



The 15th International Scientific Conference
**“DEFENSE RESOURCES MANAGEMENT
IN THE 21st CENTURY”**
Braşov, November 12th-13th 2020



**CAPABILITIES-BASED “CONFUSION”:
WHY CAPABILITIES-BASED PLANNING SYSTEMS STRUGGLE**

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Abstract

In the 2001 Quadrennial U.S. Defense Review, Secretary of Defense Donald Rumsfeld announced that the Department of Defense would henceforth use capabilitiesbased planning to guide the development of the armed forces. The popularity of the idea spread to many allied countries that also embraced the concept. However, the successful implementation of the method has been hindered by a number of factors: lack of an agreed lexicon, confusion in many defense organizations to the degree to which “threats” are used, inattention to policy priorities, heavy institutional analytical requirements, and a lack of acknowledgement of the importance money must play in any planning system. The paper concludes that whilst elements of the method are well-suited to providing objective data in support of senior leadership’s decision-making; alone, it is insufficient to drive planning, which is inherently a political process.

Key words: defense planning, capability analysis, capabilities-based planning, defense economics, capability partitions, threat-based planning.

1. Introduction

„The beginning of wisdom is to call things by their proper name.” Confucius

Although few Western defense and military officials at the time could have imagined it, defense planning was relatively simple during the Cold War. Defense planning methods could be characterized either as scenario-or threat-based. Either description was underscored by a clearly identified threat, which was quantifiable, and most countries enjoyed more or less stable defense budgets. These conditions, Builder and Dewar argued shortly after the fall of the Berlin Wall, had lulled defense planners into a state of complacency and they should get back to the business of “planning.”¹ The end of bloc tensions presented Western defense officials with the novel challenge of developing plans and convincing governments to fund them whilst they were enjoying peace dividends. In the United States, during the 1990s the Department of Defense conducted an almost endless series of defense reviews (i.e., *Base Force*, 1989–1992; the *Bottom-up Review*, 1993; *Commission on the Roles and Missions of the Armed Forces*, 1995; the *Quadrennial Defense Review (QDR)*, 1997; and the *National Defense Panel*, 1997),² to determine the size of the armed forces, as well as which capabilities they should field. A major development occurred in 2001 when the newly installed Secretary of Defense announced in that year’s version of the *QDR* that the Department of Defense would adopt a defense planning methodology that had been discussed in general terms in the bureaucracy, if not widely in the literature, “capabilitiesbased planning,” to guide the development of the armed forces. As Donald Rumsfeld wrote in the *QDR* 2001, “This capabilities-based model focuses more on how adversaries fight, rather than specifically whom the adversary might be or where a war might occur.”³

Whilst Rumsfeld avoided political difficulty by not specifying possible adversaries as either Russians or Chinese, he nevertheless initiated a debate over how to use this novel concept. The immediate question to be addressed was how capabilities-based planning was to be conducted. Paul Davis of RAND Corporation published a work in 2002 that became widely quoted that presented a model of how this new planning method could work.⁴ The Technical Cooperation Program (TTCP)⁵



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accepted it, along with a definition provided by a NATO study,⁶ as planning gospel and propagated it to defense planners in the Anglo–Saxon world, and beyond.⁷ In the absence of clear guidance as to how to use this new method, considerable debate and discussion emerged on how to implement capabilities-based planning in the Department of Defense, even with the Secretary’s published intent on how to proceed.⁸ As such, the new process did not have its envisaged effect of changing how the Department of Defense plans and executes its budgets. Early guidance as to how to implement this new way of thinking, as will be shown *infra*, was very slow in coming and not a little confusing. This could be explained by the press of events of conducting two wars (Afghanistan and Iraq), or despite the initial shock to the three military departments that the Secretary of Defense intended to change the planning system,⁹ the realities of the appropriation *and authorization* processes, firmly controlled by Congress,¹⁰ likely all combined to derail this initiative.

But the concept and its proponents the world over were not deterred, and the utility of the method continues to be preached. Many ministries of defense, general/ defense staffs, and defense analysts have studied and tried to adopt the method, as well as engage in a debate about the challenges of implementing it. Two points in this respect are worth noting. First, notwithstanding claims such as those proposed by one highly-respected defense-oriented think-tank that it constitutes the “gold-standard” of defense planning, a veritable “Copernican revolution,”¹¹ there is no agreement amongst defense planners and analysts as to its precise definition, let alone is there a commonly accepted methodology.¹² In effect, a gold-standard without a denominator of value, or a scientific discovery that cannot be replicated. Second, there is little agreement even apropos its name. It is both represented in its singular, as well as its plural, noun–form. This might appear as a distinction without a difference, but in actuality it is not: after all, what cannot be explained with precision cannot be understood with absolute clarity. As such, an appreciation of this nuance can help in understanding what capabilitybased planning is and identify its utility.

