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Primary Definers of Transformation? Actor Power and the Socio-Ecological Transformation Discourse in Austrian Media

Carlotta Verità and Hendrik Theine

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Primary Definers of Transformation? Actor Power and the Socio-Ecological Transformation Discourse in Austrian Media

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Abstract¹

This contribution provides a first comprehensive mapping of the socio-ecological transformation (SET) landscape within the Austrian media (2015–2022). Utilizing a multi-layered mixed-methods framework that integrates Named Entity Recognition (NER), Structural Topic Modeling (STM), and Critical Discourse Analysis (CDA), we examine the “geography of voice” and the competing future-visions that define the mediated transformations. Our analysis reveals a landscape characterized by a dense institutional core where politicians and corporations command over 20% of total visibility, while civil society and international organizations remain less represented. This imbalance mirrors the thematic distribution of discourses, where structurally anchored themes like *Nature/Biodiversity* and *Global Politics* are increasingly backgrounded by sector-specific categories like *Labour Market & Regulatory Policy*. The *Market-driven transition* imaginary, driven by institutional and corporate actors, dominates material discourses like energy and mobility through techno-optimist framing. Conversely, *Contested Disruptions* pushed by civil society are frequently marginalized or relegated to cultural niches. By identifying significant silences regarding radical redistribution and the Majority World, we argue that the Austrian media landscape delineates the boundaries of the possible in the ecological crisis.

Keywords: Socio-Ecological Transformation, Climate Crisis, Media coverage, Societal actors, Austria

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1) Introduction

The climate crisis is a multidimensional socio-political emergency that both stems from and reinforces profound inequalities in power and resource distribution. As global temperatures continue to rise despite a proliferation of international frameworks, it has become clear that the barrier to action is not a lack of technical solutions, but a struggle over the socio-ecological transformation (SET) of our provisioning systems. This process is fundamentally discursive: any material shift in how society is organized is preceded by the formation of SET discourses and imaginaries, i.e. competing future-visions that define the pathways, roles, and distributive outcomes of the transition.

These imaginaries do not exist in a vacuum; they are contested and proliferated within the media, a central arena where expert knowledge is translated into societal worldviews. However, the media landscape is not a neutral stage. Structural factors, such as ownership models, political affiliations, and the rise of a hybrid media system (Chadwick, 2017), dictate which perspectives are elevated and which are marginalized. In this complex environment, the role of actors is pivotal. Actors act as the discursive catalysts that bridge thematic discourses (the “what” of the debate) with specific SET imaginaries (the ideological “how”). By claiming expertise over themes like mobility, energy, or labor, different actor groups strategically frame the transition to serve specific political or economic interests.

Despite the urgency of the crisis, we lack multi-level analyses that examine how these actor-content couplings operate within specific national contexts. This study addresses this gap by investigating the landscape of SET discourses and imaginaries in Austria. We move beyond simple thematic description to analyze the “geography of voice,” examining how different actor groups compete for discursive hegemony. We ask: which actors are permitted to speak, which thematic discourses do they claim, and what underlying visions of the future are they normalizing or silencing in the process?

To navigate this complexity, the paper employs a multi-layered mixed-methods framework. We combine Structural Topic Modelling (STM) and Named Entity Recognition (NER) to map the structural distribution of voice and theme, integrated with Critical Discourse Analysis (CDA) to unpack the ideological assumptions and “significant silences” latent within the discourse. By triangulating these methods, this study provides a robust analysis of how power and inequality are reproduced or contested in the mediated struggle for a socio-ecological future.

Our core findings reveal that the media serves as a pivotal arena where socio-political worldviews are contested and societal visions are formed. However, the Austrian landscape exhibits an imbalance in discursive access; our findings indicate an institutional core where politicians and corporations command over 50% of total visibility, while civil society and international organizations struggle to maintain a sustained presence, representing less than 3% of the total discourse. This “geography of voice” directly shapes the thematic focus of the transformations, shifting discourses away from foundational frames like Nature and Biodiversity toward a surge in *Labour Market and Regulatory Policy* topics, reflecting the increasing political weight of the transition's material and redistributive costs.

These thematic clusters serve as the primary vehicles for competing SET imaginaries, i.e. ideological future-visions that define the pathways and distributive outcomes of the crisis. Specifically, the *Market-*

driven transition imaginary, driven by institutional and corporate actors, dominates material discourses through techno-optimist framing, while the *Contested Disruptions* pushed by civil society are frequently marginalized or relegated to cultural niches. This study also analyzes how these actor-driven narratives normalize specific transformation pathways while strategically maintaining significant silences regarding radical redistribution and the Majority World, effectively delineating the boundaries of the possible in the ecological crisis.

Following this introduction, the paper is structured as follows: Section 2 and 3 provide the theoretical foundations; Section 4 outlines the structural specificities of the Austrian media landscape; Section 5 and 6 detail our mixed-method approach and the operationalization of actor-content couplings; while Section 7 presents our three-stage empirical mapping of the “Who,” “What,” and “How” of the Austrian media debate; finally, Section 8 discusses the implications of these findings for discursive hegemony and future research.

2) Socio-Ecological Transformations, Imaginaries and Societal Actors

The climate crisis represents one of the biggest threats to society across multiple dimensions, be it (bio)physical, economic or social (Wiedmann et al., 2020; Steffen et al., 2018; Brand & Wissen, 2012). Addressing this multiple-crisis is thus a core societal challenge for the 21st century. In particular, we must figure out how to transform the current socio-economic provisioning system (i.e. the social organisation of the production and distribution of resources, goods and services) which is stressing our planetary systems beyond their capacities. This transformation is typically referred to as socio-ecological transformation (from here on referred to as SET, Spash, 2020; Rockström et al., 2009). While its relevance has recently increased, it is not a new concept: it has often been found in the critiques of the dominant neoclassical model of unlimited economic growth, along which many current economies are organised and treated as decoupled from nature’s boundaries. Now, SET has moved more to the centre stage: its relevance in various policy landscapes, be it in Austria, the European Union or globally, cannot be ignored. This can be true both in measures aiming to resolve the tension with planetary boundaries, as countries develop decarbonisation efforts, energy transformations, circular economy plans or aim to reach the UN defined SDGs (whether or not is it explicitly referred to as such); or, in those measures which foresee a transformation in another direction, as countries actively step away from or reverse these efforts in the pursuit of other goals. Whether we like it or not, a socio-ecological transformation is occurring: understanding how SET is conceptualised is then extremely relevant, politically and practically.

As already hinted, there are many different and often competing visions of SET. These visions constitute a necessary starting point for the transformation process, as they serve to re-imagine the established system and ways to arrive at these re-imaginings. Drawing on social philosophy (Taylor, 2004), Science and Technology Studies (Jasanoff & Kim, 2015) and political economy (Sum & Jessop, 2013), these visions can be understood as ‘imaginaries’: these foreground different social, political and economic aspects of the world and sideline others, and generate consequences regarding how we construct a new social and political order, as well as interact with our surroundings. An important element of these imaginaries is also how we conceive of pathways to achieve them. It is through shared imaginaries that social actors construct worldviews for sustainable futures and what is needed to realise these (Sánchez-Ruiz, 2024; Theine, 2023;

Armutskonferenz et al., 2021; Spash, 2020; Beckert & Bronk, 2018). Common examples of SET imaginaries include those that conceptualise different roles of growth in social provisioning, such as the ‘green growth’ imaginary (Buch-Hansen & Carstensen, 2021; Brand, 2016; Lawson, 2006), the ‘a-growth/steady-state’ imaginary (Mazzucato, 2018), or the ‘de-growth’ imaginary (Kallis, 2015), but are not limited to these. For example, a ‘commoning’ imaginary could, according to Federici (2019, 2011), question ideas of private wealth, ownership and sufficiency. a ‘climate-social policy’ imaginary foregrounding wealth, poverty and re-distribution (Hirvilammi et al., 2023; Armutskonferenz et al., 2021); or even an ‘eco-centric’ imaginary which prioritises nature and non-humans above all else or an ‘environmentalism of the poor’ which centres the lived realities of groups living at the frontline of ecological distribution conflicts (see Martinez-Alier, 2002). Besides, also negative transition imaginaries exist, which foreground post-apocalyptic futures (bunker worlds) or which downplay climate issues and insist on authoritarian power plays. Elements within these are not mutually exclusive, but differently prioritized.

A plethora of transformation and sustainability studies stress that SET is not possible without the involvement and aligned efforts of multiple actors on various scales. Power relations, the different roles actors take on and the intra-actor coalition-building are inseparable parts of transformations and change (Köhler et al., 2019; Avelino, 2021; Geels & Schot, 2007). Likewise, societal actors are crucial for SET imaginaries which are not simply “out there” as diffuse ideas, but are performed, voiced, and stabilized through various actors and institutions. Imaginaries gain traction when voiced by actors who are able to shape public discourse (Wittmayer et al. 2017; Riedy, 2020). Societal actors may articulate imaginaries deliberately – through strategic framing, agenda-setting, or political campaigning – or indirectly, through routinised practices and norms. Some actors enjoy privileged access to influential platforms, while others are structurally marginalised, struggle for access and/or only gain visibility during moments of disruption and crisis. Furthermore, it is these asymmetric power relations themselves which ensure the universalisation of the imaginaries that sustain them. Under the guise of progress, modernisation and development, a good life for the few is secured at the expense of the many: when Svampa and Viale (2020, p. 61) describe *maldesarrollo*, they note that those most affected by the different dimensions of ‘bad-living’ are society’s most vulnerable groups, highlighting the historical patterns of environmental injustice evidenced by the unequal distribution of environmental costs along different intersectional dimensions, be it ethnicity, gender, age or geography. These groups also have the power to distance themselves from the damages and limit the possibility of intervention from other groups. Their access and proximity to various spheres of influence, be it political, economic or cultural, allow them to access different bases of power to maintain favourable conditions for their activities. The ability of elites to diffuse visions of non-transformative futures across multiple domains is inherently connected to wider ideologies of control and power (Stoddard et al., 2020). Thus, understanding SET imaginaries as an actor-based process requires close attention to who imagines, who speaks, and who is heard (and who’s not).

Existing research outlines a number of actor-centered regularities in how SET imaginaries are articulated and become publicly salient. First, government and powerful economic actors tend to disproportionately promote imaginaries that preserve core institutional arrangements while promising decarbonization through innovation, efficiency, investment and competitiveness (Hager et al., 2026; Hausknot, 2020). In environmental governance terms, these dynamics map onto recurring discursive formations such as ecological modernization and green governmentality packaging transformation as technocratic, “win-win” solutions (Kammerer & Ingold, 2023; Bäckstrand & Lövbrand, 2006; Hajer, 1995). Relatedly, some of

those powerful actors deploy discursive strategies that protect room for manoeuvre, from widely circulating “discourses of climate delay” (Lamb et al., 2020) to long-run corporate framing that manages legitimacy and liability while projecting alignment with climate goals, illustrated for instance by ExxonMobil’s climate communication (Supran & Oreskes, 2017) or gas-incumbents in reframing natural gas or ‘blue hydrogen’ as a ‘bridge fuel’ in energy policy (Szabo, 2022).

Second, scholarship finds that civil society actors tend more often towards justice-, sufficiency-, and democracy-oriented imaginaries, but face episodic visibility unless they can leverage disruption, moral authority, and coalition bridges into institutional arenas (Cammaerts, 2012; Allan & Hadden, 2017). Evidence from local degrowth research similarly indicates that degrowth-oriented actors often operate in few and temporary arenas and may strategically adjust language to remain legible within mainstream sustainability discourse (Buhr et al., 2018).

