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INTRODUCTION

Negotiating climate change in public discourse: insights from critical discourse studies

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ABSTRACT

This Special Issue collects five articles that are located in the present global context, and draw on methods from across critical discourse studies (CDS) to examine the interaction between material realities of climate change and discursive communication between different Parties and non-Party stakeholders in multimodal ways and on multiple platforms. To this end, it draws on discourses such as the UN speeches, UN documents, EU green deal policy, official documents submitted by African countries to the United Nations Framework Convention on Climate Change (UNFCCC), and news reports in China and Australia. In these studies, diverse social and linguistic concepts were utilized and revisited to better inform the use of linguistic and/or visual symbols in different types of public discourse. This Special Issue aims to take the field a step further by showing the importance of carrying out more international research to expand our knowledge of the global, regional, and local discourse and ideologies that shape what we come to know and understand as climate change and how it is to be addressed. We envisage it will bring significant theoretical, methodological, and empirical insights into the relations between language use, discursive practice, and social practice.

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Climate change; critical discourse studies; public discourse; multimodality; news discourse; ideology

1. The pressing issue of climate change and global climate change governance

A new flapship UN climate change report released in 2022 issued dire warning of unprecedented changes of climate as well as the most likely disastrous consequences.[1] Climate change has also been found to closely interact with socio-political trends on global and local scale. To counter such a common non-traditional threat to all the mankind, governments and inter-governmental organizations have introduced a wide range of politics over the years, with different aims and involving different international parties and stakeholders. For example, the United Nations Framework on Climate Change (UNFCCC) was established in Rio de Janeiro in 1992 to facilitate intergovernmental climate change negotiations between its member states to advance the policies of the Convention on Climate Change.[2]But the rising temperature and worsening climate over the last decade

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constitutes the strongest rebuttal of previous global efforts to curb climate change. For instance, according to NASA, NOAA, and the UK Met Office, the last decade was confirmed as the warmest decade on record, and the five years from the beginning of 2015 to the end of 2019 were the hottest in the 170-year series.[3]

At inter-governmental level, the UNFCCC, acknowledging different capabilities and responsibilities of individual countries in addressing climate change, adopts 'Common but Differentiated Responsibility and Respective Capabilities' (CBDR-RC) as its guiding principle. Yet, this principle per se has been highly controversial. It fails to enhance inter-governmental cooperation as expected, but instead generates deep divide between developed and developing countries in international climate negotiations (Wang & Gao, 2018). As a result, the US, the biggest carbon emitter in history, refused to ratify the Kyoto Protocol in 2001, because its government considered it to only bind developed countries and place a heavier burden on them. The US also worried that the Kyoto Protocol would make it liable to reduce greenhouse gases emission than its economic development can possibly allow (Hovi et al., 2012), but meanwhile the current two biggest carbon emitters, China and India, were not required to limit and reduce greenhouse gases emission. Other industrialized countries were also reluctant to bear historical responsibilities and current burden in emission reductions, financial support, and technology transfer due to a variety of socio-political and economic reasons.

In contrast, Brazil, China, India, and South Africa formed a bloc of the BASIC countries in November 2009 before the Copenhagen Summit (Jacob, 2010) as a joint effort to negotiate with developed countries in terms of emission reductions and other climate responsibilities. They considered industrialized countries to be most responsible for the current level of carbon emissions and criticized them for their reluctance to provide financial and technological support to the developing world as well as their insufficiency of climate action (Hilton & Kerr, 2017).

To relieve tensions between industrialized countries and economies in transition in the global climate negotiations, the Paris Agreement requires each participating country to submit their National Determined Contributions (NDCs) to the UNFCCC secretariat every five years, regardless of their implementation timeframes.[4] However, under the Paris Agreement, only the submission of an NDC is a legal obligation, while effective implementation of the emissions target is, disappointedly, not compulsory, although almost all signatories of the Paris Agreement submitted their NDCs in the lead-up to the UN climate talks in 2015.

At the COP21 in Paris, its member states agreed to mobilize stronger and more ambitious climate action to scale up global responses to climate change as outlined in the Paris Agreement. The COP27 decision in 2022 to establish a loss and damage fund to help countries most affected by climate change has been hailed as a historic moment and the most important climate advance since the Paris Agreement at COP21 in 2015, although world leaders have not raised ambition on cutting emissions.

