Iperstoria
2025, no. 25
ISSN: 2281-4582

DOI: 10.13136/2281-4582/2025.i25.1571
iperstoria.it

Transparency and Trust in the United States' Response to and Attitudes about Climate Change

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Keywords

Climate change
Transparency
Corpus analysis
Public opinion
United States

Abstract

This article explores the concept of "climate transparency" in two related settings: in communication about climate change policy by US political elites and in public opinion among the US population. We consider the meaning of the term "transparency" and how climate transparency has risen to prominence in the worldwide effort to combat climate change. We then analyse two sides of transparency in the United States' treatment of the climate crisis: what political leaders have said about climate transparency and how the public has perceived it. Our analysis combines two methodological approaches: linguistic corpus analysis and public opinion data analysis. The corpus, which includes speeches delivered by Barack Obama, Joe Biden, Kamala Harris, John Kerry and Al Gore at COP summits, illustrates how the United States has contributed to transparent approaches to fighting climate change. This analysis emphasises US political leaders' usage of the terms "accountable," "candid," "honest," and "transparent;" "fossil fuels" and "decarbonisation" (as transparency requires the problem to be named directly); and "science" and "scientists" (the source of information that needs to be shared transparently). Meanwhile, analysis of public opinion data from a large sample of Americans reveals that individuals who agree with the Biden administration on climate policy are especially inclined to view the administration as transparent and trustworthy, as are those who have confidence in scientists, liberals, and older, better educated, and non-white Americans. The corpus analysis speaks directly to the public opinion analysis, as we examine the circumstances under which leaders who prioritise climate protection are perceived as transparent and trustworthy.

1. Introduction[1]

As the United Nations Development Programme contends, "If countries do not take efforts to become *transparent* about their climate contributions, we will not be able to move from planning

[1] Although the authors have conducted the analysis together and have collaborated in the research work, for practical purposes Denise Milizia is responsible for paragraphs 2, 3, and 4, and Laura R. Olson for paragraph 5. The Introduction and the Conclusion were conceived and written together.

to action, and we cannot win the fight against climate change."[2] What does "transparency" denote in the context of climate change? To what extent does the United States, one of the world's worst polluters (Friedman 2023), practice it? And how does governmental transparency concerning climate policy relate to ordinary US citizens' attitudes about their government's efforts to combat climate change?

Transparency, meaning regular, clear, and honest communication of information pertinent to decisions and actions, enhances trust in leaders and is widely seen as an essential foundation of democratic legitimacy (Fenster 2021; Bauhr and Grimes 2014; de Fine Licht 2014; Grimmelikhuijsen et al. 2013; Norman, Avolio and Luthans 2010; Fung, Graham and Weil 2007; Heald 2006; Gutmann and Thompson 1996). Being transparent about politics and policy does not mean being invisible; rather, it implies increased visibility and is the opposite of secrecy (Florini 1998) insofar as it means deliberately revealing ideas, plans, and actions (Gupta and Mason 2016; Rawlins 2009). In the current context of public suspicion and distrust toward politicians and politics in general, transparency lies at the heart of overcoming the crises of our day.

The climate emergency is one of the most significant global challenges humans have ever faced (Leiserowitz et al. 2014). The enormous financial investments needed to respond to this crisis create ample opportunities for corruption: mobilizing vast sums for renewable energy, clean transport, reforestation projects, flood defence, and much more equates to billions of dollars that must be handled responsibly. To ensure that climate funds are used for their intended purposes and not lost to corruption, transparency is essential. Moreover, as the nongovernmental organization Climate Transparency contends, confronting climate change is easier when "awareness and peer pressure among policy-makers in G20 governments"[3] is prioritised.

Although relatively little research has been conducted to date about climate transparency *per se* (Weikmans and Gupta 2021; Gupta and van Asselt 2019), previous studies (e.g., Rafaty 2018) do show that national climate policies are strongest and most effective in countries where perceptions of corruption are low. Practical challenges arise when states and international organizations strive for climate transparency, but the effort is worth it: transparency requirements, especially large-scale ones, can foster international peer pressure and peer-to-peer learning (Iozzelli 2023; Gupta et al. 2021; Weikmans and Gupta 2021; Gupta and van Asselt 2019; Gupta and Mason 2016).

As a result, the United Nations has made transparency a crucial element of its response to

[2] https://climatepromise.undp.org/what-we-do/areas-of-work/transparency. Emphasis added. Last visited 10/07/2024.
[3] https://www.climate-transparency.org/about-us. Last visited 10/07/2024.

climate change. The United Nations Framework Convention on Climate Change (UNFCCC) conceptualises climate transparency as the reporting of relevant climate information and data by all partner nations. As Gupta et al. (2021, 617) observe, "The assumption is that making visible what countries are doing will further accountability, and enhance mutual trust that progress is being made by all countries." By providing clear, robust data and information on climate change, nations that engage in climate transparency are thought to contribute to trust, ethics, credibility, and accountability among all those involved (see Weikmans and Gupta 2021; Gupta and van Asselt 2019). Nation-states naturally vary in the degree to which they engage in climate transparency. Although there is some suggestion that the United States might be inching away from governmental transparency in general (Fenster 2021), it does have a record of complying with United Nations climate transparency expectations apart from the first presidential administration of Donald Trump (Weikmans and Gupta 2021).

This article responds to a call for "explorations into the effects of transparency on citizens' attitudes and political behavior and how these may vary among groups of citizens" (Bauhr and Grimes 2014, 311). If leaders practice climate transparency and it has no effect on the attitudes and actions of the public, their efforts may well be in vain. Therefore, we examine the extent to which US political leaders have prioritised climate transparency in public statements and whether the US public seems to notice their efforts at climate transparency. We also consider whether climate transparency on the part of political leaders might contribute to mass-level attitudes about climate policy. We explore (1) efforts by US leaders to be transparent in their communication about climate change in a corpus of speeches delivered at COP summits and other international gatherings between 2015 and 2023, and (2) how US citizens' climate attitudes might reflect their perceptions of transparent communication by their government based on analysis of survey data collected by the Pew Research Center in 2022. We begin with crucial background information before presenting corpus analysis of transparency in public statements, after which we analyse survey data that gauge the US public's intersecting attitudes about climate policy and transparency.

2. Climate transparency: history and background

The international community first recognised human-driven climate change as a problem during the second half of the 20th century. In 1988, the Intergovernmental Panel on Climate Change was established to assess the scientific evidence, and at the 1992 Earth Summit in Rio de Janeiro, the UNFCCC was created. It acknowledged that countries have shared but differentiated responsibilities, especially because developed countries are responsible for greater shares of the greenhouse gases in the atmosphere – but also more capacity to act than developing countries.

