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Prescriptive Positivism: Discourse on Sustainable Development Goal Interactions and Perspectives for a Post-2030 World

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ABSTRACT

The Sustainable Development Goals (SDGs) are unlikely to be achieved by 2030, prompting debate about what should follow. Beyond revision, there is a need to critically examine what values and assumptions have shaped how the SDGs are conceptualised and operationalised. Much of the academic discussion about the SDGs has centred around their interactions. Using an inductive, latent thematic analysis of 35 papers, we analysed the discourse on SDG interactions and identified a *prescriptive positivist* discourse that *promotes management as the solution*, *puts faith in research* and *demonstrates transactionality* and *internalised fragmentation*. Authors frequently adopt directive language and advocate technical or managerial fixes; solving trade-offs with adequate financial resources, proper governance, and science. Equity is treated as instrumental, only what is measurable is acknowledged, and calls for integration rarely go beyond coordination. The paper highlights overlooked perspectives of stewardship that considers pluralism and treats equity, justice and nature as intrinsic.

1 | Introduction

What discourse(s) underlie the academic literature on Sustainable Development Goal (SDG) interactions? The 17 SDGs, as adopted by the United Nations (UN) in 2015, aim to transform the world by simultaneously ensuring human well-being, economic prosperity and environmental protection (e.g., Pradhan et al. 2017). Despite their transformative ambition, progress has been uneven and slow, constrained by factors such as weak accountability mechanisms, persistent trade-offs between SDG objectives and deficits in capacity, technology, data availability and cultural adaptability (Shulla and Leal-Filho 2023). Recent global disruptions—including the COVID-19 pandemic, economic crises, geopolitical tensions, escalating armed conflicts and accelerating climate change—have only further set back implementation, with only 17% of SDG targets currently on track (United Nations 2024).

Unlike previous development frameworks—such as the Millennium Development Goals (MDGs)—Agenda 2030 emphasises indivisibility, meaning that all goals and targets are fundamentally interconnected (e.g., Breuer et al. 2019). This principle has motivated a substantial and rapidly growing body of academic literature examining interactions between the SDGs, analysing positive (synergies) and negative (trade-offs) relationships. A seminal contribution is Nilsson et al. (2016), who introduced a seven-point interaction scale ranging from cancelling (−3) to indivisible (+3) to characterise the nature of

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SDG interactions. The framework was subsequently applied in Nilsson et al. (2018) to examine contextual variation of SDG interactions. Building on this foundation, a diverse range of studies has applied quantitative approaches—including correlations, network and regression analysis, and scenario analysis (e.g., Pradhan et al. 2017; Scherer et al. 2018)—as well as qualitative methods such as expert assessments and literature reviews (e.g., Fuso Nerini et al. 2019). Bibliometric and scientometric studies have also been applied to map SDG interactions and link research to policy agendas (e.g., Raman, Lathabhai, et al. 2024; Raman, Pattnaik, et al. 2024). Across this literature, several recurring patterns are reported: synergies often outweigh trade-offs, with SDGs 1 and 3 frequently associated with synergies, while SDG 12 is commonly linked to trade-offs (e.g., Bennich et al. 2020; Pradhan et al. 2017; Warchold et al. 2021).

This body of work plays a central role in evaluating Agenda 2030 and informing debates on a post-2030 Agenda by providing the evidence base for monitoring progress and lending credibility to sustainability goals. However, while interaction studies generate increasingly detailed empirical insights, the values and assumptions that shape how these interactions are problematised are rarely made explicit or examined. How interactions are conceptualised can influence which goals are prioritised, which conflicts are deemed acceptable and which policy pathways are considered feasible. Academic narratives thus operate as 'institutional software' (Dryzek 2022, 20), embedding discourses that steer collective action in often subtle but powerful ways. By analysing these values and assumptions, this study sheds light on the dominant discursive foundations in academic literature on SDG interactions.

Concerns about the framing and implications of the SDGs are increasingly reflected in academic literature. Although some authors contend that only holistic and integrated approaches such as the SDGs can rise to the scale of today's global challenges (Fuso Nerini et al. 2024), others caution that this very complexity and interdependence of the 17 goals may have become more of a liability than a strength. This has led to proposals for a more focused and prioritised post-2030 agenda (e.g., Cernev and Fenner 2024; Holden et al. 2025; van Vuuren et al. 2022), as well as more fundamental critiques of the goal-oriented, output-driven paradigm of the SDGs itself (Ziai 2023; Zwitter et al. 2025). Zwitter et al. (2025) call for a more process-oriented framework grounded in the concept of human flourishing, asserting that the SDGs' largely mechanistic focus on quantifiable outcomes misses crucial non-material dimensions of wellbeing. Ziai (2023), on the other hand, disputes the notion of development altogether and argues for post-development alternatives considerate of Indigenous knowledge, traditional ways of life, ecological limits and grass-roots democracy. Taken together, these perspectives signal that the future of the SDGs is not only technical, but also normative; reinforcing the need to examine the values and assumptions that underpin sustainability goals and how their interactions are problematised.

