Disentangling the Climate Divide with Emotional Patterns: a Network-Based Mindset Reconstruction Approach

Authors: Roger Cremades $^{1,2,*}$, Massimo Stella $^{3,4,*}$.

1 Wageningen University & Research, Hollandseweg 1, Wageningen 6700 HB, the Netherlands.
2 Climate Service Center Germany (GERICS), Helmholtz-Zentrum Hereon, Fischertwiete 1, 20095 Hamburg, Germany.
3 CogNosco Lab, Department of Computer Science, University of Exeter, EX4 4QF Exeter, UK.
4 Complex Science Consulting, Via Amilcare Foscarini, 2, 73100 Lecce LE, Italy.
5 Both authors contributed equally to this work.

*Correspondence to: roger.cremades@wur.nl and m.stella@exeter.ac.uk.

Abstract:

Extreme political populism has been fiercely spreading climate disinformation for years, contributing to a social divide about climate change. In order to profile how both sides of the climate divide communicate climate change, we collected dissemination materials and analysed the mindset of key actors reaching global audiences. Here we show that applying network science to textual content and analysing the emerging reconstructed mindset can support the identification of emotional patterns linked to a quick and pervasive spread of falsehoods — i.e. an infodemic — such as hypercritical scepticism masking falsehoods under a trustful promotion of change. Climate represents a fearsome threat linked to inconsistent science in climate change infodemics. Change represents a reassuring pattern characterized by trust in climate infodemics, low anticipation without risk awareness, except for some fear about policy changes. For climate activism change is linked to high levels of negative emotions like anger, disgust and fear, related to a perception of existential threats.
Furthermore, children are an angering concern in climate infodemics, while climate change activism perceives children with trust and joy, but sadness for their anticipated future.

**Keywords:**

Fridays for future, social movements, infodemics, climate change, revolution.

**Main text:**

1. **Introduction.**

The Intergovernmental Panel on Climate Change (IPCC) affirms that continued climate change is directly impacting human lives, and that risks of injury, disease, and death increase with heat waves, floods, droughts, and fires (Smith et al., 2014). However, contrasting messages from extreme political populism have been fiercely spreading climate misinformation through social and news media for years (Demelle, 2016; Horton, 2020; Watts et al., 2019).

Climate denying political leaders across world regions — USA, Brazil, Australia, the Netherlands — are just visible elements of an evolving list of hundreds of influential players and think tanks (Desmog, 2021). These think tanks repeatedly appear linked to events where influencers take climate denying positions (Youtube, 2019), often these events run in parallel to the Conferences of Parties (COPs) of the United Nations Climate Change Framework Convention (UNFCCC). These annual COPs are the most important climate policy event worldwide. When searching information about these UNFCCC COP events, content intended to trigger a quick and pervasive spread of falsehoods — i.e. an infodemic — from events organized in parallel by climate misinformation think tanks shows up in multiple media channels, including in prominent video-sharing platforms (see Methods section).
These actors and think tanks have been polarizing the worldwide public opinion for decades, amplifying the climate divide (Hoffman, 2011, Horton 2020). On one side of the climate divide, climate change infodemics actively impede “social consensus” about climate change. Climate change infodemics actors (hereafter climate infodemics) disseminate misleading information and downplay scientific evidence with the support of politically entrenched think tanks (Demelle, 2016; Desmog, 2021; Horton, 2020).

On the other side of the climate divide, science-based climate change activism (hereafter climate activism) outside the strict scientific domain demand action from policy makers while stressing the importance of climate science in society (Hoffman, 2011; Marris, 2019). While environmental and climate activists are not a novelty, and while cohorts of teenagers and students have been involved in the decarbonization of UK and US universities at least since 2010 (Healy & Debski, 2017), recently the #FridaysForFuture movement gained unprecedented prominence demanding climate action from political leaders. The #FridaysForFuture movement adheres to scientific consensus on climate change and gathered remarkable media attention since 2019.

