Article title: Deconstructing the causal layers within NATO's Strategic Foresight Analyses (2013–2023)

Author name: Javier Jordán

Affiliation: Department of Political Science. Faculty of Political Science and Sociology. University of Granada. Calle Rector López Argüeta, 4. 18001-Granada, Spain.

E-mail: jjordan@ugr.es

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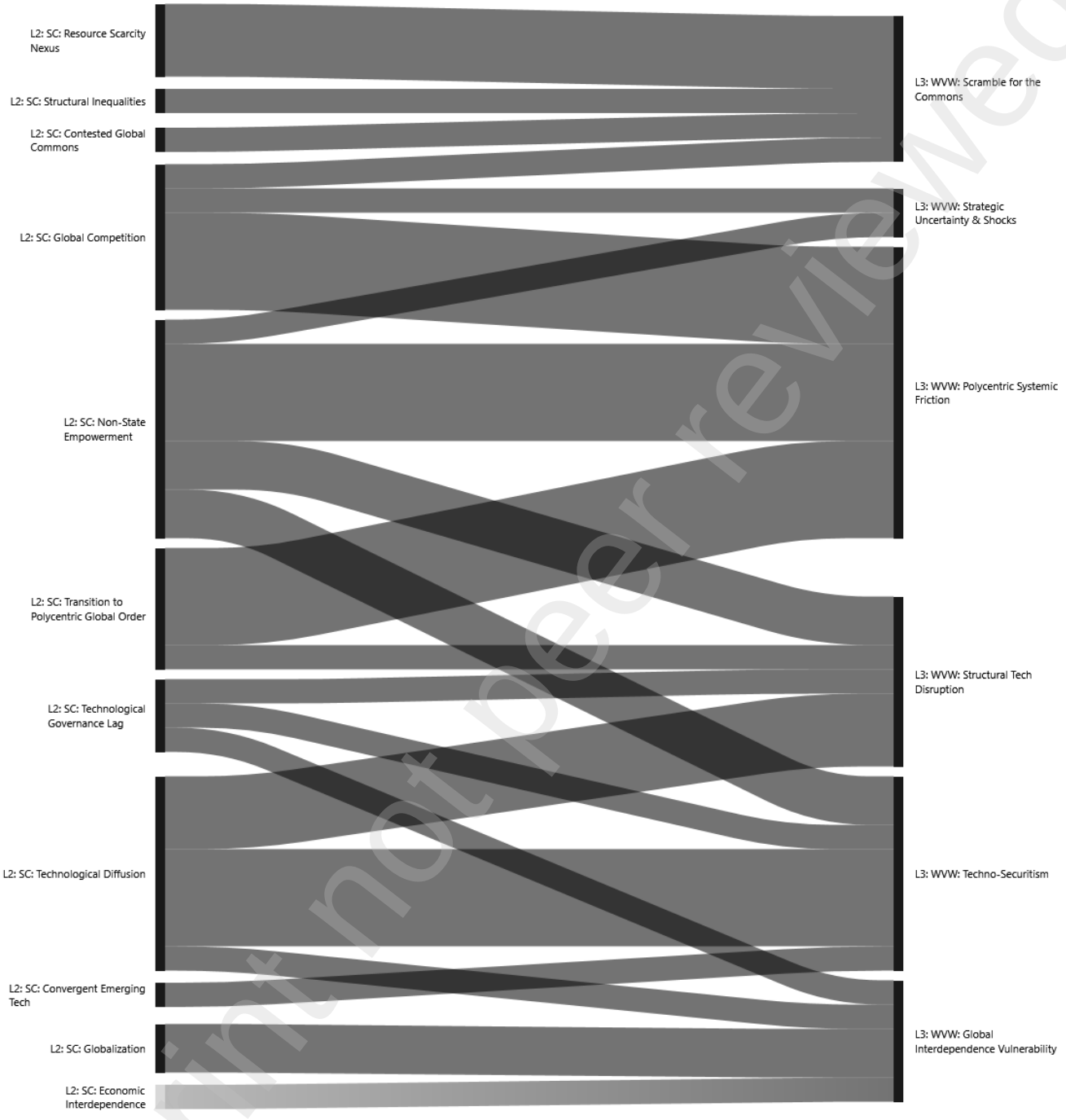
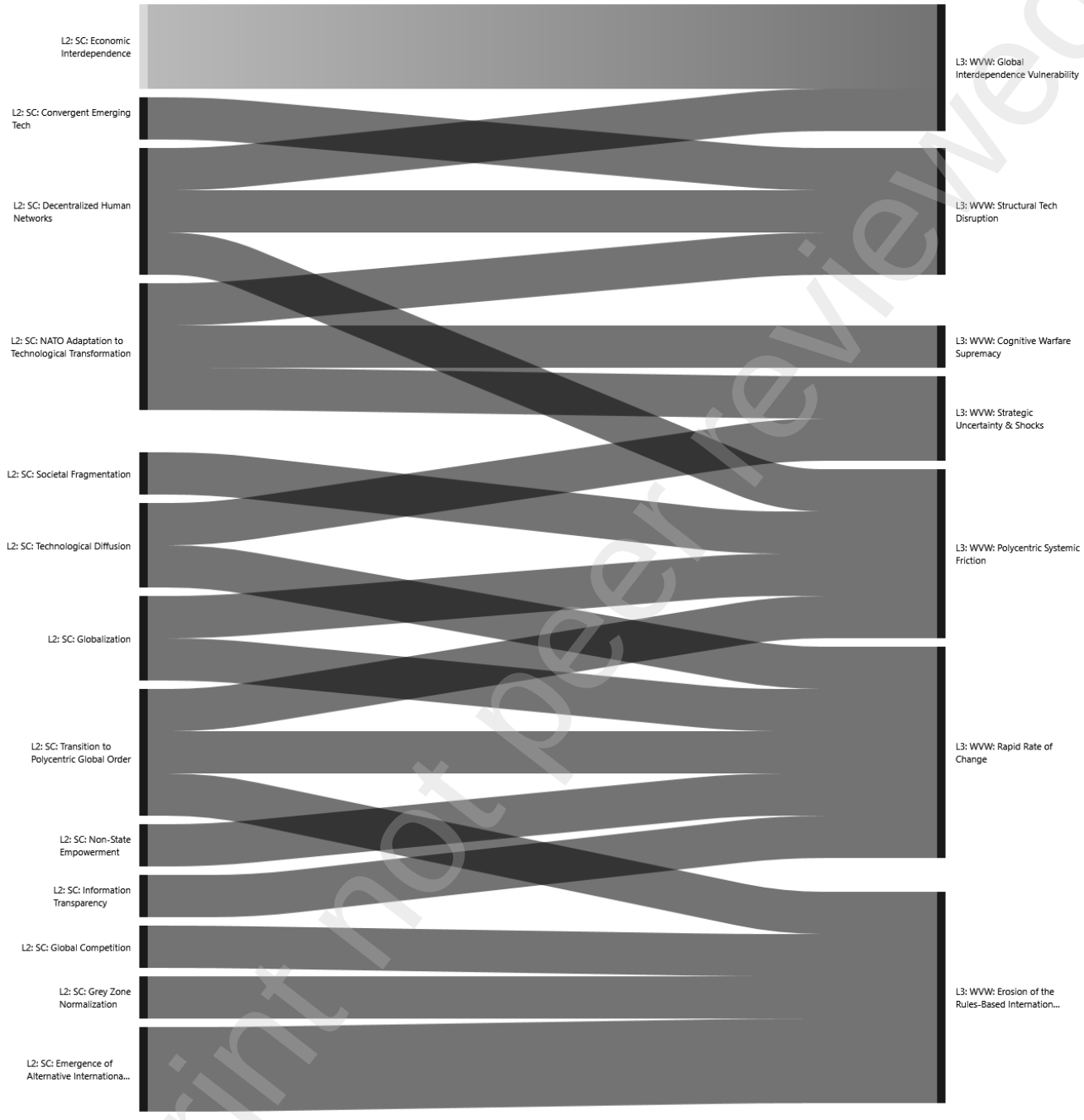
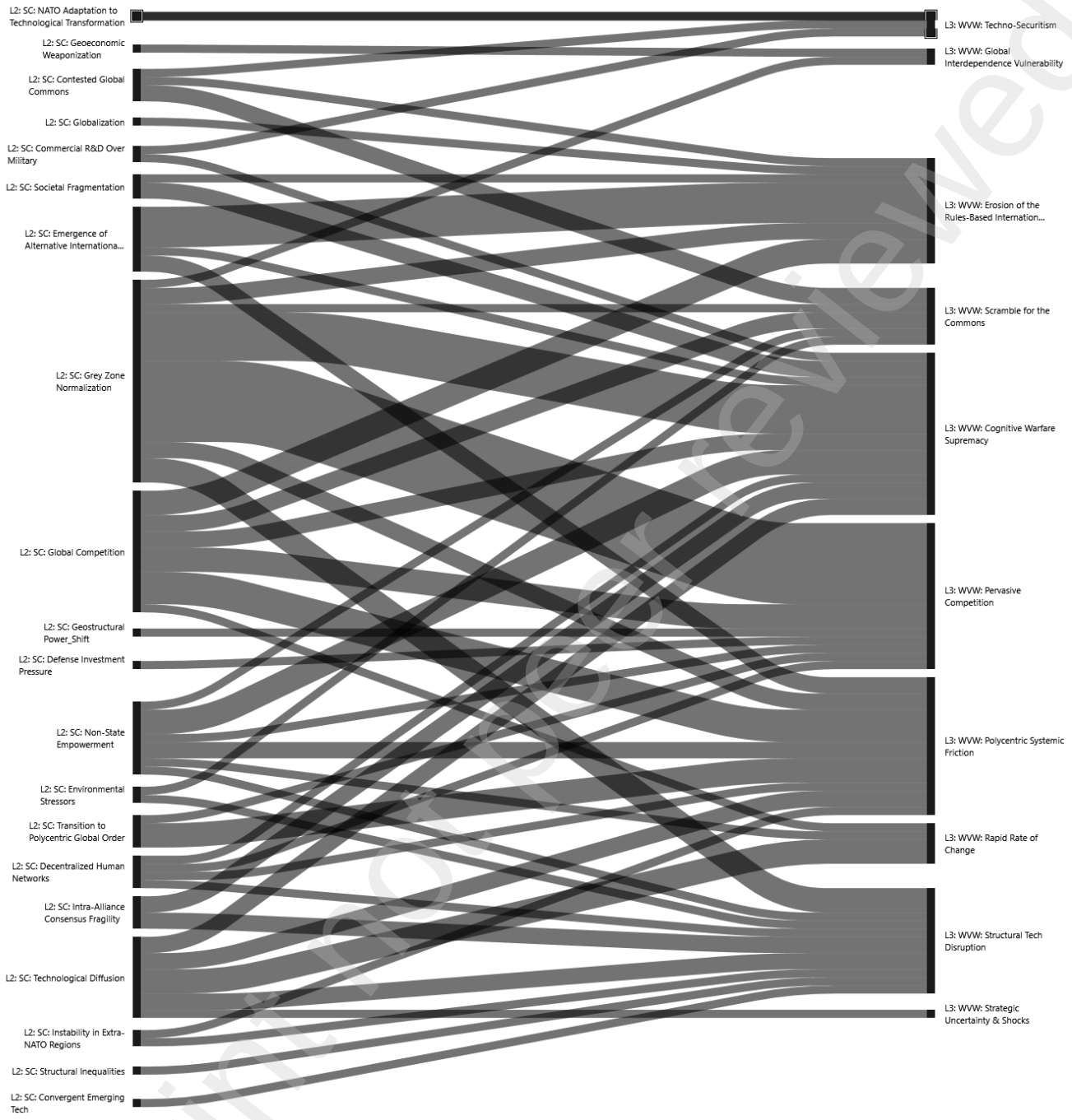
	5: SFA2013 170	7: SFA2017 154	8: SFA2023 174
L1: Litany 204	65 33,16%	67 34,18%	72 26,97%
L2: SC 323	103 52,55%	103 52,55%	117 43,82%
L3: WVW 132	28 14,29%	26 13,27%	78 29,21%
Totals	**196** 100,00%	**196** 100,00%	**267** 100,00%

