Framing Social Actors in Climate Change Communication: A Functional Analysis of Transitivity

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Abstract: We analyze how social actors are represented in articles about climate change policies in the Arab World, based on twelve news articles from pro-government news, covering the period from 2021 to 2024. The articles were selected to cover the study topic, focusing on those that were found to report on the multiple social actors involved in the process and legislation of climate change policies. For this purpose, the study employed van Leeuwen's *social actor theory* combined with Halliday's *Systemic Functional Linguistics* (SFL), specifically the notion of the *transitivity system*. The findings revealed that the news articles concentrate on specific social actors while minimizing the role of others. Highlighted social actors include governments and leading politicians, international institutions providing funding for climate change initiatives in the Arab World, and the private sector. By contrast, news articles mainly ignored scientists and researchers, environmental activists, and other public groups that are involved in climate change policies. The study recommends that the media and news writers should pay more attention to linguistic elements when tackling such a critical issue that affects all sectors of society.

Keywords: climate change, linguistic choices, representation strategies, transitivity, SFL, social actors

1. Introduction

In recent decades significant impacts of climate change have become evident, and both developed and developing nations have taken steps to address global warming, aiming to mitigate its anticipated effects and reduce its negative impact on human life. COP28, the 28th Conference of the Parties regarding the United Nations Framework Convention on Climate Change, was held in the United Arab Emirates in November 2023. It convened world leaders and important stakeholders in an attempt to address issues related to mitigating climate change, formulating new relevant policies, discussing related global impacts, and evaluating global collective progress toward achieving the goals of the Paris Agreement (2015) (About COP28, 2024). Notwithstanding critiques about COP28's efficacy in restraining global warming through a reduction of fossil fuel production and consumption, the summit saw forward-looking commitments and appeals for the adoption of novel strategies to reduce detrimental emissions. Moreover, the summit revealed the varied pace and efficiency of how the different nations headed toward the change, in addition to highlighting the increased vulnerability of some categories and nations to the climate changes taking place (Rannard, 2023).

All this underscores the relevance of research on the discourse concerning climate change (e.g., Myers et al., 2012; Wolf & Moser, 2011; Wang et al., 2022). Previous research has emphasized the importance of raising public awareness in order to influence social behaviors and attitudes regarding climate change policies (e.g., Halady & Rao, 2010). The media, including online newspapers, can help and hinder this process. Ideally, media and communication experts provide the delivery of accurate climate information (Depoux et al., 2017), which scientists and policymakers can utilize to raise public awareness, as well as stimulate active participation in finding solutions to the problems posed by climate change. In reality, however, the situation is not so ideal. The issue has been further explored in the study of media representation related to social actors involved in policymaking and their role in shaping public responses (e.g., Espluga-Trenc & Prades, 2023) and other linguistic areas (Kessar et al., 2021). This highlighted how

effective communication can underpin political efforts to remedy climate change by shaping public perception and building a consensus approach to mitigate environmental challenges. However, most media portrayals exclude certain social actors, potentially minimizing how those actors could play a part in climate action. Thus, how media outlets depict social actors in climate discourse is crucial in building inclusive and effective responses to climate change.

The media coverage of climate change requires a subtle approach, considering the relationship between language, representation, and public opinion. Media analysts could provide media practitioners and policy actors with insights into how to frame messages that cognitively and behaviorally enhance public awareness and action. Apt media representation should engender public deliberation, shape attitudes toward climate policy, and emphasize urgency in acting on the dangers posed by climate change.

Despite an ever-growing number of articles on climate change communication, few have scrutinized the representation of social actors in Arab climate policy discourse, which concerns some of the most climate-vulnerable regions. Our research aims to fill this gap by examining the representation of social actors in climate news items taken from Arab countries using conceptual tools from social semiotics. *Social actor framework* (van Leeuwen, 2008) examines how representations normalize social images and meanings through linguistic choices in referencing persons and groups involved in climate-related activities. For our purposes, it provides the tools for analyzing how texts represent social actors participating in climate policy. Analysis of these representational strategies are necessary for understanding how social actors are represented in discourse about climate action. Complementing this, *Systemic Functional Linguistics* (SFL) (Halliday, 1994; Halliday & Matthiessen, 2004) provides a framework to analyze the language structure used in these texts. By employing the *transitivity system*, we focus on how particular linguistic choices shape interpretations of agency and responsibility. This construct served as a guideline for showing how media representations involving social actors may shape the public perception of climate policies.

Specifically, we address the following research questions: (a) What are the forms and functions of the linguistic devices that represent people and events in Arab climate news? (b) What messages about climate policies in the Arab world are given through these strategies? This analysis sets out to provide insights to help inform media representation and policy messaging to improve public understanding and engagement with climate action.

The structure of the remainder of the paper is the following. In Section 2, we provide relevant background for understanding the discourse on climate change (2.1) and summarize our theoretical framework based on key concepts from social semiotics: representation of social actors (2.2) and transitivity theory (2.3). Section 3 describes the methodology and Section 4 provides the results, which are analysed in terms of social actors (4.1) and transitivity theory (4.2). The conclusion is presented in Section 5.

2. Theoretical background

2.1. Climate change discourse

Across different nations, research on climate change discourse has varied in its aims and methods. In the USA, Mooney and Nisbet (2006) compared the Democrats' and the Republicans' discourses using framing analysis. They found that the former framed it in a way that focused on catastrophic outcomes, while the latter highlighted financial aspects and scientific ambiguity. Lo (2015) examined Chinese discourse on climate change, especially considering the country's constrained political environment. The study confirmed that the various discourses lack a critical aim and honest engagement with the political debates around climate change. Krzyżanowski (2015), in turn, thoroughly scrutinized the discursive nature of European Union policies on climate change. The study confirmed that the EU's international leadership on climate change emerged from a focus on international competitiveness that characterized earlier phases of European integration.

Given that most audiences and policymakers obtain information about climate change from print and online media, news articles on climate change have been the focus of extensive research. Some researchers indicated that the media articles are constructed to reflect a balanced perspective (Boykoff & Boykoff, 2004), to frame the media articles on climate change policies (Olausson, 2009), and to show the ideologies on such communication (Carvalho, 2007). Wang and Huan (2024) maintained that climate change discourse needs to be discursively constructed in a way that is relevant to people's daily life to raise better public awareness about it.

Media coverage of climate change employs varied framing techniques that reflect distinct ideological perspectives and influence. Atanasova and Koteyko (2017) found that the *Guardian Online* employed war metaphors to support pro-climate change arguments. On the other hand, *Mail Online* utilized analogies derived from religious concepts to convey doubt and worry about climate change policies. In another study, Zhang et al. (2023) conducted an eco-linguistic discourse analysis of the news attitude toward climate change. Having constructed an ecological tone and modality system, the analysis of Sino-U.S. trade friction reports revealed different ideologies. In a similar study, Painter et al. (2024) examined how the media, particularly online news sites, communicated the Intergovernmental Panel on Climate Change (IPCC) new scenarios framework and shared Socioeconomic Pathways (SSPs). They found that the press in all countries provides little detailed explanation of how these climate change mitigation scenarios are developed. The study demonstrated how journalists use very general words such as *projections*, *futures*, and *pathways*, while shifting the narrative away from terms anticipating "doomsday" scenarios to more optimistic ones.