Third, trade unions’ engagement with socio-ecological transformation has been plural and at times ambivalent: alongside more transformative labour-environmentalist positions, unions have also articulated defensive imaginaries centered on protecting existing jobs and industries - stances that can, in practice, align with incrementalism and “delay-leaning” pathways when decarbonization is framed as a threat to livelihoods (Rätzl & Uzzell, 2011; Jordhus-Lier et al., 2024; Soder et al., 2016). Within this landscape, the “just transition” imaginary has become a key bridging device because it allows unions to support climate action while keeping it tightly coupled to core labour agendas (Stavis & Felli, 2015; Thomas, 2021; Bembič et al., 2026).

3) Socio-Ecological Transformations, Media, and Actor-Structured Discourse

The discursive framing of imaginaries of SET unfolds across multiple societal arenas (e.g., politics, education, academia). Media and journalism are one such arena which does not merely reflect transformation debates, but helps structure which futures become publicly thinkable, contestable, and legitimate. The framing of imaginaries in the media is not a straightforward process; it depends on the diverse logics and power dynamics that shape, and are shaped by, the landscapes in which they are embedded (incl. factors such as ownership structure, business models and political affiliations, see Theine & Regen, 2023; Schäfer & Painter, 2020; Anderson, 2017). Historically, media have functioned as intermediaries connecting the public to other social spheres; in contemporary hybrid media systems they operate simultaneously as channels and arenas in which competing positions struggle for dominance (Benson et al., 2025; Chadwick, 2017; Herman & Chomsky, 1988). Furthermore, the media system is constantly in a process of changing, marked by continued diversification, consolidation and new forms of communication. There are new forms of dependency and co-evolution in such a hybrid system, and old power structures shift: agency looks very different in the rise of new technologies, communication forms and practices that no longer fit to older institutional logics (Chadwick, 2017). This creates a plethora of new arenas in which many different groups of actors interact in ways they previously have not, creating new spaces “for negotiating issues crucial to the conduct of social life; among them, who is inside and outside, who may speak, who may not, and who has authority and may be believed” (Marvin, 1988: 4). This matters acutely for imaginaries: journalism brokers future-oriented information and provides interpretive work that orients audiences toward competing scenarios and pathways (Amit Danhi et al., 2024). In this sense,

journalism “facilitates the conversation of democracy” and enables meaningful participation in society (Reese, 2022, p. 254).

Yet participation in this mediated future-making is unevenly distributed. Media discourse on SET imaginaries is structured by actor constellations and access regimes that shape whose interpretations become visible and credible in news. Following cultural studies, influential actors can operate as “primary definers” by establishing initial interpretations that then “command the field” of subsequent coverage and narrow the terms of reference for public debate (Hall et al., 1978, p. 58; Morris, 2025). This advantage is reproduced through routinised interactions and strategic communication - press offices, press conferences, press releases - and, in hybrid media systems, through platform-based agenda work and amplification strategies (Anstead & Chadwick, 2018; Chadwick, 2017). Smrdelj and Paknik (2025) note that ‘older’ elites have been able to cement their dominant positions even in changing media dynamics due to their ability to control or influence the defining institutional and physical architecture of the journalistic landscape. Additionally, the neoliberal capitalist logic further skews the favour towards incumbent actors, while packaging new technologies and platforms as allowing for co-creation of content. However, its owners, not users define the rules of a medium (echoing Chancel and Rehms’s (2023) and Szabo’s (2022) parallel points with regards to energy regimes). The profit-logic which dominates much of these newer forms of communication impact both the macro and meso level of media, including the rise of technological autocracy, increased social polarisation, precarisation of work, competition for online attention, and increased focus on virality and clickability of online content (Smrdelj and Paknik, 2025). This results in the reinforcing or even exacerbation of existing dominant relations, built on certain technical and economic infrastructures, which constrain the public sphere.

While a large body of research examines how media cover the climate crisis (for various reviews of literature see: Wetts et al., 2025; Theine & Regen, 2023; Bohr, 2020; Pianta & Sisco, 2020; Moser, 2016; Schäfer & Schlichting, 2014), comparatively less work examines how *responses* to the crisis are framed, i.e. how different SET imaginaries are constructed, justified, and circulated. From this smaller subset, four recurring patterns are particularly relevant.

First, several studies point to a rise in solution-oriented scepticism and resistance around climate policy pathways in media discourse (Brüggemann & Engesser, 2017; Schmid-Petri, 2017; Schmidt & Schäfer, 2015). On an international scale, actors manage to place doubt on the idea of a shared global responsibility to address the crisis. On national scales, this manifests in strong push-back on any policy measures related to climate that could negatively impact economic growth. This leads to an over-representation of solutions that foreground technological optimism or market-based measures, inherently compatible with green-growth, such as ESG investment strategies, carbon-capture storage, or alternative energies like low-carbon hydrogen consumption (Mervaala, 2025; Belova et al., 2023; Vikström et al., 2023; Theine & Regen, 2023; Garth & Roberts, 2022). This pattern mirrors the broader repertoire of discourses of climate delay, in which actors maintain room for manoeuvre by narrowing the solution space or shifting responsibility (Lamb et al., 2020). Importantly for an imaginaries perspective, the dominance of such framings is not only ideological; it is also actor-structured, since powerful political and economic actors often possess the communicative infrastructure to repeatedly voice and normalize these “feasible” solution narratives (Wetts, 2020).

Second, because journalism is organized around news values (e.g., timeliness, clarity, conflict, personalization) and generally struggles with slow, complex, long-horizon processes, media discourse tends to privilege imaginaries that can be narrated as short-term, discrete, and measurable interventions (Perga et al., 2023; Brüggemann et al., 2022; Painter & Schäfer, 2018; Gess, 2012). This favours technocratic, technological, or market-oriented imaginaries over those that require sustained contextualization, distributional conflict, and structural change (Morris, 2025; Perga et al., 2023; Bødker & Morris, 2021; Asayama & Ishii, 2017). From an actor-centered perspective, this implies that imaginaries gain public salience when actors can translate them into media-compatible storylines via news management, staged events, and information subsidies that fit media logic and dominant news formats (Wetts, 2020; Schlichting, 2013; Greenberg et al., 2011).

Third, growing financial and organizational pressures in journalism contribute to an even more increased reliance on authoritative sources, especially political and business actors (Brück et al., 2025; Vonk et al., 2024; Schäfer & Painter, 2020; Friedman, 2015; Boykoff & Yulsman, 2013). Under conditions of time scarcity and shrinking specialist capacity, journalists are even more dependent on routinised sourcing and pre-packaged inputs. This very likely reinforces primary-definer dynamics and reduces the diversity of SET imaginaries represented in coverage, as non-powerful actors and experiential knowledges are more likely to be sidelined. Even in a changing media landscape, where platforms and technologies allow for the co-creation of content, the neoliberal capitalist logic which underscores ongoing developments skews the favour towards incumbent actors: it is owners, not users that define the rules of a medium. The profit-logic which dominates much of these newer forms of communication impact both the macro and meso level of media, including the rise of technological autocracy, increased social polarisation, precarisation of work, competition for online attention, and increased focus on virality and clickability of online content (Smrdelj & Paknik, 2025). This results in the reinforcing or even exacerbation of existing dominant relations, built on certain technical and economic infrastructures, which constrain the public sphere, prioritising a certain set of actors and associated imaginaries.

Fourth, the existing literature is uneven in scope: it concentrates on a limited set of national contexts (notably the US, UK, and Germany) and often focuses on traditional newspaper journalism (Wetts et al., 2025; Theine & Regen, 2023; Schäfer & Painter, 2021). This neglects the multilevel dynamics integral to SET and underestimates the implications of hybrid media systems, in which journalism interacts with platform logics, alternative media, and new actor repertoires of visibility and agenda work (Chadwick, 2017). Taken together, these patterns point to a substantial gap regarding how SET imaginaries are constructed, argued for, and made salient across different media formats and actor constellations—especially beyond the most frequently studied countries and beyond legacy press (Wetts et al., 2025).

4) The Austrian Media Landscape: an overview

The Austrian media landscape maintains some of the highest readership shares of daily print news in the world and the presence of a strong public broadcaster, ORF (Digital News Report 2024), however is still marked by the same pressures resulting from shifts towards digitalisation as seen in other country contexts, like the United States or Britain. When compared to levels from 2016, the proportion of news sourced from print media in 2024 in Austria almost halved, whereas TV decreased by around 20%: this is coupled with

a steadily decreasing trend in trust in news over the years. Simultaneously, digital access to news has remained rather consistent, including social media use (Digital News Report 2024). Against this backdrop, Harald Fidler writes of the ‘tipping point’ towards which the Austrian media industry is heading (Fidler, 2023).

The crises facing Austrian media pits a historically strong print and public sector against newer, commercialised sources. The influx of new, particularly online, outlets and the increased infiltration of German broadcasters in the market increase economic pressures on traditional media business models (Theine and Grabner, 2023; Theine and Regen, 2023). This pressure manifests itself in various overarching trends in Austria: shrinking, consolidation and disappearance of outlets at regional and national levels; increased reliance on public spending; increased use of digital platforms and social media amongst younger users.

For one, financial pressures have shown that the traditional media business model, which relied on low content production costs and mass audiences to sell advertisements, is no longer viable. As Theine et al. (2025) show, the move of advertisers away from print to digital sources cuts a strong revenue source for many outlets, which can lead to the complete collapse of established news media. To relieve some of this pressure, media outlets may try certain cost-cutting measures: reducing sectors, curtailing new developments, or most often, job cutting (Theine et al., 2025: 23; e.g., Digital Media Report 2024 says newspaper *Kurier* announced a 20% cut of its staff). Decreasing financial resources and personnel create a difficult environment for journalists to operate in, limiting their time and ability to cover news developments. This in turn leads to greater reliance on ‘authority’ sources, such as the state or business actors as outlined in many studies across national contexts (see Schäfer & Painter, 2020; Friedman, 2015; Boykoff & Yulsman, 2013; Yun et al., 2012; Hansen, 2010). In digital or online news production, the ease of copying content, something identified also by Cagé et al. (2019), also means that the incentives to produce original content under financial duress are lower. In Austria, for example, increased reliance on APA (Austrian Press Agency) can determine what gets included in reporting: anecdotally, a member of Fridays for Future Austria told me recently that luckily the APA still contacts them occasionally for statements, otherwise they would be left completely out of mainstream media reporting.

Furthermore, the lack of regulatory oversight on digital mergers has left the door open for increased consolidation of outlets in recent years. This simultaneously heightens financial pressures on weaker business models, and provides a way out of these economic dire straits. This is particularly problematic as it increased media concentration, especially on regional levels, as outlines by Theine et al. (2025: 37): “With the exception of the Greater Vienna area, media diversity is severely restricted in almost all federal states. Instead, the regional newspaper market is dominated by a monopolist or a duopoly of the respective regional newspaper and the local editorial office of the *Kronen Zeitung*” (own translation). They go on to write that while this may be relatively stable for now, exacerbation of this trend could lead to future ‘news deserts’ in Austria, similar to what has been seen on local levels in the US (Beaufort & Schulz-Tomancok, 2024; Pickard, 2022).