		5: SFA2013 170		7: SFA2017 154		8: SFA2023 174	
L2: SC: Commercial R&D Over Military	8			2	25,00%	6	75,00%
L2: SC: Contested Global Commons	13	3	23,08%			10	76,92%
L2: SC: Convergent Emerging Tech	7	1	14,29%	3	42,86%	3	42,86%
L2: SC: Decentralized Human Networks	13	5	38,46%	5	38,46%	3	23,08%
L2: SC: Defense Investment Pressure	15	6	40,00%	6	40,00%	3	20,00%
L2: SC: Democratic Discontent	3			3	100,00%		
L2: SC: Democratization Processes	2	2	100,00%				
L2: SC: Demographic Asymmetry	7	3	42,86%	3	42,86%	1	14,29%
L2: SC: Demographic Bulges	13	6	46,15%	5	38,46%	2	15,38%
L2: SC: Economic Interdependence	8	5	62,50%	3	37,50%		
L2: SC: Emergence of Alternative International Regimes & Organizations	11			5	45,45%	6	54,55%
L2: SC: Environmental Stressors	20	3	15,00%	4	20,00%	13	65,00%
L2: SC: Geoeconomic Weaponization	4	1	25,00%			3	75,00%
L2: SC: Geostructural Power_Shift	9	3	33,33%	4	44,44%	2	22,22%
L2: SC: Global Competition	26	8	30,77%	4	15,38%	14	53,85%
L2: SC: Globalization	13	5	38,46%	6	46,15%	2	15,38%
L2: SC: Grey Zone Normalization	25			3	12,00%	22	88,00%
L2: SC: Information Transparency	7	6	85,71%	1	14,29%		
L2: SC: Instability in Extra-NATO Regions	22	6	27,27%	7	31,82%	9	40,91%
L2: SC: Intra-Alliance Consensus Fragility	11	3	27,27%	4	36,36%	4	36,36%
L2: SC: NATO Adaptation to Technological Transformation	9			4	44,44%	5	55,56%
L2: SC: NATO Defense_Industry_Erosion	3	1	33,33%	2	66,67%		
L2: SC: Non-State Empowerment	36	11	30,56%	7	19,44%	18	50,00%
L2: SC: Population Ageing	11	3	27,27%	5	45,45%	3	27,27%
L2: SC: Regional & Multilateral Governance	5	3	60,00%	2	40,00%		
L2: SC: Resource Scarcity Nexus	19	8	42,11%	6	31,58%	5	26,32%
L2: SC: Societal Fragmentation	23	8	34,78%	8	34,78%	7	30,43%
L2: SC: Soft Power Dynamics	3	2	66,67%	1	33,33%		
L2: SC: Structural Inequalities	18	8	44,44%	6	33,33%	4	22,22%
L2: SC: Technological Diffusion	33	12	36,36%	7	21,21%	14	42,42%
L2: SC: Technological Governance Lag	14	6	42,86%	4	28,57%	4	28,57%
L2: SC: Transition to Polycentric Global Order	12	4	33,33%	4	33,33%	4	33,33%
L2: SC: Urbanization Complexity	16	2	12,50%	8	50,00%	6	37,50%
Totals		**134**	**30,52%**	**132**	**30,07%**	**173**	**39,41%**

		5: SFA2013 170		7: SFA2017 154		8: SFA2023 174		Totals	
L3: WVW: Cognitive Warfare Supremacy	19			3	15,79%	16	84,21%	**19**	100,00%
L3: WVW: Erosion of the Rules-Based International Order	14			3	21,43%	11	78,57%	**14**	100,00%
L3: WVW: Global Interdependence Vulnerability	10	4	40,00%	4	40,00%	2	20,00%	**10**	100,00%
L3: WVW: Pervasive Competition	15					15	100,00%	**15**	100,00%
L3: WVW: Polycentric Systemic Friction	26	7	26,92%	3	11,54%	16	61,54%	**26**	100,00%
L3: WVW: Rapid Rate of Change	13	4	30,77%	5	38,46%	4	30,77%	**13**	100,00%
L3: WVW: Scramble for the Commons	10	4	40,00%			6	60,00%	**10**	100,00%
L3: WVW: Strategic Uncertainty & Shocks	15	4	26,67%	6	40,00%	5	33,33%	**15**	100,00%
L3: WVW: Structural Tech Disruption	23	5	21,74%	6	26,09%	12	52,17%	**23**	100,00%
L3: WVW: Techno-Securitism	14	5	35,71%	1	7,14%	8	57,14%	**14**	100,00%
Totals		**33**	20,75%	**31**	19,50%	**95**	59,75%	**159**	100,00%







Deconstructing the causal layers within NATO's Strategic Foresight Analyses (2013–2023)

Abstract: This study applies causal layer analysis (CLA) to the evolution of NATO's strategic foresight thinking during the period from 2013 to 2023. Through a qualitative content analysis of the *Strategic Foresight Analysis* (SFA) reports, it examines how the transformation of systemic factors —the second analytical level— has shaped the worldviews of the Alliance's strategic environment —the third level—. The results, processed using Atlas.ti 26 software, show that the shift away from the crisis management paradigm characteristic of the 2010 Strategic Concept, in favour of the collective defence proclaimed in the 2022 Strategic Concept, is consistent with the perception of a progressively fragmented and adverse strategic environment. The application of this methodology allows us to go beyond the identification of drivers in the superficial layers to reveal the constitutive discourses and worldviews that legitimise the organisation's strategic planning, thereby facilitating the opening of transformative spaces aimed at articulating alternative futures.