To address this concern, the study conducts an inductive, latent thematic analysis of the most cited academic literature on SDG interactions with the aim of identifying the values and assumptions that shape the dominant academic discourse. Drawing on the work of Michel Foucault, discourses are understood as 'multiple and competing sets of ideas and concepts which are produced, reproduced and transformed in everyday practices and through which the material and social world is given meaning' (Richardson 2002, 354). They shape what is seen as a problem, what counts as a solution, and whose perspectives are legitimised (Richardson 2002; Roebuck and Phifer 1999). Hence, as they exert power and delimit what is thinkable or doable, they must be questioned critically (Dryzek 2022; Kincheloe and Tobin 2009). In this study, we define discourse broadly as the way issues are framed, reflected through values and assumptions. While discourse is what we investigate, inductive thematic analysis is the analytical approach used to do so. By making these implicit values and assumptions explicit, the analysis contributes a reflexive perspective on the knowledge base that informs both evaluations of Agenda 2030 and imaginaries of a post-2030 framework. The discussion of the findings also identifies alternative, overlooked perspectives.

2 | Materials and Methods

This study employed a qualitative research design to explore how SDG interactions are discussed and framed in the academic literature. A systematic literature review (SLR) was used to identify influential contributions, consistent with the role of reviews in synthesising knowledge for evidence-informed policy and practice (Thomas and Harden 2008). The first and second author identified a sample of relevant papers using a structured search strategy centred on a foundational publication in the field. This strategy was designed to capture a coherent and highly visible body of literature that has shaped debates on SDG interactions, rather than to provide an exhaustive mapping of all related research. The sample was analysed using inductive thematic analysis to identify recurring patterns of values and assumptions. To enhance the robustness of the interpretation of findings, a co-author workshop was conducted to critically reflect on and validate the emerging themes, rather than to generate independent empirical data. The following sections describe the search strategy and sample selection, thematic analysis process, and workshop methodology in more detail.

2.1 | Search Strategy and Selection of Literature

The search strategy is summarised in Figure 1. Nilsson et al. (2016) pioneered a literature stream on SDG interactions, introducing a shared typology that has since between widely adopted and cited in influential papers, despite having few references itself. Its role as a seed paper is justified by its foundational contribution and its broad uptake across SDGs, countries, sectors and author profiles, as evidenced by forward citation patterns. Additionally, the article was published around 10 years ago, a recognised threshold for seed papers (Lecy and Beatty 2012).

Using Web of Science (WoS), we identified 1052 papers citing Nilsson et al. (2016) before 31 October 2024, with 988 available on WoS. While citation counts are an imperfect proxy for scholarly impact, they provide a transparent indicator of

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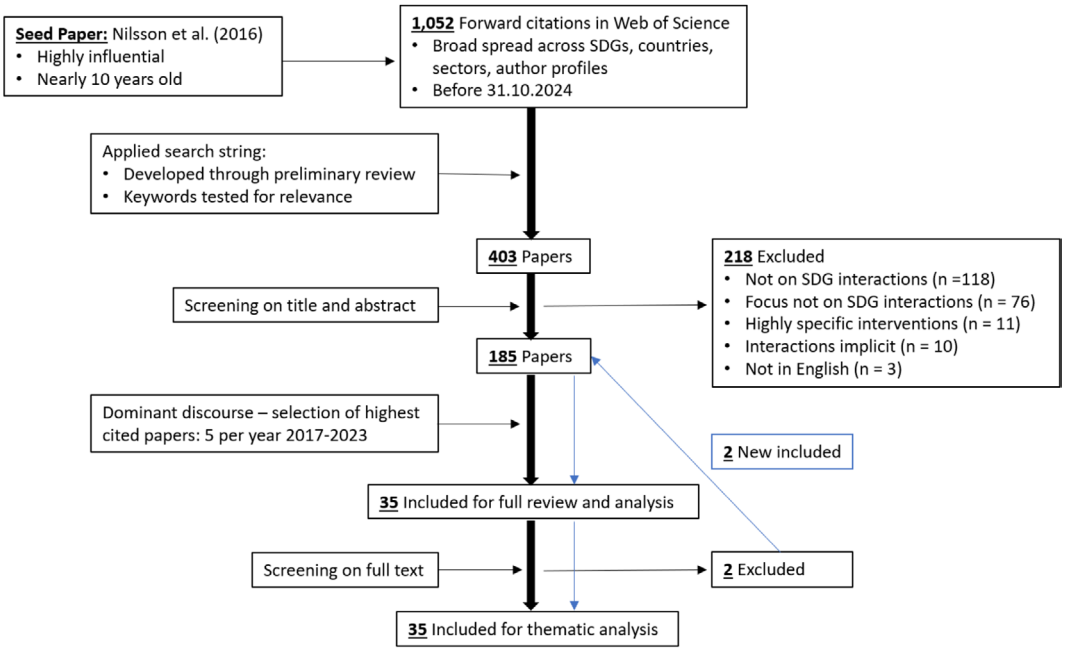