At the United Nations Climate Change Conference (COP3)[4] in 1997, the Kyoto Protocol was adopted, becoming the first international agreement to limit and reduce greenhouse gas emissions. The United States, which at the time was the world's top emitter of greenhouse gases, refused to ratify it, seriously limiting its effectiveness. It was not until 2014 that the United States (along with China) announced its intention to confront climate change. This announcement (White House 2014) led directly to the Paris Agreement, which was signed at COP21 in 2015. Nearly every nation on earth (195 countries in total) pledged action to confront climate change caused by human activity (Cook 2019).

The principal aim of the Paris Agreement is to keep climate change in check and limit future greenhouse gas emissions from human activities to the levels that trees, soil, and oceans can absorb naturally, with the goal of achieving carbon neutrality and climate resilience by 2050. The targets that signatory member nations pledged to reach would ensure that greenhouse gas emissions and removals balance each other out, so that the overall effect will be zero (Della Gatta 2023; Milizia 2023). All member nations are required to be transparent about their anthropogenic emissions and removals on an annual basis. One of the agreement's legally binding provisions is a specific requirement of transparency. Member nations are required to prepare, implement, and report their progress in achieving Nationally Determined Contributions (NDCs): concrete commitments to reducing greenhouse gas emissions.[5] Furthermore, while the scope of the Kyoto Protocol was mitigation only, the Paris Agreement calls for mitigation, adaptation, and finance. All Parties (not just developed countries) are required to make mitigation contributions. The mechanism for compliance is expert-based, non-adversarial, non-punitive – and transparent.

In the Paris Agreement, Party Nations established an Enhanced Transparency Framework (ETF) aiming to provide regular national inventory reports of anthropogenic emissions and removals.[6] These reports include markers of the progress each nation has made, as well as information about support to developing countries in the form of financial assistance, technology transfer, and capacity building. The European Union and the United States insisted on these provisions for transparency. The ETF creates a basis for publicly denouncing countries that fail to meet their self-imposed climate targets and goals. This procedure, known as "naming and shaming," can offset the lack of binding NDC achievements and is thus a central pillar of the

[4] COP refers to the annual United Nations Climate Change Conference, or the Conference of the Parties of the United Nations Framework Convention on Climate Change.
[5] There is no legal obligation to achieve the NDCs, nor do any sanctions adhere in the event of nations' failure to achieve them (Gupta and van Asselt 2019).
[6] See Gupta and van Asselt (2019) for details.

Paris regime.[7] Under the ETF, from 2024 onward, each Party Nation is required to submit a Biennial Transparency Report demonstrating how it is progressing toward achieving the goals of the Paris Agreement.

The European Union demanded an additional measure of transparency in the form of a five-yearly ambition mechanism for revising the Parties' plans and increasing their ambitions. For this purpose, the Paris Agreement required Parties to undertake the *first global stocktake* in 2023. The purpose of the stocktake was to account for collective progress towards achieving the goals of the accord, specifically reducing greenhouse gas emissions by 1.5°C (2.7°F) by 2030, achieving net zero by 2050, and laying out, in a transparent, accountable, candid, strong, visionary and comprehensive manner, what had transpired since the 2015 Paris summit. The stocktake took place at COP28 in Dubai.[8] It showed that "the world is not on track to meet the long-term goals of the Paris Agreement […] and has a narrowing window of opportunity to get back on track."[9]

3. The United States context

The climate crisis is a divisive issue both within and among the nations of the world (Pew Research Center 2022). Political leaders often blame their opponents for not being transparent enough, open and honest enough, or accurate, timely, balanced and unequivocal enough (cf. Heise 1985) when it comes to delivering information on the climate crisis. Likewise, ordinary citizens pit themselves against each other based on whether they accept the reality of the climate crisis or reject it as a hoax.

The political divide concerning climate change is especially stark in the United States (Smith, Bognar and Mayer 2024; Egan and Mullin 2017; McCright and Dunlap 2011; Kellstedt, Zahran and Vedlitz 2008). Division persists between climate deniers and climate believers, between those who believe in the seriousness of the issue and those who think it is being exaggerated, swaying from belief to disbelief and from support to scepticism (Milizia 2023). Just in the last decade, US climate policy has varied dramatically depending on who is in the White House.

Although the United States withdrew from the Paris Agreement during the first Trump

[7] https://unfccc.int/process-and-meetings/transparency-and-reporting/preparing-for-the-ETF. Last visited 15/07/2024.
[8] Al Gore said that choosing the UAE as host for the COP28 summit was "ridiculous," not because the UAE is a country that produces oil, but because the meeting's president was Sultan Al Jaber, CEO of the state-owned Abu Dhabi National Oil Company, one of the biggest and least responsible oil companies on the planet. Gore saw a profound disconnect between Al Jaber's responsibility for guiding the world in phasing down greenhouse gas emissions as president of COP28 when he was also charged by his sovereign and the companies that he heads to expand the use of fossil fuels. Al Jaber himself is on the record saying that there is no science to support phasing out fossil fuels. See Worland (2023).
[9] https://unfccc.int/topics/global-stocktake/about-the-global-stocktake/outcome-of-the-first-global-stocktake. Last visited 23/07/2024.

administration, it returned to a position of leadership around climate change after Joe Biden took office in 2021. That year, the United States rejoined the Agreement,[10] and at COP26 in Glasgow, Biden launched the PREPARE[11] plan, designed to help more than half a billion people in climate-vulnerable countries around the world adapt to and manage the impacts of climate change. However, Trump is almost certain to withdraw the United States from the Paris Agreement again during his second term in office; he may even withdraw from the underlying United Nations Framework Convention on Climate Change, which the US Senate ratified in 1992 (Kolbert 2024).

Trump has referred to the Paris Agreement as the Paris "climate disaster," contending that it is "one-sided, ridiculous, impossible, horrible, very expensive, disastrous, energy-destroying" (see Milizia 2023). Alongside Scott Pruitt, his first EPA[12] administrator and a climate change denier of the first order, Trump focused during his first term on rolling back public policy intended to confront climate change. The United States failed to submit its required biennial ETF transparency reports during the Trump administration (Weikmans and Gupta 2021). Nonetheless, a coalition of US political, business, and religious leaders attended COP24 in 2018 to assert that the United States was "still in" the international accord to curb global warming (Jordans 2018).[13] These leaders hoped to signal to other countries that they would find ways for the United States to continue making progress in reducing greenhouse gas emissions, even as the federal government under Trump continued its regulatory rollback. Likewise, at COP29 in 2024, an unlikely voice – the chief executive officer of Exxon Mobil – pre-emptively called on Trump to keep the United States in the Paris Agreement, affirming that "we need a global system for managing global emissions" (Elliott 2024).

