Defence Studies

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/fdef20

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To cite this article: Nikolay Pavlov (2022) NATO's Concept Development and Experimentation approach in the EU's Common Security and Defence Policy? – an institutional isomorphism perspective, Defence Studies, 22:2, 211-230, DOI: 10.1080/14702436.2021.2008248

To link to this article: https://doi.org/10.1080/14702436.2021.2008248

Published online: 02 Dec 2021.

DEFENCE STUDIES
2022, VOL. 22, NO. 2, 211–230
https://doi.org/10.1080/14702436.2021.2008248

Routledge
Taylor & Francis Group

NATO's Concept Development and Experimentation approach in the EU's Common Security and Defence Policy? – an institutional isomorphism perspective

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ABSTRACT

The paper analyses the Concept Development and Experimentation (CD&E) approach which has been developed and implemented in NATO over the last 20 years. NATO's CD&E approach is explained as an organisational innovation and institutional response to external and internal pressures. Within the theoretical framing of institutional isomorphism, the paper analyses the adoption of CD&E in the European Union's (EU) Common Security and Defence Policy (CSDP). The research hypothesis is that the EU will adopt and apply NATO's CD&E approach in the EU's defence planning and capability development process. The empirical findings from the analysis of the EU policy practice, however, show that CD&E has actually been adopted from NATO and applied by the EU to a very limited extent. The low degree of isomorphism between NATO and the EU with regard to applying CD&E is explained by a complex set of factors. The research results have broader implications, suggesting that under the current institutional settings it is highly unlikely CD&E to be adopted by other international organisations in the field of international security.

ARTICLE HISTORY
Received 23 April 2021
Accepted 16 November 2021

KEYWORDS
NATO; Concept Development and Experimentation (CD&E); European Union (EU); Common Security And Defence Policy (CSDP); defence planning; institutional isomorphism

Introduction

The paper's objective is twofold. First, it seeks to analyse Concept Development and Experimentation (CD&E) in its dual identity of policy and methodology being developed and implemented in NATO over the last 20 years. Surprisingly, CD&E has attracted very little scholarly attention. The academic publications on the topic are rare and focus mostly on how CD&E is implemented in NATO or in specific nations (de Nijs 2010; Van Antwerpen and Bowley 2012; Barbu et al. 2019). Secondly, the paper investigates the adoption of NATO's Concept Development and Experimentation in the European Union's Common Security and Defence Policy (CSDP). The adoption of NATO's CD&E approach in the CSDP has not attracted scholarly interest and has not been examined in the existing literature on the relations between the EU and NATO (see, Smith and Gebhard [2017, 307–310] for an overview of the EU-NATO literature). Therefore, the paper contributes to enhancing scholarly debates in defence studies by introducing NATO's CD&E in the academic literature and analysing the adoption of CD&E in the CSDP.

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Theoretical framework

Koops and Biermann (2016, 29) pointed out that any endeavour to establish a theory of inter-organisational relations will encounter the considerable theoretical challenge of fragmentation and an overwhelming plurality of sub-approaches. This theoretical challenge is evident in the study of the complex inter-organisational relationship between the EU and NATO. Koops (2017) identified a series of concepts and theoretical approaches being employed: multilevel analysis approach; population ecology approaches, institutional overlap, resource dependence theory, principal agent theory, statist approaches, isomorphism, and the practice approach. The EU-NATO relationship has also been studied from the perspective of "defence globalisation" (Fiott 2017), "division of labour" (Howorth 2017), the "integration dilemma" (Duke and Gebhard 2017) and a Grounded Theory approach (Smith et al. 2017). In this context, Koops argued that the EU-NATO relationship has served as a "catalytic case study" for applying and developing theories of inter-organisational relations (2017, 315).

From all conceptual and theoretical approaches elaborated in the literature on the EU-NATO relationship most relevant for studying the adoption of NATO's CD&E in the CSDP is the approach coming from institutional isomorphism. As argued by DiMaggio and Powell (1983, 149–157), the concept that best captures the process of homogenisation of organisations in a structured organisational field is *isomorphism*. Organisations tend to model themselves after similar organisations in their field that they perceive to be more legitimate or successful. DiMaggio and Powell contend that a theory of institutional isomorphism may help explain why organisations are becoming more homogeneous and similar to one another over time. They describe three isomorphic processes – coercive, mimetic, and normative. Coercive isomorphism stems from political influence and the problem of legitimacy; mimetic isomorphism results from standard responses to uncertainty; and normative isomorphism is associated with professionalisation. In the original theoretical formulation of DiMaggio and Powell (1983, 53) institutional isomorphic processes can be expected to proceed in the absence of evidence that they increase internal organisational efficiency. It should be noted that some of the core theoretical formulations of isomorphism have undergone an evolution over the years, for example in the study of the causal link between diffusion and isomorphism (Boxenbaum and Jonsson 2017). Hence, it is more precise to speak of theories of institutional isomorphism instead of a single theory.

Institutional isomorphism has been applied in a systematic way by Reynolds to explain the emergence and the institutional design of the CSDP (2010, 26–38). From the perspective of the historical institutionalist approach, he argued that institutional design does not take place in a vacuum. New institutional structures are invariably established with reference to those existing ones within the policy field perceived as particularly successful or legitimate. The institutional structures of the CSDP were heavily influenced by the more embedded NATO institutional templates, as well as by existing patterns of cooperation within the EU itself through the Common Foreign and Security Policy – CFSP (Reynolds 2010, 57–58). The obvious similarity between NATO structures and those established within the CSDP appear to be slightly stronger with regard to the military elements than the political ones. In search of the underlying mechanisms of such isomorphism Reynolds clearly identified elements of coercive, normative and mimetic

isomorphism (2010, 249). Doing things "the NATO way" was an obvious and conscious attempt to show that the EU wanted to be taken seriously as a security and defence actor. In certain cases, institutional isomorphism displayed rational elements when actors transferred existing institutional structures to reduce the transaction costs associated with the process of institutional design.

Koops (2012) also applied institutional isomorphism to the CSDP, examining NATO's influence on the evolution of the EU as a security actor. He argued that the explanation of NATO's influence as a model is related mostly to institutional isomorphism and gave examples of all three isomorphic processes – coercive, mimetic, and normative in the context of the EU's CSDP. A typical example of the isomorphic processes between the two organisations is the comprehensive approach which was borrowed by the EU from NATO in 2013 (European Commission and HR/VP 2013; Pirozzi 2013, 6). Three years later, in 2016 the EU's comprehensive approach to external conflicts and crises was formally replaced by the integrated approach proclaimed in the EU Global Strategy (European Union 2016, 28–29) in a shift that clearly demonstrates the dynamics of isomorphic change.