FIGURE 1 | Search strategy.

academic influence and are appropriate for examining dominant discourse rather than comprehensively mapping the field. To refine relevance before screening, we applied the following search string: ((“goal conflict*” OR “conflict* objecti*” OR “conflict* interest*” OR “trade-off*” OR “tradeoff*”) OR (synerg* OR “co-benefit*”) OR interaction*) AND ((sustainab* AND (transform* OR develop*)) OR SDG). The string was developed through a preliminary literature review and prior reviews. Keywords were tested and those contributing minimally were excluded, ensuring a focus on widely recognised discourse.

This resulted in 403 publications remaining for title and abstract screening, yielding 185 papers. Exclusion criteria included lack of focus on SDG interactions, non-English publications and studies of interventions. To avoid overrepresentation of early publications, the final sample was stratified by year, retaining the five most cited papers from each year between 2017 and 2023, creating a sample of 35 papers, 36 including Nilsson et al. (2016). This approach balances temporal coverage and analytical depth while remaining aligned with the study's discursive focus. A list of included publications can be found in Appendix S1.

2.2 | Thematic Analysis of the Discourses

A thematic analysis was conducted to identify key themes within the data. Although the study investigates the dominant discourse, it does not employ discourse analysis as a method, which typically involves fine-grained linguistic or rhetorical analysis and an explicit focus on power and legitimacy (Vaarala and Farkas 2025). Instead, thematic analysis, as outlined by Braun and Clarke (2006), was chosen as a more appropriate and flexible approach for identifying, analysing and interpreting patterns of meaning in qualitative data. Additionally, as was the case for this paper, the research question can evolve throughout the coding process and researchers actively engage in coding for theme development (Braun and Clarke 2006).

In this study, themes were identified inductively, in a data-driven manner. The papers were first read in full, and information was extracted within a broad framework including data on the sustainability topic (including SDGs), synergies and trade-offs, background, solutions, paper narrative, methods and reflections. After reviewing an initial 25 papers, the framework was analysed for early pattern recognition. Following this, the first and second authors discussed the results and initial coding ideas. All papers were then screened and coded by the first author. A second round of analysis involved refining and clustering initial codes into preliminary thematic categories, based on their explicit or semantic content. To interrogate the values and assumptions of these connections, the preliminary themes were discussed during a co-author workshop (described below). Following this, the first author revisited the data with a focus on values and assumptions. Final theme development was then carried out collaboratively by the first and second authors through several rounds of interpretations, going back and forth between the data and the emerging structure of connections between codes, deepening the latent analysis and refining the themes into their final form. Finally, all authors reviewed and commented on the paper.

2.3 | Co-Author Workshop

After drafting the initial results, a reflexive co-author workshop was organised to critically reflect on and validate the emerging themes. Co-authors were selected based on disciplinary diversity, comparable seniority and established engagement with SDG-related research, including work—either explicitly or implicitly—on SDG interactions or conflicting objectives. The co-authors are employed at Uppsala University and represent diverse disciplinary domains (earth sciences, sociology, political

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science, geography, medicine and ecological economics). An overview of co-author descriptives is provided in Appendix S2.

The workshop was held in person and followed a reflexive design, inspired by Braun and Clarke's (2006) approach to theme development and Lincoln's (1985) peer debriefing techniques to enhance credibility and analytical coherence. It centred around key questions such as: What does this theme mean? What assumptions underlie it? What are its implications? What conditions may have shaped it? Why is it discussed in this way? What overall discourse emerges?

To ensure open interpretation, co-authors were not shown any draft results or theme labels in advance. Instead, they were presented with a selection of quotes (Appendix S3) drawn from the reviewed papers and asked to individually note three impressions per set. These reflections were written on post-it notes and only shared collectively at the discussion stage, reducing conformity bias while allowing for transparent dialogue. Anonymity of co-authors was not maintained, as the purpose was reflexive validation rather than eliciting personal or sensitive data.

Following the individual reflection phase, interpretations were discussed in the group. Divergences mainly concerned discipline-specific terminology (e.g., 'management' vs. 'resolution'), which were resolved by selecting terms that were conceptually broader, more widely intelligible across fields and therefore deemed acceptable by all co-authors. Only after this discussion were the draft themes and diagram shared, followed by a second round of group discussion.

Insights from the workshop directly informed refinements to theme labels, latent interpretations and the overall structure of themes. For example, several quotes from quote-card 4 (originally grouped under the 'management as the solution' theme) were consistently identified as divergent from the other quotes and reflective of a more technocratic, research-focused perspective, leading to their repositioning under the 'putting faith in research' theme. All changes made between the initial and final thematic structure are documented in Appendix S4.