Immediately after his 2021 inauguration, Joe Biden vowed to bring transparency in general back to the US government, pledging to share accurate information with the American people, whether about the climate crisis or other matters. At her first news conference, Biden's press secretary Jen Psaki said Biden planned to "bring transparency and truth back to the government [and] share the truth, even when it's hard to hear" (Reuters 2021). Biden also sought immediately to redress the climate record of his predecessor. Within a week of taking office, he issued an executive order that established climate change as an essential element of

[10] When Donald Trump announced that he would pull the US out of the Paris Agreement, it was as if history was repeating. In 1997, George W. Bush announced that he would not implement the 1997 Kyoto Protocol, as he perceived the Kyoto standards as a threat to US economic interests, fearing "serious harm to the United States economy, including job loss, trade disadvantage, and increased energy and consumer costs" (Milizia 2023).

[11] PREPARE is an acronym for President's Emergency Plan for Adaption and Resilience.

[12] The Environmental Protection Agency (EPA) implements environmental law for the federal level of the US government.

[13] Several US states and cities are using the same language – "We are still in" – as a rallying cry and promise to continue fighting climate change during Trump's second term in office (Shankman 2024).

US foreign policy and national security.[14] He also promised climate transparency in the form of systems to track US greenhouse gas emissions and actions to mitigate climate change. These transparency systems were set up not only to hold the government accountable to climate commitments, but also to document the low-carbon investments needed to achieve the goals of the Paris Agreement.

Indeed, the Biden administration undertook the most substantial climate actions ever in US history (Lashof 2024), boosting the clean energy sector, prioritizing environmental justice, and requiring nearly four times more annual pollution reduction than any previous administration.[15] The administration also launched the American Climate Corps, a program designed to train young people and create jobs to fight climate change (White House 2023). These policy changes are among the most significant of all Biden's accomplishments while in office. Furthermore, at the COP27 summit in 2022, despite a challenging geopolitical relationship, formal bilateral climate discussions between the United States and China were restored. A meeting between Joe Biden and Chinese President Xi Jinping in advance of COP27 proved successful, as China for the first time pledged to make absolute, economy-wide emissions reductions (Spring 2022). The second Trump administration, however, "will likely shelve ongoing US-China climate conversations" (Schlanger 2024).

Biden's signature climate action was signing, in 2022, the Inflation Reduction Act (IRA), which included the most comprehensive climate provisions in US history. The IRA touches every sector: power, transportation, buildings, industry, agriculture, and forestry, investing in clean energy, electric vehicles,[16] and environmental justice. Concerning environmental justice, the Biden administration has prioritised protecting vulnerable, underserved, and historically marginalised communities from the effects of climate change. This same goal is a core tenet of the Paris Agreement.

On the other hand, Donald Trump has claimed that no one had done more damage to the American oil and gas industry than Joe Biden (NBC News 2020). Unlike Biden, Trump has aimed to reduce inflation and create jobs in fossil fuels industries (Friedman 2024). During his first term in office, "Trump […] destroyed U.S. climate policy [and] caused some other countries to do the same" (Tubiana in Davenport 2020) by questioning the Paris Agreement, denying that

[14] https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/. Last visited 02/05/2024.
[15] Neither George W. Bush nor Trump (during his first administration) established reduction goals; the Obama administration's climate goals required annual pollution reduction of 1.6% from 2016 to 2025; the Biden administration's climate goals required annual pollution reductions of 6.0% from 2021 to 2030. See https://www.americanprogress.org/article/the-biden-administration-has-taken-more-climate-action-than-any-other-in-history/. Last visited 23/05/2024.
[16] More than 1.4 million EVs were sold in the US in 2023, including fully electric and plug-in hybrids (International Energy Agency 2024).

global warming is caused by emissions from fossil fuels, and rejecting climate science altogether.[17] As he returns to office, Trump should be expected to make good on his campaign promises concerning climate policy[18] by reversing Biden's accomplishments and blocking future ones. For the foreseeable future, the Democratic Party will be unable to implement the so-called Green New Deal, an ambitious climate platform backed by the party's progressive wing. None of this should come as any surprise considering that Trump has argued on many occasions that climate change does not exist, that the crisis is not only fake news but also fake science, and that global warming is a canard, 'bullshit' and nonsense (see Cillizza 2017).

4. Climate transparency in the United States: Corpus analysis

4.1. The corpus and methodology

Given the commitment US Democratic political leaders have shown to fighting climate change – as well as the core requirement of transparency in efforts to do just that – we expect that Democratic presidents and their envoys will emphasise transparency in their public statements about climate change. We analyse the occurrences of the adjectives "accountable," "candid," "honest," and "transparent" in our corpus of remarks delivered by US leaders at COP summits and other high-level international gatherings. We then analyse occurrences of "fossil fuels" and "decarbonisation" in the same corpus, as transparency in any context requires the problem to be named directly. Finally, we examine instances when US leaders refer to the most significant source of transparent information: "science" and "scientists."

The corpus comprises speeches delivered by Democratic US leaders at the COP summits between 2015 and 2023. Barack Obama occupied an especially important leadership position in the global response to climate change and played a key role in forging the Paris Agreement (Milkoreit 2019). We include his remarks at COP21 (2015) and COP22 (2016). Obama's successor, Donald Trump, did not attend the COP summits during his first term in office, nor did he send US delegations on his behalf, so the period 2017-2020 is not represented in the corpus. Joe Biden's speeches at COP26 (2021) and COP27 (2022) are included in the corpus, as are two additional speeches Biden gave in 2021: one at the United Nations and another at the G20. Biden did not attend COP28 (2023) but delivered a written statement, which we include in the corpus. John Kerry attended COP28 as the Special Presidential Envoy for Climate, as did US Vice President Kamala Harris (deputizing for Biden) and former Vice President Al

[17] Consider Scott Morrison in Australia and Jair Bolsonaro in Brazil. Morrison, like Trump, began to dismiss the link between climate change and wildfires while promoting the use of coal (Karp 2019), while Bolsonaro, like Trump, called the movement to reduce global warming a Marxist plot to stifle economic growth (Watts 2018).

[18] https://rncplatform.donaldjtrump.com/?_gl=1*1pewp5d*_gcl_au*MzQyMTUwMTkxLjE3MjE1ODMwODM.&_ga=2.160013501.1657430937.1721583083-388914902.1721583083. Last visited 15/05/2024.

Gore, a longtime leader in the fight against climate change. We include their speeches in the corpus (see Table below), as well as a relevant speech Kerry gave at COP21 (2015) as US Secretary of State and a very pointed speech Barack Obama gave at COP26 (2021).

