

The Limits of Competition in Defense Acquisition
Defense Acquisition University Research Symposium, September 2012

Knowledge as an inhibitor to competition in defence acquisition.

Keywords: Defence, Acquisition, Knowledge, Neoliberalism

Author: Kevin Burgess

Abstract

The rise of the neoliberal agenda founded on neoclassical economic assumptions over the past thirty years has had a profound influence on the framework used to develop and assess policy effectiveness across all arms of government including defence. As a result the evaluation methods within this framework have tended to be dominated by economic metrics. The weakness associated with using these metrics is that they are poor at measuring intangible assets such as trusted based relations, culture, social networks and knowledge. All of these important intangible assets have a very large impact on competitiveness. It is widely agreed that intangible assets play a major role in determining the competitive nature of firms and therefore markets. There are as yet no agreed methodologies or standards by which to evaluate these types of assets. As a result Defence organisations struggle to effectively analyze the impact of these types of assets in their assessment of competitive bids. This paper explores one specific intangible asset “knowledge” and the role it plays in respect to competition. Knowledge is seen as the most relevant intangible asset to explore given the widely reported and generally accepted view that the world is moving from an industrial to a knowledge economy. The trend to outsource ever more knowledge creation activities which were previously carried out within defence and its impact on competitive markets is yet not well understood. This paper identifies key issues associated with knowledge in respect to how it impacts upon competitiveness in defence markets. It concludes with suggestion on how to overcome present limitations associated with the various forms of knowledge in order to improve the effectiveness of defence acquisition.

Summary: The outsourcing of evermore defence activities has not adequately addressed the issues associated with the knowledge management needed to remain an intelligent customer. This paper explores this theme and comes up with suggestion on possible actions required.

Introduction: From at least the time of the publication of Adam Smith’s magnum opus *An Inquiry into the Nature and Causes of the Wealth of Nations* in 1776, the concept of competition has been well established in economic theory. Over the past three decades a more recent development has been an increased interest in understanding the role that intangible assets play in respect to competition. While intangible assets can cover a wide range of topics such brands, systems and goods, it is knowledge that has received the greatest prominence. The reason for this prominence stems mainly from general agreement among diverse commentators that the economic foundations of modern Western society are shifting, or have already shifted, from an “industrial” to a “knowledge” economy. The convergence of claims around the increasing importance of knowledge is all the more remarkable in that despite quite major differences in the theoretical and disciplinary perspectives employed by historians, cultural theorists, technologists, economists and futurists to analyse these trends, most of these commentators reached similar conclusions. Given the emerging importance assigned to knowledge this paper sets out to achieve the following: firstly, to briefly explore the range of ideas and concepts entailed by the terms “competition” and “knowledge”; secondly, to outline how the interaction of both concepts affects defence acquisition; and thirdly, to identify some of the challenges that will have to be addressed in order for defence acquisition to improve its effectiveness.

Background: Despite the pervasiveness of the term “competition” in most economic theories, actual definitions of the term within the context of each theory have tended to be ambiguous. For instance McNulty (1968:639) notes ‘[primary amongst] the many achievements of economic science has been the ability to erect a rigorous analytical system on the principle of competition — a principle so basic to economic reasoning that not even such powerful yet diverse critics of orthodox theory as Marx and Keynes could avoid relying upon it —without ever clearly specifying what, exactly, competition is’. This lack of definitional precision renders unclear what the concept of competition is referring to – the lack of monopoly or the concept of a competitive market. Monopoly is a market situation in which intra-industry competition has been defined away by identifying the firm as the industry. ‘Probably the most general tendency concerning the meaning of competition in economic theory is to regard it as the opposite of monopoly’ (McNulty, 1968:641). By contrast, a perfectly competitive market is an ideal state which the economic literature acknowledges is impossible to actually realise. Despite these limitations, it is the concept of a competitive market which is the most relevant and adequate both for economic analysis and economic policy development. Most economic theories would concede that competition is most influenced by a paucity or plethora of buyers and suppliers within a specific market structure. The most relevant definition of competition is therefore one based on a “competitive market.”