Critical discourse analysis (CDA) has been instrumental in revealing the different, sometimes oppositional, representations of climate change in the media and underlining the need for a closer understanding of linguistic choices and their impact on public opinion. For example, Nerlich et al. (2010) analyzed the role of linguistic and other multimodal devices in conveying climate change issues, revealing how they lead to diverse and sometimes conflicting representations of different issues and topics. Kurz and Prosser (2021) further analyzed the discourse on climate change to understand the social dynamics of this global issue. Their review provided a closer look at contemporary discursive and narrative research concerning climate change, underscoring the significance of CDA in questioning the social processes underlying the negotiation of climate change in public discourse at all levels.

While existing research has explored various aspects of climate change communication and media representation, there is a notable gap in the functional linguistic analysis of climate change communication. Much of the existing literature focuses on content analysis, framing, and discourse analysis. However, very few studies have delved into the functional aspects of language—specifically, how linguistic choices shape the portrayal of social actors and events in climate change news. Further, Schäfer and Schlichting (2014) documented a research bias towards Western countries and print media in the studies on climate change discourse. This study, therefore, aims to fill this gap by thoroughly examining the language used in media coverage from the Arab World, offering insights into the subtle ways linguistic choices may influence public understanding and engagement with climate change policies.

2.2. The social actors framework

Within the field of social semiotics, van Leeuwen (2008) developed the model of *social actor network* for analyzing language that recontextualizes the link between discourse and social practice, emphasizing how texts represent social actors through linguistic referencing strategies. His socio-semantic inventory outlines key mechanisms such as nominalization, categorization, and impersonalization, which shape the inclusion or exclusion of social actors in discourse. These strategies, often realized through lexical choices like over- or under-lexicalization (Simpson & Mayr, 2009), serve ideological functions by framing agency, responsibility and identity. Examining these representations helps uncover underlying ideologies and implicit social narratives within discourse.

Some basic categories of analysis are the following. *In-determination* is the case when social actors are shown as unidentified individuals or organizations, whereas *determination* occurs when their identification is explicitly stated. Social actors can be classified or grouped according to their distinct or shared identities and roles. *Nominalizations* often involve proper nouns and can be categorized as formal, semi-formal, or informal. Categorization may be *functionalized* by classifying social actors according to their *job titles* or *role allocations* or identifying them based on their characteristics. Van Leeuwen (2008) distinguishes between three distinct types of *identification*: *classification*, based on societal categories; *relational* identification, based on personal or work ties; and *physical* identity, based on distinctive physical traits.

Moreover, there are two types of exclusions: *'radical' exclusions*, which do not leave any mark of the social actor in the representation, and *'less' radical exclusions*, which leave a mark of them in the representation. The latter is divided into two sub-categories: *suppression*, which refers to the absence of any mention of social players in the text, and *backgrounding*, which refers to the mention of excluded social actors elsewhere in the text but not in relation to a specific action. Conversely, *abstraction* is the strategy of representing social actors by assigning a particular quality to them.

Building on this framework, several studies have applied similar linguistic and discourse analysis approaches to examine how language shapes perception, agency, and responsibility in various contexts. For instance, Machin and Mayr (2013) analyzed a crime TV program, showing how language and visuals painted offenders negatively and the police positively, deflecting attention from societal issues related to capitalism. Hampl (2014) explored US President Bush's rhetoric on Iraq and Afghanistan, revealing how selective language shaped public perceptions and legitimized political actions. Similarly, Cramer (2018) investigated the construction of national identity in news articles tackling the BP company oil spill accident in the USA in 2010. The results showed that UK and US news outlets had framed the incident differently to serve the national interest. While media in the UK contextualized the economic impact to be connected with the national economy and national identity, US media related the spill to the human and environmental impacts, framing the American people as victims and, therefore, holding the nation unaccountable.

In another similar study, Chaemsaithong (2021) combined the social actor framework with transitivity analysis (see Section 2.3) to explore agency and responsibility in American trial opening speeches. It was shown that the prosecution addresses framed defendants as agents responsible for their actions, while the defense addresses the mitigated agency. In a recent study, Heaton et al. (2024) researched the social media discussion of a UK COVID-19 contact-tracing application. According to their analysis of personalization and metaphors in tweets, the application was portrayed as an actor that makes decisions, thus contributing to shaping public views about the role of the application regarding health-related decisions.

In the context of news discourse, Wei (2023) explored agency and responsibility in Chinese news discourse about air pollution. Using a corpus-based discourse analysis approach, Wei revealed that China Daily ascribed pollution to non-human agents (e.g., *vehicles, dust*) or natural occurrences (e.g., *static weather*) through linguistic selections like nominalization of such objects, thus obscuring explicit human agency. However, the obligation to manage air pollution was primarily allocated to social agents, particularly to the government, especially by placing it as a participant in material, verbal, and relational, verbal processes. This strategy corresponds with the Chinese government's tendency to project itself as responsible for maintaining social stability.

In sum, these reviews of discourse studies analyzing social actors, often alongside transitivity, effectively exposes the ideological underpinnings of social representations across different discourses. Previous literature has demonstrated that linguistic choices, whether lexical or grammatical, not only mirror but also reinforce particular social meanings and narratives, shaping public perception and understanding.

2.3. Transitivity analysis

Social semiotics emphasizes that far from being simply a passive medium through which reality is rendered, language must be seen as an active agent in shaping perception and molding social realities (Halliday, 1994). The *Systemic Functional Linguistics* (SFL) model developed by Halliday and collaborators, includes the construct of *transitivity*, a potent tool for observing how particular linguistic choices function within discourses to constitute experiences, actions, and participants. Material, mental, behavioral, verbal, relational, and existential processes—as Halliday & Matthiessen (2004) describe them—vividly demonstrate how language works in encoding human actions and social meanings. It provides ways of understanding how the functions of language operate not only to describe the world but also to influence the way in which different audiences understand it.

A core theme in recent research applying this model is the role of linguistic choices in shaping social identities and reinforcing or challenging dominant narratives. For instance, studies exploring the portrayal of marginalized groups reveal that language often serves as a vehicle for conveying broader social meanings. For example, Tan et al. (2023) explored the representation of the social identity of Malay women in Malaysia. By analyzing two Malay short stories, they showed how social meanings are conveyed through linguistic choices. Such choices include *thematic* choices, which are evident in the foregrounding and backgrounding of certain descriptions and characteristics of Malay women, aiming to reflect specific aspects of their identities. Thematic analysis constitutes a component of the *textual meta-function*, which regulates the organization of information within a sentence in order to improve coherence and structure. The *theme*, the first part of the sentence, acts as the starting point, whereas the *rheme*, second part of a sentence, delivers additional material, influencing the text's coherence and progression. Foregrounding or backgrounding specific themes or rhemes adds an extra layer of meaning to the text in a manner of framing. This analytical method is beneficial for discourse analysis, since it may uncover how specific meanings are framed, highlighted, or downplayed, thus affecting meaning-making processes.