Closely related with institutional isomorphism is the theoretical framework of institutional overlap developed and applied to EU-NATO relations by Hofmann (2009, 2011). She argued that the European security institutional environment shaped the creation and development of the CSDP. NATO and other international organisations have served as templates for the design of the main CSDP institutional structures. Institutional overlap has been conceptualised as a crucial independent variable explaining the development of international institutions occupying the same policy domain (Hofmann 2011, 101). Overlap is understood along three dimensions: membership, mandate and resources. The degree of institutional overlap varies along these three dimensions.

Against this theoretical backdrop, the paper seeks to answer the following research question: "Can NATO's Concept Development and Experimentation (CD&E) approach be applied by the European Union?" Based on the theories of institutional isomorphism, the research hypothesis is that the EU will adopt and apply NATO's CD&E approach under the Union's Common Security and Defence Policy. Institutional isomorphism suggests a homogenisation of these organisations in terms of organisational innovations, policy practices and project management methodologies. The EU and NATO are historically entangled international organisations (despite their specifics) which are engaged in a purported "strategic partnership," have common values, face similar threats, and share a majority of member states. Both NATO and the EU are important actors in the field of international security and the Union's CSDP has come to be regarded as an equal partner of NATO in some regions, such as the Balkans (Ringsmose and Webber 2020, 305). There has been an increasing overlap between NATO and the EU in terms of membership, geographical scope, and functional competence (Reynolds 2010, 212–8). As pointed out by Fiott (2020, 3), there is nothing comparable in the history of EU security and defence to the hyperactivity that has been observed in this domain since 2016. The quest for European "strategic autonomy" as proclaimed in the EU Global Strategy in 2016 entails capability development which in NATO is closely linked with CD&E. Therefore, it could be expected the EU to adopt and apply CD&E under the CSDP.

The answer to the research question has broader implications for other international organisations in the field of international security such as the United Nations (UN) and the Organisation for Security and Co-operation in Europe (OSCE). If NATO's CD&E approach could be adopted and applied in the EU, then we could expect also other international organisations in the same policy domain to do so. Sommerer and Tallberg (2019) have developed the theoretical argument about international organisations connectivity as a determinant of diffusion. They argue that interconnectedness among international organisations increases the likelihood of diffusion by opening channels for the flow of information, experiences, ideas, models, and norms across organisations. Connectivity among international organisations contributes to convergence, which is typically manifested through imitation of very specific institutional models. The study of diffusion among international organisations can offer expectations for international organisations' behaviour in capability development. The logic of diffusion suggests that the interconnectedness between NATO and the EU increases the likelihood of diffusion of CD&E from NATO to the EU. Last but not least, it could be expected that the overlapping membership of twenty-one countries who are members of both organisations offers a natural pathway for CD&E diffusion.

In line with the theoretical framing within institutional isomorphism, institutional overlap and the study of diffusion among international organisations the paper's research focus is on the CD&E process in NATO and the adoption and application of CD&E at the EU level. The adoption and application of CD&E at individual Member States' level will not be explored as it falls outside the scope of the paper and cannot be informed by reliable empirical data.

Method and material

The paper is structured, as follows. First, it carries out a critical review and analysis of CD&E in NATO in order to understand the CD&E phenomenon from an institutional isomorphism perspective. This entails document analysis of the main publicly available NATO policy documents on CD&E. To gain further insight the research also analyses data from NATO's Transformation Network portal, community of interest CDE365 (NATO TRANSNET Portal, 2021). The NATO CDE365 community of interest provides extensive unclassified data and products from the NATO CD&E process which are used in the analysis.

Secondly, drawing upon NATO's policy practice the paper hypothesises about the potential application of CD&E in the EU's Common Security and Defence Policy. The research focus is on the EU's defence planning and capability development as this is the area where CD&E is traditionally applied within NATO. As a next step, the research hypothesis is empirically tested by evaluating the extent to which CD&E has actually been adopted and applied in the EU's defence planning and capability development process under the CSDP. The evaluation compares the actual CD&E policy practice in the EU with the proposed hypothesis. The analysis of the CD&E policy practice is based on a review of EU policy and legal documents, and in-depth interviews with EU officials from the most relevant EU bodies and projects. The in-depth interviews have been conducted in the period March–June 2021 with officials from the European External Action Service (EEAS), the European Union Military Staff (EUMS), Directorate-General "Migration and

Home Affairs" (DG HOME) of the European Commission, the European Centre of Excellence for Civilian Crisis Management and with the coordinators of the most relevant EU projects. The empirical data from the interviews helps test the research hypothesis by offering insights into the actual application of CD&E in the EU's defence planning and capability development under the CSDP. After testing the hypothesis, the paper concludes by answering the research question, explaining the way CD&E is actually applied by the EU and what are the implications for academic debates.

Concept Development and Experimentation in NATO

The origins of Concept Development and Experimentation could be traced back to ideas circulating in the US defence establishment in the late 90s of the XX century. A RAND report addresses concept development as a methodology in the context of gaining new military capabilities, defence planning and force modernisation (Birkler et al. 1998). CD&E was formally established in NATO in 2000 and has been closely connected with the institutionalisation of Allied Command Transformation (ACT) after 2003. CD&E is defined as one of the tools that drive NATO's transformation by enabling the structured development of creative and innovative ideas into viable solutions for capability development (NATO 2009, 4). In NATO, CD&E is a high-level policy at the Military Committee level which is organized and managed by NATO HQ Supreme Allied Commander Transformation (SACT). CD&E is perceived simultaneously as a policy, a process, a methodology and approach. The CD&E process is closely related with the Science & Technology (S&T) process and industrial R&D (Research and Development). New operational and technological concepts are considered to be the primary sphere for CD&E. Strategic concepts are also not excluded from the process. As noted in the Policy for NATO CD&E (2009, 6) the development of strategic concepts might lead to the identification of CD&E projects.

The NATO CD&E process is highly formalised and it forms an integral part of the sophisticated NATO capability development process and the NATO defence planning process – NDPP (NATO 2010). The NATO CD&E process is defined as a scientifically supported methodology aimed at developing innovative and novel solutions to capability shortfalls or gaps, through an iterative approach of discovery and refinement (NATO 2010, 9). The whole CD&E process in NATO is based on the PRINCE2® (PRojects IN Controlled Environments) project management method. Every concept is managed like a project under the annual CD&E Work Programme in the specific NATO military-bureaucratic environment.

The NATO CD&E methodology is described in NATO policy documents mostly in general terms. The most detailed description of the methodology in the NATO CD&E Handbook (NATO 2018a, 2–17) presents a generic methodology (named also "programmatic approach" in the document), which is comprised of five primary phases: initiation, research, development, validation, and approval. In fact, the CD&E methodology is a broad project management framework, an umbrella term for multiple methodologies and methods. For example, CD&E projects might include modelling and simulation (M&S), operational analysis, scenario development, and alternative analysis methods. Overall, the NATO CD&E methodology demonstrates the difficulties in finding and employing evidence-based scientific methods.