It is the intention of this essay to bring clarity to discussions surrounding capabilities-based planning, because many countries continue to experiment with it and some analysts tout its potential utility: of which the current writer is likely guilty, albeit in a different context.¹³ What the essay does not address, due to space limitations, is what type of defense planning method cleanly ties policy priorities to financial execution: this is the subject of a future work. As confusion abounds with capabilitiesbased planning, it will be argued that it is more appropriately a planning *tool*, and/or encourages *capability-based thinking*,¹⁴ as opposed to constituting a viable planning *system*. Moreover, proponents of this still to be defined planning methodology will be confounded to point to a defense organization where it has been implemented as a *planning system* and that has produced a viable defense plan that has been executed.

This essay is organized firstly to present a brief explanation of the planning method. Second, it will analyze its numerous methodological weaknesses, to include the allimportant point that the method depreciates the centrality that money needs to play in any defense planning system. The penultimate section will assess the method’s utility, as judged by its record of success, and the ambivalent views expressed by its *proponents*. The final section is a conclusion that includes some observations as to where elements of the method are very much relevant in the area of capability optimization, as opposed to acting as a *driver* of a defense *planning system*. In light of this analysis, defense officials and analysts can make an informed decision on how they can effectively utilize elements of the concept.

2. The Theory of Capabilities-Based Planning



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At the outset of this section, one must acknowledge the challenge of providing a précis of a concept for which there is no agreed lexicon. In fact, it is difficult to say with any certitude how defense institutions in the world employ it as a *planning system* given there is no agreed definition or methodology.¹⁵ A positive development is that since 2011 NATO has agreed what could be considered to constitute a (needed) taxonomy of capabilities, but whether it is appropriate for *national* requirements, as opposed to supporting multinational operations, is debatable.¹⁶ To simplify an explanation, the current author has selected an influential paper drafted by a panel of defense experts sponsored by the TTCP in 2004.¹⁷ The reason for this selection is that it provides the essence of the concept, informs defense planners, and has been widely cited as authoritative in professional and academic literature. Those readers wishing a more detailed explanation and analysis of the method are invited to read Paul Davis’s seminal 2002 book.¹⁸ Annex A presents a diagram of a basic capabilities-based planning model produced by the TTCP panel. Space does not allow for a full review of the entire process, but rather this section will cover some of the most salient aspects of the planning process which distinguishes it from other planning approaches.

The TTCP paper describing the planning process begins with interpreting national level guidance, then moves to identifying capability gaps, developing capability options, and ends with developing an affordable financial proposal. The method’s putative unique approach to planning is to ascertain what capability is needed, as opposed to what equipment needs to be replaced. Proponents of the method claim that it is a superior planning method as it addresses changing and variable strategic environments, connects strategic goals with acquisitions, provides an audit trail, encourages innovation in addressing capability gaps by deterring early equipment decision-making, and produces better information to enable informed decision-making. All of these activities are enabled by grouping capabilities from various services within clusters, or capability partitions, based around their ability to achieve specific tasks, e.g., sea control, air defense, etc.¹⁹ They are organized as clusters in order to overcome parochial service stovepipes, thereby enabling a more effective joint approach to defining capability requirements.

Thus, in theory, the method purports to further many positive practices and encourages jointly determined outcomes. But what of its methodological shortcomings? A hint can be found in U.S. Department of Defense issued guidance in 2004 requiring that when following the new, undefined, planning method, it was expected that planners would need to be both competitive, as well as collaborative, but without instructing how and when.²⁰

3. Methodological Challenges

3.1 Problematic Lexicon

Whereas there appears to be little agreement concerning what constitutes capabilities based planning in an applied environment, there is general agreement that the centerpiece of the method relates to planning against “capabilities,” vice being tied *solely* to threat scenarios. Conceptually, this should create capabilities that would be applicable to a range of missions and situations that have utility in more scenarios and cases than just the threat envisaged, which, of course, so often proves to be wrong. But even in regards to this basic methodological point, there are sufficient differences in definitions to lead to dissonance in understanding the concept. For without agreement on a lexicon, it is difficult to understand precisely how a planning method could be constructed, tested, and validated, let alone how one could develop analytical products that can be compared with, and against, others.²¹ In the absence of a common official definition, or statement of its method, the three U.S. armed services had to develop their own individual frameworks,²² and their own definitions of force–equivalency needed to meet a capability requirement.²³ One can identify three different



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published definitions of the concept. Analysis of the content of each definition’s methodology will be addressed *infra*, however, for the moment, it is critical to argue the point that there is little agreement apropos what the method comprises:

- Davis (2002): “Capabilities-based planning is planning, under uncertainty, to provide capabilities suitable for a wide range of modern-day challenges and circumstances while working within an economic framework that necessitates choice.”²⁴
- NATO Handbook on long-term defense planning (2003): “This method involves a functional analysis of operational requirements. Capabilities are identified based on the tasks required... Once the required capability inventory is defined, the most cost effective and efficient options to satisfy the requirements are sought.”²⁵
- The Technical Cooperation Programme—TTCP (2004), using both of the above definitions argues that: “CBP provides a more rational basis for making decisions on future acquisitions, and makes planning more responsive to uncertainty, economic constraints and risk. CBP provides a framework to support analysis and facilitate risk management. It focuses on goals and endstates and encourages innovation.”²⁶