This dynamic between language and social roles extends into other domains, including legal and political discourse. Isti'Anah and Febrina (2023) used a corpus-linguistic approach and adopted an SFL transitivity model to study the lexemes *growth* and *sustainability* in Indonesia's capital relocation legal documents. They found that the emphasis on economic expansion by the government's discourse resulted in neglecting issues around environmental sustainability.

The ability of language to frame public understanding is also evident in media discourse, where transitivity analysis reveals how linguistic strategies construct national and international narratives. Xiang (2022) employed SFL in a transitivity analysis of Joe Biden's Inaugural Address to reframe the American attitudes toward social challenges and the USA's global position through linguistic elements. The study elucidated how linguistic elements are employed to reconstruct the American attitude and opinion on some issues. The role of language in shaping social realities extends beyond national contexts to global movements and protests. David-Ojukwu et al. (2021) used the SFL model in their analysis of news reports on the #EndSARS protests in Nigeria. The results indicated that the media presented youths as 'Sayers,' the police as 'Actors,' and the government as 'Goals' and 'Behavers' in reaction to government actions.

The influence of linguistic structures also emerges in translation studies. Li (2020) investigated the Chinese translation of Jung Chang's autobiography *Wild Swans* in terms of the model of transitivity shifts. The study revealed how a change in agency in translation (including equivalence, reduction, implication, and omission of agency) provokes a change in the ideology, characterization, and narrative features of the text.

In conclusion, the SFL transitivity model offers a powerful framework for examining how linguistic choices shape social meanings, identities, and power dynamics, as it simultaneously helps to reinforce ideologies, and guide public understanding of complex social and political issues. It helps show how across literature, policy, media, and translation, language not only reflects reality but also constructs and influences it.

However, while transitivity and social actor representation have been widely applied in various contexts, there remains a remarkable gap in their use within studies on climate change policies in the Arab region. This research seeks to address that gap by examining how social actors are represented in the discourse surrounding climate change policy enforcement. Such an analysis will not only enhance our understanding of climate policies in the region but also shed light on the challenges of addressing climate change effectively.

3. Methodology

3.1. Data Collection Methods

At the COP28 conference held in November 2023 in the United Arab Emirates, all 22 member states of the Arab League participated (Mauvais, 2023). Six Arab countries sent the highest number of delegates, including the United Arab Emirates, Morocco, Egypt, Jordan, Saudi Arabia, and Iraq. The corpus of data for the present study was collected from the media outlets of three pro-government media outlets in three regions, namely the UAE to represent the Gulf region, Jordan to the Levant Area, and Egypt to represent the North African region. These countries were chosen because of their active involvement in the COP28 conference and the extensive media coverage regarding climate change in 2023 and around it. An equal number of news articles concerning climate change policies were chosen from each news outlet. The corpus comprised fifteen news articles published between 2021 and 2024, containing 10651 words in total (Table 1). This small corpus was studied as a unified entity without comparing or contrasting articles from different countries. This also means that the study did not focus on differences in social actors and transitivity within the news articles of each individual country.

3.2. Data analysis procedure

With respect to the analytical steps followed, the first author initially identified the social actors in each news article. Each social actor was scrutinized in further detail, taking into consideration the representational choices that expressed and modified them. Features studied in further detail were *nomination* (as in formalization), *categorization* (as in personal identification or professional functionalization), *abstraction*, and *backgrounding* (which can be used for exclusion and suppression).

The second stage of analysis followed Halliday's (1994) model of transitivity. The researcher divided each news article into clauses, the most minor communicative event according to the transitivity model. Each clause involving the identified social actors was analyzed in terms of process choices. First, the *process* was identified and categorized as the primary constituent comprising the action in the clause. Second, the *participants* in each process were classified following the transitivity model. Bloor and Bloor's (2013) criteria for identifying processes and participants were followed to validate our classification of the study sample. Each participant's voice was examined to check if it was *included* or *excluded*. Moreover, grammatical or lexical choices related to the representation of each social actor, such as active or passive voice choices, were also marked and studied.

Table 1. Specification of the data corpus

#	Newspaper/ outlet	country	News article title	date	Number of words
1	Jordan News Agency	Jordan	Radaideh honors approved green building projects in Jordan.	2024, February 27	232
2	Jordan Times	Jordan	Leaving No One Behind: Jordan's Path for Inclusive Green Transition	2023, August 4	934
3	Jordan News Agency	Jordan	Women in Climate Action conference aims to enhance and empower local initiatives	2024, February 8	559
4	Jordan Times	Jordan	Mercy Corps Jordan, Coins for Change launch interactive platform to map climate change programmes in Jordan	2024, June 28	463
5	World Bank	Jordan	Climate Change: A Challenge and an Opportunity for Jordan's Development and Growth	2023, January 8	688
6	Al-Ahram Weekly	Egypt	A practical approach to climate change	2022, May 27	1688
7	Al-Ahram Weekly	Egypt	Egypt, IMF start discussion on $1.2 billion climate financing package	2024, 18 May	492
8	State Information Service	Egypt	Health Minister: Egypt's I-CAN is Crucial to Address Climate Change Effects	2023, December 3	397
9	Al Arabiya English	Egypt	Alexandria will sink beneath the water if Egyptians don't help fight climate change.	2021, September 1	845
10	International Monetary Fund	Egypt	Egypt Adapts to Climate Change	2022, June 16	135
11	The National	UAE	New climate change plan launched in Abu Dhabi	2023, July 19	382
12	WAM	UAE	UAE adopts integrated climate-conscious policies to enhance job opportunities, economic prosperity in labour market	2023, December 6	452
13	WAM	UAE	Mohammed bin Rashid chairs UAE Cabinet meeting in Expo City Dubai, reviews outcomes of national climate action efforts	2023, December 10	1757
14	The National	UAE	UAE and Saudi Arabia most active in GCC in climate change mitigation, report says	2023, November 18	820
15	The National	UAE	UAE's Cepas opening new pathways to green investment, minister says	2023, December 4	812

To maximize the validity of the classification of social actors and transitivity processes, the other two authors rechecked the classification, and modifications have been made accordingly. By performing this transitivity analysis of the leading social actors involved in climate change in the Arab area, our study could identify certain representation trends and highlight the information the news articles emphasized about the climate change policies in the Arab region, as dscribed in the following section.

4. Results

The findings of the present research are categorized into two groups: representational choices according to the social actors' theory and representational choices as per the transitivity analysis. Our primary focus was on the agency and responsibility of the various social actors, examining how these factors influence linguistic choices and the differences in those choices.

4.1. The representation of social actors

4.1.1. Nomination and role allocation

The analysis revealed several key social actors influencing environmental agendas, including governments as policymakers, private sector companies, public social groups, and specialized parties like scientists or activists. Governments' roles were highlighted and predominantly featured by representing the principal policymaking authority in the field of climate change policies. The articles mainly highlighted the decision-making processes, policy initiations and enactment, and legislative moves made by the governments concerning climate change mitigation strategies.