Keywords: NATO, Strategic Foresight, Security Studies, Causal Layered Analysis

1. Introduction

Realist theory of international relations constitutes the underlying paradigm of strategic studies (Baylis & Wirtz, 2005: 6-7). Realism is so named because it prioritises the analysis of objective variables—including the distribution of capabilities, geography and the balance of power—; however, it does not neglect the subjective dimension in political decision-making processes. Strategic studies recognise that the perceptions and analytical premises of statesmen operate as filters that mediate the interpretation of material reality. The configuration of threats does not derive solely from empirical data, but constitutes, ultimately, a construct arising from political judgement, in which the psychology of elites and cognitive uncertainty play a decisive role (Byman & Pollack, 2001: 136–140; Morgenthau, 2006: 5).

An example of realism's sensitivity to subjective variables is Stephen Walt's (1985: 8–15) work on the 'balance of threat'. Walt argues that states do not merely mechanically balance the aggregate power of other actors, but rather respond to perceived threats based on four variables: absolute power, geographical proximity, offensive capabilities and, most significantly, aggressive intentions. This last dimension introduces an unavoidable subjective component, given that the assessment of a third party's intentions depends on the interpretation of diplomatic signals and the historical behaviour of the state in question. In Walt's framework, perception thus becomes an intervening variable that determines whether an increase in a neighbour's capabilities is interpreted as a harmless change or as a threat requiring the formation of a countervailing coalition.

In a similar vein, the neoclassical realism proposed by Ripsman, Taliaferro and Lobell (2016: 58–79) denies the existence of a direct chain of transmission between the inputs of the international system and the outputs of a state's foreign policy. Kenneth N. Waltz (2010: 67–73) had already pointed this out when defining structural realism as a theory of international politics rather than foreign policy. Ripsman, Taliaferro and Lobell

identify four sets of intervening variables that mediate between systemic stimuli and the design and implementation of foreign policy: leader images, strategic culture, state-society relations and domestic institutions. The first of these sets refers to the belief system that shapes the perceptions of political and administrative decision-makers.

The relevance of subjective factors is also consistent with the seminal work of Robert Jervis (1976: 13–31; 1978: 174–175) on the limitations of the rational actor model—based on cost-benefit analysis—in explaining foreign policy decisions, particularly in crisis contexts. Policy-makers act under the influence of personal values and interests, and are prone to analytical errors when faced with ambiguous or incomplete information. Similarly, Colin S. Gray (1999: 146–148) notes that every strategy rests on a framework of assumptions regarding the environment, the adversary and one's own capabilities, and that those who implement it frequently operate on the basis of implicit assumptions that are rarely subjected to critical scrutiny. Given that such assumptions are often rooted in cultural beliefs or past experiences, any transformation of the strategic context requires a thorough review of them; otherwise, the strategy loses its link to reality and runs the risk of becoming ineffective.

In line with the importance that premises and perceptions hold in strategic work, this article aims to identify and analyse the underlying layers of meaning in NATO's Strategic Foresight Analyses (SFAs). The SFAs are the result of a systematic foresight effort led by the *Allied Transformation Command* (ACT). With a twenty-year time horizon, each iteration of the process employs a structured analysis to identify trends and challenges in the political, human, technological, economic and environmental spheres. The methodology begins with an examination of the environment through the PMESII (political, military, economic, social, information and infrastructure), integrating intelligence assessments, academic research and contributions from allied nations, and analyses the interaction between the various *drivers* of the future, treating uncertainty as an inherent condition, with the aim of identifying strategic opportunities and challenges across multiple scenarios (Jacucha, 2025: 13).

The design of the SFA is consistent with those foresight trends that prioritise the construction of meaning in the face of uncertainty over probability-based prediction. At the same time, the SFA benefits from the considerable resources available to an organisation of NATO's stature. Thus, the work on the 2023 SFA involved the contribution of eight hundred specialists who participated in various seminars organised with member states and partners of the Alliance, within the framework of a collaborative dialogue with national representatives and external stakeholders from academia and the business sector (NATO, 2013: 6–7).

In order to examine the deeper meanings, this article applies Sohail Inayatullah's (1998, 2004) causal layers analysis (CLA) approach to the examination of the narratives contained in the SFA. CLA is a foresight and poststructuralist research methodology that allows for the deconstruction of complex realities beyond the empirical surface. It organises knowledge into four levels of depth: the litany (headlines and visible events), social and systemic causes (political, economic and technological factors), the worldview (discourses and paradigms that legitimise the system) and myth or metaphor (unconscious narratives and cultural archetypes). This structure makes it possible to identify not only the drivers of change, but also the mental frameworks that sustain or hinder long-term transformation.

Applying the CLA to the analysis of the SFA allows us to deconstruct dominant visions of the future and denaturalise shared categories of thought, thereby enabling an inquiry into the underlying narratives that shape NATO's foresight exploration. This goes beyond the simple identification of litanies and explanatory drivers present in the superficial layers of the reports, to reveal the worldviews that underpin the organisation's strategic analysis. The framework proposed by Inayatullah also facilitates the questioning of the analytical categories employed, by clarifying how certain futures acquire a hegemonic character within strategic discourse. The utility of this approach lies, ultimately, in opening up transformative spaces that allow for the articulation of alternative futures through an examination of the systemic causes and constitutive metaphors of the institution, shifting the debate from the superficial to the profound with the aim of informing security policies of a more holistic nature.

2. Methodology

2.1. Research question

The purpose of this article is to bring to light the worldviews and myths underlying the SFA through a content analysis framed from the CLA perspective. A limitation of the research is that it was conducted by a single author, a circumstance that is not irrelevant when identifying the deeper layers of the analysis, the diagnosis of which benefits substantially from collective processes of meaning-making.

Nevertheless, the author considers that this obstacle can be overcome if the research focuses its attention on the second and third layers, which are in principle more recognisable and intersubjectively verifiable. The first layer—the litany—is also recognisable; however, the SFA reports are documents of great analytical and prospective depth. Unlike other types of reports focused on the analysis of current events, these are works designed to transcend the immediacy of the present, which is why the litany occupies a proportionally smaller and less specific space within them.

On the basis of these considerations, the research question guiding this article is as follows: *Which systemic causes (L2) identified in the SFA reports of 2013, 2017 and 2023 explain the transition from a worldview (L3) that initially prioritised crisis management towards one centred on collective defence?*

The period spanning the publication of the first SFA in 2013 and that of the 2023 report—the most recent available at the time of writing—is particularly significant, given the profound changes experienced by NATO's strategic environment: Russia's annexation of Crimea in 2014 and the outbreak, later that same year, of the war in the Donbas; Brexit in 2016; the first Trump administration in 2017; the intensification of competition between the United States and China in the Indo-Pacific; and the Russian invasion of Ukraine in 2022, amongst others. The impact of this transformation is clearly evident when comparing the Alliance's last two Strategic Concepts: the one adopted at the Lisbon Summit in 2010 and the one adopted at the Madrid Summit in 2022. Between these two documents, a substantial shift in NATO's primary mission can be observed, from managing crises arising from instability in peripheral regions to a return to the classic mission of collective defence. Whilst the 2010 Strategic Concept was drafted in a climate of post-Cold War optimism — in which, despite existing disagreements, Russia was perceived as a 'strategic partner' and priority was given to the fight against terrorism and

to crisis management and stabilisation missions, such as the intervention in Afghanistan—the 2022 Strategic Concept reflects a systemic break (NATO, 2010: 29–30; Szenes, 2023). Thus, from that year onwards, the Russian invasion of Ukraine has led the Alliance to characterise Moscow as the "most significant and direct threat" to Euro-Atlantic security, which has driven a reorientation of NATO's posture in Eastern Europe: from a rotational, low-profile presence, conceived as a security guarantee, to denial deterrence underpinned by pre-positioned, high-readiness forces (NATO, 2022: 4; Mitchell, 2023). In parallel, the characterisation of China's coercive policies in the 2022 Strategic Concept as a challenge to "our interests, security and values", together with the growing emphasis on hybrid threats, demonstrates a heightened sensitivity to competition taking place below the threshold of armed conflict—a space analytically known as the grey zone (NATO, 2022: 5).