The final stage involved discussion of overarching patterns across themes, which included references to instrumental rationality, cost–benefit thinking, technocratic and managerial problem framings and an emphasis on measurement and optimisation. These reflections validated and sharpened the interpretation of the overarching discourse that had initially been identified by the first and second authors, who used these insights to complete the final analysis. Finally, all authors reviewed and validated the results, presented below.

TABLE 1 | Characteristics of the articles.

SDGs		Journal	
All SDGs	24	*Sustainability Science*	5
SDG 7	3	*Nature Sustainability*	4
SDG 14	3	*World Development*	4
SDG 13	2	*Sustainable Development*	3
SDG 1	1	*Science of the Total Environment*	2
SDG 8	1	*Sustainability*	2
SDGs 3, 7, 14	1	*Business Strategy and the Environment*	1
		Current Opinion in Environmental Sustainability	1
Study setting		*Earths Future*	1
Global	26	*Ecosystem Services*	1
China	4	*Environmental Research Letters*	1
Australia	1	*Environmental Science and Policy*	1
Mesoamerican Reef Region	1	*Humanities and Social Sciences Communications*	1
OECD countries	1	*International Journal of Sustainable Development and World Ecology*	1
Tanzania	1	*Marine Policy*	1
Sweden	1	*Nature—Palgrave Communications*	1
		Nature Ecology and Evolution	1
Methods		*Nature Energy*	1
Quantitative	22	*One Earth*	1
Qualitative	10	*Science Bulletin*	1
Literature review	3	*Sustainable Cities and Society*	1

3 | Results

3.1 | Characteristics of the Articles

The articles analysed in this paper are all peer-reviewed. They were published in a variety of journals (Table 1). Most studies, respectively 24 and 26 out of 35, cover (almost) all SDGs and are set at a global or non-defined scale (e.g., in the case of literature reviews). Methods for investigating interactions between SDGs are mainly quantitative, through for example correlation or network analysis. Qualitative papers on the other hand mostly derive their data from literature reviews and expert elicitation.

3.2 | 'Prescriptive Positivism'

The analysis revealed a dominant discourse that can be described as prescriptive positivism (Table 2), comprising four themes: transactional thinking, management as the solution,

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TABLE 2 | Results of the thematic analysis.

Discourse	Theme	Subtheme	Component
Prescriptive positivism	Transactional thinking	Zero-sum thinking	Limited resources necessitate prioritisation
			Trade-offs are negotiations
			The environmental-economic trade-off is an inherent conflict
		Financial resources as driver of change	Current financing is not enough to bring about change
	Management as the solution	Presuming an optimistic outlook	Focusing on the positive
			Believing that trade-offs can be resolved
		Striving for optimal outcomes	Everything should be optimised
			Capitalising on synergies is a must
			Prioritisation strategies are rational choices
		Heterogeneity needs to be handled	SDG interactions cannot be generalised spatially
			Context-specific research and policy is required
		Inclusiveness instrumentalised	Structural gaps and limitations need to be addressed
			A justice-based framework as an alternative roadmap
			Everyone must be considered to prevent negative impacts
			Participatory methods as a vehicle for change
	Putting faith in research	Research as essential policy support	Measuring is crucial for change
			Understanding linkages is important for policy
		Trusting research to uncover solutions	Prioritisation research is critical to inform policy
			Technological innovation is part of the solution
	Fragmentation as an internalised reality	A world made up of compartments	Problematic siloes exist in research and policy
			Indigenous knowledge is a different type of knowledge
			Nature is separate from culture
			There is a division between private and public spheres
		Multisectoral approaches are required	Siloes need to be broken
			Collaboration is necessary

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putting faith in science and fragmentation as an internalised reality.

Positivism assumes a single, measurable reality that can be manipulated and controlled. Herein, only objective and generalisable knowledge is legitimate, maintaining a fact-value dichotomy that excludes values from knowledge production and recognises only scientific inquiry as valid (Ali and Chowdhury 2015; Jaja et al. 2022; Keat 1980; Park et al. 2020; St. Pierre 2012). This was evident across the four themes identified. As we elaborate below, we found that authors often present solutions as technical or managerial fixes, grounded in trust in research to generate objective knowledge to guide action. Trade-offs are framed as resolvable through optimisation or investment; inclusiveness and equity are valued primarily for their instrumental utility; and fragmented systems are addressed by combining parts rather than challenging the underlying paradigm to allow integration.

Furthermore, the language across the articles is highly prescriptive. Terms such as 'need', 'must' and 'should' reveal how the literature directs action. Although positivism formally excludes normativity, it accepts prescriptivity if grounded in external authority: once goals such as the SDGs are endorsed, science can prescribe the most effective path (Keat 1980). This reflects the workings of a 'scientised' society, where scientific authority provides the external justification for technical and managerial courses of action (Lemes de Oliveira 2025, 4; Macnaghten and Urry 1997).

