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## THURSDAY SESSIONS VOLUME II

### **The Case for the Development of a Theoretical Framework for Defence Acquisition**

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## Panel 14. Trends and Risks in the Global Industrial Base

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Thursday, May 15, 2014	
11:15 a.m. – 12:45 p.m.	<p><b>Chair: John Birkler</b>, Senior Fellow, Manager, Maritime Programs, RAND Corporation</p> <p><b><i>Defense Contracting Trends by Platform Portfolio</i></b> David Berteau, Center for Strategic &amp; International Studies Rhys McCormick, Center for Strategic &amp; International Studies Gregory Sanders, Center for Strategic &amp; International Studies</p> <p><b><i>The Case for the Development of a Theoretical Framework for Defence Acquisition</i></b> Kevin Burgess, Cranfield University Thomas Ekström, The Swedish National Defence College</p> <p><b><i>Identifying and Mitigating Industrial Base Risk for the DoD: Results of a Pilot Study</i></b> Sally Sleeper, OUSD(AT&amp;L) Manufacturing and Industrial Base Policy Gene Warner, OUSD(AT&amp;L) Manufacturing and Industrial Base Policy John Starns, Northrop Grumman Inc.</p>



# The Case for the Development of a Theoretical Framework for Defence Acquisition

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## Abstract

While the term *defence acquisition* is widely used, just what disciplines and content areas that should be included under this term have not been extensively explored. This paper discusses the preliminary results of a pan-European working party of defence academics based in Sweden, Germany, and the UK. This group sought to surface the research issues requiring analysis greater in order to determine what constitutes defence acquisition. They then sought to define the strategic implications that follow for defence in respect to areas such what theoretical stance or stances should inform defence acquisition, how to accelerate the creation of relevant knowledge to improve the professionalism of defence acquisition specialists, how to manage the shift from a goods-centric to a service-centric procurement focus, the new roles and relationships required between government, the higher education sector and defence industries in order to operate effectively in a globally integrated defence economy, optimal policy frameworks and ethical issues. The overall value of the paper is that it helps set a framework to direct and harness future research and educational activities in defence acquisition. In so doing, it provides opportunities for researchers and educators to make more effective use of their limited resources.

## Introduction

The widespread adoption of the neoliberal agenda by the vast majority of western styled governments over the past 30 years has resulted in defence organisations handing over ever more of their activities (including many once considered to be core to the military), to the private sector. As a result, defence acquisition has taken on an increasingly important strategic role in terms of the delivery of military capability. There is a widely held view that the global financial crisis was in large part due to the adoption of neoliberalism (Monbiot, 2013). Irrespective of the validity of otherwise of this claim, what is clear is that this crisis has further strengthened the outsourcing movement in defence. Globally, governments (e.g., U.S. and UK) forced to reduce defence budgets have generally chosen to place even greater dependency on market based solutions to fill capability gaps. The speed at which these reforms have been introduced and implemented has been such that a deeper intellectual understanding of what has occurred, and still is occurring, in defence acquisition, has lagged well behind practice. Many of these reforms have been so profound that they have fundamentally changed the defence-industry relationship to the point of determining the very nature of the types of wars that defence organisations can conduct (Kinsey, 2007).



Given these developments, there is both a compelling and an urgent need to redress the present theory-practice imbalance. This paper contends that the starting point to address this imbalance has to be the development of a far deeper theoretical understanding of the full range of implications associated with past, present and future defence acquisition practice, than what is currently in place.