2.2. Research design

To address the research question, a qualitative, longitudinal design with a descriptive-explanatory scope has been adopted. The content analysis has been structured using the CLA analytical framework with the aim of deconstructing the evolution of the ACT's prospective narrative. The documentary corpus comprises the official SFA reports for the 2013, 2017 and 2023. The 2015 SFA report has been deliberately excluded from the analysis, as it constituted an update of the 2013 SFA (*update report*) and not the conclusion of a complete prospective cycle; its inclusion would compromise the symmetrical comparability of the study.

Atlas.ti 26 was used for the analytical processing as a computer-assisted qualitative data analysis (CAQDAS) tool. The content analysis began with the creation of a codebook resulting from a predominantly inductive approach, in which the analytical categories emerged from an initial systematic reading of the SFAs. The NotebookLM application, with a Gemini PRO subscription, was used as a support tool to draw up the initial list of categories divided into layers. However, the final taxonomy, comprising 84 codes, is the result of an iterative process of refining and consolidating categories carried out by the author. The final structure of the codebook was organised hierarchically following the first three strata of the CLA, distributed as follows: the Litany layer (L1) comprises 43 codes, the Systemic Causes layer (L2) comprises 31 codes, and the Worldview stratum (L3) includes 10 codes. This decreasing distribution is consistent with the logic of the CLA, which starts from the multiplicity of current events to progressively access the deeper discursive cores of prospective analysis.

A significant finding during the coding phase is the superiority—both in terms of frequency of citations and code density—of the second layer (L2: Systemic Causes) over the first (L1: Litany) (see Figure 1). Whilst in analyses by specialist media or in think-tank reports the focus tends to be on current events (L1), NATO's SFA reports present a markedly analytical approach. The quantitative asymmetry between L1 and L2 is, in this sense, consistent with what one would expect from a strategic and forward-looking analysis: the purpose of SFAs is to identify and interconnect systemic causes—such as the contested nature of global commons, economic interdependence or the normalisation of conflict in the grey zone—rather than merely describing events.

		5: SFA2013 170	7: SFA2017 154	8: SFA2023 174
L1: Litany	204	65 33,16%	67 34,18%	72 26,97%
L2: SC	323	103 52,55%	103 52,55%	117 43,82%
L3: WVW	132	28 14,29%	26 13,27%	78 29,21%
Totals		**196** 100,00%	**196** 100,00%	**267** 100,00%

Figure 1. Distribution of mentions of categories by strata and documents

3. Analysis of temporal trends

The results of the content analysis are presented below. An examination of the distribution of the coded categories corresponding to the second layer (L2) reveals dynamics of considerable interest. A first group of categories maintains a relatively stable frequency throughout the analysed period, both at the beginning and end of the decade: *Decentralised Human Networks*, *Geostructural Power Shift* —referring to the shift in the global centre of gravity from the North Atlantic towards the Asia-Pacific region—, *Intra-Alliance Consensus Fragility*, *Instability in Extra-NATO Regions*, *Population Ageing*, *Societal Fragmentation*, *Technological Diffusion and Non-State Empowerment* and *Transition to a Polycentric Global Order*. These therefore constitute systemic structural causes identified repeatedly across the three iterations of the SFA.

The direction of change becomes evident when examining the frequency distribution and the emergence of new categories as the decade progresses. Most of these are consistent with the transition towards a progressively more fragmented and competitive strategic environment. The normalisation of conflict in the grey zone represents one of the most illustrative examples of this structural transformation. This concept refers to the spectrum of conflict situated between peaceful competition — the white end — and armed conflict — the black end — (Mazarr, 2015: 58). This category was absent from the 2013 document and had a minor presence in 2017 (12%); however, by 2023 it had established itself as a systemic cause of the first order, with 88% of its mentions concentrated in that final period. Friction between powers and rivalry below the threshold of war thus moves from being absent from the analysis to becoming one of the main drivers of the strategic environment.

		5: SFA2013 170		7: SFA2017 154		8: SFA2023 174	
L2: SC: Commercial R&D Over Military	8			2	25,00%	6	75,00%
L2: SC: Contested Global Commons	13	3	23,08%			10	76,92%
L2: SC: Convergent Emerging Tech	7	1	14,29%	3	42,86%	3	42,86%
L2: SC: Decentralized Human Networks	13	5	38,46%	5	38,46%	3	23,08%
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L2: SC: Democratization Processes	2	2	100,00%				
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L2: SC: NATO Defense_Industry_Erosion	3	1	33,33%	2	66,67%		
L2: SC: Non-State Empowerment	36	11	30,56%	7	19,44%	18	50,00%
L2: SC: Population Ageing	11	3	27,27%	5	45,45%	3	27,27%
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L2: SC: Urbanization Complexity	16	2	12,50%	8	50,00%	6	37,50%
Totals		**134**	**30,52%**	**132**	**30,07%**	**173**	**39,41%**

Figure 2. Heat map of the frequencies of systemic causes in Layer 2

A similar pattern is detected in other categories linked to this same logic. *Contested Global Commons* reaches 76.92% of its relative frequency in 2023, reflecting a growing concern over the erosion of international norms in areas such as cyberspace, outer space or maritime routes. Likewise, there is an intensification of the *Global Competition*

category which, although already present in 2013, accounts for more than half of its frequencies in the 2023 SFA. It can therefore be concluded that the *Transition to Polycentric Global Order* —identified since the first iteration of the SFA— ends up being marked more by the logic of competition than by that of multilateralism.

The content analysis reveals that this transition towards a more fragmented and competitive strategic environment is not solely due to increased rivalry between major powers, but is also driven by the intensification of non-state risks and threats. In this regard, the emphasis placed on the systemic cause *Non-State Empowerment* stands out; although relevant since the first SFA, half of its occurrences are concentrated in the 2023 iteration. Also of a non-state nature, though of a different character, the *Environmental Stressors* category shows a sustained upward trend, rising from 15% in 2013 to 65% in 2023. This trend indicates that the effects of climate change and resource scarcity have been recognised as systemic causes that exacerbate insecurity and conflict. In the same vein, the primacy of commercial research and development over the military sphere — the systemic cause *Commercial R&D over Military* — has received increasing attention, accounting for 75% of mentions in the 2023 report. This represents an explicit recognition by the authors of the SFA that the driving force behind technological innovation — and, by extension, strategic advantage— currently lies in a civilian ecosystem that is beyond the direct control of traditional defence structures.

Finally, analysis of relative frequencies reveals the retreat of certain paradigms characteristic of the previous period. Categories such as *Economic Interdependence*, *Information Transparency* or *Soft Power Dynamics* have disappeared from the layer of systemic causes in 2023. Consequently, there has been a replacement of systemic causes linked to the logic of liberal cooperation with others more closely associated with global competition, the return to rivalry between powers and the erosion of multilateral governance.

With regard to the evolution of the categories corresponding to the third layer of the CLA, a profound transformation is observed in NATO's mental frameworks, in line with the trends inferred from the analysis of systemic causes. This transition is particularly evident in the category *Pervasive Competition*, whose occurrences are entirely concentrated in the 2023 report. This indicates a significant paradigm shift, whereby the traditional distinction between peace and armed conflict gives way to the aforementioned image of grey-zone conflict.

Closely related to this, the discourse on *Cognitive Warfare Supremacy* has seen a notable rise, with 84.21% of its occurrences concentrated in 2023. It is also noteworthy that, in this iteration of the SFA, there is no mention of the systemic cause *Soft Power Dynamics*, suggesting that competition in the cognitive domain has shifted towards a more overt rivalry between the various actors.

	5: SFA2013 170		7: SFA2017 154		8: SFA2023 174		Totals	
L3: WVW: Cognitive Warfare Supremacy 19			3	15,79%	16	84,21%	19	100,00%
L3: WVW: Erosion of the Rules-Based International Order 14			3	21,43%	11	78,57%	14	100,00%
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L3: WVW: Pervasive Competition 15					15	100,00%	15	100,00%
L3: WVW: Polycentric Systemic Friction 26	7	26,92%	3	11,54%	16	61,54%	26	100,00%
L3: WVW: Rapid Rate of Change 13	4	30,77%	5	38,46%	4	30,77%	13	100,00%
L3: WVW: Scramble for the Commons 10	4	40,00%			6	60,00%	10	100,00%
L3: WVW: Strategic Uncertainty & Shocks 15	4	26,67%	6	40,00%	5	33,33%	15	100,00%
L3: WVW: Structural Tech Disruption 23	5	21,74%	6	26,09%	12	52,17%	23	100,00%
L3: WVW: Techno-Securitism 14	5	35,71%	1	7,14%	8	57,14%	14	100,00%
Totals	**33**	**20,75%**	**31**	**19,50%**	**95**	**59,75%**	**159**	**100,00%**

Figure 3. Heatmap of the frequencies of Layer 3 worldviews

This transition is consistent with the emergence of the *Erosion of the Rules-Based International Order* worldview. Similarly, whereas in 2013 concerns centred on the vulnerability of global interdependence predominated (40%), the 2023 iteration reflects a greater relative weight of *Polycentric Systemic Friction*, a category encompassing the fragmentation of the international system. In line with this shift, the *Scramble for the Commons* worldview has increased its presence to account for 60% of mentions in the 2023 SFA.