Governments, metonymically represented by the names of their countries, were often explicitly *nominated* and *role-allocated*, while other actors were not abundantly mentioned or highlighted. As van Leeuwen (2008) pointed out, actors are nominated precisely and given active or even passive roles. For example, in news articles from Jordan, the role of the government is strongly featured in (1). As the policymaking authority, Jordan's government is represented metonymically by the country's name, presented positively and stressed as an active social actor that has taken "serious actions" for climate change confrontation. In the Egyptian newspaper Al-Ahram Weekly, the *role of the government* is activated through its representation as the active force in formulating energy policies, as can be seen in (2). In news articles from the UAE, the government was no less featured than the previous two countries, as shown in (3). In the National Newspaper, the government is *signified and named* by the name of the country and its capital, declaring its obligation and responsibility in foreseeing the process of lowering harmful gas emissions. Whereas the Emirates News Agency (WAM), as shown in (4), combines both the *nomination* and the *role allocation* strategies, the latter is perceived in assigning the material process of adopting policies leading to the enhancement of climate change impact on the labor market in the country.

(1) *Jordan, he said, is at the forefront of countries that have taken "serious" environmental action to confront climate change.* (Jordan News Agency, 2024, February 27)

(2) *The government has also issued a Sustainable Energy Strategy for Egypt by 2035.* (Al-Ahram Weekly, 2022, May 27)

(3) *The plan represents Abu Dhabi's commitment to the UAE's recently announced emission reduction target.* (The National, 2023, July 19)

(4) *The UAE adopts a set of integrated policies to enhance and diversify job opportunities as part of its tireless efforts to combat climate change.* (WAM, December 6, 2023)

Writers of news articles in the corpus also moderately employed functionalization to label actors/authorities who are responsible for climate change policies according to their professions. The example from Emirates News Agency (WAM) shown in (5) presents the officials' names while explicitly also mentioning their occupations to highlight their institution's role in implementing policies combating climate change.

(5)   *Senior Advisor at the Federation of Egyptian Industries; Mohamed Al Maita from the Arab Trade Union Confederation, with various international organizations present, along with individuals interested in labor and climate change.* (WAM, 2023, December 10)

Private sector companies were also among the featured social actors that underwent the inclusion strategy, but with less emphasis than the previous actor. The role of the private sector was mainly activated through *role allocation.* For example, in (6) published by Ahram Online, the private sector is referenced collectively in a generalized manner. In the phrase *there need to be diverse financing sources,* the private sector is not excluded as an existent (entity)[1] but is only mentioned as a source of financing.

In (7), the private sector in Ahram Online is presented as an active actor in a material process that emphasizes the initiatives the private companies launch in encouraging the green economy and thus positively play roles in mitigating climate change. Similarly, in (8), the private sector is featured in The Jordan Times as a passive social actor in its position as the backgrounded agent in the passive voice construction *the strategic approach taken by both the public and private sectors*. In this context, both the public and private sectors are placed in the background, emphasizing the action rather than the actors themselves. Furthermore, it is coordinated with the public sector authorities (herein treated as one of the referents to the government), which is usually a prioritized actor before the private sector.

(6)   *She said there need to be diverse financing sources, such as the developed countries' pledges to finance projects that help mitigate climate change's effects, Egypt's state budget, and the private sector.* (Ahram Online, 2022, May 27)
(7)   *The private sector has also launched its own initiative to issue green bonds''* (Ahram Online, 2022, May 27)
(8)   *The impacts of new technological trends could either support or deter green job creation, depending on the strategic approach taken by both the public and private sectors.* (Jordan Times, 2023, August 4)

International foreign institutions were strongly highlighted as significant actors in the corpus. These actors are nominated explicitly and over-lexicalized in some cases. It is worth noting that the news articles affirmed the financial and logistics support received by these institutions from the governments under study in their attempt to mitigate the impact of climate change. Examples (9) and (10), taken from The Jordan Times and The Emirates News Agency (WAM), present nomination and role allocation strategies concerning these actors.

(9)   *According to the "Green Action in Enterprises" (GAIN) project, commissioned by the German Federal Ministry for Economic Cooperation and Development and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, cooperated*

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[1] In Systemic Functional Linguistics (SFL), existential processes are used to express the existence or occurrence of something. These clauses are typically marked by the presence of *there* as a grammatical subject, followed by a verb indicating existence (e.g., *there is, there are, there exists*). The sole participant in an existential process is the *existent*, which refers to the entity—whether a thing, event, or abstract concept—whose existence is being asserted.

with <u>Cambridge Econometrics</u>, Jordan has considerable potential of green jobs. (Jordan Times, 2023, August 4)

(10) *This statement was made during a special session by the <u>International Labour Organisation (ILO)</u>... The <u>ILO</u> and the <u>Islamic Development Bank</u> released a report titled "The social and employment impacts of decarbonization and green industrial growth scenarios for the Middle East and North Africa region."* (WAM, 2023, August 4)

The *public, the poor, refugees,* and *women* were used as labels used to refer to vulnerable groups that need to be given close attention. The news articles predominantly emphasized prominent participants in the social landscape of climate change and mitigation policies, with a limited mention of the members of the general public or marginalized groups involved in this overarching issue. In some news articles, *the poor,* sometimes given different nominations, figured as part of a material process as the goal. The Jordan Times, in (11), exemplifies a material process, specifically the processes of pushing and threatening, in which *these populations* and *the vulnerable* serve as the goal, thus adopting a passive role as social actors. This affects the process of policymaking in the quest to combat the impact of climate change, mainly affecting these populations and causing *a more urgent state of insecurity.*

(11) *The expected impacts of climate change, particularly reduced agricultural productivity and limited water availability, actively threaten the income of these <u>populations</u>, pushing <u>the vulnerable</u> into a more urgent state of insecurity.* (Jordan Times, 2023, August 4).

Women in (12) are depicted as the beneficiaries of the material process of "empowering," which assigns them, slightly paradoxically, a passive role. As van Leeuwen (2008, p. 33) explains, passivation occurs "when actors are represented as "undergoing" the activity, or as being "at the receiving end of it." Notably, one of the articles in the corpus of the study was utterly dedicated to women's empowerment in the context of climate change and climate policies. This article featured many examples that activated the role of women and their active participation in the economy and green industry, as shown in (13).

(12) *The effects of climate change, mainly the slow growth of agricultural productivity and the turbulence of weather phenomena, expose <u>millions of people</u> to the risks of insecurity and food diversity and contribute to <u>the increase and exacerbation of malnutrition</u>, whether resulting from lack of access to food or the adoption of unhealthy diets.* (Egypt State Information Service, 2023, December 3).

(13) *The UAE worked with the Organisation for Economic Cooperation and Development (OECD) in launching a guideline to <u>support working women</u>, who are <u>most affected by variables in labour markets</u> within different economic sectors because of moving to green economies and adoption of advanced technology* (WAM, 2023, December 6).

One of the vulnerable social actors comprises *refugees*, who are concurrently assigned the role of active agents in the material process of *that hit the Kingdom*. In (14), this inclusion places refugees within the spectrum of social actors impacting climate change policies. Their portrayal as a negative influence suggests their contribution to the heightened challenges of climate change, thereby shaping policy decisions aimed at mitigating its impacts, which are significantly aggravated by these communities.