3.3 | Transactional Thinking

The first theme shows that the literature on SDG interactions is framed through a transactional logic. Progress is cast as a matter of mitigating costs and setting priorities under scarcity, an approach that resonates with Rational Choice Theory, which assumes individuals act through observable and optimising decisions (Herfeld 2022). By portraying choices as external, calculable and resource-driven, these studies reflect a positivist stance that treats social phenomena as scientifically measurable. This transactional framing becomes visible in two ways: through zero-sum thinking and the centrality of financial resources.

Zero-sum thinking: SDG interactions are often formulated as a competitive balancing act in which some goals must be prioritised at the expense of others. This reflects zero-sum thinking: the assumption that progress in one area demands sacrifice in another due to limited resources, which is said to be particularly the case for environmental and economic goals. Bennich et al. (2023) for instance state: 'Negative impacts must be mitigated, or priorities must be actively made' (p. 1473), implying an unavoidable need to trade off. Breuer et al. (2019) also mention that 'in no simulation are all the SDGs reached' (p. 17), reinforcing the need to choose.

Interestingly, one study critically reflects on the potential negative implications of prioritisation, yet ultimately reaffirms its necessity: 'prioritisation of some SDGs, while essential for targeting scarce management resources and investment, may reduce the focus on other SDGs and this might be perceived against the UN's intention of the SDGs as an indivisible whole' (Bandari et al. 2022, 334). While they caution that prioritisation should not 'exclude or diminish other goals [...] perceived to be less urgent' (idem), the logic of prioritisation is still presented as essential. This demonstrates how deeply the zero-sum, transactional mode of thinking is embedded in the literature: even as its limitations are acknowledged, it remains a dominant organising narrative for decision-making.

Financial resources as driver of change: Financial resources are frequently presented as both the bottleneck and the solution to achieving the SDGs. Several authors stress that current funding levels are inadequate to meet the scale of the challenge. As Campbell et al. (2018) argue, 'the current levels of development and climate finance will be insufficient to tackle the challenges ahead', prompting calls to 'stimulate private sector investment' (p. 18). This framing supports the idea that money, transactional by nature, is key to achieving the SDGs.

3.4 | Management as the Solution

The second theme highlights how the literature presents management as the central mechanism for resolving SDG trade-offs. Complex challenges are recast as technical problems that can be measured, controlled and optimised, reflecting a positivist stance that treats social issues as manageable through rational planning (Keat 1980; Park et al. 2020). This logic is expressed through four strategies: assuming an optimistic view of trade-offs, pursuing optimal outcomes, tailoring responses to context and using inclusiveness strategically.

Presuming an optimistic outlook: A recurrent statement across most of the literature is that trade-offs are obstacles that can be managed, mitigated, or even transformed into synergies through the right governance or policy instruments. Whilst portraying trade-offs as transactions or zero-sum dilemmas, many authors also adopt an optimistic tone. For example, authors speak of the need to 'explore the pathways for shifting the trade-offs into synergies' (Zhang et al. 2022, 981) or directly assert the ability to 'resolve the existing trade-offs' (Kroll et al. 2019, 2). This optimism is underpinned by the belief that governance plays a decisive role: 'a positive interaction can be reversed in the absence of appropriate governance measures' (Nilsson et al. 2018, 1492).

Many papers also suggest that countries already have 'a positive starting point to implement the SDG agenda due to relatively larger share of synergies than trade-offs among the SDGs' (Pradhan et al. 2017, 1175). Such framings reinforce a focus on the positive. Only one paper takes a more critical stance, noting that 'there may also be other reasons for the dominance of synergies, including the limited scope of existing studies, that the 2030 Agenda is designed in a way that overlooks critical trade-offs, and that the data are incomplete' (Bennich et al. 2023, 1472). That such a critical reflection appears only once in the sample underscores how deeply embedded optimistic framings have become in this literature.

Striving for optimal outcomes: Another recurring narrative is the need to optimise efficiency and resource use to maximise synergies and capitalise on them. Prioritisation thereby becomes a rational choice for the SDGs that would deliver the greatest

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(overall) benefits. However, what counts as the 'optimal' benefit varies across papers: for some, it is the number of positive interlinkages; for others, it is long-term ecological sustainability or highest economic return. For instance, Asadikia et al. (2021) emphasise synergies: 'To ensure smart resource allocation, it is vital to prioritise synergetic SDGs if they are to be achieved' (p. 2). The underlying belief is that trade-offs are problems to be fixed through smarter choices.