Finally, it is worth highlighting two worldviews associated with technological acceleration. On the one hand, *Techno-Securitism* (57.14%), which articulates the premise that state security depends on the ability to maintain a sustained technological advantage over rival actors. On the other, *Structural Tech Disruption*, present in all three SFAs analysed, has established itself as one of the key pillars of the Alliance's prospective vision, accounting for 52.17% of occurrences in 2023.

4. Temporal evolution of the relationship between systemic causes (L2) and worldviews (L3)

The descriptive analysis of temporal trends suggests that the changes recorded in the systemic causes of the second layer act as an analytical bridge of transition that drives the transformation of worldviews. To test this hypothesis and answer the research question, a co-occurrence analysis was carried out using Atlas.ti 26 software, focusing on the relationships between *Social Causes* and *Worldview*. This technique allows spatial relationships between codes to be identified within the framework of qualitative research, by detecting instances where two or more codes apply to the same data segment or to overlapping segments. In the context of causal layer analysis (CLA), co-occurrence is not limited to indicating statistical proximity, but reflects the structural interdependence between systemic causes and the worldviews that confer interpretative meaning upon them.

The study of the results is structured around the analysis of the co-occurrences identified in successive SFA reports, an approach that allows for an examination of the transition between dominant worldviews and the fluctuation of systemic causes that have gained or lost relevance in strategic discourse over time. The Sankey diagrams integrated into the analysis of each SFA cycle visualise these trajectories by illustrating the flow and intensity of the relationships between structural variables and worldviews.

4.1 Analysis of co-occurrence in the 2013 SFA

An examination of co-occurrences in the 2013 SFA reveals the predominance of various systemic causes which, for the purposes of presentation, can be grouped into three closely interrelated analytical axes.

The first concerns the actors of the global system, among whom the systemic causes *Non-State Empowerment* and *Transition to Polycentric Global Order* stand out. The 2013 SFA thus confirms the progressive diffusion of power in the international order: the 'unipolar moment' has clearly been superseded and, although the analogy of a 'new Cold War' is sometimes invoked, the system is not evolving towards a bipolar structure either. On the contrary, the document highlights the growing relevance of non-state actors. Although this phenomenon has clear historical precedents — such as the attacks carried out by Al-Qaeda on 11 September 2001 and the armed conflicts they triggered — its consolidation and growing trend are closely linked to the acceleration of technological progress: "*The world is becoming increasingly interconnected and polycentric. Emerging technologies, improved communications and access to modern transportation create newly empowered actors that may compete with traditional ones. The exponential rise of information technology enables dispersed individuals to act as an effective organised group within a network. This could empower and embolden organisations, advocacy groups, security providers, criminal syndicates, extremists, or individuals to attempt to shape the outcomes of political, social, economic, and environmental issues.*" (NATO, 2013: 11).

The second axis addresses relational dynamics within the international system. The structural variables linked to this block —*Global Competition*, *Globalisation*, *Economic Interdependence* and *Resource Scarcity Nexus*— constitute an order characterised by growing interconnection and interdependence among its parts. However, this order coexists with persistent asymmetries and with the *Contested Global Commons*—cyberspace, maritime routes or outer space—whose control is decisive both for access to strategic resources and for participation in global trade.

The third axis incorporates technological advances as catalysts for the systemic causes described above. Within this group, *Technological Diffusion*, *Convergent Emerging Technologies* and *Technological Governance Lag* stand out. The diffusion of dual-use technologies erodes traditional power monopolies and accelerates innovation cycles, creating a security environment of increasing complexity. The convergence of emerging technologies—such as artificial intelligence, unmanned systems, quantum computing and biotechnology—shortens decision-making cycles in armed conflict, a trend which, although already identified in 2013, takes on greater prominence in subsequent iterations of the SFA. Meanwhile, the regulatory gap highlights the structural disconnect between the pace of technical progress and the development of legal frameworks capable of regulating its application.

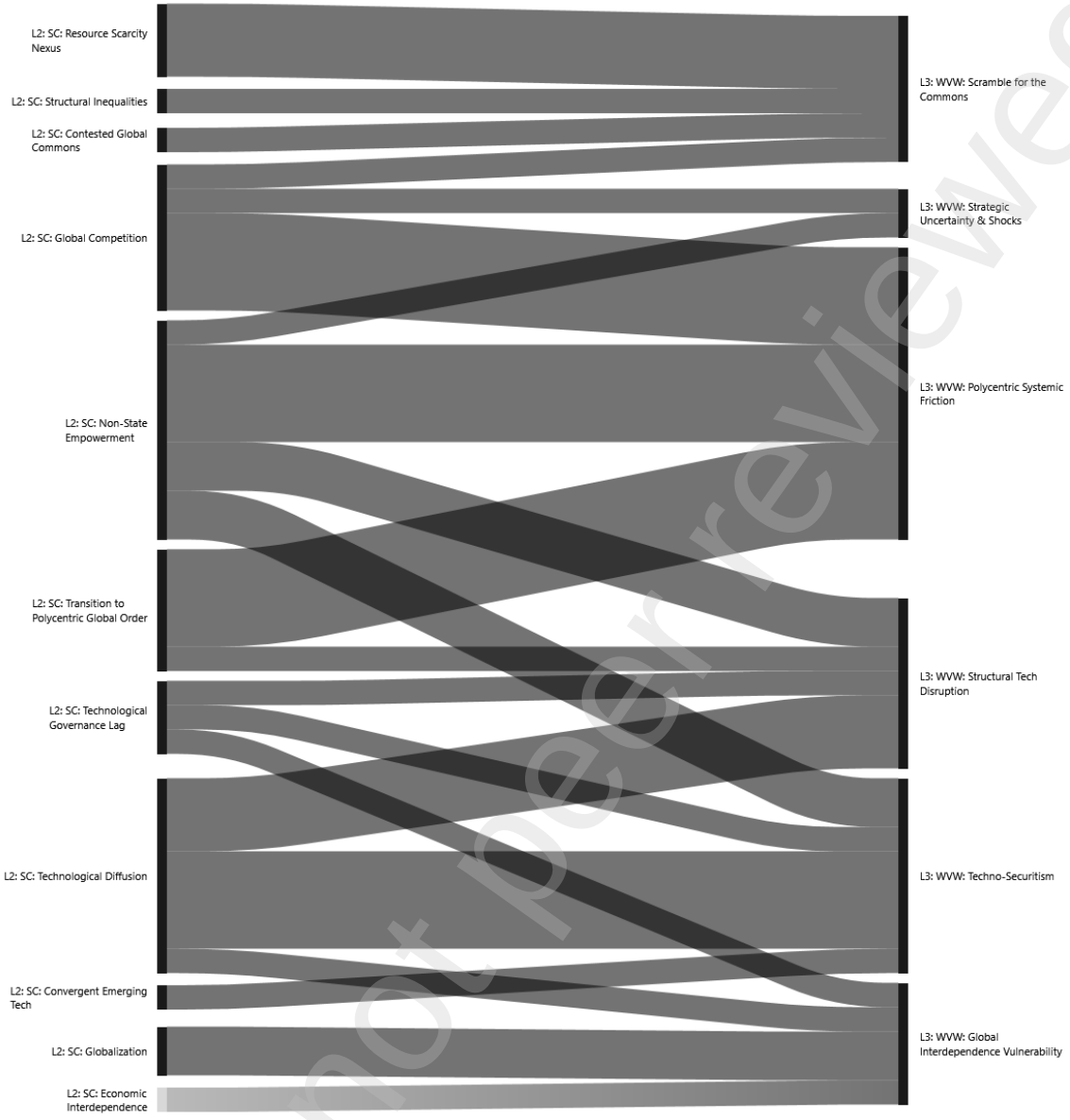

Figure 4. Sankey diagram of co-occurrences between layers 2 and 3 in the 2013 SFA

With regard to worldviews, the *Polycentric Systemic Friction* stands out first and foremost, projecting the image of a world fragmented into multiple centres of power—state, non-state and supranational—in which interdependence does not guarantee peace, but rather shapes a strategic environment marked by constant friction. The systemic causes *Transition to Polycentric Global Order*, *Global Competition* and *Non-State Empowerment* contribute to this worldview in a convergent manner. Complementary to the former is the worldview known as *Scramble for the Commons*, which describes the competitive urgency to secure resources and influence in shared domains—outer space, the Arctic, the seabed, maritime routes and cyberspace—in the face of the progressive erosion of established norms and boundaries.