(14) *He pointed to <u>the successive waves of refugees</u> that hit the Kingdom, which put pressure on its infrastructure and exacerbated the consequences of climate change.* (Jordan News Agency, 2024, February 8).

4.1.2. Abstraction, backgrounding and suppression

Here, we scrutinize exclusion strategies used to depict specific social actors in news articles about climate change policies. Actors like scientists and researchers were repeatedly excluded or less highlighted by the news writers as if never involved in the process of climate change mitigation policymaking. The exclusion strategies discussed are *abstraction, backgrounding, suppression*, and *generalization*.

Although some examples referring to research results and research institutions were found in the data, direct references to researchers and their roles were missing. (15) represents a case of suppression, where there is no reference to the researchers, although the sentence discusses those people affiliated with a research center. In another article, the researchers are abstracted and limited to their climate change effects research, as shown in (16). Yet, no mention of the researchers is found regarding the policies and measures taken to mitigate the effect of climate change.

(15) *Additionally, women entrepreneurs constitute approximately 24 percent of the beneficiaries in the innovation incubator of the <u>National Center for Agricultural Research.</u>* (Jordan Times, 2024, June 27)

(16) *In 2019, <u>research</u> suggested that rising sea levels will erase more cities by 2050 than predicted before. The new <u>research</u> shows that some 150 million people worldwide are now living on land that will be below the high-tide line by 2050.* (Al Arabiya English, 2021, September 1)

An example of backgrounding and genericization is shown in (17), which demonstrates how the researchers are merely dealt with as a social group, assimilated in one group, and backgrounded instead of being highlighted and fronted as essential players in climate change mitigation. The researcher's work is merely highlighted as part of the efforts of their institutions, which, in the end, represent governmental authorities that have been assigned all the credit all along.

(17) *The meeting approved the framework of the National Biodiversity Strategy 2031, which includes, within its directions, protecting, monitoring, and developing ecosystems and local species, conserving local genetic resources, promoting <u>research</u> and innovation, enhancing awareness, and building competencies.* (WAM, 2023, December 10).

Other social actors that have also been excluded are different social groups, such as *environmental activists*, of whom no trace could be found. Only one vague reference to social groups was encountered, shown in (18), which would have been clearer had it been defined which groups are exactly referred to. As shown, social actors are mentioned passively, without describing their contributions, perspectives, or level of involvement. Due to the political situation in Egypt, this discourse diminishes the agency of political activists, portraying them as peripheral to the narrative rather than as active participants. (18) refers to multiple social groups engaged in Egypt's national discussions on climate change. However, the exact reference to this term or whether these groups include environmental activists was unclear. It is worth noting that environmental activists have been participating in setting strategies and plans for combatting climate change in the world, and they have been influential in raising awareness among the public about this universal crisis (Haugestad et al., 2021).

(18) *The NCCS 2050's goal pertaining to <u>scientific research</u> and raising awareness had led the <u>Ministry of Higher Education and Scientific Research</u> and the <u>Academy of Scientific Research</u> to organize several workshops, Fouad said, adding that a national dialogue on the subject of climate change has been launched with the participation of <u>different social groups</u>.* (Ahram Online, 2022, May 27).

4.2. Transitivity analysis

4.2.1. Material processes

An analysis of the processes and participants in the news articles revealed that *material processes* were the most prominent in the study sample. As defined by Halliday (1994) and van Leeuwen (2008), these are actions and events involving specific participants, namely the *actor* and the *goal*. These processes sometimes include additional, less prominent participants, such as the scope or range. The prevalence of material processes indicates that the actions described in the articles have a tangible impact on the world, affecting specific participants in a concrete manner.

In our study sample, these processes frequently encompassed governmental actions, international efforts, and individual behaviors aimed at reducing the impact of climate change. Material processes were often manifested in active structures, focusing on the actors, which sometimes included abstract concepts, as illustrated in (19). Additionally, these processes emphasized the goal as the affected participant, which could also be an abstract concept, such as *a Sustainable Energy Strategy* in (20).

(19) *...expansion of green building area <u>enhances</u> concepts of sustainability. (*Jordan News Agency, 2024, February 27).
(20) *The government has also <u>issued</u> a Sustainable Energy Strategy for Egypt by 2035.* (Al-Ahram Weekly, 2022, May 27).

Examples (19) and (20) illustrate how the articles under investigation depict governmental efforts positively and favorably, positioning governments as the primary social actors in this study. These results align with our initial finding that the news articles predominantly highlight and commend governmental roles in implementing and supporting climate change initiatives. The transitivity analysis revealed that governments' efforts were prominently featured in the analyzed data. These efforts are evident in the numerous clauses where terms like *Jordan, Egypt, UAE, government,* or their representative terms such as *strategies* or *agencies* functioned as the active actors in actions like *create, drive, work, invest,* and *step up efforts*, as in (21) and (22). This was also apparent in the many clauses where governmental terms functioned as the agent in a passive construction, realized within a prepositional phrase headed by *by* with actions such as *develop*. Such passive constructions indicate that although the focus is on the foregrounded action itself and on the process, the phrase still highlights the agent and attempts to give it prominence through end-weight and end-focus, as in (23).

(21) *High-income, energy-producing <u>Gulf countries</u> generally <u>invest</u> more in sustainable infrastructure.* (The National, 2023, November 18).
(22) *...these <u>nations</u> are also rapidly <u>"stepping-up"</u> their efforts in implementing sustainability strategies.* (The National, 2023, November 18).
(23) *The project was <u>developed</u> <u>by Abu Dhabi National Energy Company</u>.* (The National, 2023, November 18).

The private sector was scarcely highlighted as the sole actor and contributor to climate change policies and initiatives. (24) illustrates the role of the private sector in issuing sustainable financial procedures that pertain to the community efforts in taking the lead in climate-change issues. In (25), it is depicted as an actor in the material process, *playing a crucial role* and as a by-agent in the process of *taking strategic measures*. However, this involvement is presented as merely happening in conjunction with the government, referred to as the public sector.

(24) *...the <u>private sector</u> has also <u>launched</u> its own initiative to issue green bonds.* (Al-Ahram Weekly, 2022, May 27)

(25) *.... education and training providers will also play a crucial role in the smooth transition of workers between the sectors/roles depending on the strategic approach taken by both the public and private sectors.* (Jordan Times, 2023, August 4)

Alternatively, the private sector was also highlighted as the goal of material processes, with the government positioned as the actor and asserted as the leading social actor and contributor to climate change initiatives. For instance, (26) illustrates how governmental efforts excel over those of the private sector and *outpace* them. In this instance, the government is depicted as the actor winning a race over the private sector in taking measures and actions toward a greener environment, where the private sector here is represented as the goal affected by this process. Interestingly, most of the processes ascribed to the private sector also involve financial or business-related actions. This is justified by the government's dependence on the private sector for financial support and reinforcement in implementing climate change policies.