Heterogeneity needs to be handled: Despite the dominance of global studies mentioned by several authors, many papers stress the need to account for contextual variation. Tremblay et al. (2020), for example, caution against broad generalisations, noting that their 'analysis illustrates the difficulty of drawing universal conclusions and reveals the variability of possible relationships between targets' (p. 1593). Furthermore, Pham-Truffert et al. (2020) highlight that 'informed decision-making urgently requires knowledge of context-specific SDG interactions' (p. 1236). The narrative in these articles is that tailoring strategies to specific contexts is not only necessary but potentially transformative: Zhang et al. (2022) argue that 'performing assessments at the subnational scale is necessary to explore the pathways for shifting the trade-offs into synergies' (p. 981). This suggests that managing uniqueness is framed as a strategic tool to actively overcome trade-offs.

Inclusiveness instrumentalised: While several sources advocate for inclusiveness, social equity and justice in SDG implementation, these elements are largely framed in instrumental terms, valued for their utility in preventing failure or enhancing effectiveness, rather than as ends in themselves. For instance, Singh et al. (2018) argue that 'proper consultation and implementation with local people might avoid many of these trade-offs' (p. 229), implying that participation is useful insofar as it helps implementation. Similarly, Bennich et al. (2020) warn that a lack of participatory approaches may lead to 'inefficient implementation or, worse, a failure to realize the high-reaching ambitions of the 2030 Agenda' (p. 12). Only one paper appears to hint at a normative understanding of justice: Bennich et al. (2020) reference another study that 'raises questions of fair allocations of resources, emissions and burden-sharing' (p. 6). Overall, however, inclusion is framed as a technique to improve outcomes, rather than a goal with intrinsic value.

3.5 | Putting Faith in Research

The third theme illustrates how research is presented as indispensable for identifying problems and guiding solutions, reflecting a logic of 'scientism' that privileges scientific knowledge while marginalising other ways of knowing (St. Pierre 2012, 497). This reliance on research demonstrates a positivist orientation, where measurable evidence is seen as the legitimate basis for policy and practice. These ideas are evident in the literature's focus on research as an essential policy support and to uncover solutions.

Research as essential policy support: Many papers position research as a fundamental tool to support policy-making, particularly in identifying priorities and understanding SDG interactions. As Weitz et al. (2018) put it, 'Research that disentangles interaction amongst the SDGs can support policy and decision makers seeking to ensure effective and coherent implementation across the governmental machinery' (p. 532). Fuso Nerini et al. (2018) even suggest that 'the research community can help build and provide the knowledge and capacity needed for other actors' (p. 14), reinforcing the idea that science serves as a knowledge base from which policymakers can draw.

Measurement, as part of this scientific infrastructure, is also frequently cited as crucial for adjusting strategies and ensuring accountability. This reveals an implicit belief that what can be measured can be managed, ideally through quantitative means. For instance, the lack of adequate biodiversity and ecosystem data in policy design is often seen as a problem solvable through better quantification. Wood et al. (2018) argue that 'making ecosystem services tangible to decision-makers through biophysical quantification is a critical step towards their successful inclusion into policies and planning frameworks' (p. 79).

Trusting research to uncover solutions: In addition to informing decisions and 'suggest[ing] action priorities to achieve as many SDGs as possible by 2030' (Wu et al. 2022, 452), research—technological research—is also entrusted to uncover the solutions themselves. While technology receives relatively little attention in this literature, its importance is acknowledged. Bennich et al. (2020) note 'the absence of studies addressing possible implications of new and emerging technologies, and the role they could play in implementing the 2030 Agenda' (p. 10). Nonetheless, when mentioned, technological innovation is seen as critical to avoiding trade-offs. For example, Bandari et al. (2022) caution that 'adopting policies to increase agricultural production without promoting agricultural technologies and developing research [...] could result in water competition and trade-offs between the water and agricultural sectors' (p. 333). This shows that science is expected to engineer the means to resolve trade-offs.

3.6 | Fragmentation as an Internalised Reality

The fourth theme points to a fragmented view of the world, organised into bureaucratic siloes, nature-society dichotomies and the marginalisation of non-scientific knowledge (Ali and Chowdhury 2015). While many call for integration, proposed solutions often remain within the same fragmented logic, focusing on coordination rather than questioning the underlying structure. This reflects positivism's tendency to divide the world into mechanistic, analysable and manageable parts.

A world made up of compartments: The most explicitly problematised compartments are institutional siloes between research and policy and across government departments. These divisions are seen as persistent barriers to coherent SDG implementation, often linked to past failures. As Collste et al. (2017) warn, 'Research on the attainment of multiple SDGs is growing, but without structured systems understanding there is a risk of repeating the silo approach seen in the implementation of the millennium development goals' (p. 930).

However, compartmentalisation also appears in more subtle ways: Indigenous knowledge is treated as a source of knowledge

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distinct from the dominant science-policy framework, nature's contributions to human life are often invisible or unrecognised and innovation is seen as either public or private without possible reconciliation between the two sources. Scharlemann et al. (2020) write: 'We based our assessment largely on scientific knowledge [...] while recognising the importance of indigenous and local knowledge as well as private sector knowledge and innovation, although these are often less accessible. [...] Each knowledge type may provide different viewpoints on appropriate courses of action and their likely outcomes for different SDGs'. This framing suggests that knowledge domains are not integrated but exist in parallel, reinforcing a view of the world as divided into compartments.