On the other hand, the *Structural Tech Disruption* worldview articulates an interpretative framework in which emerging and disruptive technologies (EDT) are not conceived as mere tools, but as structural forces that alter the distribution of power. This perspective is

closely linked to *Techno-Securitism*: whilst the link between technology and military power is inherent to the history of warfare (Van Creveld, 1991: 311-320), what sets this view apart is its premise that technological advantage—without prejudice to other political, social or cultural factors—will prove crucial, such that its loss to rival powers or hyper-empowered individual actors constitutes a critical vulnerability for traditional actors.

Consistent with the previous perspectives, the *Global Interdependence Vulnerability* framework interprets globalisation not merely as a source of economic prosperity, but as a systemic amplifier of risks, insofar as certain local disruptions can become threats of global scope. Finally, although with a lower frequency of co-occurrences, the *Strategic Uncertainty & Shocks* worldview is consistent with the analysis as a whole, in that it assumes that the future is inherently unpredictable and that strategic discontinuities and shocks constitute a structural dimension of contemporary international normality.

4.2 Analysis of co-occurrences in the SFA 2017

The examination of co-occurrences in the SFA 2017 reveals a heightened perception of global instability, characterised by a shift from the systemic friction detected in 2013 towards a paradigm of greater fragmentation and accelerated change. This report, which occupies an intermediate position between the 2013 and 2023 prospective cycles, reflects the analytical sensitivity to the major international events recorded during its drafting phase: the Russian annexation of Crimea in 2014 and the subsequent outbreak of the conflict in the Donbas; the NATO Summit in Wales, at which the commitment to allocate at least 2% of GDP to defence was reaffirmed in response to the deterioration of relations with Russia; the Brexit referendum in the United Kingdom —marked by the use of algorithms and big data to influence its outcome—; and Russian interference in the 2016 US presidential election.

As a result of this context, the co-occurrence analysis records the persistence of systemic causes already identified in the 2013 SFA: *Global Competition*, *Transition to Polycentric Global Order*, *Non-State Empowerment*, *Globalisation*, *Technological Diffusion*, *Convergent Emerging Technologies* and *Economic Interdependence*. Added to these are new structural causes that can be grouped around two distinct analytical axes.

The first of these brings together causes linked to the empowerment of non-state actors and the transition towards a polycentric global order. Notable in this regard is the systemic cause *Decentralised Human Networks*, which refers to the shift towards non-hierarchical social structures arising from global interconnectivity and communication. Whilst the analysis acknowledges the positive dimension of this dynamic, it also warns that it favours the emergence and consolidation of non-linear and unpredictable security threats in highly complex environments. In this regard, the report notes that "*non-physical networks, such as those in the cyber domain, are increasingly used to influence the political, social and economic spheres. Non-physical networks could also be exploited by states, state proxies and non-state actors to disrupt important activities. These networks are able to adapt faster than state authorities can react, and it will be increasingly difficult to acquire the information needed to target and monitor*" (NATO, 2017: 42). Consequently, the same document highlights as an operational implication that "*Human networks, physical or non-physical, will need to be increasingly understood and assessed*

for antagonistic aims and the potential for violence. This will require close cooperation across all possible domains both within and between countries." (NATO, 2017: 43).

Closely related to the above, the systemic cause *Information Transparency* refers to the rise of processes through which human networks, in synergy with digital media, decentralise the power of traditional institutions. This trend increases social pressure on government decision-making processes and simultaneously promotes the democratisation of social structures and the erosion of the information monopoly held by conventional actors, such as political parties or the mainstream media.

Closely linked to the two previous causes, *Social Fragmentation* refers to the erosion of the bonds of cohesion within the political community. This process involves the breakdown of the social contract as a result of the divergence between narratives of identity, diminishing trust in democratic institutions, and the amplification of ideological bubbles through technological tools. The result is the fragmentation of the political community into polarised factions, a circumstance which, in the view of the authors of the SFA 2017, has a direct impact on national resilience and the capacity for collective defence.

The second pillar of systemic causes addresses the growing rivalry in relations between major powers. *Grey Zone Normalisation* is added to the causes *Global Competition* and *Transition to a Polycentric Global Order*, already identified in the 2013 iteration. This systemic cause refers to the deliberate use of political, economic and military pressure falling below the threshold for a conventional military response — Article 5 within the Alliance framework — which considerably hinders strategic decision-making processes. In this regard, the report states that: "*There has been a serious breakdown in security both regionally and within states in recent years. Despite legal conventions, political agreements, security instruments and institutions of various kinds being in place, the crisis in Ukraine rapidly escalated into a conflict resulting in the illegal annexation of Crimea and Russia's intervention in eastern Ukraine. These developments highlight the evolution of hybrid warfare, where an adversary's use of unattributable means and plausible deniability signals a paradigm shift in the use of power […] Whilst multilateralism as an approach to security governance may be in decline, the return of power politics simultaneously underscores the increased importance of NATO as the main framework for the collective defence of the Euro-Atlantic region.*" (NATO, 2017: 26–27).

Closely linked to this ambiguity and to the necessary institutional adaptation to technical advances in a highly competitive environment is the systemic issue of *NATO Adaptation to Technological Transformation*. This refers to the Alliance's process of institutional and operational adjustment in the face of rapidly evolving scientific and technological changes. This adaptation encompasses the integration of cutting-edge technologies, the creation of innovation hubs, the development of data exploitation strategies, and the drive towards interoperability in multi-domain environments.

Finally, this second axis incorporates the systemic cause *Emergence of Alternative International Regimes & Organisations*, referring to the formation and consolidation of institutional frameworks, economic blocs and security alliances that operate independently or in open opposition to Western-led organisations. This dynamic includes the expansion of groupings such as BRICS+ or the Shanghai Cooperation Organisation,

as well as the development of alternative financial systems, thereby driving the decentralisation of global power and the construction of parallel international architectures.