Whilst it is clear these definitions are not in agreement in detail as to how capabilitiesbased planning should take place, they do share a number of commonalities. First, as the different definitions demonstrate, over time the NATO Handbook and the TTCP definitions place more detailed emphasis on how to optimize choices, albeit by proposing different approaches to achieve this goal. Second, whilst there are plenty of “whats” capabilities-based planning should do, there is precious little space given to the “how” the method can be used as a defense planning system. Third, none of them are authoritative, and therefore do not enjoy any form of official sanction.²⁷ In fact, few defense organizations have established formal definitions: NATO²⁸ and the United States²⁹ does not, whereas Canada does, albeit within the context of force development.³⁰ Fourth, according to Davis and the TTCP paper, the planning method uniquely addresses “uncertainty,” but it is not made clear how this is addressed. This likely explains why there is some confusion of the degree to which threats are used in capabilities-based planning (*vide infra*). Fifth, of the five countries that make up the TTCP, it should be noted that all of them have “embraced” the concept, but at the same time have implemented it differently, thereby adding to the confusion of what precisely is contained in the method.³¹ As late as 2004, an international working group of defense experts argued that without a U.S. Department of Defense agreed capability taxonomy, comparisons across capability partitions (a key strength of the method) were all but impossible to make. Yet, by the Secretary of Defense’s direction, the planning process had to be used by the entire Department of Defense for budgets, force development, acquisitions, and adaptive planning.³²

3.2. Capabilities vs. Threats?

The advocates of capabilities-based planning almost from its inception have struggled with a vexatious problem of semantics in arguing that it was more effective in addressing “uncertainty” in a country’s strategic environment. Both the 2001 *QDR* and Davis argued that capabilities-based planning has the advantage of addressing uncertainty, which many took to imply that the method does not acknowledge the need to plan against threats. After all, if there is “uncertainty”, then, by definition, threats are not officially sanctioned, because they remain “uncertain.” Yet, Davis rightfully argues that it is a fallacy that the methodology does not include within its logic the essential need to address threats, in fact, he argues that they are an integral element of the method.³³



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Whilst he is certainly correct to argue that “...history shows defence planners are rarely right when it comes to positioning for and predicting future events and threats,”³⁴ he argues further that the method is superior in addressing a wide range of threats, without explaining how this is superior to other planning methods.

Clearly, the issue of planning for uncertainty, whilst still using scenarios, could present a complication, indeed, a contradiction, for planners. The importance of how threats are treated in defense planning extends beyond their operational utility, but is an issue of high political importance in any form of governance. Whilst planning to create “capabilities” in a defense force makes eminent sense, care must be exercised to ensure that they are not assessed in a politico–military vacuum, obviating context which could make them intangible. Worse yet, it could undermine accountability given that planning for an uncertain future provides a convenient excuse for mistakes. Pity a minister of defense arguing the case within the cabinet for an expensive “capability” that *could* have utility against possible threats in an uncertain future.³⁵ In fact, one could question how many countries have the resources and the need to plan continuously against threats, uncertainties, *and* generic possibilities (a key element of capabilities-based planning),³⁶ thereby making this planning method appropriate to their requirements. Rather, Treverton makes the perceptive argument that advocating for capabilities premised on threats should put the onus squarely on a parliament to approve or disapprove defense procurements, thereby rightfully assuming risk.³⁷ Or, as Colin Gray presciently argues, “It is not impossible to conduct defence planning in the absence of an obvious enemy, but to do so tests the credibility of politicians and their voters in democracies, usually beyond the bounds of prudence.”³⁸

The TTCP method argues that capabilities-based planning provides a more rational basis for decision-making in that it addresses more comprehensively acquisitions, uncertainty, finances, and risks.³⁹ But, in reality, it runs the risk of removing the strategic context for the rationale for developing needed capabilities by inadvertently depreciating their political meaning and utility, and by extension, undermining the *raison d’être* of a defense force. In its most extreme form, planners are expected to plan capabilities (“for a wide range of challenges”), which are then to be employed on operations against unvalidated threats. This runs the risk of removing the strategic context for developing capabilities by failing to demonstrate their near-term military relevance to a government: presenting an attractive argument for any rapacious minister of finance looking at the armed forces for “efficiencies.” Clearly, a prudent defense institution would be wise to eschew any financial arguments in a political forum based on procuring generic capabilities if validated threats are at hand.