Our review of extant defence acquisition literature led to the conclusion that it is very rich in historically descriptive case studies and seemingly endless reports, developed by auditors, practitioners, and consultants, defining what actions need to be taken in order to improve performance. While empirical studies were less common, the issue of concern is not that these studies are lacking in number, but rather that collectively they appear to lack any unifying coherent theoretical framework. Despite attempts to the contrary, we could only find scant descriptive and prescriptive literature on which theories either currently do, or should, respectively, inform defence acquisition. Anecdotally, the literature appeared to take a binary stance in respect to knowledge in defence acquisition. Utilisation of declarative knowledge, “proceduralised” into activity-based descriptions, which could lead to the accomplishment of practical actions, appeared to be highly valued. This approach is consistent with trends in knowledge management practices in general, which exhibit a strong focus on creating tools, methods and instruments for manipulating existing knowledge (Jakubik, 2010). The general absence of theoretical models which seek to bridge the metaphysical space between abstracts concepts and practical outcomes suggests either an ignorance or lack of interest in such topics. If caused by the latter, then this is presumably based on a belief that such knowledge is not relevant and its absence is unproblematic. We take a very different view and argue that the present approach taken to the knowledge used to inform defence acquisition is problematic. This is because all methodologies, including practical ones, come with some sort of philosophical and theoretical baggage. The debate on the epistemology of practical knowledge demonstrates that to ignore or misunderstand the implications of this” baggage” has potentially profound impact upon practice (Easterby-Smith & Lyles, 2011; Jakubik, 2010; Hackley, 1999; Palermos & Pritchard, 2013). Given the increasing important role of defence acquisition, it is our assessment that the risks associated with ignoring theoretical aspects of defence acquisition are too great to be ignored. While the application of codified knowledge, creativity, lessons learned based on trial-and-error, on-the-job learning and experience will unquestionably make a significant contribution to the development of expertise, there is also a need to explore how expertise could be acquired, promoted and fostered through systematic research and theoretical learning. A prerequisite for such theoretical learning is that a well-developed theory either already exists or at least is being developed through systematic research.

Having briefly outlined the importance of theory relative to sound practice, our motivation for this paper is to redress the present bias we perceive in the practice-theory divide. We believe that this imbalance is problematic in several ways. The most obvious problem is that defence acquisition professionals are already, and will increasingly, be called upon to use their expertise in order to make ever greater judgements in defence acquisition matters. The risks of doing so without a coherent, well developed theory include: poor decision making, which given the increasing role of acquisition have greater potential for adverse consequences; loss of credibility with key stakeholders, who may then turn to seek advice from those who have less knowledge but superior influencing skills; and, perhaps most critical of all, that without a theory to guide and direct research, it will be difficult for defence acquisition to make sustainable improvements in order to meet present and future challenges.



The reasons for the existence of the research problem, as we have defined it, around an imbalance between theory and practice in the present acquisition body of knowledge, are doubtless very complex. However, one recurring theme that we have observed is that this privileging of one side appears to be built on a false assumption (perhaps not always conscious) that a choice can be made between theory and action in practice. Furthermore, the latter assumes that no theory is required, since the common sense of practitioners delivers the practical outcomes required. However, taking a perspective based on “common sense” alone, rather than one based on theory complemented by systematic research, has considerable inherent risks. While not claiming that common sense is wrong, it does tend to reinforce, rather than challenge, the existing order (Karlsen, Øverland & Karlsen, 2010). An additional risk is that common sense tends to end up with a black box methodology, accessible to a few, thereby making it difficult to reflect critically, or transmit the knowledge to others. While skilled professionals will always have great stores of tacit knowledge, this does not diminish the need to make as much of it as possible explicit. Therefore we take the view that the real choice confronting defence acquisition is not between action and theory but between theory and bad theory. Given this stark choice, our concern is to work out how to ensure the theory used and developed is a good theory.

The complexity, uncertainty and ambiguity of defence as a whole and therefore its core functions, including its acquisition activities, are so large as to make it clear that developing a theory for defence acquisition is going to be a complex and difficult task. It will, most likely, require several years of intensive work. Therefore this paper does not seek to provide an answer as to what theory or theories should inform defence acquisition. Rather its purpose is to explain the elements of a speculative framework, which could be used to help generate a more comprehensive theory. To that end it outlines some of the preliminary steps which could be made to eventually inform and generate more effective outcomes in defence acquisition. While we will persist with the use of the term *framework* throughout this paper, the use of such a term does imply a conceptual coherence. It is not our intent to suggest that what follows is coherently sophisticated as what we offer are our seminal thoughts on this matter. Strictly speaking, what follows is probably better described as a prolegomenon rather than a conceptually well-constructed framework and most definitely nothing like a finished theory. The overall purpose of this paper therefore has much more to do with identifying areas for future research, which can then help in developing an explanatory theory of defence acquisition.