These economic pressures have led to the increased reliance on public subsidies and public advertising revenue. Theine et al. (2025) show that between 5 and 40% of revenues for some news media are covered by public advertisements, a trend corroborated by the Digital News Report (2024). This has twofold

concerns: one, heightens tensions between those outlets which receive public support and those (more often commercialised) ones who do not; two, increases the risk of political influence on reporting. A *Dossier* in-depth investigation has shown that in Austria, increases in government advertising have coincided with election campaigns of ruling parties: “From the third quarter of 2014 to 2015 - the municipal council was elected on October 11, 2015 – they [advertising expenditures] rose from just under 5 million euros to more than 9.3 million euros. From 2019 to 2020 - elections were held again on October 11 - the city's advertising expenditure shot up from 5.1 million euros to almost 8.5 million euros. This has nothing to do with horoscopes or superstition in Vienna or the federal government. It is a calculation.” (Sim and Skrabal, 2021, own translation). In comparison, Germany has a ruling from 1977 which restricts government contributions to advertising revenue during political campaigns, while no such regulation exists in Austria. This poses a very real risk of political and economic media capture, also when considering the reduction in plurality of available media outlets.

A final trend to note is the increased use of digital platforms and social media, particularly in younger users (Digital News Report 2024). Most news consumption for the under 34 age group comes directly from social media platforms, not from the media outlets directly. This influence of algorithms on curating news consumption amongst this group is very vital, given the transparency of how these algorithms operate. Furthermore, this implies that less traffic on newspaper websites or directly through media sources also impacts funding capacities for these, further jeopardising the financial stability of these and increasing their reliance on advertisement (Theine et al., 2025; Gardinger et al., 2024; O’Brien, 2024). This additionally relates to the concept of media environment capture (Sevignani et al., 2025), both regarding indirect influence and mediate influence of platforms on structuring the digital news economy. In all, these critical trends and lack of adequate regulations make the Austrian landscape an interesting case study for the development of imaginaries of SET.

5) Methodological Framework: the necessary mixed-method approach

Because the paper foregrounds SET imaginaries and the role of actors in their mediated articulation, we use a mixed-method design that can capture both (i) large-scale regularities in content and (ii) systematic patterns of actor visibility and association. In line with a critical political economy (CPE) view that media goods are simultaneously economic and cultural and are therefore shaped by wider social forces (Hardy, 2014), we treat mediated imaginaries as the outcome of both discursive work and structurally patterned access. Methodologically, this requires an approach that is sensitive to who speaks and what is said within a use of a mixed-method framework.

Following Theine and Verità (2026), this approach is grounded in a critical realist perspective particularly useful for the study of transformations: for one, it recognises that transformations are deeply discursive processes, regarding shifting ideologies, actors and the contestation of hegemony; second, its focus on language, actors and structure reflects the core ideals of CPE; third, it allows for both large-scale analysis and contextual, theoretical grounding, crucial for the multiple scales of SET research; finally, it emphasises uncovering the underlying structures and mechanisms that shape and maintain observable patterns in textual data.

Empirically, we combine named entity recognition (NER) with structural topic modelling (STM) and a guided Critical Discourse Analysis (CDA) to map (a) which actors are most salient in coverage across the different media outlets in our sample and (b) which discourses and imaginaries are prevalent in the media coverage and c) how actor groups are systematically coupled to these discourses and SET imaginaries.

NER identifies and classifies named entities in text (e.g., persons, organizations, locations), thereby enabling an empirical map of which actors are most visible, how visibility varies across outlets and over time, and which actor types are most likely to appear in transformation coverage (Goyal et al., 2018; Sun et al., 2018; Nadeau & Sekine, 2007). Practically, NER also supports aggregation strategies (e.g., grouping entities into actor fields such as government, business, unions, civil society), enabling comparisons of whose voices structure the discourse on SET. Because entity extraction inevitably involves ambiguity (e.g., variant spellings, homonyms, organizations vs. spokespersons), we treat NER as a structured measurement step that benefits from validation and careful grouping rather than a “plug-and-play” representation of actors (Nadeau & Sekine, 2007).

For the discursive mapping, we rely on STM, a probabilistic topic model that infers latent thematic structure from co-occurring words and models documents as mixtures of topics (Blei et al., 2003; Roberts et al., 2013). Topics are distributions over words and documents are distributions over topics, which allows us to capture polysemy and heteroglossia in ways that are difficult to operationalize in manual coding alone (DiMaggio et al., 2013). A central advantage of STM is that it allows the inclusion of document-level metadata as covariates, estimating how topic prevalence and/or topic content vary across structural conditions such as outlet type, time, or other contextual features (Roberts et al., 2013). This is particularly useful for transformation research, where the same issue can be thematized differently across arenas and historical moments, and where shifts over time are substantively meaningful rather than mere “noise” (DiMaggio et al., 2013). At the same time, STM remains an inductive model: topic interpretation requires systematic researcher inference, supported by diagnostics (e.g., coherence/exclusivity) and close reading of high-probability texts, rather than treating topics as self-evident “findings” (Roberts et al., 2013; Denny & Spirling, 2018).

To move from statistical clusters to ideological visions, we differentiate between thematic discourses and socio-ecological imaginaries (adapted from Pühringer & Bäuerle, 2025). We define thematic discourses as the functional, sector-specific “containers” of the debate, i.e. the thematic “What” (e.g., Mobility, Fossil Fuels, or Housing). These are identified through the statistical clustering of STM topics and a guided CDA analysis. In contrast, SET imaginaries represent the ideological “How” and “Why”, i.e. the macro-level normative visions that give political meaning. An imaginary is not merely a subject of discussion, but a deep-seated narrative that outlines a specific pathway for societal reorganization (Pühringer & Bäuerle, 2025).

The role of actors is central to this transformation: actors act as the discursive catalysts that bridge neutral thematic discourses with specific ideological imaginaries. By claiming “ownership” of a discourse, an actor group injects it with a particular imaginary, strategically framing technical issues to serve broader political goals. To reconstruct these SET Imaginaries, we employ a CDA. By intentionally sampling high-probability documents within key actor–topic combinations, we move beyond computational abstraction to interpret the argumentation patterns, and implicit assumptions. The integration of NER and STM enables a

specifically actor-centered design, which allows us to examine how socio-ecological visions become publicly salient through systematic actor–content couplings. We link these to our actor measures by analyzing which actors disproportionately co-occur with specific discourses and imaginaries.

This triangulation addresses the complementary weaknesses of each method: while STM and NER provide scalable pattern detection, they risk decontextualized inference; conversely, CDA provides depth but risks selective sampling without corpus-level structure (Törnberg & Törnberg, 2016). By looking at significant silences, we also interrogate the “absent” actors and marginalized perspectives that a purely statistical model might overlook due to low frequency. This ensures that the reconstruction of imaginaries is not merely descriptive but evaluative, specifying the discursive mechanisms through which particular transformation pathways are normalized, neutralized, or strategically marginalized (Fairclough, 2013; Theine & Verità, 2026).

6) Data and Operationalization

Following our methodological framework discussed in the previous section, this paper proposes a combined NET and STM approach to studying the Austrian media landscape, focusing on an actor-centered understanding. To capture shifts in discourse, the timespan will cover the ten-year period between 2015 and 2022: importantly, this includes the advent of the Paris Agreement, the COVID-19 crisis, and multiple relevant and (chaotic) shifts in geopolitics.

Our dataset includes an array of different outlets spanning Austria’s legacy and online media environment. It covers traditional news media: national quality dailies (Der Standard, Die Presse, and Kurier) as well as regional newspapers including Kleine Zeitung, Salzburger Nachrichten, Tiroler Tageszeitung, and Oberösterreichische Nachrichten. It also includes broadcast journalism via the public service provider ORF. In addition, we have added the high-reach tabloid Kronen Zeitung and the free daily Heute.

Furthermore, the dataset incorporates weekly magazines (Profil and Falter), business/economy magazines (Trend and Gewinn), and a set of digital-native and independent outlets that capture online-first discourse dynamics and alternative editorial orientations (ZackZack, Moment, Dossier, Andererseits and Relevant). Finally, we include smaller niche and project-based publications (Landschaft Leben, Bauer2thePeople, Erklär Mir Die Welt, Ganz Offen Gesagt), which - despite lower output - help broaden the range of formats and potentially discursive positions represented.

Data was sourced from a combination of databases that have access to articles and broadcast transcripts, such as Factiva and APA. To find relevant output, different keyword search strings have been developed, which aim to capture the different areas of interest for SET imaginaries: one keyword group focuses on the climate crisis and ecological topics and one on general feelings related to both climate and transformation (e.g., Fridays for Future, sustainable lifestyles, or more negative terms like climate hysteria or eco-dictatorship). For an overview of our keyword strings and the number of document hits per block over time, see Table A.1. Outlets not present in the databases were attained using automated web scraping techniques. This scraped data was filtered using the same key word approach discussed above, thus ensuring consistency (see Table 1 for an overview of our dataset).

Table 1: Article volume by outlet in our dataset (2015-2022). Note: sorted by outlet type. For an overview of articles over time and per outlet see Figure A.1 and Figure A.2.

Outlet	Outlet type	No. articles per outlet
ORF	public broadcaster (TV/radio/online)	4,584
Der Standard	national daily	5,262
Die Presse	national daily	5,412
Kurier	national daily	4,861
Kronen Zeitung	national tabloid daily	7,440
Heute	free daily / tabloid	388
Kleine Zeitung	regional daily (Styria/Carinthia)	5,800
OÖe Nachrichten	regional daily (Upper Austria)	3,831
Salzburger Nachrichten	regional daily (Salzburg)	4,393
Tiroler Tageszeitung	regional daily (Tyrol)	3,972
Falter	weekly magazine	1,168
Profil	weekly magazine	762
Gewinn	business magazine	146
Trend	business magazine	574
Moment	digital magazine	369
Dossier	investigative outlet	4
Andererseits	digital-native outlet	9
Relevant	digital-native outlet	3
ZackZack	digital-native outlet	18
Landschaft Leben	digital-native outlet	14
Erklär Mir Die Welt	niche outlet (podcast)	27
Bauer2thePeople	niche outlet (podcast)	5
Ganz Offen Gesagt	niche outlet (podcast)	6
		<i>Total: 49,048</i>

Following extensive data cleaning, we ran a NER on the corpus, relying on a pretrained German-language pipeline from spaCy (an open-source natural language processing library): each word of the corpus is ‘tagged’ based on its part of speech, and certain tags are further categorized into persons, organizations or locations. The output is an unstructured list of detected entities, which we consolidated into analytically usable actor categories through several iterative coding cycles. We define an actor as any mention of a specific person or organization. We exclude generic references to groups or categories without a concrete referent (e.g., “politicians,” “industry,” “scientists”). Each actor was then assigned to the closest-fitting actor category, and - where relevant - coded as domestic or non-domestic, enabling analyses of both actor-

field composition and the geography of voice and authority in SET coverage. Given the size of detected entity output (well over 500,000), a random selection of 2,000 entities was used as a starting point for creating our own entity-categorisation dictionary. This of course presents a limitation to the study, given the scope of potential entities not captured in our mapping. Actors are place-based, thus there is a spacial dimension to an actor's analysis. Accordingly, we have further differentiated between Austrian domestic and non-domestic actors which makes the geography of voice visible. This combination of actor-type and geographic coding lets us analyze not just *who* is visible, but how domestic imaginaries are anchored, legitimated, or contested through transnational actor references and "imported" authority.