The role of experimentation in the CD&E process is to discover information, to confirm or disprove a hypothesis, or formally validate a concept. In NATO CD&E there are three types of experiments: discovery, hypothesis testing and validation experiments. Experimentation for operational concepts very often requires validation through exercises or wargames. For example, the Concept Development Assessment Game (CDAG) is a stylised wargame in which a concept, procedure or business process are under scrutiny. Experiments can vary in scale from small table-top based experiments or games, lab-based virtual simulations to large-scale exercise-based experiments. In principle, scientific rigour is considered to be essential for concept validation and approval in the NATO CD&E process. Only valid experiments can ensure that a concept is tested objectively and validated. In NATO experimentation is regulated by several documents, one of the most important being the Guide for understanding and implementing defence experimentation (GUIDEx 2006). The GUIDEx provides a number of principles for successful defence experimentation and defines the venues for experimentation (command post and live exercises, constructive simulation, analytical wargames and human-in-the-loop simulation).

One of the earliest success stories of NATO experimentation under the CD&E process is considered to be the NATO Friendly Force Tracker experiment which allowed for increased interoperability and coordination between alliance forces (de Nijs 2019, 14). Several NATO CD&E projects are focussed on developing common situational awareness. One of these projects aimed at the effective integration of civil and military activities under the Civil Military Fusion Centre. A series of Multinational Experiments (MNE) experimented the concept of Effect Based Operations (EBO) and contributed to the introduction of effects-based thinking in NATO operations planning. Another example is the CD&E project in support of the programme for optimisation of NATO logistics.

Strategic level or "capstone" concepts contain political or high-level politico-military assessments, objectives and guidance. Examples of NATO strategic concepts are the NATO Capstone Concept for Joint Military Operations in Urban Environments (NATO 2018b) and NATO's Concept for Countering Hybrid Threats. The NATO CD&E Handbook (2018a, 16) states that capstone concepts typically do not require experimentation. It could be argued that these concepts actually do require experimentation but technically it is more difficult to experiment them – compared with operational concepts, for example. It should also be noted that wherever a concept can have political or politico-military implications the respective CD&E project is considered "a sensitive project" and tasking from the NATO Military Committee (MC) is required. Hence, all CD&E projects on strategic concepts in NATO are in practice classified as sensitive projects.

Within NATO, the Strategic Foresight Analysis report (NATO 2017) describes the future security environment to 2035 and beyond, depicted as political, social, technological, economic and environmental trends. The Strategic Foresight Analysis supports and informs the NATO defence planning process and, thus, indirectly the CD&E process as well. The Strategic Foresight Analysis, however, does not include scenarios or alternative futures and is not connected with strategic (capstone) concepts. The SFA does not refer explicitly to Concept Development and Experimentation.

As noted in a white paper on CD&E, there remains a high degree of scepticism within the NATO nations that the current NATO CD&E process is not delivering worthwhile products in accordance with the intent of NATO policies (NATO 2015, 3–11). Some of the identified weaknesses in the NATO CD&E process are: the lack of a clear understanding of what is and what is not a concept; what actually constitutes experimentation; the difficulty in measuring the utility and impact of CD&E. The white paper also addresses problems of ineffective CD&E implementation and disconnection with other NATO processes. Some of the strengths of the CD&E process are seen in that it stimulates "out of the box thinking," creativity and innovation in capability development. CD&E delivers unbiassed results and helps avoiding mistakes before the implementation of operational concepts. Overall, NATO CD&E enhances interoperability within the alliance. The major threats are connected with defence cuts in most NATO nations and with the fact that the CD&E process is too much dependent on the "political climate." Building a strong CD&E community is seen as very important for improving the CD&E process in NATO. In organisational terms, the white paper recommends the establishment of a central body for CD&E governance and the professionalisation of CD&E staff officers.

The CD&E process in NATO has several specific features. Presently, CD&E is an almost exclusively NATO brand. It is part of the "corporate identity" of NATO's international staff. While some non-NATO nations – such as Sweden, Australia, and Singapore – may have some CD&E expertise, CD&E as a process and methodology is systematically conducted mostly within the institutional framework of NATO, or individually by NATO nations. Secondly, the NATO CD&E process could be interpreted as a specific civil-military ritual in the alliance. It is suggestive that some basic documents refer to the CD&E battle rhythm (NATO 2010, 25). The meaning of CD&E is not only in achieving scientifically credible results but also in enhancing cohesion within NATO. The CD&E community of interest could be regarded as a newly emerging subculture within the wider NATO civil-military culture. As noted by Van Hoeserlande (2019), for the successful implementation of concept development, you need a new culture.

From the perspective of "classical" institutional isomorphism, the CD&E process in NATO could be regarded as an organisational innovation which is driven by a desire to improve performance (DiMaggio and Powell 1983, 148). It is part of a wider process of organisational change and has a clear transformational dimension. NATO's CD&E process constitutes an organisational innovation and institutional response to external and internal pressures. It can be analysed from the perspective of institutional adaptation and resistance of a large international organisation which is put under pressure. CD&E is an institutional process deeply embedded in the transformation and survival strategy of the alliance. It is a process governed by HQ Supreme Allied Commander Transformation which seeks to adapt the alliance to the challenges of the new security environment. As a bureaucratic process CD&E is part of the efforts of NATO's large and proactive bureaucracy to cope with external pressures. It demonstrates the alliance's flexibility and the capability of NATO's international staff to provide meaningful, cutting-edge output on the international market of ideas under the CD&E brand. Bearing in mind that NATO and the EU must cope with similar pressures the paper will address in the next section the problem to what extent NATO's CD&E approach has been adopted by the EU as an institutional response.

Concept Development and Experimentation in EU defence planning and capability development

Defence planning and capability development are closely interlinked and essential elements of the EU's Common Security and Defence Policy. The main purpose of EU defence planning has been to supply autonomous capability of action – both military and civilian – to which the EU aspires in the framework of the CSDP (Mauro 2018, 6). The major developments in EU defence planning and capability development over the last years (Fiott 2018) have had strong impact also on CSDP operational planning and on EU conflict prevention and peacebuilding more broadly. Based on theories of institutional isomorphism and the positioning of the CD&E process in NATO within the defence planning process (NDPP) it could be expected the EU to adopt and apply CD&E within its own defence planning process under the CSDP. Therefore, the first step for evaluating the extent to which CD&E has been adopted by the EU is an overview of the EU defence planning and capability development process.

As pointed out by Breitenbauch and Jakobbson (2018, 2–3) defence planning is a constitutive element of defence and strategic studies. The EU's mode of international defence planning testifies to the considerable complexities of pursuing defence capability development via international cooperation. As noted by Jones (2020, 14) EU Member States retain near full sovereignty over defence matters. EU Member States often choose to cooperate at the defence industrial level but go no further into defence integration. This is combined with the transatlantic dilemmas between NATO and the EU's CSDP that create tensions for defence capability development (Hunter 2002). As a result, the EU defence planning process is ineffective and complicated (Mauro 2018, 64) and some scholars consider it to be rudimentary (Ringsmose and Webber 2020, 306).