Knowledge is an extremely complex topic which has attracted a great deal of practitioner and academic interest in recent years. The specific branch of philosophy known as epistemology, or the theory of knowledge, has been struggling with this area for several millennia. Approximately 2500 years ago Plato provided a definition of knowledge which was widely translated as “justified true belief” (Scruton, 2004:317). Lack of space here prevents a detailed discussion of epistemology beyond making the point that because knowledge is still a strongly contested concept, any definition offered can easily be discredited (Bastian et al., 2007; Hislop, 2009; Scheffler, 1965 and Smith, 1998). Sveiby’s (1997) definition of knowledge as “the ability to act”

has been chosen as a starting point primarily because acquisition is largely an applied activity, involving what Aristotle would define as “knowing how”. Know how involves mastery of means and can, therefore, be applied to a good or a bad end. Aristotle was also concerned with “knowledge of ends”, or “know what” which he called this “virtue” (Scruton, 2004). While the notion of “know what” introduces an ethical dimension to defining knowledge, many theorists suggest that such a dimension needs to be included in any relevant definition of knowledge (Bastian et al., 2008). Philosophers such as Nietzsche took a strong position regarding “know what” and “know how”, claiming that ‘we must not separate them’ (Gane and Piero, 2008:34.). Introducing ethics adds even greater complexity, as ‘Ethics is so difficult and so various that it is usually treated as a distinct branch of philosophy’ (Scruton, 2004:271). However, as will be argued later in this paper, defence acquisition is an inherently political activity. As such, any knowledge claims acquisition seeks to make often end up being assessed by key stakeholders within a theory framed within a set of values. While not wanting to add definitional complexity, the stark reality is that value free theories do not exist in the realm of political economics (Sayer, 2000). Defence acquisition’s long history of massive cost increases, time blowouts and failures to meet performance requirements has provided critics with adequate data to make strong claims as to the fallibility of both the theories used and relevance of the knowledge generated. Therefore any discussion on knowledge in defence acquisition must also deal with the complexity associated with the values which inform and shape the practices around how knowledge is generated and applied.

Much of the literature on the knowledge economy tends to take a technological determinist perspective (Castells, 1996). This perspective argues that technological developments in turn influence and shape social structures and culture. The idealised cultural determinist perspective takes the opposite view. The phenomenal growth in the information and communication technology (ICT) and associated changes to organisational work processes and wider community trends such as social networking are offered as conclusive evidence of technological determinism (Murphie and Potts, 2003). The defence equivalent is the massive investment now going into cyber-warfare. Limitations to the technological determinist argument are that it fails to come to grips with the view that knowledge is composed of at least two elements – explicit and tacit. ‘Explicit knowledge can be expressed in formal and systematic language shared in the form of data, scientific formulae... In contrast, tacit knowledge is highly personal... Subjective insights, intuitions and hunches fall into this category of knowledge’ (Nonaka, Toyama, and Konno, 2000:6). Tacit knowledge also tends to reside in distributed patterns across inter-organizational networks (Carrol and Sapinski, 2011). Therefore, while technological determinism can provide a compelling argument for storage, retrieval, transmission and accessing of explicit knowledge, it is far less effective in explaining tacit knowledge and how knowledge is created. On this latter point Cook and Brown (1999:384) suggest that knowledge “is something that is held in the head”. Therefore, creating new knowledge is primarily a cognitive process (Hislop, 2009).

As competition as examined within this paper is firmly planted within economic theory, the numerous ways of conceptualising knowledge need to be restricted to within an economic framework in order to describe its role and impact in respect to competition. From an economic point of view, and in general terms, it is the most recent knowledge that is of greatest value. Once knowledge has become explicit it can be turned into a commodity which, in turn, reduces its value (Sveiby, 2007). Many economic theories acknowledge that asymmetries in knowledge

can distort competition and that acquiring knowledge can create considerable costs. However, in an ideal competitive market the lack of knowledge will not necessarily reduce competition as the “invisible hand” will work to deliver the optimal outcome available for both buyers and suppliers within a specific, free market.

Discussion.

