mistrust

¹ 'Hysteria' was in the early 19th a diagnosable mental illness in females, manifested in the expression of uncontrollable emotions. This overrepresentation of exaggerated emotions is also attributed to 'alarmists'(Tasca et al., 2012)

for the messenger (the scientist), and the system (the totalitarian socialistic project) is rooted, combined with complex, contradictory, and confusing frames surrounding climate change.

6.3 The power in the seed of doubt

As the counter-narrative persistently implant potent seeds of doubt in the fundamental knowledge and information structures of society (e.g. the scientific community, news media and the 'establishment'), the seeds of doubt inflicts gaps in narrative, presenting an opportunity to distort and reshape the essential experience of the world. The cognitive machinery seeks to fill the gaps with new frames to restore a coherent narrative. By hijacking the associated framings utilized in communication around climate change, while repeatedly framing the sources of basic information in terms of 'shady motives', 'corruption' and 'oppression', the entire trust-structure is damaged, which activates a socio-emotional drive to disregard everything leaving the mainstream information platforms.

The recipients of the contrarian counter-narrative are encouraged to 'think for themselves', while simultaneously obtaining the exhaustive counter-narrative to think within. The socio-emotional dimensions activated through the counter-narrative thus pre-structure the individual journey to analytically approach the subject of climate change. Through the illusion of 'making-your-own-connections', a pathway to inductively accept new frames which reinforces the counter-narrative initiates. The analyzed narrative blends elements of truth and facts, e.g. considerable global investments in climate research, levels of uncertainty embedded in the endeavor to predict the influences of climate change, and, general exclusion for contrarians to partake in the scientific 'debate', being truth. These grains of truth impose a sense of credibility into the contrarian counter-narrative, where the antagonistic constructions on e.g. misuse of power and 'manipulation' of climate data fits well, creating a perception of a powerful 'establishment' on a wicked mission. With increased cultural attention given climate change in the public sphere, manifested in enhanced social mobilization demanding climate action, backed by powerful global institutions (IPCC, UN, EPA. etc), the counter-narrative repeatedly evoking a sense of illegitimacy through frames of deceptiveness, corruption, and oppression, will likely get reinforced with growing attention. If recipients accept (even only particular aspects of) the counter-narrative construction of a corrupted and money driven scientific community, this will alter, and possibly restructure the entire set of frames associated with climate change. Moreover, the relational antagonism rooted in the narrative is additionally strengthened through news-media and the academia's common response to condemning contrarian attitudes, and imposing a moral frontier, deepening the sense of oppression.

6.4 Challenging the counter-narrative – agonistic deliberation

At the current juncture, the contrarian counter-narrative has often been able to flourish in isolation, unquestioned, where the absence of debates, constructed to be due to the scientific community and establishments unwillingness to be questioned, has become one of strongest weapons for contrarianism.

In the light of the post-political notion, the public desire and democratic right to engage within *the political* are currently in conflict with a lack of opportunities for real new alternatives to engage with. With the antagonistic relationality stitched as a red thread throughout the contrarian counter-narratives exhibited in the findings, the oppressive character attached to the totalitarian ‘other’ deepens the socio-emotional drive mobilized around a sense exclusion from ‘the political’. In the US public sphere where climate change contrarianism evidently is seizing new ground, this isolated setting is beneficial for the contrarianism, who effectively can pursue the populist construction of ‘us’ against ‘them’. In this environment where reactionary feelings of exclusion from the political debate, brought forward in the counter-narratives, antagonism are like to become reinforce when this socio-emotional frustration is not meet with some form of *agonistic* deliberation (Martin, 2013; Mouffe, 2019).

Based on the socio-emotional *weapon* this sense of exclusion provides the influential voices in contrarianism, leaning on the construction of the powerful ‘others’ refusal to engage in debate, this notion might be the most sufficient construction to actively engage with, and thus, dismantle. In a political environment fueled with antagonism, the strategic application of Mouffe’s vision of *agonistic* could strengthen the capacity to challenge the socio-emotional constructions based on exclusion embedded in the counter-narrative. Based on the scope of this paper, tangible strategies over how this can be done in practice, while an urgency to strategize around conveying communication to non-experts affiliated to contrarianism is clear. A considerable challenge in this endeavor, however, would be to prevent enhancing the powerful voice lobbying organization behind the contrarian counter-narrative obtain in the public sphere.