EU defence planning and capability development is a complex and fragmented process comprised of several elements and steps which are not fully coherent. It has been placed under the responsibility of half a dozen institutions: the European Union Military Committee (EUMC), supported by the European Union Military Staff (EUMS), the European Defence Agency (EDA), the Council, the European Council, the European External Action Service (EEAS) and the European Commission. EU defence planning came into being at the Helsinki Summit of 1999 and was first framed around the 1999 Headline Goal (European Council 1999) and the European Capabilities Action Plan (ECAP), with limited success.

The first element of the EU defence planning process is the Capability Development Mechanism (CDM) which was created in the period 1999–2004 under the authority of the European Union Military Committee (EUMC) with the support of the European Union Military Staff (EUMS). The CDM is expressly referred to in the Treaty on European Union (TEU); it covers only military planning and is entrusted exclusively to the military structures. The CDM is considered to be step 1 (Establishing military requirements to deliver EU defence goals) in the EU defence planning process (Mauro 2018, 23). The CDM has produced the Military CSDP Level of Ambition (adopted in 2017) which is seen as a "political guidance" in EU defence planning. In the period 2017–2018 the CDM has also produced several catalogues: the Requirement Catalogue, the Force Catalogue, and the Progress Catalogue

which prioritises the "high impact capability goals" in six capability areas. Very importantly, the taxonomy of European capabilities under the CDM is virtually identical to the respective NATO taxonomy.

It should be noted that the EU has also launched a parallel capability development process in the realm of civilian capabilities framed by the 2008 Civilian Headline Goal (Council of the EU 2004b). The Civilian Headline Goal set in place a capability process in six priority sectors: police; rule of law; civil administration; civil protection; observation missions; support for the Special Representatives of the Union. As with defence capability development, however, the civilian side of the CSDP has also been beset by shortfalls, as it relies on voluntary contributions from Member States (Jones 2020, 6).

The Capability Development Plan (CDP) forms step 2 (Determining priority cooperation areas) in the EU defence planning process. The CDP was added on the top of the CDM after the establishment of the European Defence Agency (EDA) in 2004. Starting from 2008 the CDP has been drafted by the EDA and currently occupies most of the communication space in this area. The main objective of the CDP is to identify capability gaps and priorities for capability development. The latest revision of the CDP establishes a list of eleven EU capability development priorities (EDA 2018). The twenty-one capability gaps highlighted by the CDM are not harmonised with the eleven capability priorities of the CDP which clearly demonstrates the inconsistencies in the EU defence planning process.

Step 3 of the EU defence planning process is taking stock of progress in capability building. This step is carried out under the Coordinated Annual Review on Defence (CARD). The objective of the CARD is to review the Member States' defence activities in order to provide a comprehensive picture of the European defence landscape and to achieve better consistency between Member States' defence planning (EDA 2020). The first EU-wide CARD completed in 2020 presents a realistic review of the fragmented European defence landscape and the inefficiencies of defence planning at the EU level.

After 2016 two major initiatives for developing EU defence capabilities have been launched: the European Defence Fund (EDF) and the Permanent Structured Cooperation on security and defence (PESCO). PESCO and the EDF are cooperation frameworks for the implementation of defence capability projects. They represent the industrial dimension of EU capability development. The EDF is made up of two complementary structures: a "research window" to finance collaborative research projects in the field of defence at EU level; and a "capability window" to finance joint capability development in the field of defence. The EDF is designed to contribute to strengthening the competitiveness and innovative capacity of the EU's defence industry as well as fostering defence cooperation. PESCO is a legally binding framework and process – based on Art. 46 TEU – aimed at deepening defence cooperation between 25 EU Member States. At the heart of PESCO are PESCO projects in support for capability development (Council of the EU 2017, Art.5). From the launch of PESCO in 2017 till 2021 overall 47 projects have been developed covering areas such as training, land, maritime, air, cyber, and joint enablers (PESCO website, 2021).

The EU has not been able to develop a well-structured and sophisticated defence planning process. EU defence planning shows some similarities but also important differences with the NDPP (Zandee 2019, 25). The steps in the EU defence planning process correspond to some steps in the NDPP. Step 1 (Establish political guidance) in

the NDPP could be compared to some extent with the definition of political defence objectives at the EU level in the Helsinki Headline Goals (1999 and 2010), the EU Global Strategy (2016) and the Military CSDP Level of Ambition (2017). Step 2 (Determine requirements) corresponds to the Capability Development Mechanism (CDM) in the EU defence planning process. The capability development endeavours under the Capability Development Plan (CDP) bear resemblance to step 4 (Facilitate implementation) in the NDPP. Step 5 (Review results) in the NDPP corresponds to some extent to the Coordinated Annual Review on Defence (CARD) in the EU. Step 3 (Apportion requirements and set targets) in the NDPP is fully missing in the EU defence planning process. In the EU process capability targets are not assigned to Member States; there are simply priority action areas to be satisfied collectively and for which each Member State remains free to decide whether or not to invest.

In this context, the research hypothesis is that it could be expected Concept Development and Experimentation (CD&E) to be applied in the EU defence planning process in those steps where CD&E is typically applied in the NDPP. In the five-step NATO defence planning process CD&E provides input to step 2 – determine requirements, step 3 – apportion requirements and set targets, and step 4 – facilitate implementation (NATO 2010, 5–6). Therefore, it could be expected CD&E to be applied by the competent EU institutions within the Capability Development Mechanism (CDM) and the Capability Development Plan (CDP) in terms of determining requirements and defining capability development priorities.

It could also be expected CD&E as a project management methodology to be applied in concrete EU capability development projects under the PESCO and the EDF frameworks. CD&E experimentation techniques are very relevant for testing and validating the technological concepts under PESCO and EDF projects. The systematic application of CD&E methods and, specifically technology testing is possible in all six focus areas of capability development areas identified in the CARD report 2020: Main Battle Tank, Soldier Systems, European Patrol Class Surface Ship, Counter-UAS (unmanned aerial systems) – Anti-Access/Area Denial, Defence in Space and Enhanced Military Mobility.

Drawing upon NATO's experience it could also be expected that EU Centres of Excellence will be working actively on CD&E projects. Presently, 26 NATO-accredited Centres of Excellence play an important role in furthering innovation, lessons learned, education and training, doctrine, concept and capability development, through experimentation and recommendations (NATO 2021). Most relevant for applying the CD&E methodology at the EU level seems to be the European Centre of Excellence for Civilian Crisis Management which was established in 2020 to support the implementation of the Civilian CSDP Compact (CoE website, 2021).

Analysis of the CD&E policy practice in EU defence planning and capability development

The proposed hypothesis is tested by an analysis of the CD&E policy practice in the EU based on a review of EU policy and legal documents, and in-depth interviews with EU officials and project coordinators. It should be noted that practically there is no academic or grey literature on the CD&E policy practice in the EU.