Finally, it has to be acknowledged that it makes little sense that threats are somehow diminished as planning factors given that the method employs scenarios to ascertain capabilities gaps.⁴⁰ Although it has been argued that one could construct scenarios that do not assign aggressive intent,⁴¹ this assertion is weak given that such a method would surely remove any politico–military context from the analysis.⁴² The TTCP methodology argues that in using scenarios, the more the better is essential.⁴³ One group of experts observed when assessing the degree to which threats are addressed in this planning method, even something as innocuous as a “training standard,” can be tied to a reaction to a threat.⁴⁴ In short, irrespective of the argument for using uncertainties and generic threats in the method⁴⁵, it would appear to be dependent upon the employment of threats in order to produce viable capability gaps.⁴⁶ It is, therefore, confusing that some analysts make the argument that there is somehow a binary choice between capabilities-based planning and threat-based planning, thereby failing to acknowledge the nuanced nature played by threats in capabilities-based planning.⁴⁷



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3.3. How Are Priorities Addressed?

With acknowledgement to Jane Austen, it is a truth that *should be* universally acknowledged that all defense organizations struggle to determine priorities. It is challenging because priorities are, by definition, zero-sum. And as such, they are inherently *political* and constitute the most important instrument of policy. The TTCP method proposes a clean, if not scientific, method whereby priorities are derived from strategic guidance, which is followed by an optimization process that presents defense officials with a range of solutions.⁴⁸ A group of defense experts, implicitly agreeing with the TTCP methodology, advocates addressing priorities as the penultimate planning step in order to create a capability plan⁴⁹ (see Annex A). The issue of addressing priorities when employing capabilities-based planning would appear to be challenging. In one case study, the author found that linking priorities to requirements was a major weakness in the New Zealand defense organization. Across the Tasman Sea, the Australian Department of Defence struggles to ensure that priorities are expressed in capabilities.⁵⁰ In the case of the Canadian Department of National Defence, the study found their planning method (modeled on the TTCP’s method), was incapable of connecting “long-term future strategic issues, defence priorities and consequent investments...little justification is made for the high-end capabilities contained in the investment plan.” Finally, when assessing the U.K. Ministry of Defence’s planning method, the author was all but scandalized commenting that the “defence budget determined the capabilities available. This runs counter to the TTCP model...”⁵¹

Seemingly missing in these capabilities-based planning methods is an appreciation that priorities, as expressions of policy, should constitute the *sine qua non* of a planning system, which may explain why the New Zealand, Australian, and Canadian processes have struggled to implement the method as a key driver of their defense planning systems (*N.B.*: using elements of it for force development being another issue, to be addressed *infra*). Albeit a methodological heretic, the U.K. system nevertheless produces policy-endorsed capabilities. Encouragingly, a working group in 2006 identified two successful methods of expressing capability priorities through scenarios and identification by senior leadership, using the results of scenarios. Whether either of these methods have become widely used is unknown.⁵² The issue of the financial realities of priorities will be addressed *infra*. But with a small degree of foreshadowing, one may surmise that one of the key reasons why these three countries have struggled with the method is that planning logic is not being driven by *costed* priorities and leave addressing the financial consequences of their analysis at the end of the planning process (e.g., Canada).⁵³ One would be prudent to predict that options developed in this manner would be rarely financially acceptable.

3.4. Institutional Requirements

Despite the lack of a common planning methodology, let alone a definition of the concept, some advocates of capabilities-based planning have suggested that it remains a viable method, suitable for emulation. Interestingly for a planning method, advocates suggest significant institutional requirements that are essential if the process is to function. Some of these requirements are seemingly innocuous and eminently reasonable, e.g., a joint planning culture and a dedicated planning staff with analytic capability,⁵⁴ to which one could add that defense forces training concepts which are premised on capabilities. Additionally, one author claims that the U.S. experience in implementing capabilities-based planning demonstrated the need for a well-designed decision-making process.⁵⁵ But surely these organizational attributes would be needed in any functional defense organization. However, advocates of the method also argue the need for unique requirements. De Spiegeleire observes that small defense organizations have the challenge of not



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possessing the necessary planning tools to support the analysis required by the method.⁵⁶ Indeed, along with his co-authors of an intriguing study of modern defense management practices, he argues that there may well be a critical mass threshold, below which the method may simply not be supportable.⁵⁷ This is intuitively correct, but how small is “small”? They cite the example of the “small” Australian defense organization as being able to use the method successfully.⁵⁸ The use of this organization may not be apposite. It is hardly modest, enjoying a defense budget of A\$37.8 billion for financial year 2020, and some 57,200 personnel.⁵⁹ Conversely, as found in the *First Principles Review*, Australia struggles to express priorities as capabilities.⁶⁰ Clearly, more research and analysis is needed to determine the institutional expertise needed to employ the method effectively.