Multisectoral approaches are required: In response to the compartmentalised world, many authors call for combined, cross-sectoral and cross-actor approaches. Collaboration across departments, between research and policy and among stakeholders is often framed as essential to overcoming siloed thinking. For instance, McCollum et al. (2018) state, 'A paradigm shift to policy and institutional frameworks that take an integrated, holistic perspective is long overdue' (p. 15). Likewise, Bennich et al. (2023) note the lack of integration across proposed SDG solutions, writing: 'There is a need to pay close attention to how interventions are combined and sequenced to limit trade-offs. [...] Integrated solutions across these three domains [business policy, public policy and innovation] are not commonly considered' (p. 1469). Yet, even in these calls for collaboration, the proposed approaches often take the form of combining existing siloes rather than actually integrating them, as seen in the need for institutional frameworks to 'coordinate working across SDG areas' (Fuso Nerini et al. 2019, 678). This signals how deeply embedded the compartmentalised worldview is: authors may problematise fragmentation but continue to operate within its logic.

4 | Discussion

This paper examined the values and assumptions shaping how the dominant academic discourse on SDG interaction is conceptualised and operationalised. We found that the discourse is guided by positivism and that the tone is mainly prescriptive. In other words, the literature not only describes how goals interact, but also how these relationships should be interpreted and operationalised.

Although positivism has been modified, contested and claimed dead (Kincheloe and Tobin 2009; Norton 2008; Roebuck and Phifer 1999; Sheppard 2014), this paper's analysis demonstrates that it remains the default lens for conceptualising SDG interactions in the academic literature. The findings resonate with Patterson et al. (2024), who see policy action for sustainability transformation framed as universal, predictable and controllable; as well as with Hartley (2020) and West et al. (2024), who respectively argue that positivism characterises the SDGs and still dominates science. de Jong and Vijge (2021), in investigating the discourse shifts from the MDGs to the SDGs, identify that the latter are more universal, integral and people-centred; yet, in light of our analysis, the academic literature on SDG interactions treats the 'people-centred' claim as largely instrumental, framed in terms of management for optimal outcomes. Cummings et al.'s (2018) findings might explain this tension: while the SDGs' vision aspires to pluralism and participation, their means of implementation, as well as goals and targets, remain largely techno-scientific-economic. Bornemann and Weiland (2021) also show that the notion of policy integration in Agenda 2030 embeds a functionalist logic of prioritisation, where knowledge and evidence provide the basis for managing and optimising. Lastly, the findings also resonate with Dryzek's (2022) *Administrative Rationalism* discourse, where experts and managers dominate decision-making through technical (e.g., cost–benefit) analysis, scientific expertise is divided into offices with minimal (or failed) interaction, and nature is viewed instrumentally. These consistencies suggest that prescriptive positivism may not only be a feature of SDG interaction literature but a paradigm across wider SDG and sustainability discussions.

Our findings show that equity, justice and nature are predominantly framed in instrumental terms, treated as resources or tools to improve implementation and efficiency. This reflects the wider positivist paradigm (Ciancio and Nocentini 2000; Lemes de Oliveira 2025; Nelson and Reed 2025), long critiqued for its reductionism (Ali and Chowdhury 2015). The paradigm thereby aligns with 'Prudence'-type arguments, in which nature's worth lies in its utility for human survival, while differences between people are homogenised under a collective 'we' (Bieling et al. 2020, 189). Central to the managerial framing are measurable, stable and comparable indicators, which are not neutral but value-laden tools that simplify complex realities into narrow proxies. They render some aspects of development visible while obscuring others, often marginalising alternative (e.g., Indigenous) perspectives (Mair et al. 2018; Merry 2011; Yap and Watene 2019). Emerging approaches for the post-2030 era risk reproducing this prescriptive positivism, by privileging linear causality, managerial logics and leaving less room to consider contestations, power relations, or non-linear social transformation (Allen et al. 2026).

Environmental stewardship offers an alternative, linking justice for people with justice for nature. Unlike instrumental framings, stewardship foregrounds relational and intrinsic values, emphasising care, responsibility and protection (Arias-Arévalo et al. 2017; Bennett et al. 2018). At the same time, its participatory and self-organised character affirms plural ways of knowing, resists the othering of lived experience and validates marginalised perspectives (Bieling et al. 2020). This connects with broader calls to recognise marginalised knowledges and epistemologies of the South, highlighting the importance of epistemic justice (Kaul et al. 2022; Menton et al. 2020; Mignolo 2007; Ziai 2023). Recognising that there are multiple legitimate knowledges and values also raises the issue of incommensurability: worldviews that cannot be reconciled without loss (Andreou 2024; O'Connor and Kenter 2019; Stirling 2011). Acknowledging incommensurability opens space for more genuine well-being through deliberative processes that give voice to diverse perspectives (Isacs et al. 2023; Luederitz et al. 2017; Patterson et al. 2024). Many of these perspectives are associated with frames that avoid instrumentalising nature (Woroniecki et al. 2020). As Reed et al. (2024), for instance, describe, some Indigenous languages lack a word for 'nature' precisely to resist othering.