As noted by Mauro (2018, 21) no official document describes the EU defence planning process in its entirety. Hence, CD&E must be "traced" in many policy documents framing the EU defence planning process. The relevant section on the CSDP (Art. 42–46) in the Treaty on European Union (TEU) – which stands at the top of the hierarchy of norms – includes provisions for defence capabilities development at the EU level but does not refer to CD&E. CD&E is not mentioned either in the strategic-level policy documents which form the political guidance of the EU defence planning process: the Helsinki Headline Goals 1999, Headline Goal 2010, the Civilian Headline Goal 2008 and the EU Global Strategy (2016). Headline Goal 2010 contains provisions on the EU Capability Development Mechanism and a modest mention of defence planning but does not refer to CD&E (Council of the EU 2004a). The Civilian Headline Goal 2008 – which is the basic policy document for the civilian capability development process in the EU – does not refer to CD&E (Council of the EU 2004b). The highest-ranking strategic policy document – the EU Global Strategy (European Union 2016) calls for greater coherence in defence planning and capability development in full coherence with NATO's defence planning process and for strengthening the Capability Development Plan. The EU Global Strategy and the EUGS Implementation Plan (Council of the EU 2016) – which specifies the revision process of the Capability Development Plan and the CARD process – do not refer to CD&E.

The CD&E policy practice in the EU is framed by three documents which have been drafted by the EU Military Staff (EUMS) after 2012. The European Union Military Experimentation Concept (Council of the EU 2012) is the first ever publicly available EU document to introduce CD&E to EU policy-making and the CSDP in particular. The document provides a framework for the EU military experimentation process and aims at improving the development of EU military capabilities and their supporting concepts. CD&E is designed to contribute to CSDP activities, to support EU capability development and, specifically the Capability Development Plan (CDP). The EU Military Experimentation Concept is complemented by the Framework for EU Military Conceptual Development (adopted in 2017) which is not a public document.

The main tool for implementing CD&E in the EU is the annual EU Military Conceptual Development Implementation Programme (CDIP) which has been adopted since 2012. The focus of the CDIP is on military concepts and other military conceptual documents. The EU Military Conceptual Development Implementation Programme 2020–2021 contains a list of 67 EU military concepts grouped in three sub-types: military framework concepts, military operations concepts, and military enabling concepts (EEAS 2020). Unlike the NATO annual CD&E Work Programme, the CDIP does not provide for the implementation of CD&E projects. Actually, there is no EU funding for CD&E projects under the EU Military Conceptual Development Implementation Programme. Funding is expected to come on a voluntary basis from Member States and unspecified EU bodies. It is also expected the work on CD&E to be supported "on good will" by NATO (Interview no. 1). The severe lack of funding and resources has been highlighted in interviews as one of the major problems for applying CD&E in the EU (Interview no. 1; Interview no. 5). This fact may sound strange for a relatively wealthy international organisation like the EU but it is a clear sign for the very limited adoption of CD&E by

the EU. Therefore, the formal reference to the EU defence planning process in the underfunded Military Conceptual Development and Implementation Programme (EEAS 2020, 3) seems of little practical utility.

CD&E in the EU falls within the remit of the EU Military Staff which is a part of the European External Action Service (EEAS). EUMS has a special place as a military body (under the EU Military Committee authority) in a mainly civilian organisation like the EEAS. CD&E activities, including the implementation of the CDIP are entrusted to the small Concept Development Branch within the EUMS Concepts and Capability Directorate. With only a few action officers the EUMS Concept Development Branch has no manpower to pursue an adequate CD&E policy at the EU level (Interview no. 1; Interview no. 5). This state of play is explained by the fact that the military component within the EU is very small (less than 300 people). In fact, the human resources allocated by the EU to defence planning in the EUMS and the EDA are some thirty people in total (Mauro 2018, 42). CD&E within the EUMS is not comparable to the CD&E efforts in NATO and in practice it is done without any support of experimentation (Interview no. 1). Although considered useful for EU defence planning by some EUMS officers CD&E has actually been applied in EU defence planning to a very limited extent (Interview no. 5). As one of the interviewees has put it, "doing more without staff is just not possible" (Interview no. 1).

The EUMS Concept Development Branch and the EU Military Conceptual Development Implementation Programme could be viewed as specific examples of decoupling from the perspective of institutional theory. Meyer and Rowan (1977) proposed that organisations can decouple their practices from their formal structure in response to demands for organisational adaptation. Decoupling means that organisations abide only superficially by institutional pressure and adopt new structures without necessarily implementing the related practices, CD&E in this case.

The EUMS makes efforts to cooperate with other EU bodies, such as the European Commission's Joint Research Centre (JRC) and the EU Institute for Security Studies. The EU's in-house CD&E expertise, however, is very limited. The JRC's main contribution has been the Global Conflict Risk Index (GCRI), a quantitative tool which forms the backbone of the EU's Early Warning System (Interview no. 7). The GCRI expresses the statistical risk of violent conflict in a given country in the coming 1–4 years and is exclusively based on quantitative indicators from open sources. Being very generic and static, however, the GCRI can hardly be considered a tool for Concept Development and Experimentation. Similarly, the scenarios for table-top exercises drafted by the EU Institute for Security Studies are not part of broader CD&E capability projects (Interview no. 1). The expectation that CD&E would be conducted in the most relevant EU Centre of Excellence was not confirmed either. The European Centre of Excellence for Civilian Crisis Management is not familiar with CD&E and does not make any use of the methodology in its work on enhancing the EU's civilian CSDP (Interview no. 2).

The absence of CD&E is also evident in the legal acts and projects under the major EU defence capability initiatives. The Council Decision on the establishment of PESCO which sets the framework for defence capability development projects does not refer to CD&E (Council of the EU 2017). A review of the publicly available information on the official website shows that none of the ongoing 47 PESCO projects is focussed on CD&E and there is no single project with clearly expressed CD&E objectives (PESCO website,

2021). As noted by one of the interviewees, PESCO is Member States driven, therefore it is up to the Member States to do CD&E projects under PESCO, but there are no examples thereof (Interview no. 1). Moreover, CD&E is not considered to be relevant for PESCO by some of the interviewees (Interview no. 3; Interview no. 4).

The Regulation for establishing the European Defence Fund does not refer to CD&E either (Regulation 2021). In 2021 the first call for proposals under the EDF was launched but none of the topics under this call actually addresses CD&E (European Commission 2021). Similarly, the 2020 CARD report which aims at promoting opportunities for multinational cooperation in defence capability development does not mention CD&E at all (EDA 2020).