After so many years of global efforts to tackle climate change, COP27 also highlighted the limits of multilateralism as countries vetoed efforts to bring forward targets on limiting global warming (Bowley, 2022). Despite continuous coordination developed by the UN and numerous efforts made by all Parties and non-Party stakeholders (e.g. subnational governments, cities, states, foundations, NGOs, civil society, multilateral organizations, and the private sector) through a series of climate change related actions, our climate

actions are still falling a long way behind climate goals. As António Guterres, the UN Secretary-General, remarked at the conclusion of COP27 in Sharm el-Sheikh, 'COP27 concludes with much homework and little time. We are already halfway between the Paris Climate Agreement and the 2030 deadline'.[5]

With the worsening climate change, discussions in the public sphere have been growing intense on how to make climate-sensitive sectors more resilient to climate variability and how to limit damage from, or take advantage of, potential long-term climate changes, which, in recent years, have increasingly relied on neoliberal measures that favor free-market capitalism, deregulation, and reduction in government spending. The ways climate change is communicated is thus of paramount importance to raise public awareness and promote actions. Since the 1990s, research in media and communication studies and (critical) discourse studies have made immense contributions in revealing *what* aspects of the climate crisis have been communicated and *how*. On the basis of previous research, and in recognition of the changing realities, this Special Issue aims to establish where we are now and contribute to taking the field a step further by showing the importance of carrying out more research on how this pressing issue has been communicated between different Parties and non-Party stakeholders, in multimodal ways (e.g. infographics, texts, or images), and on multiple platforms (e.g. UN speeches, government documents, media, or netizens' online discussions).

2. (critical) discourse studies of climate change

Climate change has been investigated in fields not limited to environmental communication (Boyce & Lewis, 2009; Hansen, 2010, 2015; Leipold et al., 2019) and discourse studies (Hajer & Versteeg, 2005). Recent bibliometric evidences have also pointed to increasing scholarly attention on climate change in research on news discourse since 1994 (Wang et al., 2022) and in discourse studies since the 2000s (Huan & Guan, 2020). Scholars have observed enormous challenges to climate change communication. Key to such challenges lies in revealing divergent ideologies and value positions competing for influences, particularly because this issue is closely related with national interests of member states to the Convention. Characterized by a focus on the intimate relationship between semiotic resources and social life, the approach of critical discourse studies (CDS) possesses great potential to deepen our understanding of such a global risk by uncovering 'the way social power, abuse, dominance and inequality are enacted, reproduced and resisted by text and talk in the social and political context' (Van Dijk, 2001, p. 352).

The CDS approach has been applied to probe into how linguistic devices and visual images contribute to the construction and communication of climate issue, particularly, how these discursive strategies result in various and often deviating representations of certain aspects of climate change (Nerlich et al., 2010). The existing literature has mainly investigated representations of climate change from the following four dimensions: (1) organizational communication of climate change, for instance, how international organizations communicate climate issues and policies to member states, stakeholders, and the general public; (2) media communication of climate change, for example, how media in a given country represent the issue; (3) cross-national comparison of climate change communication, for example, how public discourses in different countries portray climate issues; (4) readers' consumption of climate change discourses,

for instance, how readers engage in online interactions with news stories published by mass media and how various types of users interact on social media platforms.

2.1. Organizational communication of climate change

Organizational discourses of climate change are by nature highly politicized, often characterized by neoliberalism. To illustrate, Kanerva and Krizsán (2021) conducted a polyphonic analysis of implicate argumentation on the Summary for Policymakers of the Fifth Assessment Report (AR5) by the Intergovernmental Panel on Climate Change (IPCC) and found that discourses of the IPCC discouraged climate action based on pro-economic-growth frames, disguised under the seemingly pro-action arguments. They recommended the IPCC avoid using such linguistic constructions and exert more positive influence on making effective policies and promoting a transition into a carbon-neutral society. Krzyżanowski (2013) scrutinized the European Union (EU) climate policy from 2007 to 2011 using the discourse-historical approach (DHA) and revealed the dynamics of climate policy by the European Commission in response to political, and economic, and social transformation within the EU and in global contexts. He observed that the focus of the policy-communication remained relatively unchanged though certain discursive change and shifts over time may go unnoticed by the public. Pounds (2021) investigated woodland narratives collected by the UK charitable environmental organization Woodland Trust in 2016 through the lens of Appraisal. Through differentiating between values attributed to trees and woodland in the narratives, she revealed the link between narrators' positive appreciation of nature (woodland), the values of nature upon which such appreciation relies, and the experiences that underlie such values and appreciation. She also highlighted the importance of considering and fostering people's affective relationship with nature in environmental protection and climate action.