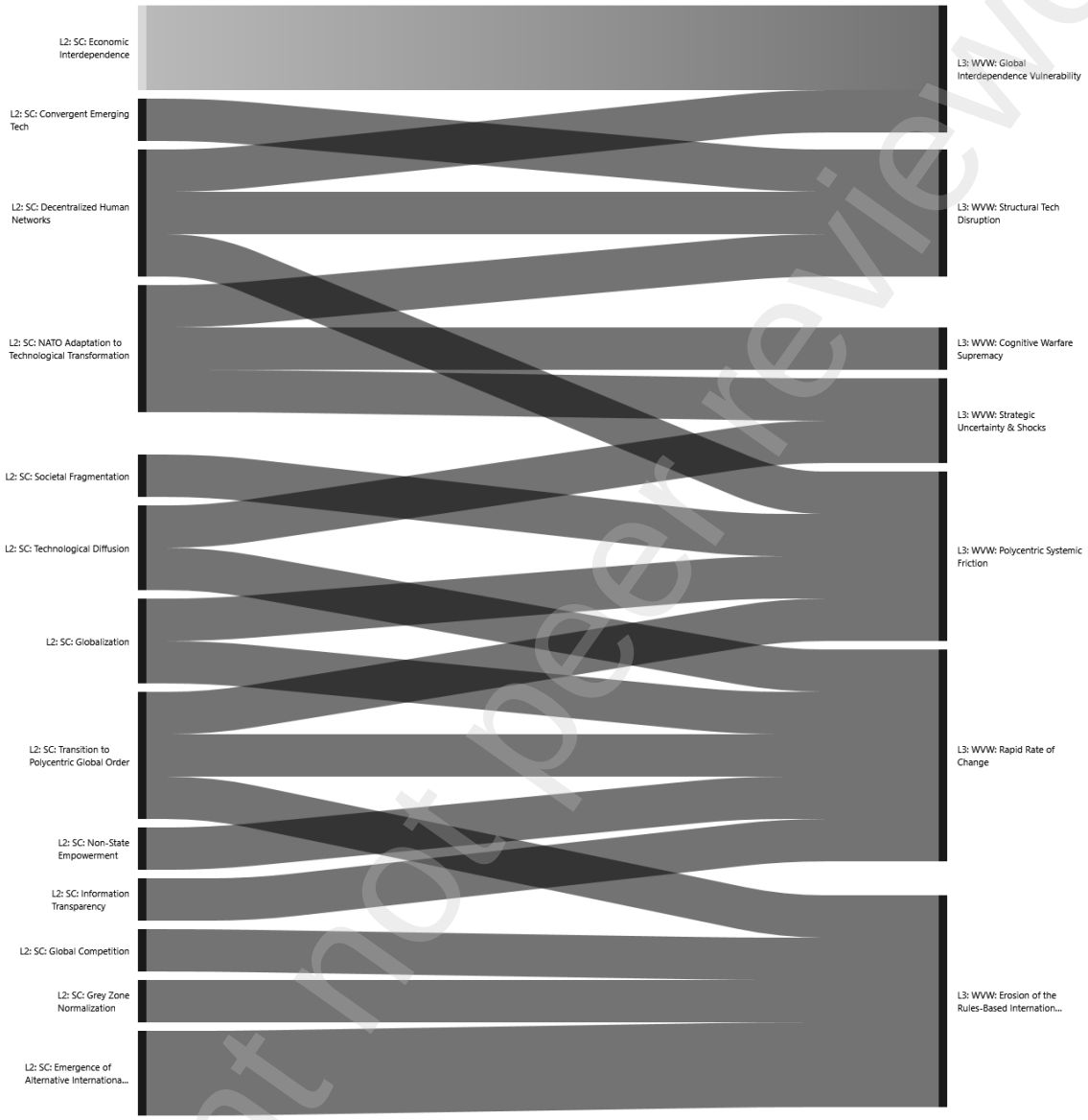

Figure 5. Sankey diagram of co-occurrences between strata 2 and 3 in the SFA 2017

The worldviews identified in the SFA 2017 show significant parallels with those of the previous iteration, insofar as paradigms such as *Scramble for the Commons*, *Polycentric Systemic Friction*, *Global Interdependence Vulnerability*, *Strategic Uncertainty & Shocks* and *Structural Tech Disruption* persist. However, there is a notable decline in the prominence of *Techno-Securitism*, whilst new worldviews are emerging that lend greater complexity to the analysis, linked primarily to the axis of rivalry between major powers.

Within this framework, the worldview *Erosion of the Rules-Based International Order* takes on particular relevance, representing the transition from a multilateral system

governed by international law towards a model in which the logic of force prevails. It entails the deliberate weakening of international treaties, the United Nations Convention on the Law of the Sea (UNCLOS) and respect for human rights by revisionist powers, with the consequent replacement of collective security and multilateral consensus by transactional bilateralism, spheres of influence and the normalisation of hybrid coercion. Likewise, the *Cognitive Warfare Supremacy* worldview stands out, which positions the human mind as yet another operational domain within the broader scope of military operations.

Finally, associated with systemic causes of a technological, political and social nature, the *Rapid Rate of Change* worldview stands out. This maintains that the present and future strategic environment is governed by non-linear dynamics, and assumes that technological and social acceleration generates a compression of time that substantially hinders traditional long-term planning cycles.

4.3 Analysis of co-occurrence in the SFA 2023

Analysis of the co-occurrences recorded in the SFA 2023 reveals, firstly, a substantial increase in the volume of identified systemic causes, although only a small subset of these exhibit statistically significant correlation coefficients. Among those systemic causes that had not shown co-occurrence in previous iterations, *Geoeconomic Weaponisation* deserves special attention; this concept refers to the deliberate use of economic interdependencies, trade barriers and financial systems as instruments of influence and coercion within the framework of inter-state relations. Furthermore, the 2023 report identifies co-occurrence in the systemic cause *Geostructural Power Shift*, referring to the ongoing shift in economic and military weight from the West to the East —with particular emphasis on Asia—, a process entailing the relative decline of Western pre-eminence in the international order.

In terms of implications for policy-making within NATO, a set of particularly relevant systemic causes stands out. The first of these is *Commercial R&D Over Military*, a factor describing the shift in technological leadership from the public-military sector towards large private-sector civilian corporations, which generates new and complex strategic dependencies. In this context, traditional defence contractors are increasingly forced to share the limelight with major technology firms—including the so-called "The Magnificent Seven" in the US context—a situation that poses serious dilemmas, both present and future, for Europe in terms of technological dependence on the United States for military applications.

Added to this dynamic is the systemic factor of *Defence Investment Pressure*, which analyses the structural tension between growing security requirements and the inherent limitations of available economic resources. This scenario encompasses the challenges faced by allied states in honouring the commitment to spend 2% of GDP on defence, against a backdrop of inflationary pressure, high costs of military modernisation and internal budgetary competition — a commitment that the Trump Administration forced to be raised to 5% at the NATO Summit held in The Hague in June 2025 (Matthijs & Tocci, 2026: 155). Closely linked to this pressure is *Intra-Alliance Consensus Fragility*, a phenomenon describing the weakening of collective decision-making mechanisms and political cohesion among member states. This phenomenon revolves around sources of friction arising from divergent national interests, processes of internal political

polarisation and disparate strategic priorities, factors which, taken together, hinder both the achievement of consensus and the coordinated implementation of common strategic courses of action.

With regard to the Alliance's broader strategic context, two additional systemic causes stand out. On the one hand, *Environmental Stressors*, which include climate change and ecological degradation as threat multipliers capable of destabilising vulnerable regions. On the other, *Instability in Extra-NATO Regions*, which refers to the set of systemic factors that negatively impact political, social or military stability in geographical areas outside the Alliance's sphere. Pockets of regional instability — comprising internal armed conflicts, the partial or total collapse of state structures, and large-scale humanitarian crises — can project their effects onto the Alliance's security through the spread of conflict, the creation of power vacuums susceptible to exploitation by hostile actors, or the disruption of global supply chains.

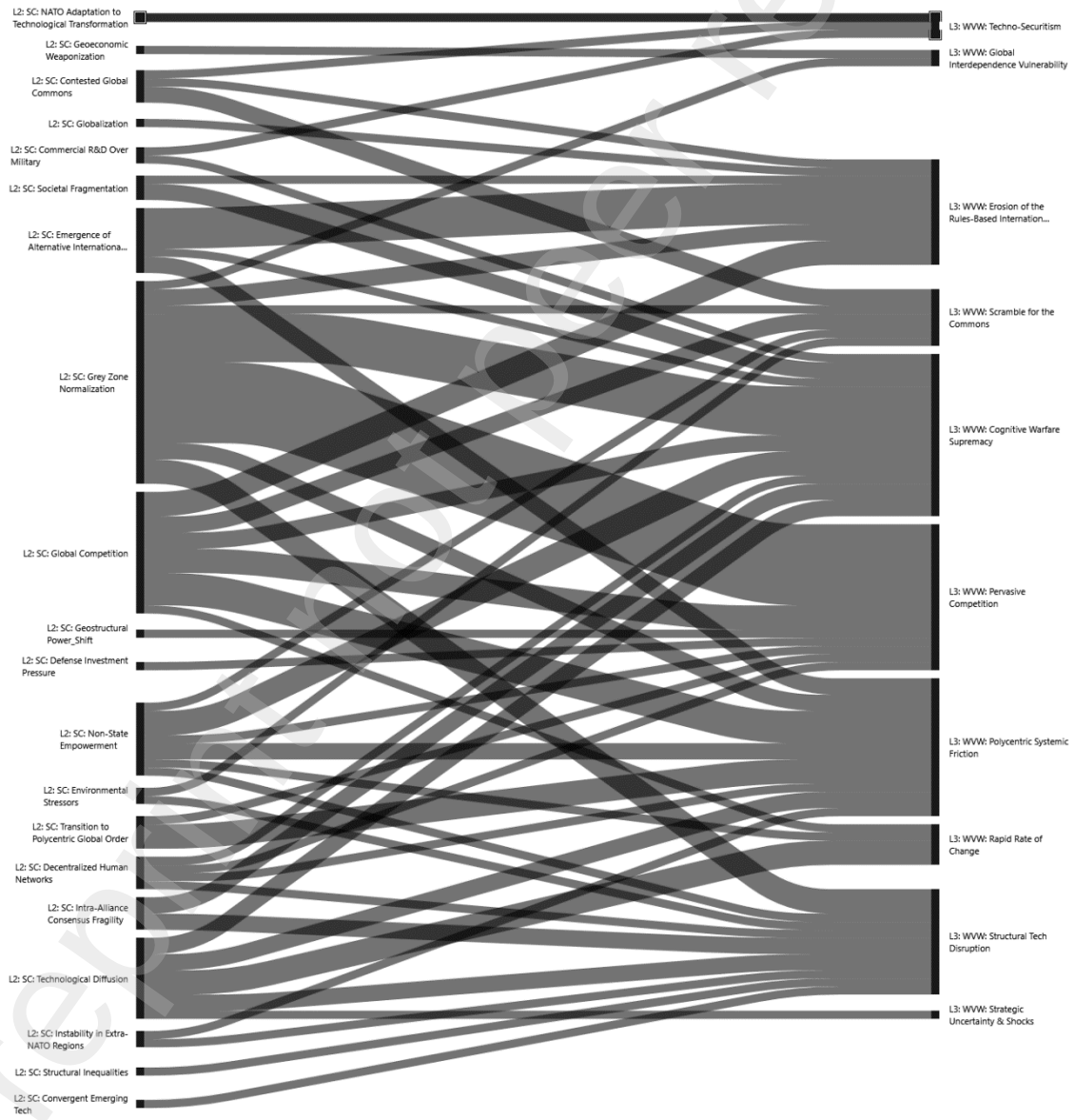

Figure 6. Sankey diagram of co-occurrences between layers 2 and 3 in the SFA 2023