The only EU capability development projects to address CD&E have been carried out under the EU's 7-th Framework Programme (FP7) for civilian research and development. The EU's civilian framework programme is considered to be a building block in the capability development process at the EU level (Interview no. 8). Two FP7 demonstration projects have addressed the role of CD&E, both of them focussing exclusively on disaster management and mostly on the tactical level. The ACRIMAS project was the first EU project to demonstrate the CD&E approach in the area of disaster risk management by a small-scale experiment (Rester et al. 2012). The ACRIMAS project, however, did not actually apply CD&E but proposed the methodology for the follow-up larger EU demonstration project (Interview no. 6). The follow-up DRIVER+ project further developed the CD&E approach to large-scale experiments but it also addressed only disaster risk management at the tactical and partially at the operational level (DRIVER+ 2014). Within DRIVER+ the CD&E methodology served as basis for the developed test-bed, the technical infrastructure for crisis management capability development and the trials (Interview no. 9). While being the EU's signature civilian CD&E capability development project, the €43-million DRIVER+ project practically has no connection with the EU defence planning process.

The empirical findings to great extent disprove the proposed hypothesis. CD&E has actually been adopted from NATO and applied by the EU in its defence planning and capability development process under the CSDP to a very limited extent. CD&E does not provide tangible input to the Capability Development Mechanism (CDM) and the Capability Development Plan (CDP) in terms of determining requirements and defining capability development priorities. CD&E as a project management methodology has not been applied in EU defence capability development under the PESCO or EDF frameworks. The CD&E methodology has only been employed occasionally in EU civilian capability development in the area of disaster response. The existing CD&E elements in EU policy-making are rather examples of decoupling. Overall, there is a low degree of isomorphism and institutional overlap between NATO and the EU in the application of CD&E. Concept Development and Experimentation seems to be an instance of institutional innovation specific to NATO.

The empirical findings pose the question: "How could the low degree of isomorphism between NATO and the EU with regard to applying CD&E be explained?" A possible explanation can be derived from the original theoretical statement of institutional isomorphism that organisations in a field may be highly diverse on some dimensions, yet extremely homogeneous on others (DiMaggio and Powell 1983, 156). The EU and NATO are inherently different international entities. While NATO is beyond a doubt an

international military-political organisation, the nature of the EU as an international actor is widely contested in international relations theory. The EU is seen by different schools of thought as a federal system, an international organisation or a *sui generis* entity (see, e.g. Phelan 2012). The EU has very different organisational architecture compared with NATO. Very importantly, the EU is a civilian international (or supranational) actor and not a military one. Every step in the direction of enhanced defence cooperation in the EU has to cope with strong opposition prompted by fears of militarisation of the Union (see, e.g. Fotiadis 2019). These are major differences which could account for the limited adoption of CD&E by the EU. As noted by Reynolds (2010, 198) it is questionable to what extent NATO can serve as a useful transferable model for the CSDP. A fundamental mistake for policymakers was to assume that institutional structures and processes established and developed within a predominantly military organisation could easily and unproblematically be transposed onto the primarily civilian and economic structures of the EU (Reynolds 2010, 38).

Another plausible explanation is that the extent of isomorphism in this particular field is not very high. The policy field of international security is not sufficiently homogeneous in structure, process and behaviour. More specifically, NATO and the EU show great organisational dissimilarity in terms of defence planning and capability development processes, which hinders the adoption of CD&E by the EU.

Another possible explanation could be that NATO's CD&E is still not a sufficiently powerful model of organisational innovation. A central idea of institutional isomorphism is that organisations conform to "rationalised myths" in society about what constitutes a proper organisation (Boxenbaum and Jonsson 2017, 2). These myths emerge as solutions to widely perceived problems of organising and become rationalised when they are widely believed to constitute the proper solutions to these problems. The empirical findings from the EU policy practice demonstrate that CD&E has still not reached the status of a "rationalised myth" with regard to international defence planning and capability development. The isomorphic pressure of CD&E in the policy field is still not sufficiently strong.

The empirical findings do not corroborate some of the early theoretical statements of institutional isomorphism, especially with regard to the increasing homogeneity of organisations within an organisational field. On the other hand, they are in line with the shift within institutional theory toward a greater recognition of heterogeneity in the institutional environment and in organisational response to institutional pressures (Boxenbaum and Jonsson 2017, 3). This theoretical shift clearly shows the limitations of institutional isomorphism, especially in policy fields which are not highly structured as is the case with international security.

It should also be taken into account that the purported "strategic partnership" between NATO and the EU has an impact – both in positive and negative terms – on the adoption of CD&E by the EU. On the one hand, the "strategic partnership" distorts the isomorphic processes between the two organisations in defence planning and CD&E, in particular. The trope of avoiding duplication with NATO is present in many EU policy documents (see, e.g. European Council 1999, point 27) and has been mentioned in one of the interviews as well (Interview no. 1). On the other hand, EU policy documents call for coherence with NATO's defence planning process (Council of the EU 2016, 21) which

would imply the adoption of an important NATO approach as CD&E in EU defence planning. Overall, the impact of the NATO-EU "strategic partnership" on the isomorphic processes cannot be reckoned straightforward.

Given that CD&E is actually applied by the EU to a very limited extent and that the EU is the international organisation with a very high level of homogeneity with NATO, then it is highly unlikely CD&E to be adopted by other international organisations in the field of international security. The other major organisations in this policy field, the UN and the OSCE are considered less institutionalised than the EU (Dijkstra et al. 2019, 5) – which is a serious setback for isomorphic processes. And, what is even more important, the UN and the OSCE do not have defence planning processes, where CD&E is most applicable. The UN military planning process and the OSCE mission planning are actually operational (mission) planning for the deployment of peace-keeping or monitoring operations and missions. These are not defence planning processes aiming at building military capabilities for the respective organisation. Therefore, under the current institutional settings it is highly unlikely NATO's CD&E approach to be adopted and applied by other international organisations in the field of international security.

Conclusion

The paper has analysed Concept Development and Experimentation (CD&E) as a distinctive NATO brand of organisational innovation and institutional response to external and internal pressures. CD&E in its dual identity of policy and methodology has certain limitations; it is not a silver bullet for all existing problems that international organisations face in defence planning and capability development. Nevertheless, CD&E as a specific civil-military ritual and subculture has important advantages in organisational terms as it helps enhance cohesion within NATO.

Secondly, the paper has analysed the adoption of CD&E in the EU's Common Security and Defence Policy (CSDP) from the theoretical perspective of institutional isomorphism. The research question asked: "Can NATO's Concept Development and Experimentation (CD&E) approach be applied by the European Union?" Based on theories of institutional isomorphism, the research hypothesis was that the EU would adopt and apply NATO's CD&E approach under the CSDP. More specifically, it was hypothesised that CD&E would be adopted in the EU's defence planning and capability development process as this is the area where CD&E is traditionally applied within NATO. The proposed hypothesis was empirically tested by evaluating the extent to which CD&E has actually been adopted and applied by the EU. The empirical findings from the analysis of the CD&E policy practice in the EU to great extent disprove the proposed hypothesis. CD&E has actually been adopted from NATO and applied by the EU in its defence planning and capability development process under the CSDP to a very limited extent. CD&E does not provide tangible input to the main steps in the EU defence planning process in terms of determining requirements or defining capability development priorities. CD&E as a project management methodology has not been applied in EU defence capability development under the PESCO or EDF frameworks. The CD&E methodology has only been employed occasionally in EU civilian capability development in the area of disaster response. The existing CD&E elements in EU policy-making are rather examples of decoupling. Overall, there is a low degree of isomorphism and

institutional overlap between NATO and the EU in the application of CD&E. Concept Development and Experimentation seems to be an instance of institutional innovation specific to NATO.