Social movements like #FridaysForFuture have been pointed out as instrumental for crossing a tipping point toward major changes of social norms and values that could contribute to stabilize Earth’s climate (Otto et al., 2020). Information flows and the feedbacks they might activate are amongst the most important interventions to stabilize Earth’s climate (Otto et al., 2020). The fear of Information flows and their related feedbacks activating social tipping dynamics towards decarbonization by certain think tanks provide a possible explanation for their interest on a climate infodemic polarization agenda.

The variety of actors involved in the climate divide is immense, and it is fully unclear what underlying patterns could characterize the messages in both sides of this divide. In this
context, we structure our investigation as a comparison between key representatives in their ranks, i.e. individuals with outstanding character that managed to exhibit leadership in a history of world-spanning events reaching millions of individuals.

To elaborate overarching strategies and understand the validity of proposals for tools dealing with the climate divide, it is fundamental to explore the emotions inflaming this battle of ideas, and to uncover weaknesses in the mindset embedded in the communication strategy of those involved (Hoffman, 2011). The communication materials of individuals involved in the climate divide can be expected to hold patterns leading to the identification of inflammatory media content. Semantic patterns can be used to unveil emotionally distorted content linked to polarization (Stella et al. 2018, Stella 2020).

In this article we aim to explore the emotional dimension of climate communication linked the climate divide. Departing from this aim, we have specified the following objectives: First, to explore how the mindset of key representatives of #FridaysForFuture and of climate denying think tanks differ when communicating about climate. Second, to unveil emotionally distorted content linked to polarisation in key climate disinformation communication events. And third, to provide a scientific basis for unveiling infodemic content linked to the climate emergency.


Mindset reconstruction exposes the emotional backbone of language (Stella, 2020; Stella et al., 2018). In order to profile how both sides of the divide communicate “climate change”, we collected communication materials related to climate change, and analysed the mindset of selected actors who have been able to reach global audiences. The methodology is divided in three consecutive steps: (i) identification of global key influencing figures of the climate
divide, (ii) data collection, (iii) application of network science methods for mindset reconstruction and visual representation of the results.

2.1. Identification of key figures.

The identification of key figures is based on criteria of leadership and of a history of contribution to global events in the respective networks of #FridaysForFuture and of climate denying think tanks. Greta Thunberg can be traced as the originator of the #FridaysForFuture. After her innovative way of demonstrating gained prominence, her initially single-student protest gained scale and lead to a global school strike movement. Afterwards, she gave speeches in many global centres of power and meet with multiple global leaders. At the moment of writing this article she is perhaps the only globally mediatic figure of this movement. Christopher Monckton was ranked a top ten climate denier by Demelle (2016), and Desmog (2021) mentions him in the context of multiple climate-related events and actions spanning across world regions for more than a decade.

2.2. Data collection.

Data originates from to key public speeches directly or incidentally linked to international bodies, national institutions, and diplomacy hubs. For example, a COP of the UNFCCC, the UN, the World Economic Forum at Davos, the UK parliament, or climate infodemics conferences. The selected key public speeches reached broad audiences beyond the auditorium and have been disseminated by multiple media channels, including television, newspapers, and video-sharing platforms like Youtube (Youtube, 2019). In particular, we selected 11 public
speeches by Greta Thunberg from 2018 to 2020, and three much larger speeches in 2019 by Christopher Monckton in events organised in Madrid in parallel to UNFCCC’s COP 25, and in a climate infodemics conference in Washington.

By using text from public speeches, we overcome the difficulties of preserving the privacy of under-age citizens that are a known part of the #FridaysForFuture movement (Marris, 2019).

2.3. From words to mindset reconstruction with forma mentis networks.

The mental lexicon is an idealised system that acquires, stores, processes and produces language (Vitevitch, 2019). The mental lexicon represents the structure of conceptual associations in language as used by each individual. As a purely cognitive system, the mental structure of conceptual associations in the lexicon can be extracted and analysed from communication materials under the assumption of the individual’s authorship.

Communication materials like texts are an open view to the mindset of the authors, which is a proxy for the structure of language and its associations in the human mind (Teixeira et al., 2021).