(26) *When it comes to climate action, governments are outpacing the private sector in both the Middle East and Africa.* (The National, 2023, November 18)

Though depicted negatively, *refugees* were represented as actors in material processes in a few instances within our study sample. For example, (27) illustrates three material processes attributed to refugees: *hit, put pressure*, and *exacerbated*. These actions emphasize the impact of the refugees' situation on straining the financial and social capacities of Arabic countries to address climate change.

(27) *Additionally, he pointed to the successive waves of refugees that hit the Kingdom, which put pressure on its infrastructure and exacerbated the consequences of climate change.* (Jordan News Agency, 2024, February 27)

Despite being assigned the role of actor in some material processes, refugees were generally addressed in broad collective terms and excluded as influential or influenced social actors in climate change mitigation efforts. This exclusion was evident in the lack of verbal processes assigned to underprivileged groups (*refugees, people with low incomes, women*) and the absence of their voices throughout the studied articles, despite their significant presence as a sector affected by climate change.

Notably, our analysis did not identify any explicit mention of *refugees* in the news articles originating from Egypt or the UAE. This absence may be contextualized by the differing socio-political realities of these countries in relation to refugee populations. Unlike Egypt and the UAE, Jordan has historically been a primary destination for refugees, hosting a disproportionately large number relative to its population. Consequently, refugees have become deeply integrated into Jordan's economic and political structures, shaping public discourse and policy frameworks. This structural integration likely amplifies the visibility of refugee-related issues within Jordanian media, a contrast that may account for their omission in the media narratives of Egypt and the UAE.

Groups of the general public, including vulnerable groups, were found to be generally depicted as passive recipients of the effects of climate change, namely as *goals of material processes*. The news reporters on climate change policy implementation did not consider the public as active actors in mitigating the impact of climate change. In (28), the vulnerable public is referred to as *people* and described as those *who are in danger of rising sea level*. This group is portrayed as the affected party, positioned as the goal of the government's policies and actions, rather than as an active participant or responsible element within Arab society.

However, it is worth noting that the same article, published in *Al Arabiya English,* referred to *the responsibility of the people* as an existent in an existential process. In (29), the responsibility of the people of Alexandria in safeguarding the city is emphasized and brought to the front. Although this contradicts the previous finding on how refugees were depicted as actors, it remains

consistent with the perspective that public awareness of the effect of climate change is essential, while assigning the responsibility of policy design and planning to the governments in general.

(28) People who are most in danger from sea level rise were transferred and resettled… (Al Arabiya English, 2021, September 1)

(29) It is the responsibility of the people and not just the government to save the city. (Al Arabiya English, 2021, September 1)

4.2.2. Relational processes

The second most common type of process in the corpus of the study were *relational processes.* They establish a static relationship between an identified entity (e.g., women) and its identity or role (at the forefront of implementing sustainable agricultural practices). This means that the first part of the structure (a sentence exhibited in a relational process) is linked to the other part to be explained and defined. Accordingly, the identified part of the sentence (the first part) is labeled in terms of its identity. In our data set, relational processes describe social actors as either the affected part of climate change or as being effective in its mitigation. These processes express relationships and states of being, primarily when specific qualities are ascribed to particular social actors. In our data, the relational processes often incorporated social actors like the countries' leaderships, local families, and women.

Women were included in the news articles as a collective category of social actors and are often described in terms of relational processes. In (30), the discourse frames women as an active social group driving climate mitigation policies. The relational process *are at the forefront* emphasizes women's active and leading role in advancing and practicing sustainability in agriculture. Relational processes served in this example to define and reaffirm women's roles as active actors driving agrarian initiatives. This example depicted women as essential and influential participants in mitigating sustainable development and climate change.

Yet, women were in general underrepresented as a social actor. In the Jordanian corpus, the article titled "Women in Climate Action Conference" aims to enhance and empower local initiatives", the word *women* figured 24 times, as in (31). However, in the rest of the corpus, women were mentioned nine times (1 in Jordan news, 3 in UAE news, 5 in Egypt news), either as part of the vulnerable groups or as an integral part of the workforce.

(30) <u>Women</u> in rural areas are at the forefront of implementing sustainable agricultural practices. (Jordan News, 2024, February 8).

*(31) The UAE worked with the Organisation for Economic Cooperation and Development (OECD) in launching a guideline to support <u>working women</u>, who <u>are most affected by variables</u> in labour markets within different economic sectors. (*WAM, 2023, December 6).

Another type of participant in relational processes is the "carrier". Families who live in poverty or impoverished individuals are described as carriers of specific traits or characteristics. The Jordan Times newspaper described the poor as affected social actors, identifying them as the most vulnerable to the impacts of climate change. In (32), the carrier *families in poverty* is presented as the most vulnerable group to climate change impacts. The news article writers appear determined to advocate with policymakers on behalf of this group and prioritize them in the plans for addressing climate change effects. The use of relational processes effectively emphasized the need for directing adaptation strategies toward these families, portraying them as deserving of additional attention and resources.

In (33) and (34), *millions of people* and the *public* are shown as social actors; however, their functions within the linguistic structures vary considerably. In (33), they are designated as the *goal* in a material process, with the agent being the abstract forces of *malnutrition and unsafe and contaminated food.* This depiction highlights the public's passivity as victims of broad, systemic problems. Conversely, in (34), the public assumes a more active role, accountable for

the material process of *transitioning to healthier food*. The responsibility for tackling issues as climate change and food insecurity is shifted to individuals, framing their agency as essential for resolving these concerns. This perspective oversimplifies the issue by neglecting the economic and political barriers, such as poverty and limited access to healthier choices, which complicate these social issues. In both (33) and (34), the public is not depicted as an "identified" entity in a relational clause. They are shown either as victims of ambiguous issues or as individuals anticipated to resolve these issues independently. This portrayal subtly diverts focus from institutional accountability and emphasizes a persistent trend of individualizing responses to broader issues, such as climate change.

(32) <u>*Families in poverty*</u> *are at the greatest level of exposure to the impacts of climate change and therefore deserve priority and consideration in the design of adaptive measures.* (Jordan Times, 2023, August 4)

(33) *He continued saying that malnutrition and unsafe and contaminated food cause the <u>deaths of millions of people</u> annually, noting that climate change represents a threat to the progress of health systems and thus hinders efforts towards achieving the Sustainable Development Goals (SDGs). (Egypt State Information Service, December 3, 2023).*

(34) *He also said that moving toward healthier food systems will help <u>improve public health</u>. (Egypt State Information Service, December 3, 2023).*

4.2.3. Verbal processes

Verbal processes were used in the study data to display discussions and meetings, highlight the efforts of individual countries and governments, and emphasize the importance of various initiatives. This type of process focuses primarily on communication and is concerned with the kind of communication between the participants and the way this communication is structured. The data revealed that among the main participants involved in verbal processes are the governments and the international institutions collaborating with them. This finding highlights the participants who are given a voice in this type of communication. The governments were presented as among the leading social actors, as shown and discussed in Section 4.1. Here, we focus on the international institutions as active social actors in this type of communication.

In (35), the "sayer" in the verbal process *outlined* is a representative from an international institution. The verbal process of outlining the organization's programs demonstrates that it actively discusses its initiatives and activities in several countries. This highlights the organization's engagement and commitment to climate change across various locations.