2.2. Media communication of climate change

Media studies of climate change take a lion's share of extant literature. One major reason is that climate change, as a largely intangible issue, needs to be discursively constructed as relevant to people's daily life in order to raise public awareness or mobilize voters (Huan, 2023/This Issue). Broadly, previous studies have proffered insights into journalistic norm of 'balanced reporting' (Boykoff & Boykoff, 2004), contextualization of climate contrarians (Brüggemanna & Engesser, 2017), framing of climate policies (Olausson, 2009), political and ideological influences (Carvalho, 2007; Carvalho & Burgess, 1985), the issue attention cycles of narratives (Boykoff & Boykoff, 2004; Doulton & Brown, 2009; McComas & Shanahan, 1999), news sources used in media coverage (Antilla, 2005; Mormont & Dasnoy, 1995; Trumbo, 1996), inter alia.

Past studies have revealed divergences in climate change communication across different countries, domestic political parties, media platforms (e.g. broadsheet vs. tabloid), and time periods. For example, Mooney and Nisbet (2006) found the Democrats in the US tended to emphasize the catastrophe frame whereas the Republicans tended to foreground the money frame and the scientific uncertainty frame (p. 3). Brossard et al. (2004, p. 14) noted that French media coverage focused on international relations while the US coverages brought into focus conflict between scientists and politicians.

Brüggemanna and Engesser (2017) observed right-leaning papers challenge climate change significantly more often, but left-leaning papers quote contrarians more often, and clearly evaluate them negatively. The US media generally displayed more climate scepticism than did the European media (e.g. Gavin & Marshall, 2011; Olausson, 2009, p. 43). Atanasova and Koteyko (2017) investigated linguistic and conceptual metaphors in opinion page content collected from *Guardian Online* and *Mail Online*, and found divergent discursive strategies and attitudes towards the issue across media outlets. Specifically, they revealed that *Guardian Online* tended to utilize war metaphors to promote pro-climate change arguments, whereas *Mail Online* employed religion metaphors to furnish sceptic/contrarian arguments, which raised concerns about sustained policy gridlock. Boykoff (2007) found journalistic norms of 'balanced' reporting on scientific investigations of human-induced climate change in the UK and US newspapers was no longer evident. Similar evidence was provided for political reporting in different Western countries (Esser & Umbricht, 2014; cited in Brüggemanna & Engesser, 2017). Doulton and Brown (2009) observed a shift in media perceptions of climate change from 1997 to 2007 as a low development priority to a high risk with catastrophic consequences for developing countries which need assistance from industrialized countries. Carvalho (2005) pointed out a change of climate change communication from being a strictly scientific problem in the mid-1980s to a controversial political matter at the end of that decade.

Through a meta-analysis of 133 studies of climate change in media discourses, Schäfer and Schlichting (2014) argued that scholarship in the field has still concentrated strongly on Western countries and print media. The reasons are evident as well. On one hand, major Western powers bear more historical responsibilities for current level of carbon emissions and are now more capable, financially and technologically, to provide solutions to climate crisis. On the other hand, Western media are dominating international knowledge flow and possessing substantial discursive power in defining, amplifying, and interpreting climate debates. Yet, the focus on Western media would not necessarily help to remove impediments to climate actions. For instance, Carvalho (2007) and Koteyko (2012) lamented that the ideologies of free-market capitalism and neo-liberalism embedded in the discursive construction of climate change in the UK news media, restricted debate on climate change mitigation scenarios, and in turn resulted in maintaining conservative climate policies and delaying, even hindering, a transition into a carbon-neutral society.