		Number of words
Barack Obama	COP21, COP22, COP26	9,762
Joe Biden	COP26, COP27, UN speech 2021, G20 speech 2021, COP28	19,774
John Kerry	COP21, COP22, COP28	8,793
Kamala Harris	COP28	2,862
Al Gore	COP27 and COP28	8,370
TOTAL		49,561

Tab. 1: Dataset of the spoken language used in corpus analysis

4.2. Transparency

How have US leaders spoken about their country's contribution to phasing out fossil fuels and achieving net-zero emissions? Figure 1 shows that "accountability," "'honesty," and "transparency" are used frequently in making the argument that leaders are being honest about climate policy. The adjective "candid" appears once as well. Usage of these words would seem to advance the goal of showing that, in a world where the need for climate transparency has become a given, stakeholders (in this case, US political leaders) want to show that practices and decisions concerning climate policy do not take place behind closed doors, thus displaying three transparency traits: integrity, respect for others and openness (Rawlins 2009).

N	Concordance
1	economy. And we have to continue to hold one another accountable for the choices that our nations makes. Earlier
2	their own emissions, and even holding their supply chains accountable to their overall carbon footprint. And there's
3	no punitive measures in this plan to hold these companies accountable. And many experts firmly believe that you've
4	an age of increasing transparency and public demand for accountability, citizens in the long run will not accept
5	us a framework that is built to last, and a degree of global accountability that has never before existed. But I want to
6	civil society organizations to continue to keep governments accountable to their promises. Ladies and gentlemen, I
7	needless to say, that's a problem and we need to have accountability at this COP for that lack of follow-through
8	accountable to the hard truth. It requires holding ourselves accountable to facts, not opinion; to science, not theories
9	on a better track. But doing that requires holding ourselves accountable to the hard truth. It requires holding ourselves
10	to advance the fight against COVID-19 and hold ourselves accountable around specific targets on three key
11	is putting our money where our mouth is to strengthen accountability for climate risk and resilience. These critical

N	Concordance
1	needs to earn the credibility of the world by being candid, strong, visionary, comprehensive; it needs

N	Concordance
1	. All of this and more has to be added to any honest assessment of high-carbon energy
2	simple: You know, if you're honest — you are honest; I didn't mean to imply you weren't — but
3	is what The Lancet projects may be possible. I honestly think that getting our collective act
4	here. It's just very simple: You know, if you're honest — you are honest; I didn't mean to imply
5	, we have the ability to measure exactly, with honesty, candor, comprehensively, what we have

N	Concordance
1	for arms control measures that reduce the risk and enhance transparency. Our approach is firmly grounded and fully
2	of high-carbon energy sources. And in an age of increasing transparency and public demand for accountability, citizens
3	is facing. Here in Paris, let's agree to a strong system of transparency that gives each of us the confidence that all of
4	focus on climate. The project we're facilitating is built on transparency, partnership, the protections for workers and
5	for countries over time. Done the right way, however, with transparent, sustainable investment in projects that

Fig. 1: Concordance lines of "accountab*," "candid," "honest," and "transparent" in the COP corpus

Perhaps the most striking finding in Figure 1 is the fact that the US leaders made relatively few direct mentions of transparency and related terms. "Accountable" and "accountability" appear the most. It is used in specific contexts such as "holding their supply chains accountable to their overall carbon footprint" (line 2) and broader ones such as "putting our money where our mouth is to strengthen accountability for climate risk and resilience" (line 11). "Honest" and "transparent" appear in broader contexts, from "measure exactly, with honesty, candor" (line 5) to "let's agree to a strong system of transparency that gives each of us […] confidence" (line 3). The fact that these terms appear rather infrequently leads us to ask whether the leaders might have used other rhetorical means of communicating transparency in their COP comments.

4.3. Naming the problem

As Rawlins (2009) argues, for information to be transparent, it needs to be true, substantial, and useful; political leaders need to identify which information needs to be provided and then provide it in an objective, balanced way. Indeed, transparency is useful mainly when it enhances understanding, not just when it increases the flow of information (Wall 1996). Providing information alone is more accurately labelled disclosure, which on its own can defeat the purpose of transparency, as more information may lead to less understanding and thus less trust (Strathern 2000). A person can be truthful without revealing all information; what is most needed is substantial completeness (Klaidman and Beauchamp 1987), which depends not on the needs of the sender but rather on the needs of the receiver.

Calling facts and events by their exact names is a core matter of transparency and trust, as Al Gore said in a Bloomberg television interview at the World Economic Forum in Davos, Switzerland:

> There are so many loopholes. And so many tricky phrases. And it took us 28 COPs, 28 years, before we could even use the phrase "fossil fuels." The climate crisis is a fossil fuel crisis, that's what it is. And it's taken us this long to overcome their resistance and even naming the problem. (Millan and Lacqua 2024)

Withholding important information, providing partial information, or even worse, distorting information, inevitably leads to distrust and defeats the purpose of transparency. The climate crisis is a fossil fuel crisis. Avoiding using that phrase will not change reality but only conceal truthful information.

Thus, do US political leaders point directly to a root cause of climate change and the main solution proposed to mitigate it? Looking at the terms "fossil fuels" and "decarbonisation" in the COP corpus we found "fossil fuel*" on 43 occasions and "decarbon*" on just two occasions,

as shown in Figure 2:

N	Concordance
6	places, clean energy has already reached cost parity with fossil fuels. Millions around the world are currently employed by the
7	aimed at gradually reducing or eliminating unmitigated fossil fuels, with specific reference to oil?" Over to you, sir.
8	supported language requiring the phase-out of unabated fossil fuel, and we will continue to support that language. We
9	G7 commitment to accelerate the phase-out of unabated fossil fuels, and to achieve net-zero emissions in all energy systems by
10	to try to mitigate the impacts of unmitigated, unabated fossil fuel burning. And so we have high hopes that we're going to be
11	in any fossil fuels. We're going to stop subsidizing those fossil fuels. We're going to be making significant changes. And it just
12	– committing, for the first time, to transition away from the fossil fuels that jeopardize our planet and our people, agreeing to triple
13	for clearer language about the need to largely phase out fossil fuels, but we know this was a compromise between many Parties.
14	Riyadh, and was asked not about a measure to phase out fossil fuels, which of course is what we need, but a measure to phase
15	play a limited and temporary role while we largely phase out fossil fuels in our energy systems by 2050, with abatement
16	that COP28 must have countries agreeing to phasing out fossil fuels without any caveats if it is to make any progress on this real
17	it has taken us until COP28 to even talk about phasing out fossil fuels is because of what happened at COP1, in Berlin, in 1995.
18	around the UN General Assembly to call for action on fossil fuels. Clearly, we would have liked to have seen ever greater
19	of the need to transition the world off its dependence on fossil fuels. True energy security means every nation — it means that
20	, it's the way we propel our vehicles, it's the burning of fossil fuels unabated that is creating the problem. And the issue is
21	. But we all know what the problem is. It is this burning of fossil fuel without abatement, without capturing, or not burning it and
22	how they would continue to allow unabated burning of fossil fuel in the world we're living in, knowing what we know about the
23	, it's the way we propel our vehicles, it's the burning of fossil fuels unabated that is creating the problem. And the issue is