*Forma mentis* networks are a representation of the emotional content of the mental lexicon and the relations between the meanings involved. We use *forma mentis* networks to show how an individual person conceptually and emotionally structure their mindset about climate change. Mindset reconstruction with *forma mentis* networks exposes the emotional backbone of language, and such exposure highlights the attitudes towards “climate change” fuelling the climate divide (Figure 1, Text Box 1).

To build the *forma mentis* networks, syntactic networks are used as a proxy of the mental lexicon. Relations between words come from syntactic and semantic dependencies in speeches and written text (see the explanation of Equation 1 below), and neighbourhoods are
interpreted as semantic frames (cf. Stella 2020). Network neighbourhoods contain all words syntactically and semantically related to a given target concept. According to frame semantics in cognitive science (Fillmore & Baker, 2001), these associations contain key insights about the meanings and emotions framing a given target concept in a specific way in text. In this way, network neighbourhood encode contextual knowledge that indicates how the same concept, e.g. “failure”, can be framed in different ways within various narratives (e.g. “failure is a disappointing experience” vs. “failure is a learning opportunity”).

Then, emotional relations are computed on the basis of the NRC Emotion Lexicon, which is the largest lexicon mapping emotions, going far beyond simple sentiment patterns (Mohammad & Turney, 2013). The words in the forma mentis networks also identify their key concepts in the analysed speeches with the size of the words (see Figure 1), larger words were represented as possessing a higher closeness centrality in the speeches (see Formula 1).

Closeness centrality is defined as the inverse average distance between a word and all its neighbours (Metcalf & Casey, 2016). A previous study (Stella, 2020) showed that closeness centrality is able to identify prominent concepts of short texts, i.e. the main concepts providing grounding to a short narrative. This motivates our choice to use closeness centrality as an estimator for concept prominence in texts. Eq. (1) is used for calculating the closeness centrality (Metcalf & Casey, 2016) of each concept:

$$C(v) = \sum_{w \in G} \frac{N-1}{d(v,w)}$$  \hspace{1cm} (1)  

Where:

C is the closeness centrality for each node in the graph G, in this case a network made of words from speeches and written text, where links indicate syntactic (e.g. “pen” – “table” in the sentence “the pen is on the table”) and synonym relationships (e.g. “nice” and “good” overlap in meaning in the sentence “you are nice and good”).
G is the whole network, which includes words (nodes) and semantic and syntactic links as extracted from all sentences in a speech/text.

v is the node in the graph G, which in our case is a word in a speech or written text; the closeness centrality is computed for this v node.

w represents any other node in the graph G.

N is the number of nodes in the graph G.

d is the shortest path network distance, i.e. the smallest number of links between nodes (words) v and w in the graph G.

3. Results.

As detailed in the Methodology above, mindset reconstruction exposes the emotional backbone of language (Stella et al. 2018, Stella 2020). Such exposure importantly allows to highlight the attitudes towards “climate change” that fuel the climate divide. In order to profile how both sides of the divide perceive “climate change”, we illustrate their emotional and semantic patterns in Figures 1-4 and Text Box 1, accompanied in Appendix A by Figures A1-A12. Overall, here we show that speeches in climate activism rely mostly of trust and hope with links to anger, while climate infodemics shows clear patterns of hypercritical misinformation masked under trust-inspiring content.
Figure 1. Speakers’ mindset reconstruction around “climate” (top) and “change” (bottom) in the speeches of Greta Thunberg (left) and Christopher Monckton (right). Links indicate
syntactic and semantic relationships between words in speeches. Links are coloured if linking at least a positive/negative/neutral/synonyms (blue/red/grey/green) word. Blue/red/black (positive/negative/neutral) coloured words indicate how they are perceived in language according to the NRC Emotion Lexicon (see Methods). Font size expresses the relative importance of the words reflecting their centrality in the speeches. Emotions are self-explanatory except for anticipation, which is a projection into future expectations (cf. Stella 2020). We refer the reader to Text Box 1 for an interpretation of the figure.