## Literature Review

The overall research approach taken would be more accurately defined as using a grounded theory method, as distinct from the application of a grounded theory methodology which imposes far more methodological constraints. Therefore, in the strictest sense the research did not need to, nor did it start off with a literature review. Rather it involved a series of on-going discussions over a six month period between European academics and practitioners (drawn from France, Germany, Sweden, and the UK) with a strong interest in defence acquisition. A team of four (drawn from Germany, Sweden, and the UK) met in Germany in November 2013 to review and refine the collective inputs generated of the wider process. The purpose of this review was twofold. First, to ensure that we had listed the sorts of questions that most felt would be needed to develop a coherent theory. Second, to ensure that we had listed the relevant content headings that would be needed to answer each question.

While the research methodology used does not require a literature review, given the importance of theory to the aim of the paper, a very brief review of the key concepts of theory follows. The literature on theory is vast with many divisions between different schools



of thought on topics such as to what constitutes theory, the purpose it serves, how it should be conceptualised and what research methods should be used to develop it. Therefore, what follows is a thumbnail sketch of a massive body of thought, which by necessity is also general and incomplete. However, it is viewed as sufficient for the purpose of this exercise.

At its most basic a theory is “a statement of relations among concepts within a set of boundary assumptions and constraints” (Bacharach, 1989). A more expansive definition is that “a theory is a set of interrelated constructs (concepts, definitions) and propositions that presents a systematic view of phenomena by specifying relations among variables with the purpose of explaining or predicting phenomena” (Kerlinger, 1973, p. 9). This more expansive definition captures the two core functions of a theory, namely to explain causal relationships between variables and to predict what can happen. While achieving the latter is the “gold standard” of what constitutes a good theory, the reality is that while common in the natural sciences, such a standard is rarely achieved in the social sciences (Sayer, 2000). White (1991) expresses this distinction as “world revealing” as opposed to “action guiding” theory. Other commentators such as Glasser and Strauss (1967) stretch the role of theory further by arguing that by definition it should be able to help advance its own development.

Because of the diverse and complex nature of what is involved in theory, there have been numerous attempts to develop approaches by which to make meaningful distinctions and demarcations. This has most commonly been done by developing taxonomies and models which can then be used to separate differences considered important by its authors. Merton’s (1945, 1949, 1968, 1973) cumulative and comprehensive body of work on sociological theory is one of the most commonly cited approaches used to discuss and explain key differences in theory. Merton’s work has been applied to a wide range of disciplines and contexts. For instance, accounting (Laughlin, 1995), government (Yang & Hsieh, 2007), marketing (Saren & Pels, 2008), non-profit organisations (Shea, 2011) and nursing (Peterson & Bredow, 2009). The wide use and general acceptance of Merton’s theory typology suggests it provides a useful means of explaining the key concepts and issues associated with theory across a broad spectrum.

Crucial to Merton’s typology of theories is the distinction between grand and middle range theories. The term “Grand Theory” seems to have been coined by C. Wright Mills in his critique of Parsons earlier work (Alo, 2007; Brown, 2013). Grand Theory covers “those large, overarching, all-encompassing explanations of social and political behaviours that give meaning to existence, enable us to order our lives and provide us with conceptual frameworks to think about reality” (Wiarda, 2010, p. 1). The high level of abstraction involved makes it difficult to test theories empirically (Peterson & Bredow (2009). Therefore not surprisingly Grand Theories generally reject “the assumption that the natural sciences offer an adequate or even a relevant model for the practice of the social disciplines” (Skinner, 1985, p. 6). Examples of Grand Theories include Evolution, Marxism and Neo-Liberalism. Grand Theory is often attacked on the grounds it blurs “values” with “facts.”