N	Concordance
24	. They are, some of them, among the major producers of fossil fuel, and they need to immediately step up and be part of the
25	stuck with a one-choice-only, you got to go the road of fossil fuel. We think there are many more and better options than that
26	deaths that are linked to air pollution caused by the use of fossil fuels. In 2014, a study found that up to six million people in China
27	was invested in renewable energy technologies than in new fossil fuel plants. And like many of you, I've seen this transformation
28	able to see that money outpacing what is being put into fossil fuels. An average of half a million new solar panels were installed
29	climate inaction and lobby for billions of dollars in fossil fuel subsidies. In the face of their resistance and in the context of
30	has done arguably more in the region to move away from fossil fuels than other countries. Yet, a little less than 30% of its flawed
31	are committed to work together to transition away from fossil fuel emissions in the next three decades. Period. It's critical.
32	. The decision embraces transitioning away from fossil fuels in energy systems so as to achieve net-zero by 2050. And
33	coming out of this COP is that we are moving away from fossil fuels – and we are not turning back. The United States is leading
34	extreme weather and bear a disproportionate burden from fossil fuel pollution. Globally, the United States is a leader in the effort
35	other hand, gets only 3% of its gross domestic product from fossil fuels. Yet, when the Republican Party is in power, it acts like a
36	for gasoline in the hope that they would consume fewer fossil fuels and emit less? THE PRESIDENT: Well, because they have
37	of course is what we need, but a measure to phase down fossil fuels, "Would you accept that?" He said, "Absolutely not." So,
38	at the core of the climate crisis. For the first time at a COP, fossil fuels have been on the table as a major part of our negotiations.
39	We've said no to infrastructure that would pull high-carbon fossil fuels from the ground, and we've said yes to the first-ever set of
40	economy grew while global carbon emissions from burning fossil fuels stayed flat. And what this means can't be overstated. We
41	more oil or gas; that we're not going to be engaged in any fossil fuels. We're going to stop subsidizing those fossil fuels. We're
42	enabling the widespread development of the dirtiest source of fuel in an outdated way. It just doesn't make sense. That's suicide.
43	. In particular, we would highlight that the use of any transitional fuels needs to be aligned with 1.5 degrees, which means that

N	Concordance
1	community is now fully on board and moving forward to decarbonize and lessen their carbon footprint. For example,
2	low-carbon future more affordable for everyone, accelerate decarbonation beyond our borders. In fact, the International

Fig. 2: Concordance lines of "fossil fuel*" and "decarbon*" in the COP corpus

Looking solely at the data, we might conclude that the purpose of the COP summits was to "phase down" (one occurrence) or "phase out" (seven occurrences) fossil fuels, in particular unabated fossil fuels. Line 7 clearly spells out the meaning of "phase down" and "phase out," i.e., gradually reducing or eliminating unmitigated fossil fuels. As we read in line 8, John Kerry said that the United States "supported language requiring the phase out of unabated fossil fuels, and we will continue to support that language." It emerges clearly from the data that Kerry recognised that transparency is a must, that people have the right to know and understand what is at stake, "that there is a lot to make clear to people about this COP that

begins in earnest," and that "there is a fair amount even to straighten out to people." In his COP28 briefing, he maintained:

> I want to be as crystal clear as I can be that President Biden and the United States now are fully seized of the full measure of threat that the issue poses to the planet, to all of us, to all of our citizens. And we've worked very hard with a lot of countries to achieve an understanding of what's needed to get here, to keep 1.5°C alive. We all depend on each other. There's no way to get there. No one country can solve this problem. But we all know what the problem is: it is this burning of fossil fuels without abatement, without capturing, or not burning it and providing for alternatives.

As Figure 2 shows, "fossil fuels" collocates not only with "phase down" and "phase out," but also with "burning," "move away from," and "transition away from." Thus, the global stocktake finally addressed an issue that lies at the core of the climate crisis: for the first time at a COP meeting, fossil fuels were on the table as a major part of the negotiations.

In this respect, both Biden and Kerry often have relied on a trite saying that "the proof of the pudding is in the eating,"[19] and "there has to be a fairness in the air here." Besides, "people will measure," and the ability to measure transparency with a statistically reliable instrument gives us a way to make legitimate, verifiable claims of transparency (Rawlins 2009). Calling for "radical transparency," this is exactly what keynote speaker Al Gore said at the opening ceremony at COP27: "you cannot manage what you cannot measure."

4.4 Science and Scientists

As Florini (1998) asserts, transparency and secrecy are not either/or conditions, as they represent two ends of a continuum. Citizens need to know that elites are sharing information that is complete, relevant, verifiable, accurate, balanced, comparable, clear, timely, reliable, and accessible (Rawlins 2009). Scientists are, of course, the key source of such information as it concerns climate change. Therefore, we ask whether our corpus includes references to "science" and "scientists."

In an age of public demand for accountability, citizens in the long run likely will not accept obfuscation but honesty, not ideology but pragmatism, not imposition but consent. They need to know that political elites are putting their money where their mouth is, as it were, to strengthen accountability for climate risk and resilience. Putting the planet back on a better track requires holding ourselves accountable to facts, not opinions, to science, not political

[19] When John Kerry relies on this saying, he often says "the proof is in the pudding." Although the complete expression is "the proof of the pudding is in the eating," the shorter, incomplete version has become quite common, too. It means that the value, quality, or truth of something must be judged based on its results. In the case in question, it means that we will now start to see if we have made significant progress and if more needs to be done.

bromides and slogans. To this end, many leaders assert that their actions are following science, which is often referred to as "the science," to emphasise that there is now unanimity on the issue, mainly after the Paris Agreement, as we read in Figure 3 (line 22).