Figure 2. Speakers’ mindset reconstruction around “Children” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure 3. Speakers’ mindset reconstruction around “Scientist” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure 4. Speakers’ mindset reconstruction around “live” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.

Text Box 1: A lexicon of the climate divide, with the associated emotions in both sides.

**Action**: for climate activism it means hope for a better future, much wanted and needed, propositional toward the elicitation of a revolution-like call to action, while for climate infodemics it is just a sad bureaucratic cost, still something positive but that does not lead to any practical safeguarding initiative (Figures A5 and A10, see Appendix A).

**Believe**: climate infodemics angrily believes there is scarce contradictory evidence, while climate activism’ beliefs are strongly propositional about setting goals to avoid the danger of inaction (Figure A6, see Appendix A).
Change: for climate infodemics there is a pattern characterized by trust, low anticipation without risk awareness, overall a perception of “change” that is reassuring, there is no sense of threat, no problem at all, except for some fear about policy changes. For climate activism change is linked to high levels of negative emotions like anger, disgust and fear, related to a perception of existential threats (Figure 1).

Children: an angering concern for climate infodemics. Climate activism perceived children with trust and joy, but sadness for their anticipated future (Figure 2).

Climate: a fearsome threat, linked to inconsistent science for climate infodemics or to scary tipping points for climate activism (Figure 1).

Future: relatively absent in climate disinformation, it inspires trust linked to future awareness in climate activism (Figure A8, see Appendix A).

Ignore: a large and central concept for climate activism, counterfactually associated to trust on that people will come to let change happen. Ignore is only peripheral for climate disinformation and linked to trust on the potential profits of global warming (Figure A7, see Appendix A).

Leader: someone to trust and follow in climate disinformation, but who triggers anger linked to “politicians” and “emissions” in climate activism, and still inspires trust (Figure A9, see Appendix A).

Live: climate activism uses this term carefully, associating “live” to trust to conditions of human survival and planetary justice, while climate disinformation does not display a coherent pattern (Figure 4).

Number: climate activism stays positive and lacks objections to numbers coming from current science, while climate disinformation displays an opposite pattern of strong anxiety projecting
into the future a sense of exaggerated imbalance on the issues at hand (Figure A11, see Appendix A).

**Science:** inspiring mostly negative emotions of anger, disgust and fear to climate disinformation, it is a matter of trust associated to listening and numbers for climate activists (Figure A1, see Appendix A).

**Scientist:** isolated prophets that provide facts for narratives of climate disinformation around changes in solar radiation and that are a source of anticipation. Instead, for climate activism they are people that politicians need to listen to, experts that solve problems (Figure 3).

In their promoted mindsets, climate infodemics resorts to a wide variety of trust-related semantic associates reducing scientists to isolated prophets that provide alternative facts, which they relate to infodemic attempts to convince the public with alternative scientific evidence on global warming. Despite presenting alternative facts, negative emotional associations with “climate” such as “hysteria” and “catastrophe” are only present in the climate infodemics side, while climate activism gives more relevance to “breakdown”, “danger” and “threat” (Figure A3, see Appendix A).

Anticipation, a projection into the future of both anxiety and excitement, is a stronger emotion for climate activism around concepts of “leadership”, “listen” (Figure A2, see Appendix A), “children” and “threat”. Climate infodemics concentrates anticipation toward “studies” and “numbers”, due to the anxiety that scientific facts create to the climate infodemics community. The emotion of surprise is linked to “children” and “future” (Figure A8, see Appendix A) for climate activism, while climate infodemics associates it to the “numbers” behind climate science. Sadness is very strong in the climate activism arena for
concepts like “children”, “action”, or “believe”, and appears also linked to “future”, “climate”, “leader”, and “live”.

Climate infodemics displays high levels of sadness only around the term “believe”. Joy is counterfactually high for terms like “children” and “action” in climate activism, which can be explained by the emotions of hope and sense of belonging to a growing group (Lerner, 2015).