Studies on media communication of climate issue in major Western countries other than Anglo-American nations (e.g. Germany, Sweden, and Japan) have also uncovered positive and negative impact of media communication on climate governance. For instance, Olausson (2009) investigated three Swedish national newspapers and found they were reluctant to display scientific uncertainty that would undermine collective climate actions. By contrast, an analysis of image-language interactions in Canadian media indicated that climate change was inconsistently communicated to its citizens because visual and linguistic communication tended to pull in different discourse directions, thus advancing unrelated, confusing, and sometimes contradictory claims (DiFrancesco & Young, 2011). Drawing on the approaches of multimodal critical discourse analysis (MCDA) and DHA, Sedlaczek (2017) delved into two factual television programs in Australia and discovered an insufficient orientation in characterizing climate change. Findings also suggested that the religious program put an emphasis on the question of responsibility, while the consumer magazine underlined economic aspects of energy

efficiency, which would arguably miss the complex interaction of different representations and their argumentative use within the programs. Asayama and Ishii (2014) examined how Japanese national newspapers (1988–2007) discursively constructed the IPCC, and observed rhetorical disconnection between science and politics, by portraying the IPCC as a pure scientific authority. Horsbøl (2020) identified and examined protest voices against the erection of wind turbines in Denmark's national and local news media discussions based on the notion of topos, and found that critical voices were by large expressed in local or regional media due to their concern of local matters.

Voices from developing nations, especially some of the current largest carbon emitters such as China, India, and Brazil, are critical to find solutions to climate crisis. For instance, Brazil is not only one of the current largest carbon emitters, but its Amazon rainforest has a critical cooling effect on the planet. If deforestation continues at current levels in the Amazon region, the climate would only change for the worse.

Broadly, we can observe an evident nationalism in discourses of climate change in those countries. To illustrate, Fu and Wang (2022) examined news reporting in *China Daily* from 2010 to 2019 and found while *China Daily* emphasized the importance of cooperation between China and the US on climate actions, it also highlighted China as a responsible major power and the US as a capricious and self-centered power. They related the ways those two countries were portrayed to pragmatism and the China Dream of national rejuvenation. Billett (2010) investigated four major national English-language newspapers in India and revealed that they tended to situate this issue within the context of international 'carbon colonialism' that could suppress India's economic growth. In a study on the Brazilian press (2003–2013), Dayrell (2019) demonstrated shifts in climate polices from reluctance to control deforestation to strict implementation of forestry policies and reiteration of its commitment to renewable sources, and then to an emphasis on sustainability, as well as social justice in environmental protection.

2.3. Cross-national comparison of climate change communication

Cross-national comparison has showcased both convergences and divergences in media representation of climate change. For instance, a study on visual images attached to online news articles collected from US, UK, and Australian newspapers found they all brought into focus the 'contested' frame and the 'distancing' frame, and that these visual framings helped shape the cultural politics of climate change in important ways through sanctioning some interactions while marginalizing others (O'Neill, 2013). Research on news articles published in France, Germany, the UK, and the US between January 2000 and July 2010 indicated sceptical voices were more prevalent in the US and France than they were in Germany (Grundmann & Scott, 2014). A multimodal analysis of newspaper articles covering the UNFCCC (2010–2013) collected from Brazil, India, South Africa, Germany, and the US, revealed four major frames (i.e. the frames of global warming victims, civil society demands, political negotiations, and sustainable energy) prevailed across the five countries (Wessler et al., 2016).

Cross-national differences have also provided us with useful insights into understanding the dominant ideologies related to climate issues in a given society. For example, an investigation into news articles about climate change published between 2000 and 2009 in *The Times* in the UK and *The New York Times* in the US showed that

both newspapers focused on finding solutions to climate change. However, *The New York Times* seemed to portray the issue as a problem, which may hinder mutual understanding and the crafting of global climate change mitigation policies (Nerlich et al., 2012). Grundmann and Krishnamurthy (2010) compared news from the US, the UK, France, and Germany between 1984 and 2007 and found the UK and US placed more emphasis on this issue than did France and Germany. The US tended to foreground a scientific frame, whereas the UK, France, and Germany were more likely to augment political frames. In a comparison between developed and developing countries, Wang (2009) examined *The Guardian* in the UK, *The Washington Post* in the US, and *People's Daily* in China (1984–2008), and observed that global warming was depicted as an established fact in *The Guardian* and *People's Daily*, whereas *The Washington Post* remained sceptical about it.