Related to the question of institutional critical mass is the factor of time. In case of Canada, the Department of National Defence constructed an elaborate strategic capability roadmap that was envisaged to be reissued in a 3-year cycle.⁶¹ One study makes the argument that for the method to be useful, it must look at least two years into the future. As most governments operate on one-year budgets and as it would be infeasible to change a previous year’s budgetary allocation, planning must be completed far enough in advance to be expressed in that year’s defense budget.⁶² This seemingly reasonable requirement is problematic on two levels. First, it assumes that the practice of long-term planning is valid⁶³, which evidence from the experience of many countries in central and eastern Europe has proven not to be the case,⁶⁴ and which is viewed with skepticism by many U.S. Air Force senior leaders.⁶⁵ Second, one has to ponder how a planning method that plans out multi-years (as opposed to controlling for long-term financial obligations)⁶⁶ could possibly be responsive to policy changes, let alone be responsive to operational commanders *in war*.

3.5. Show Me the Money!

The last planning methodological challenge a review of the literature reveals relates to the all-important issue of money. Gray is certainly correct in observing that, “The *lingua franca* of defence planning has to be money, not strategy.”⁶⁷ In addressing the issue of finances, there are two issues which impede the method’s successful adoption: the need for financial guidance and solving the vexatious issue of how to design capability partitions. As to the former point, the general approach to capabilities-based planning, which is found in the TTCP paper, begins with “overarching guidance,” but no mention is made of the need for determining financial ceilings, priorities, policy proscriptions, etc.⁶⁸ As mentioned *supra*, the TTCP model addresses the budget as the penultimate (financial constraints) and final (affordable capability plan) steps in the planning process, which in itself is proper *if* the process begins with clear financial guidance. Davis acknowledges that the method has been critiqued in the U.S. Department of Defense because its advocates have been able to use it to identify shortcomings, but then have asked for additional funding without leadership making hard choices, thereby being decried as a blank-check approach.⁶⁹

One study group noted that costs and cost-effectiveness were generally absent from discussions on the planning method and are only considered in different processes. Even three years into the United States’ putative use of the concept, there was still no agreed common method to cost accurately “capabilities.”⁷⁰ What is revealing is that neither the 2001 *QDR*,⁷¹ nor the important 2004 *Joint Defense Capabilities Study* (Aldridge team)⁷² commissioned by the Department of Defense, addressed how the existing U.S. defense budget system and the three autonomous military departments were to be reconciled with this new planning methodology.⁷³ Apparently, in the case of the United States, the issue of how the budget was to be realigned to facilitate the operation of this new planning method was never reconciled, in large part due to the lack of agreement on how



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planning was to be conducted.⁷⁴ Other defense institutions soon discovered existing weaknesses in their respective planning systems when they tried to adopt the method. For instance, inadequate or not properly referenced cost models, or a failure to use life-cycle costs in the case of Australia⁷⁵ and Canada,⁷⁶ impeded the implementation of the method. Nor are these challenges limited solely to these sophisticated defense organizations. According to De Spiegeleire, “...in many countries the defence capability development community (with defence staffs in the lead) has for a long time been separated from the defence costing community (primarily in the acquisition and the finance/control community).” He suggests that the adoption of life-cycle capability management, could solve this challenge, without explaining how.⁷⁷ Yet another expert notes that apportioning costs of platforms across multiple capabilities likely will be arbitrary, and as such, acknowledges that costs perforce will be inaccurate.⁷⁸

As to the second point, the key issue of how capabilities-based planning addresses the critical importance of *money* is the likely reason why implementation has proven to be difficult, *as a planning method*, where it has been attempted. As two analysts observed, ... *CBP [capabilities-based planning] may not effectively incorporate the resource dimension of capability. Here, the complex interdependence between [sic] the key resource constraints of financial capital, human capital and time needs to be understood so as to tackle fundamental problems.*⁷⁹

Thus, arguably one of the method’s most compelling attractions may well include an inherent weakness that impedes its successful adoption. By this, the method’s strength is that it was designed to empower “jointness,” as well as avoid the over-specialization of defense forces and the predictable practice of “stove-piping” in their own environmental planning.⁸⁰ Without doubt, this is a laudable objective, however, good intentions have apparently met an impasse when capabilities, which are envisaged to span environments and organizations, need to be connected to budgets.⁸¹ This may appear to be a mere budgeting issue, but in reality the source of the problem is more conceptual in nature. When developing capability partitions, which are needed to organize budgets, officials are confronted with the problem of deciding where to send the money. How can one fund a task that feeds multiple capabilities or conversely, fund a capability that can support various and different missions?⁸² Moreover, according to one author, the method does not support innovative operational and functional concepts, particularly in the case of the U.S. Department of Defense, where its three military departments exist in splendid financial isolation from each other.⁸³ Indeed, Caudle’s optimistic assertion that this planning process uniquely “links procurement decisions to strategic goals and provides an audit trail for accountability” is simply difficult to accept in the baronial U.S. Department of Defense.⁸⁴ Individual services understandably are resistant to initiatives to transfer money to “joint” missions, given that they have more confidence in their own methods to address risk in their battlespace.⁸⁵ In consequence, the method generates an abiding tension as capabilities are envisaged to be executed in a joint environment, but budgets are allocated to services.⁸⁶ The case for, and need to, continue to operate the fleet of A-10 Thunderbolt II closeair-support aircraft by the air force for the army, is a case in point.