As a final step, we included the NER-based actor categories as document-level covariates in the STM, enabling us to estimate how topic prevalence varies systematically with the presence of different actor types (and, where applicable, domestic vs. non-domestic actors). Two actor covariates were assigned to each document, based on the category of the top two entities mentioned within a document: e.g., if the top mentioned entity within a document was an Austrian politician from OeVP, that became top entity, and if the second-most mentioned entity was a corporation, that was assigned second-top entity. In addition, both outlet and publication date were treated as relevant metadata covariates for the modelling process, especially useful for analysing trends over time. We then estimated a range of models with different numbers of topics and evaluated them using standard diagnostic criteria (e.g., semantic coherence, exclusivity, and residual checks). Based on a combined assessment of these quantitative diagnostics and qualitative inspection of topic interpretability across model variants, we selected Model 80 as the best-performing and most substantively meaningful specification (see Figure A.3 for semantic coherence and exclusivity of the three potential models). A qualitative evaluation of Model 80 and elimination of redundant topic outputs resulted in a final total of 69 topics. Using a focused CDA approach (see section 5), we then grouped these topics together based on their thematic connections into fourteen overarching discourses.

7) Empirical results

This section presents the core empirical findings from our mixed NER–STM analysis of Austrian media coverage of climate change and SET. We begin with an actor-centered overview based on the NER results, mapping the key actor constellations and the geography of voice that structure who is visible in SET-related reporting (section 7.1). We then turn to the thematic dimension of coverage by presenting the STM topic landscape through the lens of discourses and imaginaries (section 7.2). Finally, we discuss how particular actor groups are linked to discourses and imaginaries of SET (section 7.3).

7.1) Mapping the “Who”: The actor landscape of Austrian climate coverage

Our NER-based actor typology captures a strongly politicized core of the transformation debate (see Table 2): political parties, EU-level actors, corporations, specific politicians and government actors. Those actor categories are based on previous research stressing that parties and elected officials frequently voice programmatic positions and contest policy pathways; governmental actors speak through formal authority and administrative capacity; and corporate actors intervene via policy demands, investment narratives, and

sectoral “feasibility” claims. Beyond this politicized core, we also included a substantial knowledge-oriented layer with research institutes/universities, think tanks, lobby organisations and scientists: economists and political/social philosophers are further identified, given the uniquely privileged position they often hold in shaping transformative debates (see Maesse et al., 2021; Kapeller et al., 2022; Theine 2021). Different civil society elements have also been included, importantly activists and activist movements, e.g., Fridays for Future or Letzte Generation. These categories will help us capture how expert authority and scenario-building enter SET discourse, often as evidence claims, risk assessments, or projections that can be mobilized by different actor coalitions.

Table 2: Actor-type categories. Note: this table gives an overview of all identified actors in our media corpus grouped into dominant categories.

Actor Category	Mentions
Politician (Austrian)	10,307
Political Party (all regions)	6,364
Politician (non-AT)	5,863
Corporation	4,283
Research Institute/University	4,219
Scientist	2,256
Government/Public Entity	1,880
Managers	1,176
Think Tank/Lobby/Foundation	984
NGO/Charity	602
Economist/Philosopher	563
Artists	539
Activist/Movement	411
Media VIP	217
International Organisation (IO)	54

To further trace the domestic partisan structuration in more fine-grained terms, we assigned mentions of individual politicians to their respective party affiliation (Table 3), allowing us to examine not only which parties are referenced as organizations but also how party-political visibility is reproduced through person-centred reporting. Given the climate and SET focus of our corpus, the clear dominance of Die Grünen is unsurprising; however, the magnitude of their visibility relative to ÖVP and SPÖ is noteworthy. It suggests that climate-related transformation debates are strongly mediated through actors that are explicitly associated with environmental policy agendas. By contrast, other parties appear far less frequently. Most strikingly, the FPÖ remains comparatively marginal across the dataset—an observation that sits uneasily with its broader electoral weight and agenda-setting capacity in Austrian politics.

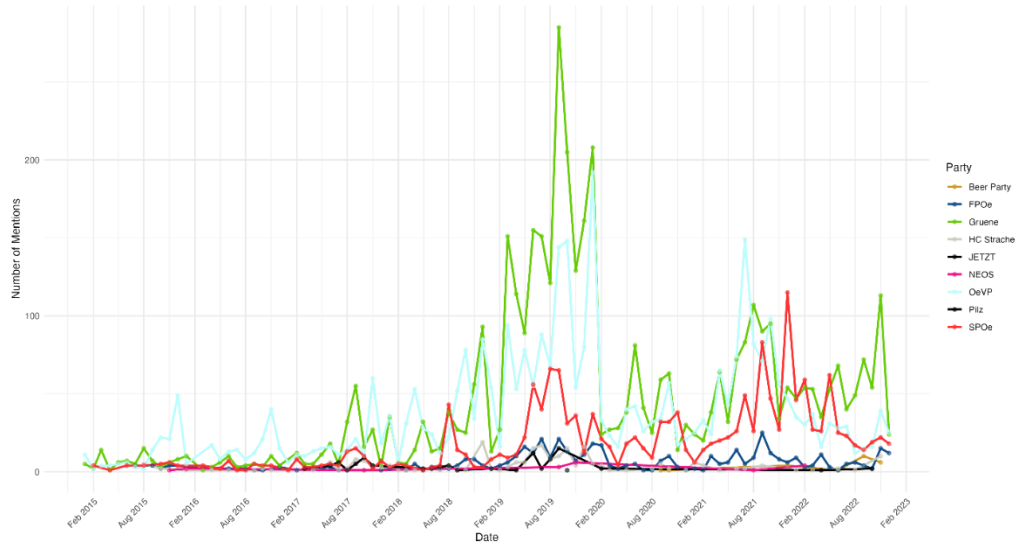
The actors mentioned in Austrian climate change coverage cluster around a small set of dominant actor categories, a pattern that is corroborated by Figure A.4, which captures how often two entity categories appear together across the corpus. It reveals a dense core of recurring connections among institutional political and economic actors, alongside markedly weaker and more distant ties to civil-society-adjacent categories such as scientists or activists. Against this backdrop, a CDA-informed attention to significant silences also highlights that the KPÖ does not appear in our current actor set (Theine & Verita, 2026). While this may reflect randomization in the NER dictionary construction, the absence is nonetheless noteworthy given its potential implications for which redistributive or ownership-focused imaginaries enter the mediated SET debate.

Table 3: Austrian politicians by political party. Note: Mentions of individual politicians were coded under their respective party (e.g., ÖVP, Grüne).

Austrian Politicians by Party	Mentions
Gruene	4,302
OeVP	3,508
SPOe	1,661
FPOe	454
HC Strache	240
JETZT	88
Bier Partei	23
NEOS	18
Liste Pilz	13

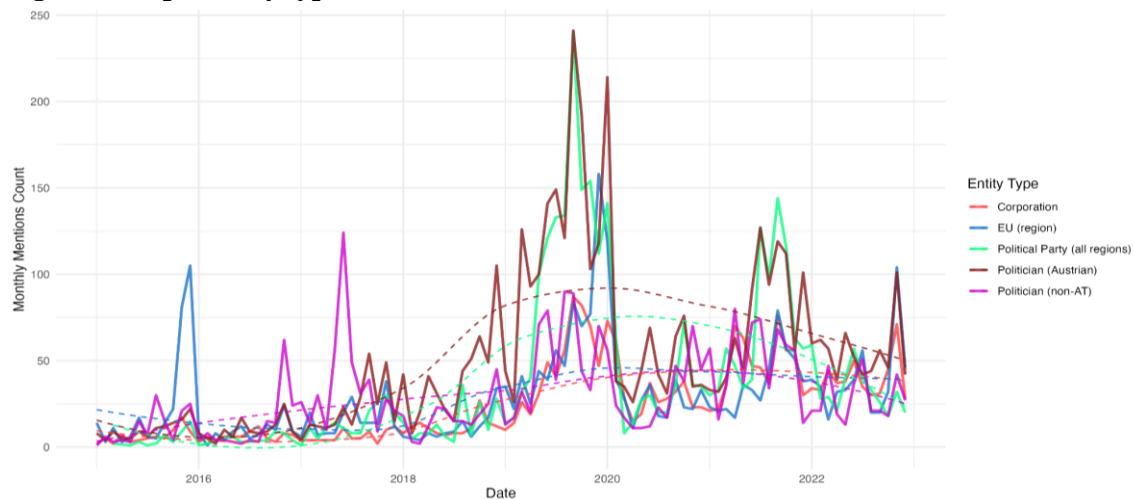
A time perspective adds an important qualification (see Figure 1). The ÖVP is the most mentioned party up to early/mid-2017, but visibility rises sharply around 2019/early 2020, after which Die Grünen become the dominant party reference. This shift aligns with the 2019 snap election and the subsequent ÖVP-Green coalition formation and government (2020- 2025), alongside intense coverage of coalition negotiations and major political controversies. After a dip, mentions rise again in 2021/early 2022—most clearly for Greens and ÖVP—suggesting renewed politicization of SET coverage even as other topics compete for attention. By contrast, the FPÖ and smaller parties remain comparatively marginal over time, with visibility limited to short-lived spikes rather than sustained presence.

Figure 1: Austrian Politicians mentioned over time (2015-2022)



Turning to the non-political entities in the dataset (see again Table 2), corporations stand out as a particularly significant actor group (around 9% of all top entities across the top and second-top tagging). Research institutes and universities account for a similarly large share, well above the roughly 4% attributed to governments and other public entities, and far above the less than 1% allotted to activists and activist movements. Overall, this points to a clear under-representation of certain groups: when we additionally include think tanks and individual managers, “private” or private-sphere-adjacent interests amount to roughly 14% of named actors. Finally, international organizations register a surprisingly low share, especially given the timing of pivotal events within the observation window—most notably the Paris Agreement (2016) and subsequent controversies around the U.S.’s shifting commitment between the first Trump administration and the Biden administration.

Figure 2: Top 5 entity types mentioned over time (2015-2022)



A time-series perspective adds an important qualification (Figure 2). Across the main actor categories, visibility is comparatively low and stable from 2015 through roughly 2018, followed by a pronounced surge in late 2019 and early 2020 after which mentions drop sharply and settle into a higher baseline than in the pre-2019 years. A second, smaller wave of heightened salience emerges around end of 2021/early 2022, before gradually tapering off toward the end of the observation window.

Table 3: Geography of actors in the Austrian SET media corpus: domestic vs. non-domestic references. Note: The table reports aggregated mention counts by geographic tag; only the 20 most frequent categories are shown (remaining tags are omitted for readability).