6.5 Approach Limitation and Future research

As in most qualitative research, the interpretive nature of the research design employed in this narrative analysis implies limitation the findings, of which I want to be explicit. My sampling was centered around one platform (Heartland Institute), and one format (editorial pieces) with the purpose of capture a coherent counter-narrative pinning down climate change contrarianism. While this was successfully completed, the many nuances, manifestations, and levels the counter-narratives

activates in the social sphere was not covered. To fully understand the implications the type of counter-narrative examined for this paper implicates on different levels and socio-political contexts, a wider scope with complementary forms of data (e.g., social practice, social-media platforms, interviews), and a timeframe allowing observations of changes and influences over time is recommended. Future research which considers the socio-emotional drives activated in contrarianism would be of value for strengthening communication strategies seeking to dismantle the powerful counter-narratives which could undermine sustainability efforts and contribute bridge-the-divide between polarized attitudes. While this research can contribute to grow awareness on how antagonistic constructions active in this counter-narrative manifests and interlink with socio-emotional dimensions, the complexity and practical implications the contrarian counter-narrative poses was beyond the scope of this paper to uncover.

7. Conclusion

To conclude, this paper has underpinned the antagonistic constructions active in the climate change contrarian counter-narrative in the US, while navigating several socio-emotional dimensions consequently activated. Through reconstructing the counter-narrative brought forward in editorial pieces from the think-thank Heartland Institute, a central narration about the antagonistic 'other' was established, which by far outshined the scientific argumentation around climate change. The constructed antagonist is embodied at all societal levels, with the 'establishment', scientific community, individual scientist, and the 'alarmist' public constituting the main characters. In turn, the socio-emotional identification the counter-narrative facilitate provides a powerful political frontier in the shape of *we, the people*, colored by characteristics of underdogs, rational thinkers, and protectors of the 'free world'.

The relational nature demonstrated in the counter-narrative points to the importance to enhance awareness of *what* the antagonistic constructions consist of, and *how* they manifest relationally in the social sphere, socio-emotionally motivated. This paper show how the relational traps consistently planted in the counter-narrative extensively limits the ability to convey scientific knowledge to contrarian affiliates. Instead, scientific communication is likely to exacerbate the socio-emotional identification of antagonism the counter-narrative seeks to activate. These results could contribute to the existing body of research covering the ideological roots and socio-political dimensions of climate change contrarianism, through demonstrating the underlying constructions for identification and emotionally motivated engagement.

For future research, enhancing the awareness of the *relational* traps constructed in climate change contrarian counter-narratives would benefit to be studied over time, in larger scale, and within different geographical and cultural settings. Extended knowledge over what the counter-narratives embodies would contribute to better recognize how the underlying drivers of contrarianism manifests in diverse socio-cultural environments, which also provides insights in how they can be bridged. In turn, studies of contrarian counter-narratives would aid in strategically tackle the dilemma of how to better convey scientific knowledge around climate change across polarized attitudes on a more structural level, with possibility to expand social capacity supporting cultural and societal transformations towards sustainable trajectories.

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APPENDIX I

Articles with respective URL, listed after numbers of associated codes in the main analysis