Macro Level Analysis: Prior to exploring the interaction of competition and knowledge in defence markets, it is necessary to first examine the macro environment within which influences how markets operate. Markets are located within wider economies which in turn are framed within political ideologies. ‘Ideologies are systems of widely shared ideas and patterned beliefs that are accepted as truths by significant groups in society’ (Steger and Roy, 2010:11).The political ideology which has been widely adopted and implemented by western democratic governments, and even by authoritarian ones, is “neoliberalism”. This ideology is associated with political leaders such as Reagan and Clinton in the US, Thatcher and Blair on the UK, Koizumi in Japan and Pinochet in Chile. Neoliberalism is built upon the ideal of self-regulating markets. The ideological claims are laced with reference to global economic interdependence, the necessity of privatisation of state owned enterprises, and the worldwide flow of goods, services, and labour, operating in free, deregulated global market capitalism, primarily through transnational corporations able to access off-shore financial centres in order to gain access to capital at optimal rates. Because neoclassical economics forms the foundation of so much of neoliberalism, it is best viewed as an “econometric ideology” (Steger and Roy, 2010;12). Neoclassical economics claims that markets regulate themselves when free of any intervention. ‘The emergence of the idea of competition as itself a market structure, was a distinguishing contribution of neoclassical economics’ (McNulty, 1968:643).However, the imposition of this ideology is not unproblematic in the case of defence markets.

The first problem is that, historically, defence industries and markets have been amongst the most protected from competition by host governments because of links to national sovereignty, jobs and the expenditure of state resources. Defence markets are inherently imperfect because there are few (typically government) customers, served by limited and increasingly consolidated suppliers who are involved in large, long-term programmes. These factors tend to generate incumbents who are insulated from traditional free-market business incentives. Further market restrictions are imposed by not being allowed to source from all available global markets (Bialos et al., 2009). Therefore, using the competitive market definition of competition, the defence industry has never been truly competitive. This evidence would suggest that the neoliberal move to globalisation would increase market competitiveness by increasing the number of suppliers. While this argument may hold for very basic items such as consumables, it fails as soon as it moves to the expensive, technologically sophisticated equipment which in financial terms accounts for the bulk of the capital budget for defence organisations. As Table 1 below illustrates, the trend in the USA has been toward fewer suppliers of major weapon systems.

Table 1 - US defence industry consolidation

Sector	No. of contractors in 1990	No of contractors in 1998
Tactical missiles	13	4
Strategic missiles	3	2

Surface ships	8	5
Torpedoes	3	2
Fixed wing aircraft	8	3
Rotary wing aircraft	4	3
Tracked combat vehicles	3	2
Tactical wheeled vehicles	6	4
Satellites	8	5
Expendable launch vehicles	6	2

Source: US General Accounting Office. Defence Industry Report. GAO/NSIAD-98-141, April 1998.

Much of this shift can be attributed to the end of the Cold War where reduced orders resulted in overcapacity and the need to rationalise. Nonetheless, globalisation did not arrest this trend; in fact, it encouraged the development of transnational business models which further reduced the number of competing suppliers. Major US suppliers demonstrated a bias for greater merger and acquisition activities while European suppliers tended to favour strategic alliances and consortia arrangements with other suppliers (Neal and Taylor, 2001). For instance, the UK’s purchase of two aircraft carriers is a consortium of BAE and Thales. The point is that such business models do not increase competition as defined within this paper. What these new arrangements do, however, is move not only power but also knowledge away from the purchasers to the suppliers.

While the claims made by any political ideology in respect to truth cannot match those of the natural sciences, specific ideologies nonetheless tends to claim to bring us to a “truth” that is vastly superior to opinions and, indeed, to other ideologies. Who determines what is true, and how, has profound implications for how different sorts of knowledge are viewed. While positivism lays claims to knowledge as rational, objective and value-free, postmodernists argue the opposite. ‘The core of postmodernism is the doubt that any method of theory, discourse or genre, tradition or novelty, has a universal and general claim as the right or the privileged form of authoritative knowledge’ (Richardson 2000: 928). A leading social thinker in this intellectual tradition, Michel Foucault, refers to “governmentalities” – certain modes of governance based on particular premises, logics and power relationships. A neoliberal governmentality defines truth within its values such as competitiveness, devolution of state power, self-regulating free markets, and “rational choice” models that internalise, and thus normalise, markets. The concern for postmodernists is that this ideology becomes what they would refer to as the dominant discourse. While there are always marginal discourses challenging the dominant discourse in play at any particular point of time, they tend to struggle to be heard. Those who control or benefit from the dominant discourse do so through a range means including the use of power. History suggests that knowledge which challenges the dominant discourse is often threatened by the use of power. Galileo Galilei’s (1564-1642) confrontation with the Catholic Church due to his astronomical observations provides one such example. Bertolt Brecht dramatized this confrontation in one of his plays, where senior figures of the Church are invited to confirm Galileo’s revolutionary observations with the help of his own telescope, but they simply refuse to look. The Inquisition shows Galileo the instruments of torture and he recants (West, 2010). While not suggesting the methods used to defend today’s dominant discourse are as extreme or obvious, nonetheless the concept remains valid in that new knowledge which could be generated to improve competition would most likely be excluded or at least marginalised unless it was presented in a manner which