It was this lack of ability to do empirical testing, among other concerns, which generated Merton’s scepticism toward grand or general explanatory theories in sociology, and his shift to the “middle-range” (Saren & Pels, 2008). Middle-range theories (also sometimes referred to as “middle-level”) involve limiting the components of theory and therefore its research focus for the purpose of discovery. A frequently used metaphor for middle level theories is “skeletal.” The intent of this metaphor is “to paint a picture of incompleteness yet also stability... the skeleton remain unchanging yet incomplete (Laughlin, 1995, pp. 81–82). “Middle range theory involves abstractions, of course, but they are close enough to observed data to be incorporated into propositions that involve



empirical data” (Merton, 1949, p. 448). The benefits of empirical testing and parsimony offered by middle-level theory are not without its own perils. First there is the risk of “abstracted empiricism” which in its search for answers to practical problems risks generating researchers who vouch for the scientific status of their theories by reference to esoteric statistics. It is for this reason that some grand theorists are hostile to all forms of mindless and abstracted empiricism (Aakvaag, 2013). This risk is linked to the wider issue of paradigms (Khun, 1962) which have demonstrated that the problem of objectivity, especially in social science, is not as easily overcome as positivists claim (Alo, 2007). The second risk is with what is widely seen as desirable in theory, namely parsimony (Chau & Witcher, 2005). However this desirability is on the strict condition that it does not conceal more than it illuminates (Pinder & Moore, 1979, p. 102). Theories attempt to explain why classes of phenomena occur. To do this they also delineate boundaries between those phenomena that belong to a class and those that do not. As parsimony introduces delimiting boundaries it always carries the risk of overly delimiting what phenomena are explored (Pinder & Moore, 1979). Opinions are divided on how effective middle-range theories are at assisting in the development of Grand Theories (Brown, 2013).

While Merton tended to use categorical distinctions between types of theories other have opted for a continuum ranging from Big T through to Little t theories. ‘A “big T” theory is generally overarching, widely recognised and used, and has a formal name (hence the capital T). ... A “little t” theory, on the other hand, can be thought of as a simple theory that provides value on its own or as a relatively immature but developing theory. A little t theory may not be widely recognised (hence the non-capitalised t)’ (Schnerberger, Pollard & Watson 2009, pp. 54–55). A comparison of the “T- t” theory spectrum against Merton’s work tends to equate it with Merton’s middle-range theories to what some describe as small scale theories (Halldorsson et al., 2007), low-middle or micro-range theories (McEwan, 2007). Grand Theory does not appear to be covered within this continuum. The small scale, low-middle, micro-range or little t are not discussed at any length within this review as they are often so elementary as to struggle to be seen as a theory. The key implication to be drawn from both Mertons’ middle-range and big T theories is that they are optimal for theoretical research because they contain all the elements that theorists like to see. They are mature, since they have been tested, honed, and re-tested many times and in many contexts; and they operate within sufficiently limited boundaries as to allow small scale research (Schneberger et al., 2009).

The final theory that warrants discussion is “meta-theory.” Stated simply, meta-theory is a theory about theory. An analysis by Wallis (2010) discovered over 21 distinct definitions of meta-theory. His analysis produced eight aspects of meta-theory as described by various authors. The aspect “analysis of theory” was the most common with a count of ten. This finding reinforces the more generally held view that the subject of analysis in meta-theory is theory. The next most common was “is (or creates) a theory of theory” with a count of three. This inability to get to a majority agreement on even one aspect was also reflected in epistemological indeterminacy around meta-theory. While the definition is contested, there is far more agreement on the purpose of meta-theory, which is “the development of better theory” (Wallis, 2010, p. 78). Meta-theory challenges the “silent prejudice” of parsimony in theory by using a *reductio ab absurdum* that if this is correct, the smallest theory would produce the best fit. Despite the use of this logical fallacy, the overall argument would appear to have considerable merit. Many of the problems researchers face involve dealing with extreme complexity. While other theories use parsimony to deal with complexity meta-theory tends to go in the other direction by acknowledging such complexity and seeking to find ways of dealing with it other than simplification. Meta-theory is therefore different to Grand Theory since its research methodology has more in common with the aspirations of