Ref	Article title	Codes	URL
Art.23	Earth Day has Become Polluted by Ideology and Ignorance	47	https://blog.heartland.org/2017/04/earth-day-has-become-polluted-by-ideology-and-ignorance/
Art.5	Tell a Big Lie and Keep Repeating It	41	https://www.heartland.org/news-opinion/news/tell-a-big-lie-and-keep-repeating-it
Art.22	Five Stages of Climate Grief	41	https://blog.heartland.org/2016/11/five-stages-climate-grief/
Art.29	The Global Warming Cult is Polluting Children and Adult Minds	35	https://blog.heartland.org/2019/10/the-global-warming-cult-is-polluting-children-and-adult-minds/
Art.21	Climate Science is NOT Settled	34	https://blog.heartland.org/2016/08/climate-science-is-not-settled/
Art.27	Dr. Willie Soon versus the Climate Apocalypse	30	https://blog.heartland.org/2018/12/dr-willie-soon-versus-the-climate-apocalypse/
Art.30	Climate Hysterics Skyrocket	29	https://blog.heartland.org/2019/01/climate-hysterics-skyrocket/
Art.4	A Few Facts For Climate Alarmists Waging War Against Astrophysicist Willie Soon	28	https://www.heartland.org/news-opinion/news/a-few-facts-for-climate-alarmists-waging-war-against-astrophysicist-willie-soon
Art.8	Climate Alarmists Push Panic Button	27	https://www.heartland.org/news-opinion/news/climate-alarmists-push-panic-button
Art.24	Don't Call Climate Skeptics 'Deniers,' Call Us 'Correct'	27	https://blog.heartland.org/2017/10/dont-call-climate-skeptics-deniers-call-us-correct/
Art.18	Green Activists Hate Trump More Than They Love Animals	24	https://www.heartland.org/news-opinion/news/green-activists-hate-trump-more-than-they-love-animals
Art.7	Sustainability Is Not Sustainable, Climate Panelists Say	22	https://www.heartland.org/news-opinion/news/sustainability-is-not-sustainable-climate-panelists-say
Art.6	Alarming Climate: Expert Opinions and Government Funding Versus Scientific Forecasting	21	https://www.heartland.org/news-opinion/news/alarming-climate-expert-opinions-and-government-funding-versus-scientific-forecasting
Art.14	California Sues Over Global Warming, Judge Orders Climate Lesson	21	https://www.heartland.org/news-opinion/news/california-sues-over-global-warming-judge-orders-climate-lesson
Art.25	We Need Some Climate Skeptics	21	https://blog.heartland.org/2018/11/we-need-some-climate-skeptics/
Art.9	When Environmentalists Oppose Science	20	https://www.heartland.org/news-opinion/news/when-environmentalists-oppose-science
Art.13	EPA's Non-Politicized Science Benefits Americans	19	https://www.heartland.org/news-opinion/news/epas-non-politicized-science-benefits-americans
Art.15	Is Climate alarmist Consensus About to Shatter?	18	https://www.heartland.org/news-opinion/news/is-climate-alarmist-consensus-about-to-shatter
Art.1	On Climate, Ad Hominem, Funding, and Facts	17	https://www.heartland.org/news-opinion/news/on-climate-ad-hominem-funding-and-facts
Art.3	Open Letter to Attorneys General about Climate Change	17	https://www.heartland.org/news-opinion/news/open-letter-to-attorneys-general-about-climate-change
Art.11	Trump Points Out Political Agenda Behind Climate Change Activism	17	https://www.heartland.org/news-opinion/news/trump-points-out-political-agenda-behind-climate-change-activism
Art.12	Reforming the Culture of Science at EPA	17	https://www.heartland.org/news-opinion/news/reforming-the-culture-of-science-at-epa
Art.20	Crisis Looms in Alarmist climate science	17	https://www.heartland.org/news-opinion/news/crisis-looms-in-alarmist-climate-science
Art.2	Obama's Attorney General Says She's Considered Using An Old Law To Silence Global Warming Critics	16	https://www.heartland.org/news-opinion/news/obamas-attorney-general-says-shes-considered-using-an-old-law-to-silence-global-warming-critics
Art.26	Let the Climate Debate Begin!	13	https://blog.heartland.org/2018/02/let-the-climate-debate-begin/
Art.28	Evidence of Climate Model Misuse	13	https://blog.heartland.org/2018/10/evidence-of-climate-model-misuse/
Art.17	A Post-modern 'Nonsense' Critique of NIPCC	10	https://www.heartland.org/news-opinion/news/a-post-modern-nonsense-critique-of-nipcc
Art.16	The Good, the Bad, and the Missed Opportunities of the 'Climate science Tutorial' in San Francisco	8	https://blog.heartland.org/2018/03/the-good-the-bad-and-the-missed-opportunities-of-the-climate-science-tutorial-in-san-francisco/
Art.19	Study suggests no more CO2 warming	7	https://www.heartland.org/news-opinion/news/study-suggests-no-more-co2-warming
Art.31	Free Speech? Forget It.	7	https://blog.heartland.org/2021/01/free-speech-forget-it/
Art.10	Climate Scientist Spencer Describes Corrosive Role of Government Funding	6	https://www.heartland.org/news-opinion/news/climate-scientist-spencer-describes-corrosive-role-of-government-funding

APPENDIX II

Table for overviewing the overarching nodes utilized in the main analysis, contextualized through text samples.