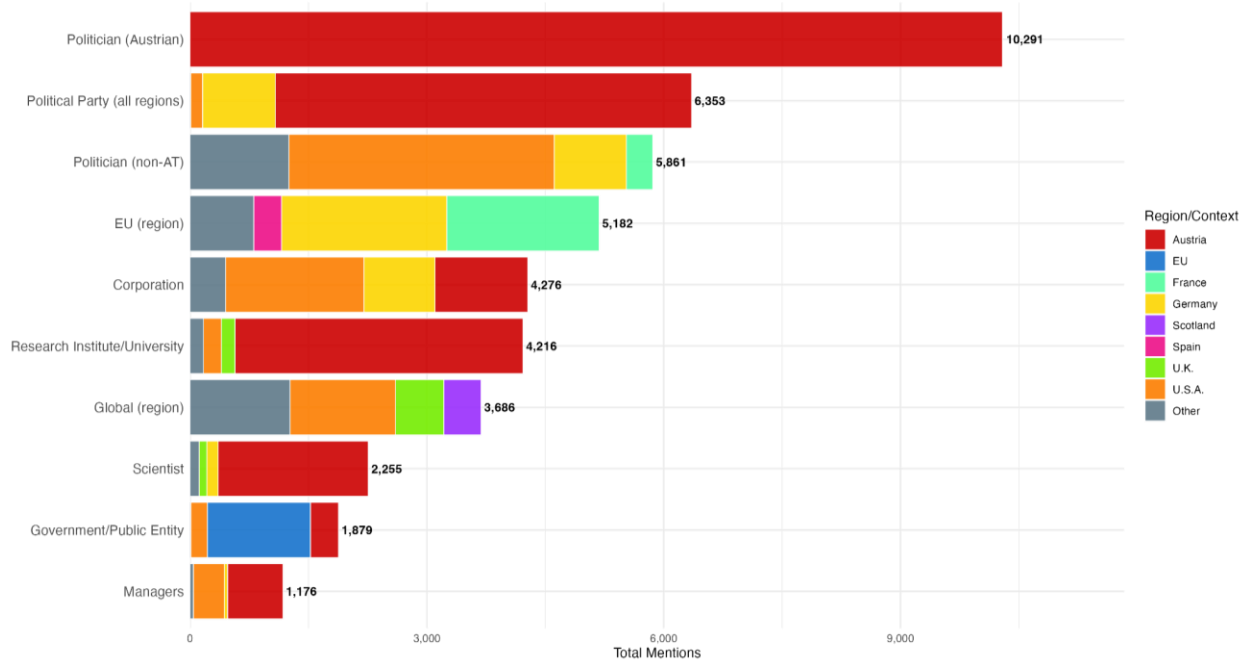
Geographic category	Mentions
Austria	25,646
United States of America	7,683
Germany	5,480
France	2,278
United Kingdom	1,258
Russia	534
Switzerland	512
Scotland	486
Spain	379
Netherlands	369
Norway	312
Sweden	216
Brasil	214
Italy	204
China	130
Denmark	113
India	107
Canada	104
Hungary	90
Greece	77

Introducing a geographical focus adds an important qualification to our actor analysis. Apart from the Austrian entities, the dataset is shaped by references to the United States and Germany, unsurprisingly (see Table 3). Two points are noteworthy. First, U.S. politicians are more often referred to as individuals, rather than being directly tied to their party (potentially reflecting a stronger personalization of politics, including the rise of prominent at times autocratic figures), whereas in the German case references are more balanced between individual political figures and parties as organizations. Second, very few “third-country” contexts (i.e., outside the EU) are explicitly tied to other actor categories: compared to the geographic mentions in

Table 3, non-EU references appear more often as location-based wordings rather than as identifiable actors. Specific actor categories linked to “other” geographical contexts are thus rarely visible. It is also notable that, in terms of both raw mentions and affiliations to other actor categories, geographical contexts from the Majority World are largely absent (with Brazil being a limited exception, primarily tied to Jair Bolsonaro and the Amazon rainforest). In the context of SET imaginaries, this is problematic: rhetoric around green transformations is deeply entangled with unequal ecological exchange and extractivism, which can reproduce neo-colonial dependencies and obscure historical patterns of colonial violence, exploitation, and responsibility for the crisis conditions in the first place.

Figure 3 also highlights that the geographical embedding differs sharply by actor type: while Austrian politicians (and largely also research institutes/universities and scientists) are overwhelmingly Austria-tagged, non-Austrian politicians and corporations show a much more international profile—driven in particular by U.S. and German references—whereas the EU (region) and global categories display the most heterogeneous mix of regional contexts.

Figure 3: geographic context of top 10 actor-type categories



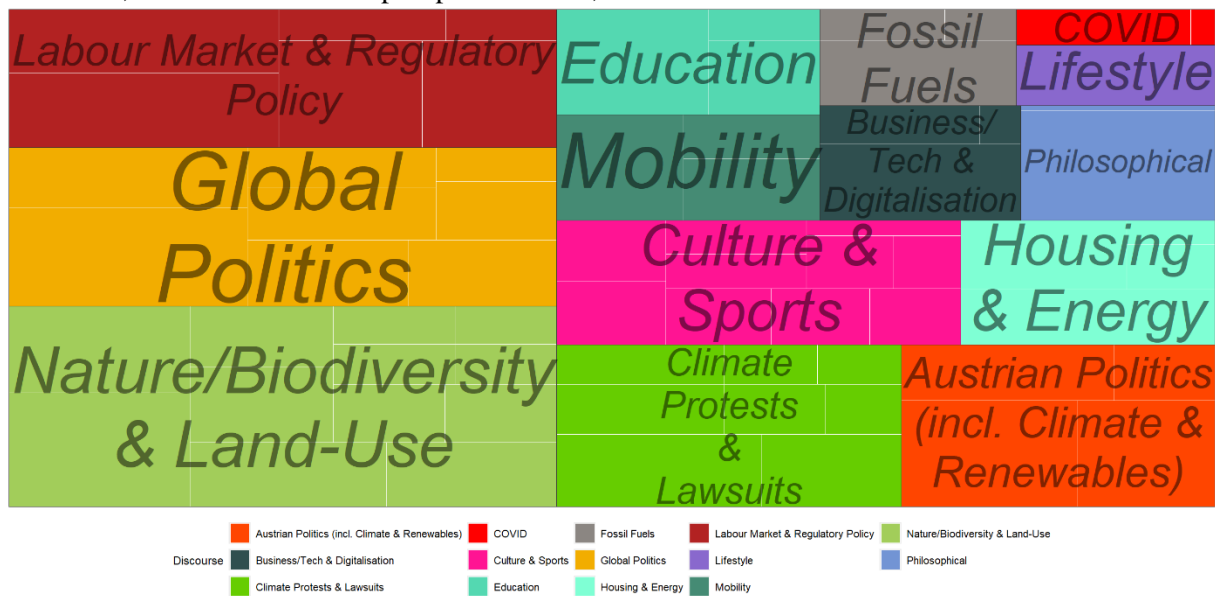
7.2) Mapping the “What”: Topic structures and SET discourses

As discussed in Section 6 (Data and operationalisation), we grouped topics into broader thematic discourses to provide a higher-level view of the corpus. Figure 4 offers an initial overview of the dominant discourses in Austrian climate/SET coverage. The largest of these is *Nature/Biodiversity & Land-Use*, which accounts for 17% of the coverage and frames the crisis through the lens of ecological impact and natural resource management. This is followed by *Global Politics* at 13%, a discourse that interprets climate change as a matter of international diplomacy and emissions targets, and *Labour Market & Regulatory Policy* at 12%,

which focuses on the structural and economic frameworks of the transition. A second tier of discourses represents approximately 25% of the coverage, centering on social dynamics and national identity. This tier includes *Climate Protests & Lawsuits* at 9%, which captures the friction between activism and legal structures, alongside *Austrian Politics* at 8% and *Culture & Sports* at 8%. The latter integrates environmental concerns into the fabric of daily life and national heritage, such as skiing and tourism.

The remaining mid-sized discourses cluster around sector-specific transition domains that detail the technical and social modernization of specific industries. These include *Housing & Energy* at 5%, *Mobility* at 4%, *Education* at 4%, and *Business/Tech & Digitalisation* at 4%. The *Fossil Fuels* discourse, making up 3% of the corpus, specifically addresses the sectors most directly challenged by the shift away from carbon-intensive energy sources.²

Figure 4: Distribution of climate-related discourses. Note: For the relative values of each discourse, see Table A.2; for a full list of all topics per discourse, see Table A.3.

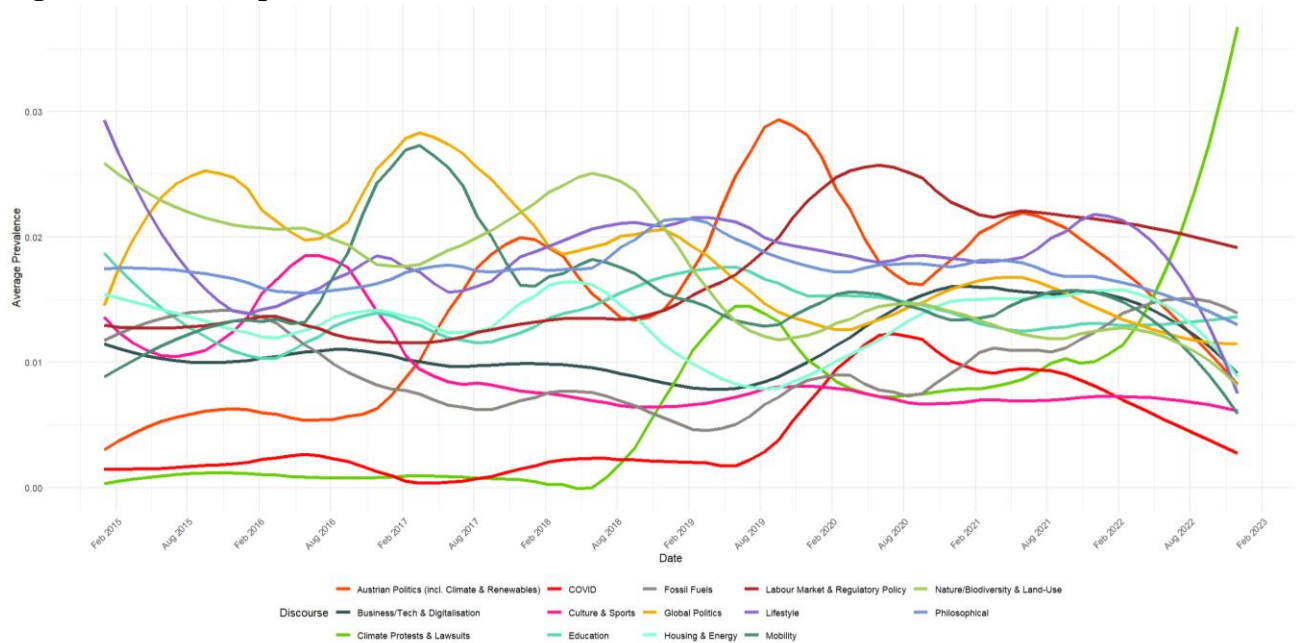


Adding a temporal perspective we find by shifting attention cycles in which certain discourses surge and temporarily re-weight the overall mix (Figure 5). In other words, some discourses function as relatively stable background frames, while others are more episodic and spike around political turning points and overlapping crises. Three major themes stand out. First, the rise in importance of *Labour Market & Regulatory Policy* appears only after 2019, which can be attributed to an increase in conversations (as well as pushbacks), particularly within the EU, regarding carbon taxation and other climate-related policies, for example the diesel tax that sparked the Yellow Vest Movement in France in 2020. The steady rise of this discourse is also tied to an Austria-specific policy measure, i.e. the Klimabonus. This high prevalence of this discourse is especially interesting given the inherently redistributive nature of the topics included in it, not only in terms of taxation, but also relating to reductions in work-time, alternatives to the 40-hour work week, and concerns for unemployment.

² For the distribution of the different discourses by media outlet, see Figure A.5.