middle-theories. However it differs from the latter in its willingness to use multiple theories and to employ a broad range of research methodologies, including, but not restricted to, empiricism. To that end meta-theory would appear to offer some hope around advancing knowledge creation by reducing the various polarities generated by different disciplines and research traditions.

Historically, theories have played, and will continue to play, an extremely important role in the development and dissemination of specific bodies of knowledge. While there is some dispute as to how best to categorise various types of theories and how useful each type is, there is generally strong agreement as to the importance of theory. There are therefore no justifiable grounds for assuming that defence acquisition practice can ignore the important role theory plays in respect to knowledge creation and advancement and therefore ultimately performance improvement.

## Discussion

The Territory of Defence Acquisition—If a theory involves “interrelated concepts” then the first questions that need to be addressed are what they are and why these? A traditional starting point to answer such a question is to start with a definition of the subject area. Unfortunately there does not currently appear to be any internationally agreed definition of defence acquisition available. Frequent reference is made to terms such as purchasing, procurement and acquisition. However it is not clear what difference (if any) exist between these terms and between, e.g., acquisition and defence acquisition.

As agreed definitions are the exceptions for most undertakings which cover a vast area of activities it is hardly surprising that defence acquisition adheres to this common trend. However this finding in no way diminishes the need to try to sort out commonalities and differences in defence acquisition definitions. The reason being that carrying out such an exercise would help provide preliminary guidance as to what sort of phenomena need to be examined. Identifying and defining which phenomena should be included would then help to outline the concepts and constructs which interact within the causal manner that is of importance to theory development. For instance, to define hypotheses and propositions and to then test them.

Clearly economic and management ideas appear to hold dominance, but other themes such as international relations, domestic politics and systems engineering also appear, along with a host of less common issues, to be involved in causal relations. An additional benefit of defining the present content boundaries is that this would then permit greater debate and reflection on how adequate or not these criteria are at meeting not only existing but also emerging challenges.

Theory Types—In the case of most advanced, western-styled democracies, defence acquisition is strongly predicated on, directed by and ultimately constrained by neoliberal ideology. While the political implications are wider than economics, neoliberalism is first and foremost an economic ideology. ‘Ideologies are systems of widely shared ideas and patterned beliefs that are accepted as truths by significant groups in society’ (Steger & Roy, 2010, p. 11). Neoliberalism is founded on classical economic theory, and advocates the privatization of state enterprises and institutions, maximised competition through liberalism and deregulation of the economy and, in order to promote “free trade,” the application of monetary policies favoring the private business sector (Harvey, 2003; Steger & Roy, 2010). The idea of competition is core to neoliberalism because it claims that it is the lack of competition that has caused so many difficulties in the past. One challenge for defence acquisition is whether to continue to work within the constraints of this ideology or to appraise its relevance more critically. For instance, its foundational assumption of



competitive markets is immediately violated in defence, which in the case of large weapons platforms have never had free and open markets. The increasing use of contractors to carry out defence and security tasks has also raised a raft of complex legal and performance management issues.

Legal issues include the differences between the Uniform Code of Military Justice and civilian criminal prosecutions which meant that in both the Blackwater and Abu Ghraib incidents, the contractors never faced prosecution under any legal jurisdiction (Jackson, 2013). Furthermore, the last minute acknowledgement by the firm G4S that it could not meet its contractual obligations to provide security services for the London Olympics meant that the UK Army had to step in and fill this gap (Chan, 2013) illustrates the legal complexities and inefficiencies. In theoretical terms the issue worthy of examination is to determine if these failures are due to the imposition of an ideology, which does not work in all defence situations, or ineptitude on the part of defence acquisition practitioners. As this ideology has political economics as its foundation, and despite the best efforts of many economists to claim that their work is equivalent to natural science, the reality is that economics is a social science. Neoliberalism is therefore best described and treated as a Grand Theory. It is difficult to see how defence acquisition could resolve this question without first seriously engaging in some form of Grand Theory analysis.