LITANY: nodes				
Overarching Nodes	Description	Codes	Articles	Text Samples
Competing views on CC - deductively emerged	<ul style="list-style-type: none"> Locate to overarching patterns and paradoxes in the counter-narrative's argumentation against the scientific consensus and knowledge around CC 	70	20	"Predicting the future climate of the Earth by using computer models is not solid science. The predictions are subject to manipulation and uncertainty. Predictions are made by averaging the results from models that don't agree with each other, and they don't even use the same climate histories to calibrate the models. At best the methodology is highly dubious, at worst the methodology is simply a pseudoscientific smokescreen designed to produce a predetermined result. (Art.5) "So where do we go to get some truth about the unvarnished facts, and more importantly, sources that do not manipulate data to support an agenda, or at least obscure the reality of what is happening over a longer time frame rather than cheerily pick data to support a pre-ordained position." (Art.29)
	<ul style="list-style-type: none"> Locating argumentation around the costs, risks and dangers of CC mitigation 	9	5	The debate over regulation often devolves into a debate about "too little" versus "too much" regulation, split along the ideological divide. Too little regulation, goes the argument, and we are exposed to too much risk. Too much, and we don't advance." (Art.9) "Currently, regulatory costs top \$1.9 trillion annually, which amounts to \$14,842 per household. That's nearly \$15,000 less for Americans to pay for health insurance, medical bills, education expenses, groceries, gasoline, or entertainment." (Art.13)
	<ul style="list-style-type: none"> Locating their alternative scientific understanding that backs up their competing views on CC 	11	7	"We are told that Earth's climate is controlled by the gradual increase of a tiny trace of one colourless gas in the atmosphere. But Clexit has specialists who can show that the warm and cold currents in the deep and extensive oceans, the variable water vapour on weather and climate than carbon dioxide. We are told that carbon dioxide is a pollutant. But Clexit has organic chemists, biologists, physicians, naturalists, graziers, foresters and farmers who know that extra carbon dioxide in the atmosphere is very beneficial for Earth's biosphere – deserts are contracting, bush and forests are expanding, and crop yields are up. We are told that sea levels are rising alarmingly. But Clexit has experts on sea level history and measurement who can prove that there is nothing unusual or alarming about current fluctuations in sea levels." (Art.21)
	<ul style="list-style-type: none"> Locating the argumentation on historical example of misconduct, indirectly relational to CC, flaw, biased or wrong results 	12	4	"The result attained through climatic models is labeled pure assumptions, regarded as "nothing more than educated guesses or simple assertions." (Art.28) "Observation is argued as the direction to reach to sound scientific conclusions; "what about observation, which is supposed to rule in science? The scientific method says observation trumps theoretical modeling." (Art.20) "Using LNT as a basis for regulation of environmental clean-ups, setting safety standards for nuclear plants, and limiting low-dose radiation treatments for medical patients has cost lives and millions of dollars." (Art.12)