The TTCP paper outlines the many challenges well, but falls short of providing advice on how to organize a defense budget using capabilities-based planning. As stated, the problem is that capabilities are not nicely defined and discrete amalgamations of command and control, equipment, personnel, and training that can be individually funded as they can span numerous organizations and even constitute parts of other capabilities. The paper’s authors acknowledge that they have not seen an ideal solution to the problem, but that some partitions they have studied are worse than others. As the paper describes the challenge: “once information has been elicited within the partition it must facilitate aggregation to allow for whole of force considerations, or easy translation if the capability is used in a different partition.” Easy to describe, but incredibly difficult to achieve, as a solution has



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apparently yet to be validated. The paper suggests that it might be useful to develop a common partition method, whilst a case could be made to use different methods designed to meet the unique requirements of different types of capabilities. But if the latter solution were selected (which is likely the easiest), the method loses one of its main conceptual strengths: its ability to facilitate cross-comparisons of different capabilities.⁸⁷

Alas, it gets worse. One group study published in 2019 (some 15 years after the TTCP working group identified the partition's issue as being a major problem), both argued the viability of capabilities-based planning, but acknowledged that they have yet to find a *partition method that might constitute a best practice*. The authors then inexplicably argue that the implementation of capabilities-based planning is *dependent* on the adoption of capability partitions.⁸⁸ Given that partitions are a *sine qua non* for the planning concept to be adopted and yet no such “best practice” exists, it is difficult to understand how this planning method could possibly be considered valid. Confusion is compounded by their argument that a program structure is an “inherent requirement to link capability plans to the budget.”⁸⁹ But absent a viable capability partition, which they acknowledge they have yet to discover, this simply does not seem possible, nor even needed. De Spiegeleire argues in his two influential works on the subject that traditional means of budgeting across services is incompatible with the planning method, and therefore argues that some countries are cutting up their partition schemes into more manageable sub-areas, to include developing more functional partition schemes (e.g., mobility, strike) that either replace, or complement, existing service budgets. Such solutions are both intriguing and attractive, but alas, he offers no details, or hard examples of successes.⁹⁰ One possible success in breaking this budgetary impasse could be the case of the Australian practice of designating one capability manager, as a whole-of-enterprise agreed position, which allows for the apportionment of resources funded by one budget.⁹¹

It is difficult not to conclude from assessing the inability of capabilities-based planning as a *planning system* to address budgets that the concept cannot be easily adopted. Surely, the most important role of any defense planning process is to optimize however much money has been allocated to the defense budget, and thence to execute it. Rather, capabilities-based planning appears to exist in a space that is isolated from the realities of developing a financially-supportable defense plan. Evidence of this distance between these planning aspirations and budget realities can be found in the work by Davie. He argues that in the seven countries⁹² he studied that employ capabilities-based planning, he discovered that they largely comply with the TTCP “template”, constituting a “global defence planning standard.” Yet, with almost near incredulity, he acknowledges at the same time that “defence investment outcomes often differ from those generated by this capability based model” and, “...final capability outcomes are either at odds with CBP generated recommendations and/or inconsistent with preceding stages of the CBP process.”⁹³ Evidently, defense political leadership and policy officials across these countries are skeptical with the recommendations produced by this method, one suspects, due to its inability to link proposed capabilities with the budget that expresses priorities in a language they can understand.



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4. Determining the Utility of Capabilities-Based Planning

This essay, heretofore, has laid out the many methodological challenges that have confronted countries attempting to introduce capabilities-based planning into their defense organizations. With this background in mind, it would be useful to assess which of the aspects of the method are valuable, and therefore, can support the development of viable defense plans. Upon careful review of the method and the wellintentioned efforts of its advocates, one judges that there is great value in elements of it, but these useful techniques must be carefully identified, and most importantly, their limitations need to be identified. One can acknowledge four key aspects of the method that need to be assessed individually.

First, as one could imagine coming from the massive U.S. Department of Defense, any planning method it develops would be, perforce, optimized for U.S. requirements. Therefore, one could also predict that it will be highly complex and decidedly nuanced. It is little wonder, therefore, that the method requires a critical mass of highly-trained and -experienced military and technical experts to be able to conduct the necessary analysis (e.g., operations research) to inform decision-making.⁹⁴ This is no minor requirement when one of the key elements of the method is to address generic adversaries, as well as “capabilities” that might be employed against an armed force.⁹⁵ One would think that the U.S. Department of Defense would be well-prepared to execute this level of analysis. Surprisingly, this is not the case. Some three years after the publication of *QDR 2001*, a group of U.S. and allied defense officials, officers, and analysts ostensibly involved in capabilities-based planning complained that, “The theologians of CBP have a responsibility to explain the principles of CBP in clear, concise English.”⁹⁶ Davis rightfully argued that the Department of Defense would need to change in order to equip itself with the ability to conduct successfully this type of planning.⁹⁷ One study of how the U.S. Navy could adopt this planning method argued in 2005 that the “Navy has not yet developed or acquired all of the analytic tools needed to address this type of portfolio-management issue.”⁹⁸ Admittedly, the Department of the Navy has been slow to adopt an effective planning, programming, budgeting, and execution system (PPBES) method used within the U.S. Department of Defense to enable it to connect policy priorities more closely to its budget.⁹⁹ However, that the world’s largest navy acknowledged that it did not have the necessary staff and analytical capability to undertake this systematic level of analysis is significant. If the Department of the Navy judged itself incapable of conducting this level of analysis, how can any other defense organization do so? The fact that the Australian and the Canadian defense organizations, at least according to the literature, struggle to implement the method should obviate suggestions that it can be adopted by many other defense organizations.