Performance Management Issues—including decisions regarding which dimensions of performance; e.g., speed, quality, cost, flexibility and dependability; that should be measured, and why others should be omitted. Performance measurement include questions such as “what to measure,” “when, where and how to measure it,” and “with what to compare the measurement.” Without a deeper understanding of the theory which informs expected performance it is difficult to effectively carry out other critical activities such as making corrections when required and explaining variations to key stakeholders. The latter being deemed important as the bulk of media and government attention in defence acquisition tend to fall into the area of major programmes, where blowouts in cost and time and under achievement of the performance outcomes sought are legendary. As the recent example of the Joint Strike Fighter demonstrates, projects which require leading edge technology and long (10 years or more) development lead times always involve a high risk of not meeting time, cost and other performance targets. These sorts of projects receive the most attention from academics, consultants and various arms of government (e.g., in the UK the National Audit Office, the House of Commons Defence Committee and the Public Accounts Committee). In fact many large defence acquisition programmes do meet all performance targets. Despite this achievement, the consequences of poor performance of even a few large external programmes are usually so massive as to create a perception of general incompetence.

The perception held by key stakeholders of poor performance in turn has quite adverse knock on effects in terms of the image of defence organisations. That stakeholders external to defence see fit to fund such high levels of external scrutiny suggests how adverse this persistent problem with defence acquisition is in defence as a whole. While there are no silver bullets available to instantly solve this problem endemic to defence organisations, our conclusion is that if a more coherent theoretical framework existed, that the research efforts presently taking place would eventually yield better results than is currently the case. The present weakness is that most studies are done on individual projects rather than being driven by a programmatic research effort. The constrained nature of this sort of research combined with a bias to produce empirical results suggests that this sort of research fits into middle-level theories. However, for reasons already mentioned in the literature review, in order to move away from the dangers of confusing “abstracted



empiricism” with a theory, it would be highly desirable to conduct this middle-level research in a manner which allowed greater cross-comparisons of theories, methodologies and findings in order to accelerate knowledge creation. This requirement is made all the more urgent by the likelihood that the middle-range theory approach will most likely continue to constitute the bulk of research for the foreseeable future.

Our analysis of defence acquisition led to the conclusion that it is a multidisciplinary activity and therefore inherently complex. While meta-theory is in itself a difficult and emerging concept, it does hold great promise for grappling with the complexity that is inherent in defence acquisition. As such it probably represents the best possibility of developing a coherent theory of defence acquisition. Despite the reservations of eminent commentators such as Merton as to the ability of middle-level theory to generate Grand Theory, such reservations are not as common in respect to meta-theory. Therefore, if it is assumed that such a meta-theory is possible, then it raises the question as to where to generate the research needed in order to do the meta-theorising. As the cost and time needed to run a large meta-theorising exercise are unlikely to be readily available, the next most logical option is to use data produced from middle-range theories. This view again reinforces our contention for the need to have a coherent framework which can facilitate the integration of various middle-level studies in defence acquisition.