The Political: nodes

Overarching Nodes	Description	Codes	Articles	Text Samples
Character of the 'other' - inductively emerged	<ul style="list-style-type: none"> Locate characteristics attributed to the 'other' Nuances the constructions 	88	22	"Taverne deplores the "new kind of fundamentalism" that has infiltrated many environmentalist campaigns — an indiscriminating back-to-nature movement that views science and technology as the enemy and as a manifestation of an exploitative, rapacious, and reductionist attitude toward nature. It is no coincidence, he believes, that ecofundamentalists are strongly represented in antiglobalization and anticapitalism demonstrations worldwide." (Art 23)
The political 'project' - inductively emerged	<ul style="list-style-type: none"> Locate how the 'threat' posed by the establishment is constructed 	22	12	"The Left has long been intolerant of alternative viewpoints. Refusing to engage or debate, banning or forcibly removing books and posters, threatening and silencing contrarians, disinviting or shouting down conservative speakers, denying tax exempt status to opposing political groups, even criminalizing and prosecuting climate change "deniers" — have all become trademark tactics." (Art. 22) "Far be it from me to suggest university and government scientists, bureaucrats, and regulators might overstate their certainty about human-caused climate change and its
The scientist - deductively/inductively emerged	<ul style="list-style-type: none"> Locate the characteristics constructed around the scientist Examine connection with notions of scientific uncertainty 	63	20	"Sadly, many of today's environmentalists see science only as a tool to advance an anti-progress political agenda. When the science contradicts the agenda, the science is the first to fall by the wayside." (Art.9) "If you want to tell a big lie, a good vehicle is "science." Like a wolf hiding in a sheep's skin, lies hide in lab coats worn by liars with Ph.Ds. We are gullible because science and scientists have a positive image. The positive image belongs to the science of the past, before the entrepreneurial idea of inventing fake catastrophes to attract vast sums of government money." (Art.5)
The scientific community - deductively/inductively emerged	<ul style="list-style-type: none"> Locate the construction around scientific uncertainty due to corruption and abuse of power on an institutional level 	69	23	"From its very formation, the IPCC was a political, not a scientific organization, directed by politicians to research the "human causes" of climate change—as if nature—the Sun, clouds, and oceanic cycles, for example—plays no role in climate."(Art.11)
The environmentalist - deductively/inductively emerged	<ul style="list-style-type: none"> Locate the construction of the 'other' in the social sphere, and the roots values associated with 'alarmist' 	29	11	"Ecofundamentalists have reinterpreted traditional Judeo-Christian beliefs and myths and made a religion of environmentalism. This religion has its own Eden and paradise, where mankind lived in a state of grace and unity with nature until mankind's fall, which came not after eating a forbidden fruit, but after partaking of the forbidden tree of knowledge — that is, science." (Art.19)

WORLDVIEW: Nodes

Overarching Nodes	Description	Codes	Articles	Text Samples
We, the people' - inductively emerged	<ul style="list-style-type: none"> Locating the construction of 'us', and the values and worldview associated 	63	22	"Regular folks in developed and developing countries alike see this politicized, money-driven kangaroo court process for what it is. They also know that unproven, exaggerated and fabricated climate scares must be balanced against their having to give up (or never having) reliable, affordable fossil fuel energy. That is why we have "dangerous manmade climate change" denial on this scale." (Art. 30) "That is why we must get the facts out by other means. It is why we must confront Congress, media people and the Trump Administration, and demand that they address these realities, hold debates, revisit the CO2 Endangerment Finding — and stop calling for an end to fossil fuels and modern living standards before we actually have an honest, robust assessment of supposedly "settled" climate science." (Art.30)
Emotional identification - inductively emerged	<ul style="list-style-type: none"> Locating the constructions appealing to emotions and identification Locating deeper or underlying motives 	82	22	"We ask the media to give our soundly-based dissenting conclusions a fair hearing — "It is important we don't get this wrong. Because people suffer and die when science becomes unquestioned dogma." (Art.25) "What we should be alarmed about is the perverse and widespread brainwashing, of our young people as well as many naive and gullible adults, with doomsday tales regarding climate change." (Art.29) "Policy makers, teachers, journalists, environmentalists...all of us...really know nothing about climate change other than what trickles down from the climate scientists'
Oppression from the elite - deductive/inductively emerged	<ul style="list-style-type: none"> Locate how actions and threats from the antagonistic and powerful other is constructed 	43	16	"I can't get it out of my mind that the university office building of climatologist John Christy — who shares Willie's skepticism of Climate Apocalypse — was shot full of bullet holes last year. But let's not let a spattering of gunfire spoil a friendly scientific debate. Right?" (Art.27) "Climate alarmists have worked hard to deprive dissenters of research funds, jobs, and publication while hiding their own scientific misconduct." (Art.3)