Second, this planning method has a decided orientation towards the future, as opposed to being concerned with current operations. One group of experts argue that the method explicitly does not address current operational challenges, arguing that this is the responsibility of commanders¹⁰⁰ (assuming, of course, they have the authority to “fix” problems and the resources to do so—a big assumption in many countries).¹⁰¹ Therefore, one might be forgiven to see within the method shades of the Department of Defense’s PPBES, at least in terms of its future orientation. Thus, there is an almost myopic focus on developing capabilities, which suggests a planning alignment with acquisitions, as suggested by Gaffney.¹⁰² Far from seeing this as a strong point, Filinkov and Dortmans identify the fixation on acquisition as one of its conceptual shortcomings.¹⁰³ Whilst it would be understandable for any planning system to emphasize obtaining appropriate capabilities for the armed forces, to all but ignore current operations is imprudent for two reasons. Firstly, a planning system oriented largely towards acquisition runs the risk of becoming irrelevant in periods of crisis and war. It is a legitimate question to pose how many defense organizations can realistically assume



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that they could manage two planning systems (for acquisitions and operations) as does the United States (i.e., PPBES and Overseas Contingency Operations supplemental appropriations)?¹⁰⁴ Secondly, a *defense planning system* that is not focused on current operations, but rather some distant, undefined future, runs the serious risk of producing false positives, e.g., the introduction of PPBES during the Vietnam War. A review of the arguments of how PPBES was enabling the United States to fight successfully in Vietnam (ca. 1971)¹⁰⁵ by two of its creators should provide salutary caution against planners focusing too much time and energy on acquisitions and the long-term.

Third, the proposal to use “capabilities” as opposed to platforms and systems as a unit of force development and management is quite laudatory. Arguably the most lasting, and irreversible, contribution made by advocates of this method has been to create *capability-based thinking* to help planners break out of their platform and environmental conceptual shackles. Here, De Spiegeleire and his colleagues are only partially guilty of overstatement that the introduction of capabilities as a measure of output is arguably the equivalent of a “Copernican revolution” for defense planning.¹⁰⁶ As rightfully identified by the authors of the TTCP manual, such a logic starts the discussion of requirements by “...asking questions regarding *what do we need to do* rather than *what equipment are we replacing*.”¹⁰⁷ But, this description, whilst more than valid, cannot alone constitute a defense planning system. Rather, the cold, analytical, and objective answers to the question of what is needed are within the realm of force development, vice defense planning. Indeed, one group of experts in defense planning openly state that their capabilities-based planning model “focuses on force development,”¹⁰⁸ a view all but echoed by the TTCP¹⁰⁹ and Canada.¹¹⁰ A group of Canadian defense researchers in one technical paper discuss how “A genetic algorithmbased optimization tool produces solutions offering best value for money and these preferred options form the basis of a 20–year roadmap (the SCR [Strategic Capabilities Roadmap]).”¹¹¹ Here, we can identify how a promiscuous and imprecise use of nomenclature can lead to confusion. This is a description of “capability analysis”, now an essential *tool* in modern force development planning, and cannot on its own constitute a *defense planning system*. Rather, if we return to the subject of grammar, one can argue that the concept’s use of the singular noun–form is where the concept’s true and deeply important value can be found, i.e., as constituting an analytical *tool* employed in optimizing capability options, and not purporting to be a *defense planning system* since the method’s recommendations cannot be accurately calculated, let alone connected to the budget. Once again, Gray provides a sagacious observation of the true political nature of *defense planning*: “Much about defence can and needs to be analysed with quantitative methods. But the higher reaches of policy and strategy do not lend themselves to conclusive scientific analysis metrically verifiable by testing. Human political judgement, individual and collective, friendly and hostile, can make a mockery of rational process with its frequent domination by all too subjectively unreasonable intent.”¹¹²

By defining and keeping the process within a highly rational, analytical, and algorithmic realm, the proponents of capabilities-based planning have perhaps inadvertently contributed to its undoing. Given that planning is political, as it has to address “money” (after all, one cannot buy half a radar), expectations have been created which have been difficult to produce.