Trust, an emotion strongly used by outstanding visionary leaders (Mumford, 2006), is consistently high for climate activists, with very high values associated to its science-based grounds. Instead, climate infodemics projects trust toward future-centered terms like “change”, “live”, and “study” (Figure A12, see Appendix A), linked to reports with alternative facts from their own dissemination activities.

Fear is higher for terms like “climate change”, “threat”, “issue” (Figure A4, see Appendix A), and “believe” in climate activism, while for climate infodemics appears very intense against “children”. Anger again is linked to “children”, and also “believe”, in climate infodemics, while for climate activism anger is associated to “climate change” and “leader”. Last but not least, disgust appears linked to how much both sides “ignore” each other.

Figure 1 (top left) illustrates that climate activism perceived “climate” as overwhelmed by the threat of climate breakdown, whereas climate infodemics associated “climate” with neutral concepts expressing ‘inconsistent science’ (top right). Such dichotomy reverberates in the mental construct of “change”, a neutral concept by itself in common language. In climate activism, “change” was associated to concepts strongly eliciting anger and fear but also trust, an emotion identifying outstanding visionary leaders (Mumford, 2006). Climate activism gave relevance to “breakdown”, “danger” and “threat”, concepts characterising charismatic value-based mindsets (Mumford, 2006) and revolutionary speeches (Jasper 2011; Kramer et al. 2014). Stunningly, in climate infodemics such threatened perception was completely
absent (Fig. 1, bottom left) and left space to a wide variety of trust-evoking associates about attempts to convince the public with alternative facts on global warming.

Climate activism combines anger (towards inaction), fear (of an approaching threat) and trust (in solving this crisis), and perceives “climate change” as an indispensable “call-to-action” fight. This “call-to-action” is urgently motivated by a combination of emotions: anger against political leaders, fear for the dangers of inaction and against existential climate threats, disgust about a stolen future, and an overall ambition to act over climate change. This “call-to-action” makes climate activism’s mindset entwined to revolutionary emotions. In fact, emotions like anger, hope and despair are well known to accelerate the social tipping dynamics of large-scale social protests and revolutions (Jasper, 2011).

Furthermore, it is known that outstanding future-focused leaders, often promoters of such revolutions, rely on emotional styles revolving around trust, joy and anticipation (Mumford, 2006), so that detecting these emotions in a future-oriented topic like climate change can provide insights on how charismatic #FridaysForFuture can be. Cognitive and semantic contagion require conscious information processing, e.g. interpretation and acceptance, whereas emotional contagion can lead to a faster transfer of moods among people, involving both implicit and explicit mechanisms. Positive emotions like trust and joy have been reported to cause a "ripple effect", i.e., a “pandemic” or “tsunami” of massive contagion of positive sentiment driving the social behaviour of the whole collective in synchrony (Barsade, 2002). In other words, the emotions and perceptions linked to climate activism have been described as rippling better through society, and thus reaching larger social audiences (Jasper, 2011; Mumford, 2006), in comparison to the emotional profile adopted by climate infodemics.
In fact, conceptual associations and emotions indicate that climate infodemics promote hypercritical skepticism, hiding under a generally trustful promotion of change and including:

(i) discussing numbers in terms of imbalanced exaggerations, (ii) referring to scientists in a stereotypical way, i.e. isolated individuals that attempt to provide abstract, theoretical evidence to climate infodemics, (iii) displaying negative emotions against children, and (iv) showing fear against public policy interventions.

As reported in the semantic-emotional analysis around other concepts (see the lexicon reconstructed in Text Box 1), climate infodemics displays high levels of sadness only around the term “believe”. Joy is counterfactually high for terms like “children” and “action” (Figure A5, see Appendix A) in climate activism, which can be explained by the emotions of hope and sense of belonging to a growing group (Lerner, 2015).

These hypercritical attitudes disrupt public awareness on the climate emergency and compromise public consensus to stabilize Earth’s climate (Bloodhart, 2019). They prevent policy-makers from acting over the risks posed by climate change (Hoffman, 2011; Watts et al. 2020). Thus, they obstruct the Paris Agreement and the formation of foreseen social tipping dynamics towards decarbonization (Otto et al. 2020).