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Researchers should be aware of their values and assumptions. As Roebuck and Phifer (1999) conclude: positivism often shapes scholarship invisibly, and, according to Dryzek (2022), therein lies its power. The perspective of environmental stewardship discussed here does not call for abandoning science or measurement of impact, or the generation of policy recommendations, but for situating them within a reflexive practice and wider set of values that better reflect the diversity of human and ecological life. Such plurality has been proven to play a critical role in transformative responses to sustainability challenges (Woroniecki et al. 2020). Arora-Jonsson (2023) argues the SDGs themselves could serve as a platform for redeploying development in ways that respond to long-standing critiques of the agenda. Satterthwaite and Dhital (2019), for instance, see potential in SDG 16 to move beyond technocratic framings by insisting on the centrality of people's lived experiences of justice. However, it must be noted that realising any of these perspectives is deeply political (Hickmann et al. 2024; Meadowcroft 2011). Much of the SDG interaction literature, as well as Agenda 2030 itself, overlooks the role of politics in defining indicators, shaping priorities and determining whose knowledge counts (Beisheim et al. 2025; Patterson et al. 2017). Power analysis can play an important part in avoiding the risk that even well-intentioned frameworks reproduce existing inequalities and reinforce dominant worldviews.

This paper has several limitations worth noting. First, our sample was relatively small and focused exclusively on highly cited academic publications, restricting our review to a specific, mainstream literature stream. That said, this focus was intentional, as our aim was to examine the dominant academic discourse shaping SDG interaction research and policy. While we did notice occasional traces of alternative discourses—for example Scharlemann et al. (2020), who referred to '*multiple framings*' for 'pathways towards more plural and dynamic sustainability systems' (p. 1580)—nothing emerged strongly enough to constitute a distinct narrative. Second, citation counts were used as a transparent and widely applied indicator of academic influence, but they remain an imperfect proxy for scholarly impact and may reflect visibility rather than substantive contribution. Third, bibliometric and text-mining approaches could have offered complementary insights and helped identify additional strands of literature (e.g., Raman, Lathabhai, et al. 2024); however, such methods were beyond the scope of this study and would have required different analytical assumptions. Integrating such methods with qualitative thematic analysis represents a promising direction for future research. To strengthen this analysis and avoid blind spots, co-authors from different research areas were invited.

5 | Conclusion

This paper examined discourses on SDG interaction literature between 2017 and 2023, emanating from Nilsson et al.'s seminal paper in 2016. The analysis focused on the assumptions that underpin how these interactions are conceptualised and discussed. Through an inductive, latent thematic analysis of 35 highly cited academic papers, we identified the dominance of a discourse that can be described as prescriptive positivism, which does not just describe how goals interact, but also prescribes how these relationships should be interpreted and operationalised. This discourse is reflected in four interlinked values and assumptions: transactional thinking, management as the solution, faith in research and fragmentation as an internalised reality.

By uncovering these assumptions, this paper contributes to discussions on the post-2030 agenda through highlighting a dominant paradigm that current debates on the past performance and future of the SDGs should be aware of. Researchers should be aware of this paradigm, as the narratives we adopt shape both how we understand the world and the actions we take. These findings point to the importance of shifting towards relational and intrinsic approaches that recognise equity and justice as intrinsic values, value multiple worldviews and foster genuine environmental stewardship. Although these approaches do not suggest abandoning science and measurement—or even certain positivist outputs—altogether, such relational paradigms and their positivist 'counterparts' may struggle over the question of what is next, post-2030. Ultimately, challenging the assumptions embedded in the dominant academic discourse, we believe, is a necessary step towards SDG implementation that is socially just, environmentally sensitive and globally relevant; and has a chance of success post-2030.

Author Contributions

Gin Dupont: conceptualisation, methodology, investigation, writing – original draft, writing – review and editing, visualisation. **Mats Målqvist:** conceptualisation, methodology, investigation, supervision, funding acquisition. **Malgorzata Blicharska, Wiebren Johannes Boonstra, Sofia Cele, Sarah Dickin, Emma Elfversson** and **Eva Friman:** validation, writing – review and editing.

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The authors have nothing to report.

Conflicts of Interest

The authors declare no conflicts of interest.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Appendix S1:** Publications included in this paper's data sample. **Appendix S2:** Descriptives of co-authors. **Appendix S3:** Quote cards for co-author workshop. **Appendix S4:** Diagram version 1 (before co-author workshop) + changes made based on the workshop.

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