Research Paradigms, Approaches, Strategies, and Methodologies—Expanding the range of research paradigms, approaches, strategies, and methodologies used involves a logical extension of the previous point. As the split between natural and social sciences demonstrates, different theories are often founded on different epistemological and ontological assumptions (i.e., paradigms), which in turn have consequences for what research approaches (e.g., deduction and induction), strategies (selection of type of qualitative, quantitative or mixed research methodology) and methodologies (selection of specific qualitative, quantitative or mixed methodology) that can be applied and what truth claims that can be made. For reasons already explained, defence acquisition (irrespective of its various forms) has overwhelmingly been conducted within middle-range theory building supported by empirical data generation. We take the view that there is a need to expand the various enquires beyond positivism, based on the argument that to do more of the same, only more often, is less likely to generate fresh insights than what can be achieved by looking at old problems through a different set of theoretical, conceptual and methodological lenses. Without such an expansion of research paradigms, approaches, strategies, and methodologies, it is unlikely that defence acquisition will ever be able to develop a meta-theory as this form of research involves drawing upon different research approaches

Professionalism—While a wide range of definitions are available on this topic, in essence, professionalism involves being responsible for the development, maintenance and (often) control over accreditation of those admitted to the profession, e.g., medical doctors. It is logical to assume that the rising importance of defence acquisition should be accompanied by some similar movement around practitioners being able to demonstrate that they have the capability to carry the key activities in the best interests of the organisation. At present, this is not the case, with many disciplines making competing claims to occupy acquisition. While we did not come to any clear answer on what would constitute a defence acquisition professional, we did conclude that answering the following questions would help make a useful start to sorting out this issue:

- On what grounds would specialisation in defence be justified?
- What would be needed to define a specialist as a professional?



- What are the skills, capabilities, experiences and qualifications that would be required to be recognised as a defence acquisition professional?
- Should these specialists work within a professional code of conduct and if so what should its content be, who should develop it, and who should police it?
- What should be the responsibilities and accountabilities, of a defence acquisition professional?
- What role do defence acquisition professionals play around ensuring that their employing organisations are acting as intelligent customers?

The logical starting point for any profession to answer the above types of questions is to first decide what the body of knowledge or theory covered its profession should be? It seems reasonable to ask defence acquisition to do the same

Other Issues—in the interests of space and avoiding redundancy a few more examples of what could be included in the theory are only touched upon briefly and include the following:

*Servitization*—increased outsourcing has involved moving away from goods and towards services. This movement in turn raises questions such as which of the present range of theories on services best explains what has been happening in defence acquisition. Also, does the move to greater dependency on services mean that defence acquisition need to develop skills which are complementary to existing skill sets, do they need to develop entirely new the skill sets, or are the existing ones sufficient to meet the new challenges?

*Intangible Assets*—covers matters such as brand, relationships, systems and knowledge. Intangible assets such as knowledge are becoming increasingly important to defence acquisition and will continue to be so into the foreseeable future. Indeed, the future vision being forced upon defence acquisition (e.g., ever more outsourcing of more functions) cannot work without a greater engagement in and understanding of how to make effective use of these assets. A key question to answer is do defence acquisition practitioners know how to identify, value and make effective use of intangible assets?

The aforementioned list does not come close to covering anywhere near the number of issues that we felt needed to be addressed if defence acquisition was to develop the sort of robust theory needed. Providing even more examples of what might be included, while ultimately relevant to theory, is not considered crucial at this point in the discussion. The main purpose of this paper was to lay out the case as to the need to develop a theory and suggest some key components that might need to be addressed in such a theory. It is our judgement that we have provided sufficient details to make this case.

## Conclusion

The expansion in the scope and scale of defence acquisition activities has not been matched by similar developments in theoretical understanding of what is happening. This paper argues that in order for defence acquisition to be able to match the increasing challenges it faces it must enhance its theoretical understanding. Theories come in many types and at this stage there would appear to be adequate justification for defence acquisition to engage in grand, middle-range and meta-theory development. Irrespective of which type of theory is chosen, certain key themes need to be addressed. These include: defining what is covered by defence acquisition; what sorts of disciplines need to be included; what research methods should be employed; professionalism; and many other themes. We hope that our argument helps to serve the wider purpose of provoking a broad acceptance of the need for theory development. However, we accept that it may in fact



provoke counter views and disagreement, which we would welcome, since such a reaction will also help to open up what we perceive to be a much needed debate.

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