N	Concordance
1	here. But I know enough to know that if these people are scientists have spent a lifetime studying this issue are
2	to do. And the science has been clear: in 2018 the best scientists in the world at the IPCC told the world, you,
3	evidence has to be based on the best judgment, the best scientists in the world. Here in Dubai, through the first
4	in place, we'll unleash the creative power of our best scientists and engineers and entrepreneurs to deploy clean
5	the opposite end of the globe. For half a century, climate scientists have believed the West Antarctic Ice Sheet is a
6	myself that climate change is happening. As distinguished scientists of IPCC have already made it clear several times
7	. When you see that more than 3,000 distinguished scientists around the world have repeatedly issued
8	to Greenland to visit the incredible Jakobshavn glacier. Scientists pointed out to me the lines many meters above
9	emissions worldwide. And above all, consult with the scientists who have dedicated their entire lives to
10	last week to McMurdo Station in Antarctica to meet with our scientists and to understand better what is taking place. I
11	out onto the Ross Sea ice shelf. And I talked with the scientists who are on the front lines, not people involved in
12	crossing international borders to escape conditions that the scientists tell us are becoming physiologically unlivable. If
13	is going to save us from ourselves. Meeting the target the scientists are giving us with respect to the reduction of
14	is going to save us from ourselves. Meeting the target the scientists are giving us with respect to the reduction of
15	this crisis, as we are warned by the 2018 IPCC report. The scientists should guide this just like they are guiding every
16	have to get this right, and we have to get it right now. The scientists in Antarctica told me that they are still trying to
17	the scientists, a greater speed than was predicted by the scientists – we see that there's really very little security
18	more rapidly in larger amounts than were predicted by the scientists, a greater speed than was predicted by the
19	has rightly called "code red for humanity." And the scientists and experts are telling us that we're fast
20	could raise global sea levels by four to five meters. And the scientists down there described to me how the pressure of
21	that are necessary to address this challenge. These scientists urged me to remind my own government and
22	there's nothing partisan about climate change for the world scientists who are near unanimous in their conclusion that

Fig. 3: Concordance lines of 'scientists' in the COP corpus

It is apparent in the COP corpus that "the scientists who have spent a lifetime studying this issue" (line 1), "the best scientists in the world" (lines 2 and 3), "the distinguished scientists of IPCC" (line 6), "the scientists who are on the front lines" (line 11), "the scientists and experts" (line 19) should guide us, that our choices are based on mathematics and physics, and that the evidence is coming from the best scientists in the world. As we see in Figure 4, leaders are asserting that we need to 'follow the science' (lines 5 and 20), as "the science tells us what we need to do" (line 7); "the science is devastatingly clear" (line 13); and "the science has been clear" (lines 17 and 18). This "science says" and "science requires" rhetoric serves the purpose of establishing that new practices and commitments are transparent, open, and sincere. As John Kerry said in his COP28 speech, "I did not make up the science here," emphasising that the government is willing to listen and is acting openly and honestly (Ball 2009), supporting sustainable development with candour and comprehensiveness, and contributing to a low-carbon future in a way that is reliable, ethical, and consistent.

N	Concordance
1	to slow or stop our progress. Leaders who deny climate science, delay climate action, and spread misinformation.
2	variants. To fight this pandemic, we need a collective act of science and political will. We need to act now to get shots
3	all of the real-world evidence, with all of the peer-reviewed science, with all of the plain just old common sense, there
4	nations to invest in infrastructure, technology, and the science to get the job done. It supports the most vulnerable
5	said consistently what we need to do, we need to follow the science. The science requires net zero emissions by 2050,
6	. In other words, we can't wait too long to translate the science that we have today into the policies that are
7	has to be a fairness in the air here. We gotta do what the science tells us we need to do. And the science has been
8	. And if we don't do all of the above, and target what the science says, we will not get to net zero by 2050. Q: would
9	position? Kerry: my position is the scientific position. The science says we cannot get to net zero in 2050 without
10	response to the IRA. Remember what I just said: the science says we have to reduce emissions. If we are
11	what we need to do, we need to follow the science. The science requires net zero emissions by 2050, and the
12	. The science requires net zero emissions by 2050, and the science requires that we do 43% minimum reduction by
13	above our ambitions and the speed of our efforts. The science is devastatingly clear. We have to make vital
14	years? This is crunch time: folks, look, I didn't make up the science here. But I know enough to know that if these
15	transition. The science has been clear. I didn't make up the science here. Q: Do you believe that the science calls for a
16	can you say that of? There is no room for debate on the science here. The crisis is growing, it's undermining our
17	progress on all aspects of clean energy transition. The science has been clear. I didn't make up the science here.
18	gotta do what the science tells us we need to do. And the science has been clear: in 2018 the best scientists in the
19	didn't make up the science here. Q: Do you believe that the science calls for a phase-out? Can you tell us why the US
20	came here with one central goal, and that is to follow the science, and help keep 1.5° C alive as a limit on the
21	holding ourselves accountable to facts, not opinion; to science, not theories that haven't been proven and can't be
22	temperature increases at 2 degrees warming, which science tells us is a tipping point. And if we fall short, it will

Fig. 4: Concordance lines of "science" in the COP corpus

5. Climate transparency in the United States: What surveys show

Public opinion about climate change is highly polarised in the United States (Smith, Bognar and Mayer 2024; Egan and Mullin 2017; McCright and Dunlap 2011; Kellstedt, Zahran and Vedlitz 2008). Previous research shows that Americans' attitudes about climate change are directly affected by the party affiliation of their elected officials (Meyer 2019) above and beyond the impact of personal partisan leanings (e.g., Egan and Mullin 2017). As Meyer contends, "climate change platforms and policies of the political elite impact the climate change beliefs of their constituents" (2019, 784). This is so because climate change is a complex policy area, and political elites serve as opinion leaders for the public when confronting complex matters (Meyer 2019; Egan and Mullin 2017; Zaller 1992). Presumably, when individuals view their elected officials as transparent and trustworthy, they might be more inclined to listen to their pronouncements about climate change.

We assume that the efforts taken by US political leaders to promote transparency in the fight against climate change are both noticed and (more or less) taken seriously by other political elites (see Weikmans and Gupta 2021). But how well might perceptions of transparency and trust in government correlate with ordinary citizens' attitudes about climate change policy and confidence in science? If citizens perceive aggressive, science-based climate policy being communicated in transparent and trustworthy ways, we may tentatively conclude that climate transparency is worth it because it enhances the state's legitimacy in this policy area.

5.1 Data and Method

To explore these matters, we analysed data from surveys of the public fielded in 2022 by the Pew Research Center.[20] Our goal in analysing these data is to understand the factors that shape citizens' perceptions of the Biden administration – the most aggressive and arguably most transparent presidency in history concerning climate change – as transparent and trustworthy. Specifically, does (1) agreement with the administration on climate policy and (2) confidence in scientists who contribute to public policymaking make one more likely to see the administration in a positive (transparent and trustworthy) light?