Despite the increase in the number of systemic causes with co-occurrence recorded in the SFA 2023, the four factors of greatest relative weight had already been identified in previous editions of the series: *Non-State Empowerment*, *Global Competition*, *Technological Diffusion* and *Grey Zone Normalisation* (the latter in the SFA 2017). These causes operate as cross-cutting axes that are deeply interrelated with the rest of the system's variables and simultaneously play a central role in articulating the worldviews that underpin the SFA.

The Sankey diagram (Figure 6) allows us to identify five saturated worldviews that underlie multiple systemic causes of the SFA 2023 and operate in a cross-cutting and interconnected manner: *Cognitive Warfare Supremacy*, *Pervasive Competition*, *Polycentric Systemic Friction*, *Erosion of the Rules-Based International Order* and *Structural Tech Disruption*. These worldviews are consistent with NATO's institutional evolution, which has refocused its emphasis on collective defence, as set out in the Madrid Strategic Concept of June 2022. The Alliance's strategic shift is taking place in an environment characterised by rivalry between powers that favours conflictual interactions in the grey zone of the conflict spectrum, dynamics that are amplified by disruptive technological advances. Within this framework, the SFA 2023 pessimistically anticipates that systemic competition will intensify across all domains of the evolving security environment, as the Alliance's strategic competitors adapt to increasing levels of global fragmentation and the progressive deterioration of the current international order.

5. The evolution and juxtaposition of myths and deep metaphors in the SFA

Beyond the discursive evidence processed via CAQDAS, *causal layered analysis* leads one to question the fourth analytical stratum: that of collective archetypes and the unconscious dimensions that condition the perception of reality (Inayatullah, 1998: 820). These are metaphors that operate as unconscious and emotional sediment upon which the narratives of the SFA are founded. This section explores and proposes a series of metaphors underlying the worldviews identified in each of the three SFA. Given that this exercise involves a high degree of subjectivity and has been carried out by a single author, it should be understood as a proposal informed by the previous content analysis, but necessarily tentative in nature.

With regard to the 2013 SFA, analysis of the deeper layers allows for the identification of a series of unconscious narratives that give meaning to the document's strategic vision. Based on the worldviews detected, two underlying and interconnected metaphors are proposed:

- *The Hollow Leviathan*: This metaphor represents a security architecture that aspires to remain relevant in a hyperconnected world, but which proves structurally hollow in the face of the volatility of a network of interdependencies in which seemingly minor phenomena can trigger high-impact global consequences. The image of the Leviathan evokes, with deliberate ambivalence, the legitimate monopoly on the use of force exercised by the state — and, by extension, by an alliance of states such as NATO — in contrast to a world in which such a monopoly is progressively becoming an unattainable aspiration. The metaphor thus encapsulates an unresolved tension: the

need for global order versus a reality perceived as fragmented, competitive in access to resources and the *global commons*, and structurally fragile.
- *Prometheus's Shield*: This metaphor constitutes the symbolic core of the *Structural Tech Disruption* and *Techno-Securitism* worldviews. At this deep level, technology transcends its merely instrumental function to become the infrastructure underpinning the way of life of advanced societies. Under this premise, power is largely conditioned by technological advantage: if this is lost, the architecture of state security is severely compromised.

In relation to the SFA 2017, an additional metaphor is proposed that synthesises the document's dominant worldviews:

- *The Fragile Threshold*: This archetype alludes to a period of systemic uncertainty in which traditional security structures risk becoming obsolete in the face of the magnitude and speed of the changes underway. The metaphor integrates, in particular, the worldviews *Erosion of the Rules-Based International Order*, *Rapid Rate of Change* and *Pervasive Competition*. The underlying emotional states can be summarised as a sense of vulnerability in the face of chaos, an instinct for institutional survival, and a sense of vertigo at the loss of control entailed by the accelerated transformation of the strategic environment. The following passage from the SFA 2017 encapsulates the core ideas of this metaphor: "*Fundamental changes in the international security environment, driven by power transitions among states from West to East and power diffusions from governments to non-state actors worldwide, have resulted in increasing instability within the post-Cold War world order. As power is shifting away from the West towards Asia, the West's ability to influence the agenda on a global scale is expected to diminish. The redistribution of political, military, and economic aspects of geostrategic power, led by the developing world, will most likely affect the former Soviet space, the Middle East and North Africa (MENA) and the Asia-Pacific regions. These areas are expected to witness more power politics and competition between major powers, resulting in interstate conflict. Whilst countries are increasingly working together to address global challenges such as poverty and climate change, recent years have seen a worrying increase in the potential for confrontation between major powers."* (NATO, 2017: 21).

Finally, for the SFA 2023, the following metaphor is proposed, which summarises the document's central worldviews:

- *The Shattered Glass Floor*: This reflects the archetypal fear of losing control and vulnerability in an environment that is becoming unstable. The fragmented nature symbolises the worldviews of *Erosion of the Rules-Based International Order* and *Structural Tech Disruption*: the rules of the game are becoming increasingly uncertain, both due to transgressions by multiple actors and the impact of unregulated emerging technologies. At the same time, the image alludes to the plurality of external risks and threats stemming from the systemic causes *Polycentric Systemic Friction* and *Non-State Empowerment*.

6. Conclusion

The application of the CLA reveals a progressive transformation in the worldviews across the three complete foresight cycles of the Allied Transformation Command between 2013

and 2023. This study demonstrates that the shift from a worldview aligned with crisis management in the 2010 Strategic Concept towards a collective defence paradigm in the 2022 Strategic Concept is not merely a doctrinal adaptation, but rather to a profound alteration of systemic variables and the worldviews underpinning them. The international environment has evolved from global interdependence — perceived as vulnerable but functionally operational in 2013 — towards systemic fragmentation, which in 2023 is characterised by constant competition, manifested predominantly through conflict in the grey zone.

This evolution is reflected in the progressive obsolescence of the categories linked to liberal theories of international relations within allied prospective discourse. Factors that were analytically relevant a decade earlier—such as soft power or information transparency—have disappeared from the 2023 records, where worldviews such as *Cognitive Warfare Supremacy* and *Techno-Securitism* prevail.

At the level of deep metaphors, the institutional narrative reflects the exhaustion of Western hegemony. Whilst the 2013 report operated under the myth of a *Hollow Leviathan*, the 2023 document accepts the reality of a world in which rules have eroded and where the proliferation of non-state actors and technological disruption compel the organisation to operate in a state of structural strategic uncertainty. In this regard, the co-occurrence analysis confirms that the identified systemic causes—such as the *Technological Diffusion* and *Grey Zone Normalisation* —act as the vector driving the transformation of organisational worldviews. However, the fragility of internal consensus and pressure on defence spending emerge as factors that could hinder the effective implementation of this new strategic posture. Both systemic causes are, moreover, central elements in the crisis the Alliance has been facing since the start of the second Trump administration (Matthijs & Tocci, 2026: 155–157).

Insofar as security is a reality built upon shared premises and perceptions, the utility of the CLA lies in its ability to highlight and challenge dominant visions of the future. The application of causal layer analysis to the study of NATO's SFA is, consequently, a methodologically valid tool for moving beyond conventional analysis. This approach enables a shift from the litany of immediate challenges towards an understanding of the worldviews and deep-seated myths that shape the organisation's identity. The creation of this critical distance is epistemologically fundamental to redefining the future and challenging the hegemony of certain security discourses. Thus, CLA not only enhances the richness and depth of prospective scenarios but can also guide strategic action towards policies that are conscious of their own epistemological foundations.

Statement on the use of generative AI:

The author has used AI as an aid in generating the first version of the category codebook for content analysis. However, that first version has been substantially refined through various iterations during the coding process. AI has also been used to assist with the translation of the article into English.

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