The sayer in (36), *Earth Journalism Network*, is an international institution responsible for holding a communication event and a workshop in Sweden. It states its main focus and its concern with the green transition. The institution emphasizes inclusivity in the green transition, highlighting its role in shaping the discourse about climate change. The passive construction reduces the importance of that agent, and shifts the focus to the central, guiding theme of the workshop. This leads to a rise in the level of importance of the event, yet a lower level of authority or emphasis on the international organization.

(35) *He <u>outlined</u> the <u>organization's</u> comprehensive projects across Jordan, Tunisia, and Morocco.* (Jordan News, 2024, February 8).

(36) *This, leaving no one behind in the green transition, was the main focus of a recent <u>workshop in Sweden, <u>held by</u> the <u>Earth Journalism Network.</u>* (Jordan Times, 2023, August 4)

4.2.4. Mental processes

Mental processes reflect cognitive activities like thinking, perception, cognition, and emotion. Participants involved in mental processes include the "senser" and the "phenomenon" being sensed. In a sentence expressing a mental process, the senser is the entity or person who experiences this mental process, through performing the act of thinking, feeling, or receiving something, thus the entity or person that is mentally engaged in specific thoughts or plans.

Mental processes provide insights into participants' hidden thoughts and perspectives by helping to identify attitudes and beliefs and elicit emotional responses. In our data, mental processes were used to express awareness, beliefs, and attitudes towards climate change.

Our analysis revealed that most mental processes in the studied articles were associated with government institutions as sensers. For example, in (37) the phrase *the Kingdom* is a metonymy that refers to a government entity. The sentence attributes the mental activity of *plan* and *focus* to the government. This illustrates the cognitive effort directed toward the advancement of the electric car sector. It also portrays the government as intentionally and strategically preparing for the more effective use of environmentally sustainable industries. In other words, it indicates that the government is focusing its efforts on advancing the electric car sector.

In (38), a government representative featured as a speaker in one of our news articles *lauded* the environmental strategy of that country. The act of lauding involves both cognitive recognition and emotional approval. It indicates that the government institution is engaged in testing, evaluating, and assessing environmental strategies for efficiency and success in mitigating climate change. The government not only assessed the strategy but also positively viewed and appreciated it as a successful initiative in the broader attempt to combat climate change.

(37) *The <u>Kingdom</u>, which <u>plans</u> to achieve net-zero carbon emissions by 2060, is <u>focusing</u> heavily on building its <u>domestic electric vehicle market.</u>* (The National, 2023, November 18)

(38) <u>*Fouad*</u> <u>*lauded*</u> *the <u>strategy</u> for <u>boosting women's responses to climate change</u> by giving them more space to acquire loans for climate-change projects.* (Al-Ahram Weekly, 2022, May 27)

These examples illustrate that mental processes helped underscore the government's effective and active involvement in evaluating, planning, and developing climate change policies and initiatives in the three countries' news articles under investigation. This construction of mental processes asserts the role of governments and governmental institutions as responsible and engaged social actors and participants in the international discourse on climate change.

5. Conclusions

The discourse on climate change is shaped and reconstructed in conformity with political ideologies that suit the involved stakeholders and frame the issues following their interests, as shown in much previous research (e.g., Brossard et al., 2004; Mooney & Nisbet, 2006; Carvalho, 2007; Olausson, 2009; Lo, 2015; Krzyżanowski, 2015; Isti'Anah & Febrina, 2023).

The present study examined the portrayal of social actors in news articles on climate change policy using social actor theory (Van Leeuwen, 2008) and transitivity analysis (Halliday, 1994; Halliday & Matthiessen, 2004). The findings revealed that governments are overwhelmingly depicted as the primary decision-makers, while other key actors remain underrepresented. This emphasis reinforces governments' dominant role in climate change mitigation while obscuring contributions from other sectors.

Methodologically, the study demonstrated the effectiveness of integrating transitivity and social actor analysis to uncover ideological motives in media discourse. The frequent use of material processes positioned governments as the driving force behind climate initiatives,

reinforcing their authority. This focus aligns with the structure of COP conferences, where national governments are central to negotiations. Active-voice verbs reinforced this proactive image. Meanwhile, the private sector appeared mainly in supportive roles, while marginalized groups were portrayed passively, emphasizing their vulnerability rather than active engagement in climate action. Women were specifically linked to sustainable agricultural practices. Mental processes further associated governments with cognitive tasks like planning and strategizing, while verbal processes underscored the role of international institutions in providing financial and logistical support. However, governments remained the primary focus. The analysis revealed significant exclusions in climate change representations. Scientists, researchers, and environmental activists were frequently marginalized through backgrounding or suppression, diminishing their contributions in favor of governmental actions. This suggests an undervaluation of scientific research and advocacy in shaping climate solutions

Our findings reveal that climate change discourse in the Arab world often lacks depth, emphasizing government achievements while downplaying public impact and participation. This communication pattern reinforces existing power dynamics, limiting the agency of less powerful social actors. These research findings also agree with other research that underscored the need to connect climate change research with the public daily life for better public awareness (e.g., Wang & Huan, 2024, Painter et al., 2024).

Media professionals shape climate discourse by selecting topics, framing issues, and emphasizing particular aspects such as effects, solutions, or urgency. Their linguistic choices influence public understanding by directing attention toward specific individuals and actions. Our findings provide insights that may help improve media coverage of climate change in Arab countries, fostering more balanced representations. Media coverage should equitably represent all key actors involved in climate change mitigation to foster a more inclusive discourse. While governments play a vital role, the contributions of the private sector, international organizations, vulnerable communities, and scientists are equally essential. Addressing these representation gaps can help create a more comprehensive and effective response to climate change. By promoting a more balanced portrayal, the media can support broader public engagement and more informed climate policies.

Acknowledgments

References

About COP 28. (2024). The United Nations Climate Change. Retrieved January 13, 2025, from https://unfccc.int/process-and-meetings/conferences/un-climate-change-conference-united-arab-emirates-nov/dec-2023/about-cop-28.

Atanasova, D., & Koteyko, N. (2017). Metaphors in Guardian online and mail online opinion-page content on climate change: War, religion, and politics. *Environmental Communication, 11*(4), 452–469. https://doi.org/10.1080/17524032.2015.1024705

Bloor, T., & Bloor, M. (2013). Chapter 2: Processes and participants. In: *The functional analysis of English: A Hallidayan approach* (pp. 109–139). Routledge.

Boykoff, M. T., & Boykoff, J. M. (2004). Balance as bias: Global warming and the US prestige press. *Global Environmental Change-Human and Policy Dimensions*, *14(*2), 125–136. https://doi.org/10. 1016/j.gloenvcha.2003.10.001

Brossard, D., Shanahan, J., & McComas, K. (2004). Are issue cycles culturally constructed? A comparison of French and American coverage of global climate change. *Mass Communication and Society, 7*(3), 359–377. https://doi.org/10.1207/s15327825mcs0703_6

Chaemsaithong, K. (2021). Agency, responsibility, and actor positioning in courtroom narratives. *Manusya: Journal of Humanities*, *24*(2), 204–226.