Second and similarly, *Climate Protests & Lawsuits* went from taking almost no space in the corpus to having two significant spikes in 2018 and 2022: this can be directly linked to the advent of the Fridays for Future movement and Greta Thunberg in 2018, and the rising prominence of other movements like Letzte Generation (notable for a global series of actions, particularly around 2021-2022, including disruption of highways through gluing themselves) and Ende Gelände. A major event is also Austria's first climate lawsuit presented by Greenpeace to the Constitutional Court in 2020, on behalf of 8,060 Austrians against the kerosene tax exemption of airlines. Third, *Nature/Biodiversity & Land-Use* exhibits the opposite trend: starting with one of the largest prevalences in the corpus, the frequency of topics related to this theme decreases pointedly after 2019, and never recovering its levels. The importance of more stringent ecological conservation seems to have taken a backseat with respect to other socio-political topics: COVID is of course one such issue, though the coinciding rise in *Business/Tech & Digitalisation* around the end of 2019 is worth pointing out.

Figure 5: Discourse prevalence over time (2015-2022)



In order to analyse the co-occurrence of topics in documents, we calculated a topic network. Figure A.6 shows that some themes clearly cluster together, for example *Nature/Biodiversity & Land-Use* topics condense largely together with few connections to *Education* or *Culture & Sports*. Others appear to have more relevant ties: *Austrian Politics* and most topics of *Labour Market & Regulatory Policy* are very closely linked, likely due to the importance of the Klimabonus and the close ties between fiscal policy implementation and party politics. These also have strong links to topics concerned with fossil fuels and emissions goals. Interestingly, the topic concerned with work-time reduction is very closely related to *Climate Protests & Lawsuits*: alternative working ideologies have long been a cornerstone of activist movements, as well as the connection between labour and climate crises (i.e., reduction of material throughput). By comparison, it has only one (very small) link to an *Austrian Politics* topic, and it is one focused on right-wing developments. Themes which tie together a material understructure of

transformation, in particular *Housing & Energy* and *Mobility* are very close to *Business/Tech & Digitalisation* (and interestingly no ties to protest-oriented themes, and only minor-level ties to any political ones).

While the network co-occurrence mapping reveals the structural architecture of the media landscape, CDA is required to move beyond these statistical clusters and unpack the specific socio-ecological imaginaries and ideological visions latent within the text. By qualitatively examining the discourse and associated topics, we identified a four-quadrant typology of SET visions (see Table 4) that compete for dominance within the Austrian corpus.

Table 4: Thematic mapping of SET imaginaries

SET Imaginary	Core Narrative & Vehicle of Change	Associated Topics
Contested Disruptions	Systemic Shock: Disruption (COVID, disaster, protest) as a catalyst for either radical change or regressive retrenchment.	8, 18, 13, 37, 39, 77, 79, 56, 63, 70
Long-Term Institutional Action	Policy Reform: Gradual, institutionalized shifts focusing on redistributive justice and democratic participation.	43, 40, 59, 38, 62, 29, 16, 24, 30, 53, 47
Market-driven transition	Techno-Optimism: Market-led growth, efficiency, and private sector innovation aligned with the European Green Deal.	21, 55, 35, 41, 49, 51, 60, 80, 57
Nature for Nature's Sake	Ecological Preservation: Protection of biodiversity and natural reserves as a discrete, often isolated, value.	28, 56, 63, 70, 72, 48

The first identified imaginary, *Contested Disruptions*, centers on systemic shock as a transformative catalyst, yet the directions of these changes can diverge sharply. In this "Zone of Conflict," the media navigates shocks, ranging from the COVID-19 pandemic to ecological catastrophes, as pivotal moments of change. On the one hand, large scale system disruptions like the COVID pandemic can showcase the weaknesses baked into our global structures where certain actors can capitalise on this disruption to push (regressive) transformative views. Conversely, activist-led disruptions (e.g., *Letzte Generation*, Topic 77) attempt to force a "halt" to the status quo to foreground the nexus between climate and poverty. However, Austrian media coverage remains largely "lukewarm," often depoliticizing these movements by focusing on the individual ramifications for activists rather than engaging with the underlying critiques of power and oppression.

A second imaginary, *Long-Term Institutional Action*, focuses on policy-driven reform and a shift toward foundational social issues. This vision is anchored in domestic initiatives such as the *Klimarat*, the *Klimabonus*, and the *Klimaticket*, which frame SET as a matter of redistribution and democratic participation. In this discourse, education is elevated as a key driver for active, conscious participation as seen in local projects like the Repair Café in Güssing. However, a CDA reveals a persistent focus on the level of the individual. Even critical lifestyle discourses, which correctly identify that "a wasteful lifestyle remains wasteful even if the wasted is bio"³ (Die Presse, 2020, own translation), stop short of calling for a wholesale reorganization of production. Furthermore, while the media acknowledges that the weakest in

³ Original wording: "Ein verschwenderischer Lebensstil bleibt verschwenderisch auch wenn das Verschwendete bio ist." (No. 40566, Die Presse, 2020)

society are hit hardest, responsibility is often outsourced to international or religious charities, leaving the core structures of economic power and capitalist relations largely unaddressed.

Third, the *Market-driven transition* imaginary functions as the hegemonic narrative within the corpus, framing the socio-ecological transition as a market-led evolution spearheaded by private sector innovation and aligned with the strategic goals of the European Green Deal. At its core, this vision is defined by a deep-seated techno-optimism, where the climate crisis is treated as a managerial challenge solvable through “sector coupling” and the deployment of high-tech alternatives like hydrogen and liquified natural gas. As evidenced by reports on startups and industrial research, this discourse prioritizes “future-fit” technologies and efficiency over systemic restructuring, effectively depoliticizing the transformation by turning it into a series of investment opportunities. Crucially, this imaginary reveals a neo-extractivist dimension regarding resource security; as the media discusses the diversification of energy imports from regions like North Africa or Azerbaijan to replace Russian gas, the focus remains on securing the material underpinnings of European industry rather than reducing demand.

Forth, parallel to this is the *Nature for Nature’s Sake* strand. While emphasizing biodiversity loss, this discourse remains remarkably insulated from broader climate goals. By treating ecological preservation as a discrete cultural or educational concern—rather than a systemic one—the media reinforces a siloed view of nature that avoids the more radical, system-critical implications of the socio-ecological crisis.

7.3) Mapping the “How”: Actors and SET discourses and imaginaries

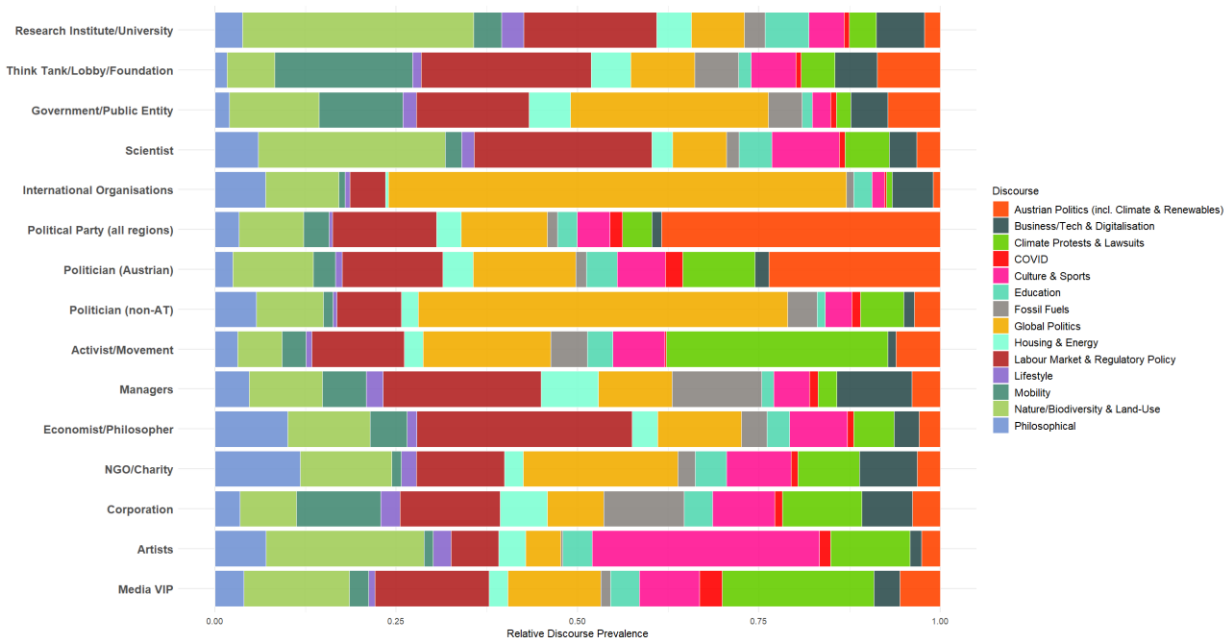
This final analytical layer bridges the previous sections by examining how specific actor groups “own” and propagate the competing visions for the SET discourses and imaginaries.

As illustrated by the distribution of institutional actors in Figure 6, there is a pronounced divide between domestic policy implementation and international governance. Austrian Politicians and Political Parties are overwhelmingly anchored in the *Austrian Politics (incl. Climate & Renewables)* discourse. For Austria specifically, the results reflect the governing reality: the Grüne and ÖVP coalitions were responsible for the implementation of the latest climate policy measures, hence their strong affiliation, while smaller parties show no significant effects. Conversely, the prominence of Non-Austrian Politicians and International Organisations in the *Global Politics* discourse highlights their role as conduits for international regulations. Notably, Global politics is less connected to scientists or research institutes. Interestingly, while Government and Public Entities show a broad distribution, they maintain a significant focus on *Housing & Energy* and *Mobility*, reinforcing the “techno-material” underpinnings of the transition also prioritized by the private sector. The strength of mobility here is particularly interesting, as its connection to public entities suggests it may be a more accessible front to mobilize public attention.

The contrast in discursive spaces occupied by civil society and economic actors is further evidenced by the thematic clusters in Figure 6. Activists/Movements and Media VIPs are the dominant voices in *Climate Protests & Lawsuits*, yet their influence in other policy domains is limited. Activists are most strongly affiliated with *Culture & Sports*, followed by scientists; however, cultural awareness and transformation are often relegated to niches. For activists, this represents one of the few ways to gain a “say,” though it is mostly restricted to reviews of exhibits and cultural events rather than deeper engagement, while big-money sports like Skiing and F1 remain the domain of corporate engagement. In direct opposition, Corporations and Managers exhibit a dense concentration in the *Market-driven transition* quadrant. The *Fossil Fuels*

topic has super-strong connections to corporations and think tanks; notably, the only topic critical of fossil fuels is linked to activists, specifically focusing on the critique from Greenpeace toward OMV.