The negative answer to the research question and the low degree of isomorphism between NATO and the EU with regard to applying CD&E is explained by a complex set of factors. The policy field of international security is far from being homogenous and major differences between the two organisations exist. CD&E has still not become a sufficiently powerful "rationalised myth" and institutional template. Paradoxically, the NATO-EU "strategic partnership" could also distort the isomorphic processes between them. The negative answer to the research question has broader implications for other international organisations in the field of international security such as the UN and the OSCE. Given that CD&E is actually applied by the EU to a very limited extent and that the EU is the international organisation with a very high level of homogeneity with NATO, then it is highly unlikely CD&E to be adopted by other international organisations in this field under the current institutional settings.

Acknowledgments

The author would like to thank the two anonymous referees and Patrick Van Hoeserlande for the valuable comments on an earlier version of this article. The author is also grateful to Peter Leitner and the whole team at SYNYO GmbH for providing excellent conditions for conducting the research under the Marie Skłodowska-Curie fellowship.

Funding

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 882055.

Disclosure statement

No potential conflict of interest was reported by the author.

Disclaimer

This publication reflects only the author's view. The funding agency is not responsible for any use that may be made of theinformation it contains.

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References

Barbu, Bianca, David Martin, and Lora Hadzhidimova, eds. 2019. *Advances in Defence Analysis, Concept Development and Experimentation: Innovation for the Future*. Norfolk, VA: Headquarters Supreme Allied Commander Transformation.

Birkler, John, C. Neu Richard, and Glenn A. Kent. 1998. *Gaining New Military Capability. An Experiment in Concept Development*. Santa Monica, CA: RAND.

Boxenbaum, Eva, and Stefan Jonsson. 2017. "Isomorphism, Diffusion and Decoupling: Concept Evolution and Theoretical Challenges." In *The SAGE Handbook of Organizational Institutionalism*, edited by Greenwood, Royston, Christine Oliver, B. Lawrence Thomas, and E. Meyer Renate, 77–101, London: SAGE Publications.

Breitenbauch, Henrik, and André Ken Jakobbson. 2018. "Defence Planning as Strategic Fact: Introduction." *Defence Studies* 18 (3): 253–261. doi:10.1080/14702436.2018.1497443.

CoE website, European Centre of Excellence for Civilian Crisis Management 2021 11 10 2021: https://www.coe-civ.eu/

Council of the EU. 2004a. *Headline Goal 2010*. Brussels: Council of the European Union.

Council of the EU. 2004b. *Civilian Headline Goal 2008*. Brussels: Council of the European Union.

Council of the EU. 2012. *European Union Military Experimentation Concept*. Brussels: Council of the European Union.

Council of the EU. 2016. *Implementation Plan on Security and Defence*. Brussels: Council of the European Union.

Council of the EU. 2017. *Council Decision (CFSP) 2017/2315 of 11 December 2017 Establishing Permanent Structured Cooperation (PESCO) and Determining the List of Participating Member States* (Brussels: Council of the EU).

de Nijs, Johannes. 2010. *Concept Development and Experimentation Policy and Process: How Analysis Provides Vigour*. (RTO-MP-SAS-081), Neuilly-sur-Seine: NATO Research and Technology Agency.

de Nijs, Johannes. 2019. "Gazing Back and Looking Forward: Why NATO CD&E?" In *Advances in Defence Analysis, Concept Development and Experimentation: Innovation for the Future*, edited by Barbu, Bianca, David Martin, and Lora Hadzhidimova, 2–22. Norfolk, VA: Headquarters Supreme Allied Commander Transformation.

Dijkstra, Hylke, Petar Petrov, and Ewa Mahr. 2019. "Learning to Deploy Civilian Capabilities: How the United Nations, OSCE and European Union Have Changed Their Crisis Management Institutions." *Cooperation and Conflict* 54 (4): 524–543. doi:10.1177/0010836718823814.

DiMaggio, Paul J., and Walter W. Powell. 1983. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review* 48 (2): 147–160. doi:10.2307/2095101.

DRIVER+. 2014. "Driving Innovation in Crisis Management for European Resilience (2014-2020) 09 08 2021," Available from: https://www.driver-project.eu/

Duke, Simon, and Carmen Gebhard. 2017. "The EU and NATO's Dilemmas with Russia and the Prospects for Deconfliction." *European Security* 26 (3): 379–397. doi:10.1080/09662839.2017.1352577.

EDA (European Defence Agency) 2018. "*Capability Development Plan Factsheet* 01 09 2021." Available from: https://eda.europa.eu/

EDA (European Defence Agency). 2020. *Executive Summary of the Coordinated Annual Review on Defence Report (CARD)*. Brussels: EDA.