We rely on four specific survey questions in the analyses that follow.[21] These questions directly measure attitudes about transparency and trust in the Biden administration, climate change as an issue, or belief in science. Table 2 presents the percentages of survey respondents who gave affirmative responses to each question. Our measure of *transparency* is drawn from the question "Since taking office, do you think Joe Biden has run an open and transparent administration?" We code respondents who respond in the affirmative (either "He has definitely done this" or "He has probably done this") as endorsing the Biden administration as transparent. Almost half the sample (47.8%) meet this threshold. We measure *trust* with responses to the question "How well does the phrase 'governs in an honest and ethical way' describe the Democratic Party?" Respondents who said the statement describes the party "very well" or "somewhat well" are coded as endorsing a proxy for the Biden administration – the Democratic Party – as trustworthy. Again, almost half the sample (47.4%) take this view. Our measure of *agreement on climate policy* is drawn from the question "Which party would you say you agree with on policies to deal with climate change?" Respondents who said they "strongly" or "somewhat" agree with the Democratic Party are coded in the affirmative, again comprising almost half the sample (49.5%). Finally, we gauge *belief in science* using the question "How much confidence do you have in scientists to act in the best interests of the public?" Respondents who said they have "a great deal" or "a fair amount" of confidence in scientists are coded in the affirmative. More than three-quarters (78.6%) of the sample are in this category.

[20] Pew's "American Trends Panel" (ATP) is a panel survey of a random sample of more than 12,000 US respondents. The first wave of ATP surveys was conducted in 2014; a new wave of surveys is fielded roughly once a month. We make use of (merged) data from Wave 110 (June-July 2022) and Wave 114 (September 2022) of the ATP. See https://www.pewresearch.org/the-american-trends-panel/. Last visited 28/04/2024.

[21] We code all four variables in a binary manner, such that affirmative responses = 1 and other responses = 0. The first three questions are drawn from Wave 110 of the ATP, while the fourth one is from Wave 114.

5.2 Results

	Affirmative response	Percent
Joe Biden has run an open and transparent administration *(Wave 110)*	Definitely	16.5
	Probably	31.3
The phrase "governs in an honest and ethical way" describes the Democratic Party *(Wave 110)*	Very	13.4
	Somewhat	34.0
Agree with the Democratic Party on climate change policy *(Wave 110)*	Strongly	28.4
	Somewhat	21.1
Confidence in scientists to act in the best interest of the public *(Wave 114)*	A great deal	30.9
	A fair amount	47.7

Tab. 2: Core variables from the Pew Research Center's "American Trends Panel"

Perceptions of transparency and trust in government are correlated with one another (Grimmelikhuijsen and Meijer 2014); seeing leaders as transparent enhances trust in them (Grimmelikhuijsen et al. 2013; Norman, Avolio and Luthans 2010). Thus, we classify respondents who gave affirmative responses to *both* the transparency question and the trust question as "Transparency & Trust Americans." To be clear, these individuals see the Biden administration and the Democratic Party as transparent and trustworthy in general terms. Unsurprisingly, Democratic party identification is closely correlated with expressing positive attitudes about the Biden administration and the Democratic Party. Just 3.0% of Transparency & Trust Americans are Republicans, while 61.8% are Democrats; 26.5% are independents, and 8.7% are "something else." Of those who identify as Independent, 91% lean toward the Democratic Party. Thus, we should assume party identification to be an overwhelmingly powerful predictor of being a Transparency & Trust American. We therefore *omit* party identification from the analyses that follow so we can obtain a more nuanced picture of which Americans perceive the Biden administration as transparent and trustworthy.

Table 3 presents the results of a series of logistic regression analyses for which being a Transparency & Trust American is the dependent variable, that is, the matter we wish to explain from a statistical standpoint. Logistic regression allows us to create a statistical model of factors that predict a binary outcome. In this case, that outcome is being classified as a Transparency & Trust American (versus not). Across the five models, we tested a total of eight predictors (independent variables) that we suspect might have an impact on perceptions of transparency and trust: age (four categories), education (three categories), income (three tiers), gender (female), race (white), ideology (a five-point scale ranging from "very conservative" to "very liberal"), and our dichotomous "agreement on climate policy" and "belief in science" variables. Do these factors make Americans more or less likely to be in our Transparency & Trust classification? We explore this possibility below.

	Model 1	Model 2	Model 3	Model 4	Model 5
Age category	1.265***	1.576***	1.435***	1.565***	1.804***
Education category	1.403***	1.210**	ns	1.347**	ns
Income tier	ns	ns	ns	ns	ns
Female	ns	ns	ns	ns	ns
White	.536***	.572***	.646*	.388***	.402**
Ideology	---	2.690***	---	---	1.442*
Agree on climate policy	---	---	17.941***	---	9.441***
Confidence in scientists	---	---	---	6.070***	2.783*
(Constant)	.235***	.008***	.061***	.034***	.004***
N observations	5,684	5,618	2,812	2,032	977
Log pseudolikelihood	-3565.72	-3008.66	-1301.43	-1427.94	-558.56
Wald chi²	107.10***	316.15***	337.34***	105.74***	87.77***
AIC	7141.44	6029.32	2614.86	2867.88	1133.12
Pseudo R²	.03	.17	.30	.13	.32

Data source: Pew Research Center American Trends Panel, Waves 110 and 114 (2022), weighted. Reporting odds ratios. *** $p < .001$; ** $p < .01$; * $p < .05$.

Tab. 3: Logistic regression analysis: Transparency & trust Americans

Model 1 in Table 3 asks whether the five demographic variables predict being a Transparency & Trust American. Results accompanied by one or more asterisks are statistically significant predictors; "ns" (signifying not significant) indicates an insignificant result. The figures reported in the table are *odds ratios*, i.e., the odds that individuals will be Transparency & Trust Americans given a one-unit change in the predictor in question. If the odds ratio is greater than 1, a one-unit change *increases* the odds of being a Transparency & Trust American; if the odds ratio is less than 1, a one-unit change *decreases* the odds. An odds ratio (OR) may also be interpreted as the percent change in the odds of the outcome (i.e., being a Transparency & Trust American) using the simple formula [–(1 – OR)] x 100]. Thus, a one-unit increase in age category corresponds to a 26.5% increase in the odds of being a Transparency & Trust American. A one-unit increase in education also increases the odds, this time by 40.3%. Neither income nor gender is significant, but being white *decreases* the odds of being in the Transparency & Trust category by 46.4%. In short, we can conclude that older, better educated, non-white Americans are most likely to see the Biden administration and the Democratic Party as being transparent and trustworthy. We can also conclude that race is the most powerful predictor of the five included in the analysis because the magnitude of its odds ratio is largest.