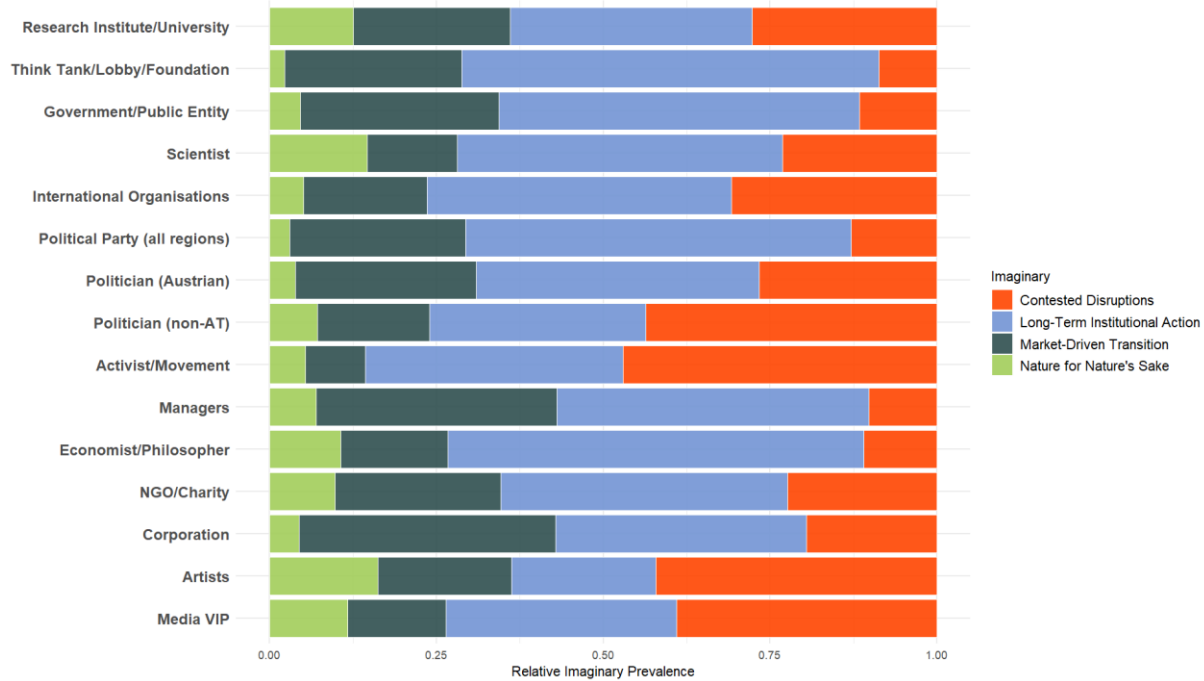
Figure 6: Relative discourse distribution by entity categories. Note: the figure illustrates the proportional prevalence of thematic discourses associated with each actor group. Values are calculated based on cumulative topic gamma distributions, normalized to 1.0 (100%) for direct comparison across categories.



When these thematic affiliations are aggregated into the macro SET-imaginaries shown in Figure 7, the landscape is defined by a sharp tension between the *Contested Disruptions* and *Market-driven transition* imaginaries. Activists/Movements drive the disruption narrative, yet zones of conflict are nuanced: very few actors show positive relationships with the ecological conflict part, showing a decline in the importance of dealing with wider transformation from a purely ecological perspective as social aspects move to the forefront. This is mirrored by Politicians, who engage with these disruptions or fuel reactionary counter-narratives; specifically, HC Strache and the FPÖ are clearly affiliated with right-wing reactionary imaginaries. Conversely, the *Market-driven transition* imaginary is disproportionately concentrated among Managers, Corporations, and Think Tanks, showing very negative connections with civil society. This creates a discursive axis where "disruption from below" clashes with "innovation from above," marked by a strong negative connection between private sector entities and topics related to environmental damage.

While conflict and industry define the extremes, Figure 7 identifies Scientists, Economists/Philosophers, and NGOs as occupying a central role through the *Long-Term Institutional Action* imaginary. This imaginary shows an interesting mix of actors: positive associations include activists, government institutions, think tanks, and scientists, while most political actors show negative relationships, as they are associated less than average with these topics outside of specific measures like the *Klimabonus*. Notably, the *Nature for Nature's Sake* imaginary remains marginalized.

Figure 7: Relative prevalence of SET imaginaries across entity categories. Note: the figure illustrates the proportional prevalence of the imaginaries associated with each actor group. Values are calculated based on cumulative topic gamma distributions, normalized to 1.0 (100%) for direct comparison across categories.



8) Conclusion

This working paper provides a first comprehensive mapping of the socio-ecological transformation (SET) landscape within Austria’s media system. By triangulating Named Entity Recognition (NER), Structural Topic Modelling (STM), and Critical Discourse Analysis (CDA), we tried to move beyond a descriptive account of climate reporting to uncover the structural and ideological engines that drive the mediated transformation. As a foundational mapping, this study reveals that the struggle over the Austrian SET is not merely a debate over technical solutions, but a profound struggle for discursive hegemony over the future of society.

Our results demonstrate that the Austrian media landscape is characterized by a highly specialized geography of voice. The “Who” of the transition is dominated by a core of institutional actors, specifically the governing coalition and private-sector managers, who effectively “own” the material discourses of *Mobility* and *Energy*. This dominance manifests in the *Market-driven transition* imaginary, which has emerged as a rather hegemonic narrative. By coupling sector-coupling and techno-optimism with market-led innovation, this imaginary depoliticizes the crisis, framing it as a series of investment opportunities rather than a question of systemic restructuring.

In contrast, civil society activists and movements are visible primarily through the lens of *Contested Disruptions*. While these actors successfully inject urgency into the debate, they are often strategically marginalized and siloed within the “protest” niche. Furthermore, the significant silences identified, i.e. the

absence of radical redistributive parties and the near-total exclusion of voices from the Majority World, suggest that the Austrian debate remains insulated from the realities of global extractivism and neo-colonial dependencies. This lack of a global perspective is a persistent blind spot in the national discourse; mirroring the findings of Hager et al. (2026), we find that virtually no actors beyond the Green Party and Global 2000 consistently integrate the global dimension of the climate crisis into their narratives. *The Nature for Nature's Sake* imaginary remains the most marginalized, reflecting a media preference for human-centric economic struggle over deep ecological preservation.

For the Austrian context, these results suggest that the transformation is currently framed as a techno-material adjustment rather than a social one. The strong coupling between public entities and the private sector in promoting e-mobility and hydrogen suggests a consensus on preserving the industrial status quo. To move toward a more inclusive SET, there is a clear need to break the siloing of activist voices. Integrating redistributive justice into mainstream political discourses, moving it out of the niche of protest, is essential for a democratic transformation. Austrian policy debates must expand to address the significant silences regarding the reorganization of production and the global implications of Austrian resource demand. Beyond our Austria case study, this paper tries to serve as a methodological blueprint for analyzing SET in other national contexts within a complex media environment.

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APPENDIX

Table A.1: Operationalization of the Climate and SET Search Terms

Keyword block	Specific keyword string
Climate change/ climate crisis	ATLEAST.2(Klimawandel*) OR ATLEAST.2(Klimakrise*) OR ATLEAST.2(Klimaerwärmung) OR ATLEAST.2 (Erderwärmung) OR ATLEAST.2 (Klimaerhitzung) OR ATLEAST.2(Erderhitzung) OR ATLEAST.2(Treibhausgas*) OR ATLEAST.2(CO2-Ausstoß) OR ATLEAST.2(CO2-Emission*) OR ATLEAST.2(Methanemission*) OR ATLEAST.2(Klimaschutz*) OR ATLEAST.2(Klimaanpassung) OR ATLEAST.2(Klimafreundlich*) OR ATLEAST.2(Klimaneutral*) OR ATLEAST.2(Netto-Null) OR ATLEAST.2(CO2-neutral) OR (ATLEAST.2(Hitzewelle*) AND Klimawandel) OR (ATLEAST.2(Starkregen) AND Klimawandel) OR (ATLEAST.2(Extremwetter*) AND Klimawandel) OR (ATLEAST.2(Dürre*) AND Klimawandel) OR (ATLEAST.2(Hochwasser) AND Klimawandel) OR (ATLEAST.2(Jahrhundertflut) AND Klimawandel) OR (ATLEAST.2(Jahrhundertdürre) AND Klimawandel) OR (ATLEAST.2(Kipppunkt) AND Klimawandel)
Climate-related protests, Contested Climate Agency & Radicalization Narratives	(NEAR.5(Protest, Klima*) OR Fridays for Future OR “Letzte Generation*” OR “Ende Gelände” OR NEAR.5(Klima*, Aktivismus) OR NEAR.5(Klima*, Bewegung) OR NEAR.5(Klima*, Demonstration*) OR (Klimastreik OR Klimablockade) OR Klimaklage OR Klimagerechtigkeit OR Klimadiktatur OR Klimahysterie OR Klimaangst OR Klima-Panik OR Klimawahnsinn OR Klima-Alarmismus OR Klimareligion OR Klima-Sekte OR Klimazwang OR Klimaterror* OR Klima-RAF OR Öko-Terrorismus OR Öko-Extremismus OR „Great Reset“ OR „grüne Weltregierung“ OR Klimaschwindel OR Klimalüge)

Figure A.1: Number of articles over time. Note: the figure displays monthly article counts with a smoothed trend line.

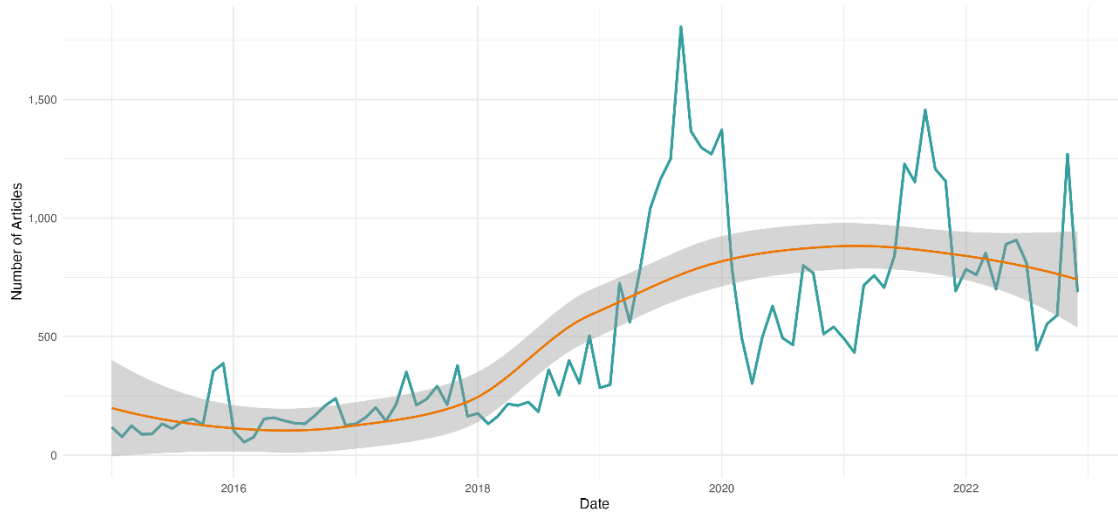


Figure A.2: Number of articles per outlet over time. Note: the figure shows stacked bar plots with number of articles per year per outlet.