Fourth, and finally, can one point to instances where capabilities-based planning, *as a planning method*, has been successfully employed? Here, hard examples are difficult to find. However, there are some instances that can be reviewed (some by its advocates) which can support speculation about the method’s degree of success. The reforms to the NATO Defense Planning Process in 2009, which were envisaged to base alliance defense planning on capabilities (in the form of discrete capability targets, in place of general force goals), all managed in a multinational forum, did not have its envisaged effect since countries can weasel out of meeting their commitments with little political consequence.¹¹³ In effect, yet again, capability aspirations are systematically stymied



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by the realities of national and international politics and money. NATO Defense ministers agreed in October 2016 to a revised method that has the objective of bringing greater discipline to the process.¹¹⁴ The authors of *Closing the Loop* identified that in the subject countries that they assessed (and one NGO), that the “main tenets of CBP now seem fully internalised by the main defence referents,” albeit precise methods vary across the subjects reviewed.¹¹⁵ But at the same time, De Spiegeleire and his co-authors acknowledge that the process has yet to be fully realized.¹¹⁶ In another publication, De Spiegeleire admits that whilst the concept is arguably revolutionary, “its actual impact on force structures has been underwhelming.”¹¹⁷ His explanation for the lack of success is revealing. As he writes, The potential analytical power of CBP has so far not proved a match for the much more potent constituencies (political, bureaucratic, industrial and others) that drive capability planning. Any objective observer cannot but be surprised by some of the choices that still come out of our current, supposedly more “rational,” CBP processes.¹¹⁸

This is hardly a ringing endorsement of capabilities-based planning *as a defense planning system*.

5. Conclusion

The observation that most countries continue to practice “marginal planning,” as opposed to capabilities-based planning, is likely more accurate than inaccurate.¹¹⁹ Whereas a number of countries have attempted to adopt the latter method, there is no evidence that it has taken hold. One can identify other reasons for the failure of the method to be implemented. The method, like programming, is human resourceintensive, due to the heavy need for producing objective analysis of capability options.¹²⁰ That the U.S. Department of the Navy identified it lacked expertise to use the method successfully, should give other defense organizations serious pause when considering its adoption. From a policy perspective, one can speculate that the method has failed to be institutionally internalized as it has elevated to the national level, which is inherently political in nature, a technical method which is optimized for decisionsupport, and cannot act as a *defense planning system*. Additionally, practitioners and proponents of the method have been unable to address successfully how to employ calculated priorities in the planning process. The fact that costs are considered at the end of the generally-accepted generic planning process is telling. To be sure, the method is ideally suited to contributing to the debate and formulation of capability options. But these data, by themselves, are incapable of replacing the political nature of defense planning and policy decision-making where discussions are more often about finances, as opposed to strategy.¹²¹

Given its value in supporting decision-making, it is appropriate to pose the question in which countries should the method be adopted? One could argue that most countries likely have a good idea from where threats could possibly emanate. Yet, capability analysis would nevertheless be an essential tool to ensure that an adversary’s full complement of capabilities is acknowledged, if not addressed. The original argument

(put forth in the 2001 *QDR*) that it was envisaged to address generic threats and to base planning assumptions on countering “capabilities”, vice explicit threats, does not obviate in the least the contemporary utility of capability analysis. However, it is unrealistic for many countries with armed forces equipped with legacy equipment and/ or which are cash-strapped, to experiment with the



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method either as a defense planning system, or even use extensively capability analysis. In addition to the need for highly trained and experienced experts to generate useful data, the method's focus on the long-term and acquisition should preclude its adoption by countries that need a defense planning system that can function through escalation (peace, tension, crisis, war), and thereby obviate the need for two planning systems. It is a truism amongst professional armed forces that in peacetime one uses processes and assumptions that can function in wartime conditions. As a planning method, capabilities-based planning is not designed to meet this standard.

Finally, the utility of a defense planning method that does not enjoy a common definition, let alone even an agreed planning methodology, is problematic. As it enjoys neither, as a defense planning system it runs the risk of being defined *as being anything, to anyone, and anywhere*. It is likely because of all the reasons cited *supra* that, in the end, its most troublesome challenge as a *defense planning system* is that it has not been able to develop robust capability partitions, as well as producing accurate costs of capabilities, a *sine qua non* for any effective planning system. Failing to make full provision of the need to work within a strong policy-framework and a planning system driven by financial priorities, has produced a method akin to Frederick the Great's observation that "diplomacy without arms is like music without instruments." Thus, whichever planning method is used, it will be unsuccessful if it fails to connect policy priorities to financial execution. As Hicks so presciently noted about defense planning, the key challenge is to "...focus on improving our ability to prioritize investments in light of realized requirements and possible threat, concept, and capability evolutions."¹²² "Capability analysis" can most definitely contribute and arguably improve aspects of most defense planning process, but it certainly cannot drive it, let alone be at its center.

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