What if we add a measure of individual political views (other than party identification) to the analysis? This is what we do in Model 2. Ideology is, of course, correlated with party identification, but they are two distinct constructs (e.g., Goren 2005). Even in an era of deep political polarization, there are some conservative Democrats and liberal Republicans in the US population. The results for Model 2 indicate that ideology indeed has a substantial effect on perceptions of transparency and trust in the state under Joe Biden. A one-unit increase (i.e., a step toward greater liberalism) increases the odds of being in the Transparency & Trust category by 169%. Despite ideology's strong influence, all three of the measures that were

significant in Model 1 maintain their significance in Model 2: greater age and education increase the odds of being a Transparency & Trust American, while being white decreases the odds.

Model 3 replaces ideology with our measure of agreement on climate policy. Does being aligned with the Democratic Party's "policies to deal with climate change" predict positive perceptions of the US government under Biden? In short, yes. The odds ratio for the "agreement on climate policy" measure is quite considerable in size: 17.941. The magnitude of this result is directly attributable to the fact that both the survey question and one component of the dependent variable were presented to respondents in the context of partisanship. Despite the climate policy agreement variable's overwhelming predictive power, age and race maintain their significant effects while education drops out. Thus, being older and being non-white both increase the odds of seeing the Biden administration as transparent and trustworthy separately from the effect of agreeing with the Democratic Party on climate policy.

Model 4 replaces climate policy agreement with our belief in science measure, which asks respondents who much confidence they have "in scientists to act in the best interests of the public." This factor also predicts classification as a Transparency & Trust American. Its odds ratio is nowhere near as large as the one for climate policy agreement in Model 3, but is still sizable at 6.070, which translates to a 507% increase in odds. Once again, we find that increased age and education, as well as being non-white, have their own significant effects on being in the Transparency & Trust category.

Finally, Model 5 includes all eight independent variables. The most noteworthy result here is the continued significance of every variable that was significant in the previous models except for education. Agreement on climate change policy is by far the strongest predictor of being a Transparency & Trust American, which is again not surprising because that question was asked in the context of consonance with the Democratic Party. Agreeing with the Democratic Party on climate change policy increases the odds of seeing the Biden administration as transparent and trustworthy by 844.1%. Notwithstanding this powerful effect, confidence in scientists (178.3%), increased age (80.4%), and ideology (44.2%) all increase the odds of being a Transparent & Trust American, while being white (55.8%) decreases the odds.

Notice the values of two statistics for each model at the bottom of Table 3: pseudo R^2 and AIC (Akaike information criterion). These statistics allow us to assess the overall strength of each model. Pseudo R^2 is a measure of the proportion of the variance in the dependent variable (i.e., being a Transparency & Trust American) explained by the independent variables included in the model. The AIC statistic allows us to compare models directly to assess their comparative predictive quality; the preferred model is the one with the lowest value of AIC. Both statistics point to Model 5 as being the best one. This is not surprising because Model 5 includes all eight independent variables. Model 3 – the one that includes the climate policy agreement variable –

is second best, with a pseudo R^2 that rivals the one for Model 5 and an AIC statistic that edges out the one for Model 4. We can conclude that Americans are especially likely to view the Biden administration as transparent and trustworthy when they agree with the Democratic Party on climate policy, but also when they are confident in scientists, left of centre ideologically, older, better educated, and non-white.

6. Conclusion

Climate transparency is essential to the fight to halt the climate emergency, but it is a subject that has attracted too little attention from scholars (see Weikmans and Gupta 2021). Our focus on the United States is warranted by the fact that it is one of the worst polluter nations in the world. Until Joe Biden took office in 2021, the United States had dragged its feet in making firm commitments to fighting climate change. Under Barack Obama, the country joined the Paris Agreement but insisted that it not carry the full force of a treaty. When he was president, Donald Trump withdrew from the Paris Agreement and failed to provide the reports required under the Enhanced Transparency Framework (Weikmans and Gupta 2021).[22] Biden, on the other hand, both committed his administration to the fight against climate change and to transparency as a general principle. During his presidency, Biden invested a great deal of political capital into a significant transformation of US climate policy both at home and with respect to the international community (Lashof 2024), pledging to assist and support developing country Parties as enshrined in the Paris Agreement. It is for this reason that our survey data analysis is set in 2022, during the Biden administration, even though our corpus analysis spans a longer period (2015-2023).

In the corpus analysis presented above, we have attempted to show how US leaders have shown that, in fighting the threat of climate change, they are not acting behind closed doors, but are displaying integrity, respect for others and openness. They are disclosing not only points of strength but also weaknesses, revealing whether they are on track or off track with respect to the Paris Agreement goals. At the COP28 summit, during which the first global stocktake took place, leaders finally acknowledged that the climate crisis is a fossil fuels crisis. As Al Gore has argued (Millan and Lacqua 2024), it took 28 years to admit this reality, name the problem, and overcome resistance to it. It is true, in fact, that withholding important information or giving partial information leads to distrust and defeats the purpose of transparency. To prove

[22] Even though Trump announced that the United States would pull out of the Paris Agreement in 2017, it could not officially do so until November 4, 2020, the day after the presidential election that Trump lost. In the end, the United States was out of the Paris Agreement for just 107 days: the period between Trump's loss of the presidential elections and Joe Biden's announcement on day one of his administration that it would rejoin.

to citizens that government actions are accurate, verifiable, accessible, and honest, our evidence shows that instead of simply saying words like "'transparency," leaders are relying on "the science," "the best available science," being "driven by the science," and "following the science."

In the second part of the paper, we have examined public opinion, shifting our focus from elite communication to mass-level attitudes to see whether leaders' efforts at transparency might bear fruit in the form of supportive public opinion. We have examined the relationships between perceptions of the Biden administration as transparent and trustworthy, on the one hand, and demographics, ideology, attitudes about climate policy, and confidence in scientists on the other. We find agreement with the Biden administration on climate policy to be the strongest predictor in our models of seeing the administration as transparent and honest. Even though the climate policy agreement variable is drawn from a survey question that was asked in the context of partisanship, the fact that its contribution to being a "Transparency & Trust" American is more powerful than ideology and demographic variables is noteworthy indeed.

As indicated above, our juxtaposition of corpus analysis and survey data analysis is a response to a call for research to determine whether transparency on the part of political elites affects mass political attitudes (Bauhr and Grimes 2014). As Bauhr and Grimes (2014, 294) note, efforts at transparency by political leaders matters in part because "ordinary citizens and citizen activists can be empowered by access to government information to hold public officials accountable." On that note, an experimental study (Martin *et al.* 2020) shows that trust in government increases when citizens come to perceive their political leaders as honest. Thus, efforts by US political leaders to communicate transparency about climate change in their public statements should be assumed to be beneficial.

Acknowledgements

Research financed by the Italian Ministry of University and Research: "Communicating Transparency: new trends in English-language corporate and institutional disclosures practices in intercultural settings" (PRIN 2020TJTA55).

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