EEAS (European External Action Service) 2020. "Working Document of the EEAS of 13. 05.2020. EU Military Conceptual Development Implementation Programme 2020-2021 (CDIP 20-21)."
European Commission and HR/VP. 2013. "*The EU's Comprehensive Approach to External Conflict and Crises*." HR/VP-Commission Joint Communication to the EP and Council, JOIN (2013) 30 final, Brussels, 11 December.
European Commission. 2021. "European Defence Fund 2021 Calls for Proposals, Conditions for the Calls and Annex."
European Council 1999. "Presidency Conclusions of the Helsinki European Council 10 and 11 December 1999."
European Union. 2016. *Shared Vision, Common Action: A Stronger Europe*. Brussels: A Global Strategy for the European Union's Foreign and Security Policy.
Fiott, Daniel. 2017. "The EU, NATO and the European Defence Market: Do Institutional Responses to Defence Globalisation Matter." *European Security* 26 (3): 398–414. doi:10.1080/09662839.2017.1352582.
Fiott, Daniel. 2018. "EU Defence Capability Development. Plans, Priorities, Projects?" EU Institute for Security Studies Brief 6.
Fiott, Daniel, ed. 2020. *The CSDP in 2020. The EU's Legacy and Ambition in Security and Defence*. Paris: European Union Institute for Security Studies.
Fotiadis, Apostolis. 2019. *Why are We Letting the Defence Industry Hijack the EU?* London: Guardian. December 11.
GUIDEx. 2006. *Guide for Understanding and Implementing Defence Experimentation (Guidex)*. Ottawa: Technical Cooperation Program.
Hofmann, Stephanie. 2009. "Overlapping Institutions in the Realm of International Security: The Case of NATO and ESDP." *Perspectives on Politics* 7 (1): 45–52. doi:10.1017/S1537592709090070.
Hofmann, Stephanie. 2011. "Why Institutional Overlap Matters: CSDP in the European Security Architecture." *JCMS: Journal of Common Market Studies* 49 (1): 101–120. doi:10.1111/j.1468-5965.2010.02131.x.
Howorth, Jolyon. 2017. "EU-NATO Cooperation: The Key to Europe's Security Future." *European Security* 26 (3): 454–459. doi:10.1080/09662839.2017.1352584.
Hunter, Robert. 2002. *The European Security and Defense Policy: NATO's Companion or Competitor?* Santa Monica, CA: RAND.
Interview no. 1 with EUMS official, 09/03/2021
Interview no. 2 with a representative of the European Centre of Excellence for Civilian Crisis Management, 23/03/2021
Interview no. 3 with EEAS official, 08/04/2021
Interview no. 4 with EEAS official, 08/04/2021
Interview no. 5 with EUMS official, 08/04/2021
Interview no. 6 with a representative of Fraunhofer INT, 02/06/2021
Interview no. 7 with EEAS official, 04/06/2021
Interview no. 8 with an official from DG Migration and Home Affairs, European Commission, 17/06/2021
Interview no. 9 with a representative of TNO, 18/06/2021
Jones, Ben. 2020. CSDP Defence Capabilities Development *(In-depth Analysis Requested by the Sub-committee on Security and Defence)* . Brussels: European Parliament.
Koops, Joachim A. 2012. "NATO's Influence on the Evolution of the European Union as a Security Actor." In *The Influence of International Institutions on the EU*, edited by Costa, Oriol and Knud Erik Jørgensen, 155–185. London: Palgrave Macmillan.
Koops, Joachim. 2017. "Theorising Inter-Organisational Relations: The 'EU-NATO Relationship' as a Catalytic Case Study." *European Security* 26 (3): 315–339. doi:10.1080/09662839.2017.1352583.

Koops, Joachim, and Rafael Biermann, eds. 2016. *Palgrave Handbook of Inter- Organizational Relations in World Politics*. New York, NY: Palgrave Macmillan.
Mauro, Frédéric. 2018.EU Defence: The White Book Implementation Process (*Study Requested by the SEDE Subcommittee)*. Brussels: European Parliament.
Meyer, John W., and Brian Rowan. 1977. "Institutionalized Organizations: Formal Structure as Myth and Ceremony." *American Journal of Sociology* 83 (2): 340–363. doi:10.1086/226550.
NATO TRANSNET Portal, NATO TRANSNET Portal 2021 . Community of Interest CDE365 01 04 2021. Available from: https://transnet.act.nato.int/COI/cde365/Applications/cde365.aspx
NATO. 2009. "NATO Military Committee MC 0583 Policy for NATO Concept Development and Experimentation."
NATO. 2010. "NATO Military Committee MCM-0056-2010 NATO Concept Development and Experimentation Process."
NATO. 2015. "Shaping Concept Development and Experimentation. Preparing NATO CD&E for the Challenges of the New Security Environment (White Paper Study)." Norfolk, VA: HQ SACT.
NATO. 2017. *NATO Strategic Foresight Analysis Report*. Norfolk, VA: Allied Command Transformation.
NATO. 2018a. *Concept Development and Experimentation (CD&E) Handbook. A Concept Developer's Guide to Transformation*. Norfolk, VA: Allied Command Transformation.
NATO. 2018b. *Capstone Concept – Joint Military Operations in an Urban Environment*. Brussels: SHAPE, Norfolk, VA: SACT.
NATO. 2021. *NATO-accredited Centres of Excellence 2021 Catalogue*. Norfolk, VA: Allied Command Transformation.
PESCO website, PESCO website 2021 . "Official Website of the Permanent Structured Cooperation on Security and Defence 02 04 2021." Available from: https://pesco.europa.eu/
Phelan, William. 2012. "What Is Sui Generis about the European Union? Costly International Cooperation in a Self-contained Regime." *International Studies Review* 14 (3): 367–385. doi:10.1111/j.1468-2486.2012.01136.x.
Pirozzi, Nicoletta. 2013. *The EU's Comprehensive Approach to Crisis Management*. Brussels: DCAF Brussels.
Regulation 2021. "Regulation (EU) 2021/697 of the European Parliament and of the Council Establishing the European Defence Fund."
Rester, Markus, De Groeve Tom, Alessandro Annunziato, Daniele Galliano, Andreas Hirner, Luca Vernaccini, and Stefano Paris. 2012. "Interoperability of Mobile Devices for Crisis Management. Outcomes of the 1st JRC ECML Crisis Technology Workshop." JRC Scientific and Policy Reports, Ispra: JRC Institute for the Protection and Security of the Citizen.
Reynolds, Christopher. 2010. *Understanding the Emergence of the European Security and Defence Policy. An Historical Institutionalist Analysis*. Baden-Baden: Nomos Verlagsgesellschaft.
Ringsmose, Jens, and Mark Webber. 2020. "Hedging Their Bets? The Case for a European Pillar in NATO." *Defence Studies* 20 (4): 295–317. doi:10.1080/14702436.2020.1823835.
Smith, Simon J., and Carmen Gebhard. 2017. "EU–NATO Relations: Running on the Fumes of Informed Deconfliction." *European Security* 26 (3): 303–314. doi:10.1080/09662839.2017.1352581.
Smith, Simon J., Nikola Tomic, and Carmen Gebhard. 2017. "The Father, the Son and the Holy Ghost: A Grounded Theory Approach to the Comparative Study of Decision- Making in the NAC and PSC." *European Security* 26 (3): 359–378. doi:10.1080/09662839.2017.1352578.
Sommerer, Thomas, and Jonas Tallberg. 2019. "Diffusion across International Organizations: Connectivity and Convergence." *International Organization* 73 (2): 399–433. doi:10.1017/S0020818318000450.
Van Antwerpen, Coen, and Dean K. Bowley. 2012. "An Australian Approach to Concept Development and Experimentation: Linking Strategy to Capability." *Journal of the Operational Research Society* 63 (2): 278–292. doi:10.1057/jors.2011.28.

Van Hoeserlande, Patrick. 2019. "Concept Development Success by Cultivating Chaos." In *Advances in Defence Analysis, Concept Development and Experimentation: Innovation for the Future*, edited by Barbu, Bianca, David Martin, and Lora Hadzhidimova, 119–127. Norfolk, VA: Headquarters Supreme Allied Commander Transformation.

Zandee, Dick. 2019. "EU and NATO Capability Development: Separate or Together?" In *Mutual Reinforcement: CSDP and NATO in the Face of Rising Challenges*, edited by Brustlein, Corentin, 21–32, Paris: Focus Stratégique, No. 93, Institut Français des Relations Internationales (Ifri).