METAPHOR: Nodes				
Overarching Nodes	Description	Codes	Articles	Text Samples
Antagonistic metaphors -inductively emerged	<ul style="list-style-type: none"> Locate the underline enmity, which legitimizing active opposition and resistance 	43	14	<p>"[...]dominated by alarmists addicted to the idea that increasing carbon dioxide will cause dangerous global warming." (Art.20)</p> <p>"In just such ways they sell us their Climate Apocalypse – along with the roll-back of human energy use, comfort, living standards and progress: sacrifices that the great green gods of Gaia demand of us if we are to avoid existential cataclysms. Thankfully, virgins are still safe – for now." (Art.27)</p> <p>"There are also those who think that non-believers in the catastrophe are mentally ill. The obvious solution is to send the skeptics to prison or to an insane asylum. Why should we think that true believers in global warming, if they gain enough power, would be less totalitarian than communists?" (Art.5)</p>
	<ul style="list-style-type: none"> Locate myths/metaphors which reinforces the construction of 'us', and what this 'we' constitutes of 	46	22	<p>"[...]the two hate-speakers tediously trundled through the history of challengers to the scientific establishment who were proven right ..., but they did so without appreciating that it is we climate skeptics today who are the scionoclasts, and it is the entrenched and generally totalitarian academic elite with which they pietistically identify themselves that is as wrong today..." (Art.24)</p> <p>"The tide is turning, and informed opposition is growing. It is time for the thinking media to give sceptical evidence and conclusions a fair go in the court of public opinion." (Art.21)</p> <p>"We the people hunger for truth, as does science itself. And that hunger will inevitably eclipse our romantic dalliance with the Climate Apocalypse." (Art.27)</p>

APPENDIX III

Article Sample (Art.5)

TELL A BIG LIE AND KEEP REPEATING IT

NOVEMBER 17, 2017

By [Norman Rogers](#)

If you want to tell a big lie, a good vehicle is “science.”



If you want to tell a big lie, a good vehicle is “science.” Like a wolf hiding in a sheep’s skin, lies hide in lab coats worn by liars with Ph.Ds. We are gullible because science and scientists have a positive image. The positive image belongs to the science of the past, before the entrepreneurial idea of inventing fake catastrophes to attract vast sums of government money.

When a lie is backed by millions of government dollars, it is difficult for the truth to compete. The truth comes from scientists not corrupted by money, and from small organizations dependent on private donations. The truth is outgunned by government financed propaganda mills. The promoters of fake catastrophe depict themselves as disinterested idealists. The promoters of the truth are depicted as servants of evil industries, or as mentally disturbed crackpots.

Pravda was the official newspaper of the Soviet Union. *Pravda* means “official truth” in Russian. Pretty much everyone in Russia knew that there was very little truth in the pages of *Pravda*. But to publicly dispute the “official truth” was a very dangerous step. Often dissenters were sent to insane asylums. In the United States, as a climate skeptic, you may lose your job. Almost certainly you will be vilified as incompetent. But so far, you won’t go to prison or to an asylum, although there are calls to [criminally prosecute](#) “climate deniers.” There are also those who think that non-believers in the catastrophe are [mentally ill](#). The obvious solution is to send the skeptics to prison or to an insane asylum. Why should we think that true believers in global warming, if they gain enough power, would be less totalitarian than communists?

Fake science prospers for a number of reasons. Investigative reporters are mostly ignorant concerning science. The average educated person is equally ignorant. Often those who do understand that something is fake don’t dare speak up because they work for bureaucracies that are promoting the fake science.

Solar power is an example of a fake idea that prospers. Billions of dollars are being spent to install solar power. It is often claimed that solar power is competitive with traditional methods of generating electricity -

- a completely fake claim. There are plenty of people who have exposed the fake nature of solar power, but their side of the story rarely makes it into the popular media. It is not difficult to understand that solar power has severe problems. After all, it doesn't work at night. If you mention that fact to a believer in solar power he may suggest that batteries can be used to provide power at night. To refute that the argument gets a bit more complex. Batteries are exorbitantly expensive and wear out quickly. Sometimes the sun doesn't shine in the day, in which case the battery won't be recharged for the next night. (See [here](#) and [here](#) for more on solar power.)

If obvious, stupid lies, like the competitiveness of solar power, can gain popularity, how can more complicated lies be refuted? Frankly, I don't know. As long as those with the potential to expose the frauds are taken in and those who are not taken in are afraid to speak, it's hard to see how fake science can be stopped or slowed down.