2.4. Readers' consumption of climate change discourses

Interactions between journalists and readers on social media provide valuable window into demystifying the dynamics and complexity of public comprehension of climate change. Young (2013) scrutinized letters to the editor about climate change in eight major Canadian dailies in 2007–2008 and illustrated how these letters established and legitimized conservative or sceptical perspectives on climate change. Jaspal et al. (2013) investigated reader comments on the UK tabloid newspaper website before and after the East Anglia controversy, and revealed how stereotypes of science and politics were appropriated, how readers' constructions of climate change after 'climategate', and how climate-sceptic arguments were adopted and contested in interaction. Studying user comments in response to articles on climate change from *The Guardian*, Collins and Nerlich (2015) found that while some comments discouraged alternative viewpoints, there were others encouraging dialogic interaction. Based on a corpus from Web feeds (blog-searching engines and RSS databases) containing 'carbon compounds' (e.g. 'carbon credit', 'carbon diet', and 'carbon sinner'), Koteyko (2010) observed both support and criticism of climate mitigation initiatives proposed by policy makers and environmentalists.

Apart from the above four perspectives on climate change in discourse studies, scholars also investigated data related to other key stakeholders, such as UN news (Wang et al., 2022), news from scientific journals such as Nature and Science (Nielsen & Schmidt Kjærgaard, 2011), environmental law (Gellers, 2015), sustainability reports by the companies – BP, Equinor, ConocoPhillips, and ExxonMobil (Dahl, 2022), as well as images on Green Issues from Getty Images, a British-American visual media company (Hansen & Machin, 2008).

While previous studies have shown the contribution we can make in CDS, we believe our understanding of discourses of climate change would be further enriched by more studies carried out around the world, especially in countries other than the US or the UK, in relation to international as well as regional and national policies, and vis-à-vis communication about climate change in some vulnerable developed countries, developing countries, international or inter-governmental organizations, and private sectors both in regard to the international situation and locally based knowledge.

3. Overview of the special issue

Since climate change has shifted from an environmental phenomenon to a concern of global and local security that has been increasingly penetrated by neoliberalism, it seems imperative to continue a critical discourse study of climate change in public discourses, taking discursive strategies as analytical point of view to understand ideologies or belief systems shared by various stakeholders. CDS, with its inherent problem- and action-focused agenda, possess substantial potential to contribute to the debate by offering a deeper insight into *how* various Parties and non-Party stakeholders negotiate their stances and positions regarding climate change through and in various public discourses. We hope findings presented in this issue will assist decision-makers, scientists, private sectors, and the general public in furthering their comprehension of climate issues and enhancing climate actions at both local and global scale.

This Special Issue presents a collection of five articles, with various theoretical underpinnings, research methods, and data types, to explore how climate change is represented and how specific ideologies related with the definition and causes of, and solutions to climate change are shaped, reshaped, consolidated, and normalized in the dynamic and polyphonic debate at different levels. This issue attempts to bring into focus more types of public discourses, such as UN speeches (Wang, Yu, Xiang & Qu), UN documents (Machin & Liu), EU green deal policy (Molek-Kozakowska), official documents submitted by African countries to the UNFCCC (Zhu & Shang), in addition to news discourses (Huan). The five articles closely examine discursive construction of climate change by key parties and other stakeholders (for instance, the UN, the EU, mass media, and states and countries) in a variety of public spheres across cultures, aiming to make climate-sensitive sectors more resilient to climate variability and promote climate actions to limit damage from, or take advantage of, potential long-term climate changes. In these studies, diverse social and linguistic concepts are utilized and revisited to better inform the use of linguistic and/or visual symbols in different types of public discourse.

Based on the UN speeches on climate change (2002–2021) collected from the website of the UNFCCC, Guofeng Wang, Xiuzhen Yu, Yupei Xiang, and Yingzi Qu integrated quantitative and qualitative methods to examine how polyphony was used to convey stance through analysing concessive-*but* constructions in implicit argumentation. Findings revealed that, guided by humanitarian principles, the UNFCCC Executive Secretaries expressed dissatisfaction with insufficient progress made thus far on climate action in their speeches, serving to promote solidarity and urge parties and all the other stakeholders to take immediate climate actions. The presence of multiple voices in the concessive-*but* constructions of implicit argumentation reduced the likelihood that specific parties or stakeholders would take offense. However, considering the urgency of tackling this pressing global issue, it was recommended they should use more explicit discursive strategies which exert more direct pressure on specific parties or stakeholders who fail to assume their share of responsibility in climate governance.