Cramer, R. (2018). 'The BP is a great British company': The discursive transformation of an environmental disaster into a national economic problem. *Discourse & Communication*, *12*(2), 109–127.

Carvalho, A. (2007). Ideological cultures and media discourses on scientific knowledge: Re-reading news on climate change. *Public Understanding of Science, 16*(2), 223–243. https://doi.org/10.1177/0963662506066775.

David-Ojukwu, I., Orabueze, F. O., & Okoye-Ugwu, S. (2021). Transitivity and youth violence in# EndSARS discourse. IKENGA: *International Journal of Institute of African Studies*, *22*(2).

Depoux, A., Hémono, M., Puig-Malet, S., Pédron, R., & Flahault, A. (2017). Communicating climate change and health in the media. *Public Health Reviews, 38*. https://doi.org/10.1186/s40985-016-0044-1.

Espluga-Trenc, J., & Prades, A. (2023). Social inequalities in the making sense of climate change narratives. *Catalan Journal of Communication & Cultural Studies*. https://doi.org/10.1386/cjcs_00092_7.

Halady, I., & Rao, P. (2010). Does awareness to climate change lead to behavioral change. *International Journal of Climate Change Strategies and Management, 2*, 6-22. https://doi.org/10.1108/17568691011020229.

Halliday M. (1994). *An introduction to functional grammar*. Arnold, London

Halliday, M. A. K., & Matthiessen, C. M. (2014). *An introduction to functional grammar*. Routledge. https://doi.org/10.4324/9780203783771

Hampl, M. (2014). The System of transitivity in the war on terror discourse. *Komunikácie-vedecké listy Žilinskej univerzity v Žiline, 16*(3), 46-51.

Haugestad, C., Skauge, A., Kunst, J., & Power, S. (2021). Why do youth participate in climate activism? A mixed-methods investigation of the #FridaysForFuture climate protests. *Journal of Environmental Psychology*. https://doi.org/10.1016/j.jenvp.2021.101647.

Heaton, D., Nichele, E., Clos, J., & Fischer, J. E. (2024). Perceptions of the agency and responsibility of the NHS COVID-19 app on Twitter: critical discourse analysis. *Journal of Medical Internet Research*, *26*, e50388.

Isti'Anah, A., & Febrina, R. (2023). Contesting "growth" and "sustainability" in Indonesia's capital city relocation: a corpus ecolinguistic study. *Научный результат. Вопросы теоретической и прикладной лингвистики, 9*(3), 65-83.

Kessar, S., Rabab'Ah, G., Al-Khadra, W., & Hamdan, H. J. (2021). The Representation of the Algerian Hirak Protest Movement in the International Media: France 24 and Al-Jazeera. *Cogent Social Sciences*, 7(1). https://doi.org/10.1080/23311886.2021.1930646

Krzyżanowski, M. (2015). International leadership re-/constructed?: Ambivalence and heterogeneity of identity discourses in European Union's policy on climate change. *Journal of Language and Politics, 14*, 110-133. https://doi.org/10.1075/JLP.14.1.06KRZ.

Kurz, T., & Prosser, A. (2021). Understanding the social dynamics of climate change through analyses of discourse. *Current opinion in psychology, 42*, 71-75. https://doi.org/10.1016/J.COPSYC.2021.03.010.

Li, L. (2020). Shifts of agency in translation: a case study of the Chinese translation of Wild Swans. *Meta*, *65(1*), 168-192.

Lo, A. (2015). Political ambiguity in Chinese climate change Discourses. *Environmental Values, 24,* 755 - 776. https://doi.org/10.3197/096327115X14420732702653.

Machin, D., & Mayr, A. (2013). Personalizing crime and crime-fighting in factual television: An analysis of social actors and transitivity in language and images. *Critical Discourse Studies*, *10*(4), 356-372.

Mauvais, L. (2023, December 08.). COP28: Reports of rift grow within Arab Group. The New Arab. https://www.newarab.com/features/cop28-reports-rift-grow-within-arab-group

Myers, T., Nisbet, M., Maibach, E., & Leiserowitz, A. (2012). A public health frame arouses hopeful emotions about climate change. *Climatic Change, 113*, 1105-1112. https://doi.org/10.1007/s10584-012-0513-6.

Mooney, C., & Nisbet, M. (2006). The next big storm: Can scientists and journalists work together to improve coverage of the hurricane-global warming controversy? *Sceptical Inquirer,* August 3. Retrieved December 10, 2021. https://skepticalinquirer.org/exclusive/next-big-storm/

Nerlich, B., Koteyko, N., & Brown, B. (2010). Theory and language of climate change communication. Wiley Interdisciplinary Reviews: *Climate Change, 1*(1), 97–110. https://doi.org/10.1002/wcc.2

Olausson, U. (2009). Global warming-global responsibility? Media frames of collective action and scientific certainty. *Public Understanding of Science, 18*(4), 421–436. https://doi.org/10.1177/0963662507081242

Painter, J., Marshall, S., & Leitzell, K. (2024). Communicating climate futures: a multi-country study of how the media portray the IPCC scenarios in the 2021/2 Working Group reports. *Climatic Change, 177*(6), 82.

Rannard, B. G. (2023, December 4). *COP28: Head of UN talks hits back at climate denial claims*. https://www.bbc.com/news/science-environment-67612929

Schäfer, M. S., & Schlichting, I. (2014). Media representations of climate change: A meta-analysis of the research field. *Environmental Communication, 8*(2), 142–160. https://doi.org/10.1080/17524032.2014.914050

Simpson, P., & Mayr, A. (2009). *Language and power: A resource book for students.* Routledge.

Tan, S. M., Tjin Ai Tan, J., & Raj, G. S. (2023). A Representation of Malaysian Malay Women identity from a systemic functional perspective. *GEMA Online Journal of Language Studies, 23*(1).

van Leeuwen T. (2008). *Discourse and practice: new tools for critical analysis*. Oxford University Press, Oxford.

Wang, G., & Huan, C. (2024). Negotiating climate change in public discourse: insights from critical discourse studies. *Critical Discourse Studies, 21*(2), 133-145.

Wang, G., Wu, X., & Li, Q. (2022). A bibliometric study of news discourse analysis (1988–2020). *Discourse & Communication, 16*(1), 110–128. https://doi.org/10.1177/17504813211043725

Wei, R. R. (2023). Agency and responsibility in environmental reporting in the Chinese press: a corpus-based diachronic analysis. *Text & Talk, 43*(3), 357-379.

Wolf, J., & Moser, S. (2011). Individual understandings, perceptions, and engagement with climate change: insights from in-depth studies across the world. Wiley Interdisciplinary Reviews: *Climate Change*, 2. https://doi.org/10.1002/wcc.120.

Xiang, Q. (2022). Transitivity analysis of Joe Biden's inaugural address from the perspective of systemic functional grammar. *Theory and Practice in Language Studies*, *12*(1), 165-169.

Zhang, B., Chandran Sandaran, S., & Feng, J. (2023). The ecological discourse analysis of news discourse based on deep learning from the perspective of ecological philosophy. *PloS one, 18*(1), e0280190.

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