4. Discussion and Conclusion.

We have shown that applying network science to textual content and analysing the emerging mindset can support research about infodemics, i.e. the quick and pervasive spread of falsehoods. We have identified infodemic emotional patterns, such as hypercritical scepticism masked under a trustful promotion of change. The reconstructed mindsets and the emotional patterns identified provide new pointers on climate infodemics.
Climate infodemics sustain a chain reaction triggering a major divide at the global scale, which threats sustainability, human health and ultimately the global economy (Hoffman, 2011). Infodemics strongly depend on their emotional and perceptual content, much alike viruses spreading across populations according to their genetic information. Recent studies highlighted how contagions of distorted perceptions and misinformation greatly influence human responses to the climate threat (Bloodhart, 2019).

Emotions and their contagion, much alike a pathogen spreading over societies (Kramer et al., 2014), have been instrumental in large-scale societal changes like revolutions from Maoist China to Nicaragua and Czechoslovakia (Jasper, 2011), and are instrumental in the process of emergence of charismatic social and political leaders (Mumford, 2006). Nevertheless, the parallelism in the emotional patterns of a revolution could be just anecdotal. As a matter of fact, the call to action by #FridaysForFuture is limited to policy-making. And objectively, the movement often finds a “glass ceiling” about how they could trigger change beyond their demonstrations and judicial actions (Neubauer, 2019).

Tracing this emotional parallelism with massive social movements is important because recent calls to civil disobedience by leading climate diplomats (Figuieres and Rivett-Carnac, 2020) could create game-changing developments if related to large-scale emotional contagions, but could be hindered by infodemics. These interactions between propelling and hindering factors points us towards future work on the opinion dynamics of the climate divide, within and between sides.

We conclude that mindset reconstruction could be an important tool to deal with infodemic communication materials facilitating the climate divide. Mindset reconstruction of textual content provides a scientific basis for detecting climate-related hypercritical attitudes and fuelling discourses. Hence, mindset reconstruction could help to design strategies narrowing
the climate divide by countering infodemics in climate-related communication. The innovative techniques we have shown — at the fringe of AI and cognitive science — could support climate policy, e.g. by being applied to flag online communication materials with infodemic content. Further work includes the automated training of cognitive tools for in-vivo flagging online infodemic content in several languages, and the study of their influence on the opinion dynamics of pro-active climate debates.

Acknowledgments:

The authors thank the organisers of the Winter Workshop on Complex Systems, editions 2019 and 2020, and gratefully acknowledge the feedback received at the Conference on Complex Systems 2020.

Author contributions:

R.C. and M.S. envisioned the study. M.S. and R.C. collected the data and analysed it. R.C. and M.S. drafted the manuscript.

REFERENCES


Neubauer, L. (2019) Personal communication (03.07.2019). Earth League’s annual scientific symposium 2019 “Towards a 1.5 °C world: Challenges and Solutions” held at the Climate Service Center Germany, Hamburg, Germany.


Youtube (2019). “Rebutting the Climate Delusion of the UN in Madrid” (sic).

Appendix A.

Figure A1. Speakers’ mindset reconstruction around “Science” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure A2. Speakers’ mindset reconstruction around “listen” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure A3. Speakers’ mindset reconstruction around “threat” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure A4. Speakers’ mindset reconstruction around “issue” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure A5. Speakers’ mindset reconstruction around “action” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure A6. Speakers’ mindset reconstruction around “believe” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure A7. Speakers’ mindset reconstruction around “ignore” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure A8. Speakers’ mindset reconstruction around “future” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure A9. Speakers’ mindset reconstruction around “leader” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure A10. Speakers’ mindset reconstruction around “act” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure A11. Speakers’ mindset reconstruction around “number” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.
Figure A12. Speakers’ mindset reconstruction around “study” in the speeches of Greta Thunberg (left) and Christopher Monckton (right). We refer the reader to Figure 1 for a detailed explanation of the colour code, and to Text Box 1 for an interpretation of the figure.