I spent years going to scientific conferences, reading scientific journals and [writing articles](#) to try to expose the global warming/climate change fake science industry. I found plenty of scientists who shared my viewpoint, but most keep a low profile concerning their skepticism. Their children need to eat.

The scientists who openly oppose the climate catastrophe industry are invariably retired or otherwise occupy impregnable positions that protect them from economic retaliation. There are plenty of informed climate skeptics. You can consult a list of [1,000 such scientists](#) that oppose global warming alarmism. There are no [young and upcoming climate scientists](#) that oppose the industry. If a young scientist opposes fake science he will be unable to remain in the scientific field. He may not be able to get a Ph.D. and he certainly can't get a job. Remember, an entire multi-billion-dollar industry is dependent on the public credibility of fake science. Dissent is not tolerated.

The U.S. Global Change Research Program (USGCRP) is a bureaucratic edifice that the Trump administration has apparently neglected to sweep into the dustbin of history. The USGCRP is an unapologetic promoter of climate catastrophe. Its scientific credibility is nil. Its reports are filled with unsupported fantasy and cherry-picked data.

The USGCRP's most recent report is the [Fourth National Climate Assessment | Volume I](#). The report is nearly 500 pages long and over 100 authors, editors, contributors, etc. are listed. Although the report is filled with dubious claims, bad methodology and just plain scare stories, refuting the report page by page is an impossible task. It is much easier to make wild claims than it is to explain why these claims are fantasies or even to point out reasons for skepticism. Many scientists have criticized this report as deceptive, politicized and containing outright lies. See, for example: [here](#), [here](#), [here](#), [here](#), [here](#) and [here](#).

The USGCRP report gives away the game because the "key findings" are based on the "authors' expert judgment of the synthesis of the assessed literature." In other words the report is nothing more than the authors supposedly expert judgment. If the authors' expert judgment does not predict a climate catastrophe, then there is no need for the report and the authors would soon be unemployed.

Predicting the future climate of the Earth by using computer models is not solid science. The predictions are subject to manipulation and uncertainty. Predictions are made by [averaging the results](#) from models that don't agree with each other, and that don't even use the same climate histories to calibrate the models. At best the methodology is highly dubious, at worst the methodology is simply a pseudoscientific smokescreen designed to produce a predetermined result. The output of the models, in the words of an important scientist, [bear no resemblance](#) to the actual climate of the Earth. Yet, to a layman reading the impressive and voluminous reports, it may seem that climate prediction is on a par with using computers to predict eclipses.

Mother Nature is not cooperating with fake global warming science because the Earth has failed to warm for the last [two decades](#). That simple fact is obscured by the propaganda of the climate catastrophe industry.

Back in 2011 I attended several meetings of the Federal Advisory Committee for the USGCRP when the previous report, published in 2013, was in preparation. I wrote an [article](#) detailing the fake nature of the advisory committee. Federal advisory committees are supposed to represent a wide spectrum of views,

but this committee was specially selected to support a predetermined outcome. In any case, the committee had no interest in discussing, much less disputing, the global warming catastrophe theory. The committee was only interested in the best way to present propaganda supporting the catastrophe theory.

Opinion on global warming/climate catastrophe is split between Democrats and Republicans. The Democrats generally buy into global warming. The green part of their electoral base represented by fanatical believer organizations, like the Sierra Club, practically forces democrat politicians to preach climate catastrophe. The Republicans are generally skeptical, but sometimes favor green policies such as solar power or wind power. A few politicians, such as Ted Cruz, actually show glimmers of understanding the scientific issues.

As the Italian philosopher [Wilfredo Pareto](#) pointed out, people form their opinions based on passion. Resort to logic and data is basically window dressing to support their previously adopted opinions. That's why it is so difficult to make ideological conversions by means of logical argument.

Scientists are supposed to be different and form their opinions based on logical analysis. But catastrophe theories are the geese that lay golden eggs. If a school of scientists can invent a catastrophe theory they will be showered with government money. After all, it is the government's job to prevent catastrophes. There are plenty of scientists for whom science trumps money, but for the important bureaucrat scientists that exercise power and run things, money trumps science by a mile.

[Originally Published at [American Thinker](#)]

ARTICLE TAGS

[ENVIRONMENT](#)

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