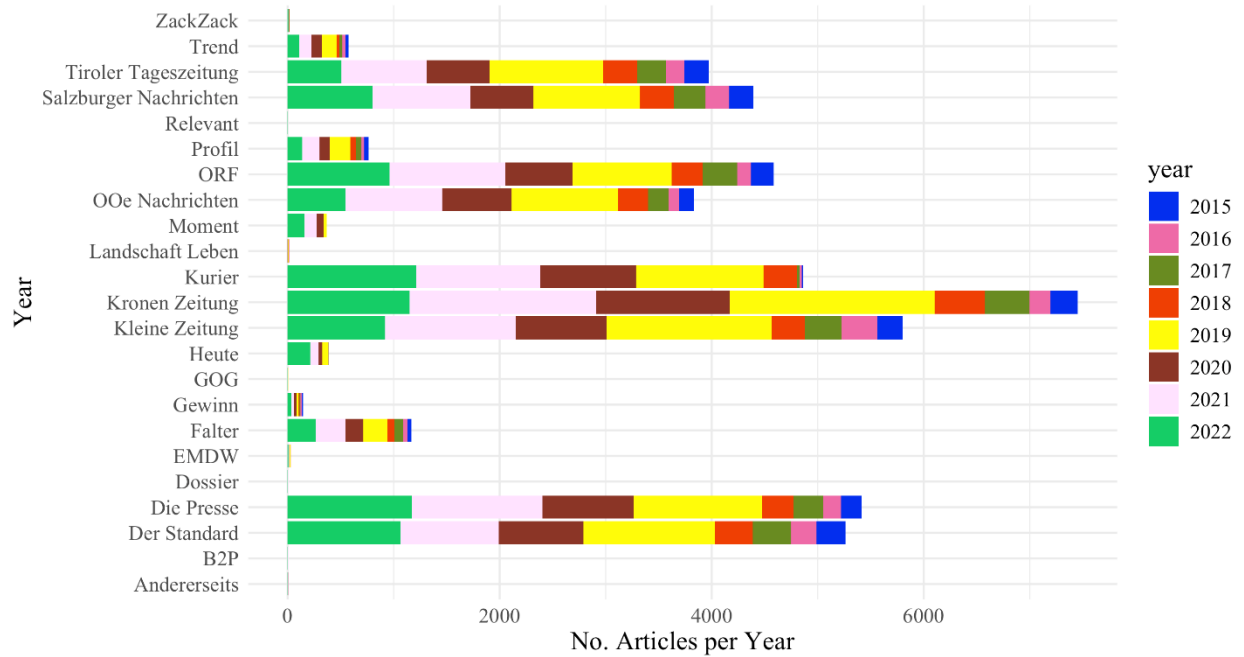


Figure A.3: Semantic coherence and exclusivity of three potential models (K=50, K=80, K=100)

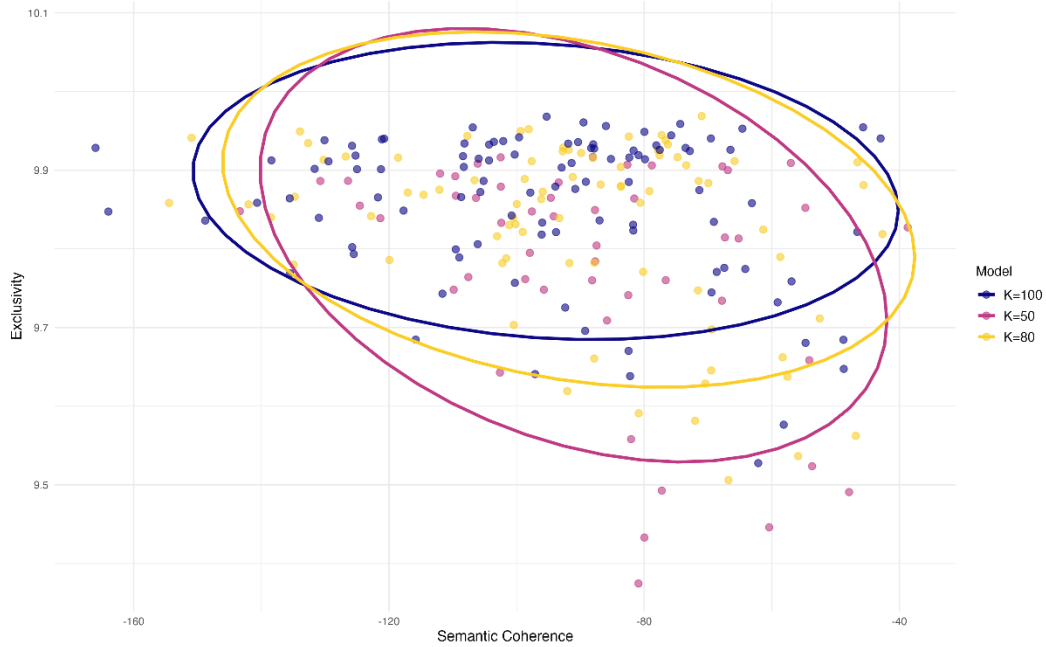


Figure A.4: Actor category co-occurrence network. Note: The network shows how often pairs of NER-derived actor categories appear together within the same documents across the corpus. Edges are displayed only when two categories co-occur at least five times; node size reflects the overall frequency of a category, and edge thickness indicates the strength of co-occurrence between categories (i.e., how often they “meet” in the corpus).

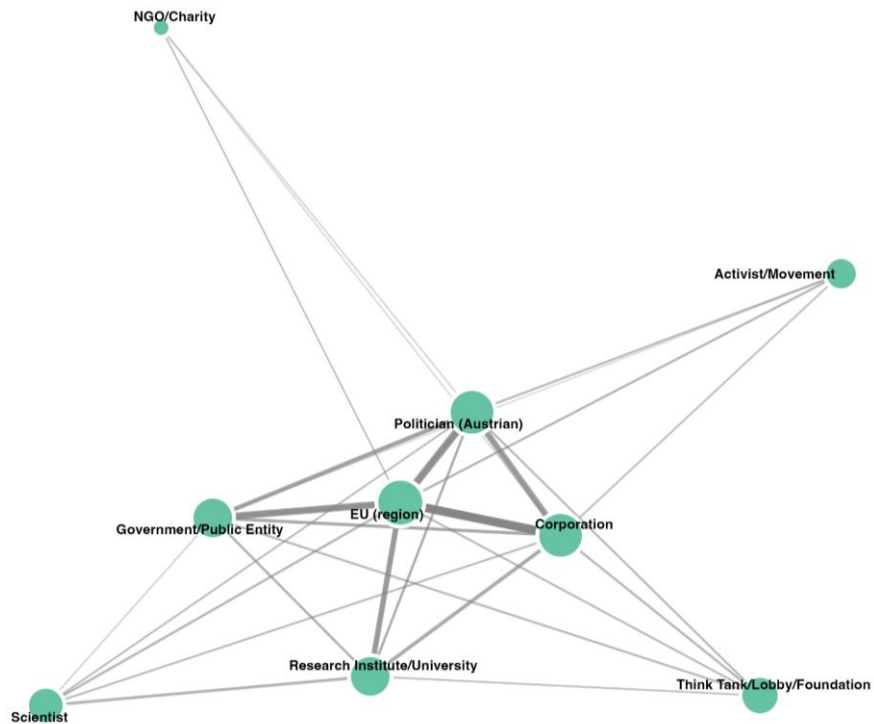


Table A.2: Relative prevalence of discourses

Discourse	Prevalence
Nature/Biodiversity & Land-Use	0.169
Global Politics	0.133
Labour Market & Regulatory Policy	0.116
Climate Protests & Lawsuits	0.086
Austrian Politics (incl. Climate & Renewables)	0.078
Culture & Sports	0.077
Housing & Energy	0.049
Mobility	0.043
Education	0.043
Business/Tech & Digitalisation	0.036
Philosophical	0.034
Fossil Fuels	0.029
Lifestyle	0.018
COVID	0.011

Table A.3: Topics by discourse and relative prevalence

Topic	Discourse	Topic prevalence
Coalition Negotiations (Austria)	Austrian Politics (incl. Climate & Renewables)	0.022
Rightwing Politics (Austria)	Austrian Politics (incl. Climate & Renewables)	0.009
Climate Politics (Austria)	Austrian Politics (incl. Climate & Renewables)	0.029
SPOe (Politics)	Austrian Politics (incl. Climate & Renewables)	0.018
Growth & Business (Austria)	Business/Tech & Digitalisation	0.009
Tech & Innovation	Business/Tech & Digitalisation	0.024
Start-Ups/Businesses/Sustainability	Business/Tech & Digitalisation	0.002
Soup Leopold Museum Demo	Climate Protests & Lawsuits	0.006
Climate Lawsuits	Climate Protests & Lawsuits	0.008
Police Violence in Protests	Climate Protests & Lawsuits	0.006
Lobau Camp	Climate Protests & Lawsuits	0.010
F4F Klimademo	Climate Protests & Lawsuits	0.023
Cultural Protests	Climate Protests & Lawsuits	0.005
Autobahn Demos	Climate Protests & Lawsuits	0.016
F4F & Greta	Climate Protests & Lawsuits	0.013
COVID Protests (Rightwing)	COVID	0.001
COVID	COVID	0.010
Events & Places (Austria)	Culture & Sports	0.006

Exhibitions & Culture	Culture & Sports	0.008
Sports (F1 & Ski)	Culture & Sports	0.008
Art & Dance (Climate)	Culture & Sports	0.007
Sports (Football)	Culture & Sports	0.004
Exhibitions (Kaernten)	Culture & Sports	0.010
Theatres & Exhibitions (Austria)	Culture & Sports	0.007
Music	Culture & Sports	0.007
Sports (Biking & Tirol)	Culture & Sports	0.009
Skiing & Tourism	Culture & Sports	0.011
Education (Austria)	Education	0.005
Schools (Pre-University)	Education	0.025
Secondary Education	Education	0.013
MNCs (coal/tech)	Fossil Fuels	0.003
Oil/Gas	Fossil Fuels	0.006
Fossil Fuels	Fossil Fuels	0.020
Climate Summit (AS)	Global Politics	0.015
U.S. Politics	Global Politics	0.012
COPs & Human Rights	Global Politics	0.011
German Politics	Global Politics	0.006
EU Politics	Global Politics	0.022
Poverty & Catholicism (GS)	Global Politics	0.015
Global Politics & Protectionism	Global Politics	0.016
Emissions & Climate Targets	Global Politics	0.036
Housing & Construction	Housing & Energy	0.003
Renewable & Alternative Energies	Housing & Energy	0.022
Nuclear Energy	Housing & Energy	0.006
Building Regulations & Heating/Cooling	Housing & Energy	0.018
Climate Taxes & Klimabonus	Labour Market & Regulatory Policy	0.026
Work-Time Reduction	Labour Market & Regulatory Policy	0.005
Regulatory Policy	Labour Market & Regulatory Policy	0.024
Regulatory Policy (EU)	Labour Market & Regulatory Policy	0.008
Climate Research & Policy	Labour Market & Regulatory Policy	0.022
Economists & Research	Labour Market & Regulatory Policy	0.031
Conscious/Problematic Consumption	Lifestyle	0.018
Mobility & Public Transport (Austria)	Mobility	0.021
Autos & E-Autos	Mobility	0.013
Airlines	Mobility	0.009
Wine (makers & regions)	Nature/Biodiversity & Land-Use	0.010
Wildlife/Nature (Austria)	Nature/Biodiversity & Land-Use	0.013
Anthropocene & Nature	Nature/Biodiversity & Land-Use	0.007
Water (Management)	Nature/Biodiversity & Land-Use	0.006
Meteorology & Weather	Nature/Biodiversity & Land-Use	0.032

Land-use/Agriculture/Circular Economy	Nature/Biodiversity & Land-Use	0.007
Urban Greening (Vienna)	Nature/Biodiversity & Land-Use	0.017
Environmental Damage & Activists	Nature/Biodiversity & Land-Use	0.010
Forestry Concerns	Nature/Biodiversity & Land-Use	0.019
Ecologically Sensitive Zones	Nature/Biodiversity & Land-Use	0.024
Biodiversity (Species & Climate)	Nature/Biodiversity & Land-Use	0.017
Natural Parks (Austria)	Nature/Biodiversity & Land-Use	0.006
Crises/Danger	Philosophical	0.001
Democracy & Identity	Philosophical	0.033

Figure A.5: Discourse distribution by media outlet



Figure A.6: co-occurrence of Austrian climate topics. Note: This network graph illustrates the probability of topic co-occurrence within the same document. Larger nodes indicate higher frequency; thicker links and closer proximity signify stronger discursive relationships. Colors reflect the primary thematic clusters identified in Section 6.