David Machin and Yueyue Liu employed the approach of MCDA to examine 'Transforming our World: The 2030 Agenda for Sustainable Development' proposed by political leaders of the UN member states. The investigation into those documents used to communicate the Agenda comprising the 17 Sustainable Development Goals uncovered the

neoliberal free-trade ideology, concealed in frequent use of infographics, bullet points, charts, and tables. They found that the Agenda was represented as a highly technical, engaging, and above all, moral process, and these formats helped to persuade governments, organizations, and companies into accepting the plan.

Against the background of neoliberalism and ideological hybridity, Katarzyna Molek-Kozakowska investigated the 'European Green Deal', a package of policy initiatives mapped by the European Commission to achieve climate neutrality by 2050. Drawing on the notion of 'interdiscursivity' in CDS and several discursive strategies of DHA, the study conducted a close thematic analysis based on keyword and concordance analysis of representations of 'environment' and 'climate' as well as 'economy' and 'transition'. It illustrated how tensions between discourses were eased and how interdiscursive crossovers were established to normalize 'sustainability' as the contingency between environmental and economic orders of discourse.

Taking the discursive news value approach, Changpeng Huan focused on two levels of discursive interventions (i.e. news values and news voices) in his cross-national comparison of news reporting on climate change in China's and Australia's mainstream print media. He observed stark contrast between climate change communication in Chinese and Australian contexts. The trend of politicization was found in the media of both countries. Yet China's media tended to globalize China's local climate actions, foregrounding political conflicts between developed countries and developing countries in general, and between China and the US in particular, whereas Australia's media were more likely to localize global climate actions, highlighting political conflicts between the Coalition government and the rest of domestic society. Those differences were explained by recourse to different societal functions of news media and the stiff China–US strategic competition.

Drawing on the positioning theory, Xufeng Zhu and Xin Shang's article probed into how African countries positioned themselves in their NDCs through discursive narratives around three prominent thematic categories, i.e. *responsibility*, *vulnerability*, and *conditionality*, within the conflicting contexts of international climate change negotiations between developed and developing countries. Research results showed African countries were likely to shape a collective identity by portraying themselves as non-villains, victims, and demi-heroes through emphasizing their insignificant historic responsibility, exceptional vulnerability, and conditionality of implementation on the external support from the international community. The authors argued that these discursive strategies assisted African countries to fight against inequalities and hegemonic discourses in climate negotiations.

To sum up, this Special Issue aims to encourage continued scholarly efforts to examine the interaction between material realities of our climate and discursive construction in various public spheres, by multiple stakeholders, via manifold semiotic resources, and across a wide range of countries, as part of expanding our knowledge of the global, regional, and local discourse and ideologies that shape what we come to know and understand as climate change and how it is to be addressed. It is argued that the confinement to a single perspective or methodology would fail to do justice to such complex topics as climate change and the power struggles behind it. We envisage this Special Issue will bring significant theoretical, methodological, and empirical insights into the relations between language use, discursive practice, and social practice.

Notes

1. Please see the UN news, 'Can the UN climate report: It's "now or never" to limit global warming to 1.5 degrees', which can be found at: https://news.un.org/en/story/2022/04/1115452 (accessed December 20, 2022).
2. The general information of the UNFCCC is available at: https://unfccc.int/about-us/about-the-secretariat (accessed October 10, 2021).
3. More details can be found at the news 'Last decade confirmed as warmest as record' by the BBC on January 15, 2020, which is available at: https://www.bbc.com/news/science-environment-51111176 (accessed December 20, 2022).
4. More information about NDCs can be found at: https://unfccc.int/ndc-information/nationally-determined-contributions-ndcs (accessed October 10, 2021).
5. The speech can be seen at: https://www.un.org/sg/en/content/sg/statement/2022-11-19/statement-the-secretary-general-the-conclusion-of-cop27%C2%A0-sharm-el-sheikh%C2%A0%C2%A0 (accessed December 20, 2022).

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