conformed to the dominant discourse. As neoliberalism implies that all values can be translated into economic terms, it would appear that economists are those most entrusted with the authority to determine “the truth” about knowledge claims.

Returning to the postmodernist concern that knowledge never sits independently of power, it follows that the shift to greater market dependency gives more power to suppliers and, therefore, more opportunities to distort market operations in their favour. It is well known that Adam Smith shared some of the key concerns of today's critics of neoliberalism. Smith repeatedly emphasized the role of power, influence and class in distorting economic policy to serve the interests of a narrow elite. Commenting on any politicians being beholden to the mercantile class, Smith noted that such a person, ‘is sure to acquire not only the reputation of understanding trade, but great popularity and influence with an order of men whose numbers and wealth render them of great importance. If he opposes them [he is subjected to] the most infamous abuse and detraction’ (Wearing, 2012). While most firms go to great lengths to adhere to legal requirements, the enduring track record of a minority of corporations in bribing politicians or buyers to gain influence and distort markets, and the failure of successive legislative regimes to eliminate these practices, provides sufficient cause for on-going concern. There is considerable evidence, acquired over several decades, to demonstrate that defence contractors regularly indulge in such practices (Galbraith, 1977). BAE’s payment in 2011 of \$400 million in fines to settle US investigations into dubious practices is but one example in a long line of the application of such practices (Binham, 2011). The current Leveson Inquiry into practices of certain media organisations operating within the United Kingdom would strongly suggest that large corporations can at times by far from subtle in exerting their power over politicians (Watt, 2012). The developments around the US tanker deal which saw Airbus initially awarded the contract and then having it withdrawn for retendering after what, on the surface, appeared to a reversal of a decision as the result of considerable political lobbying certainly caused some Europeans to question how open the US markets were and the degree of influence defence suppliers could exert over Congress (Lemer, 2009). From a knowledge perspective, the structural arrangements create two increased risks in respect to competition. The first risk is that movement of power away from government to suppliers has increased suppliers’ power and, therefore, their privileged and non-transparent knowledge to further control the dominant discourse in their favor. The second risk relates to the perennial problem around firms having knowledge on the human weaknesses of key stakeholders and using this knowledge to gain an unfair advantage. A major consequence that flows not adequately treating both risks is to reduce competition.

Practice Level Analysis: At the level of purchasing equipment, there are several issues (beyond the macro contextual factors already discussed) which further inhibit competition. The first issue has to do with defence withholding knowledge. In the case of the Ministry of Defence (MoD) it has become clear that the secrecy provisions imposed on certain equipment reduced competitiveness. Manchester University has in one of its museums a computer which was built well before the personal computer was developed for global markets. However, as it was developed for MoD purposes it was subject to a blanket policy provision around secrecy and was, therefore, not made available in time for industry to develop.

The second issue has to do with misalignment of wider national strategic and defence policy requirements which in turn drive non-competitive practices. The most widely cited example in

this space is the use of “offsets”. Offsets are a means by which governments seek to get better returns on their investment in defence equipment. While the US opposed the use of offsets on the quite correct and well proven grounds that it increases costs and distorts markets, the fact remains that offsets continue to grow in most countries. However, critics of the US claim that the American defence industry props up poor performing states, falls short of competitive solutions and, in effect, is also involved in offsets. The dilemma from an acquisition perspective is that it operates within a framework honed to deliver military capability yet has it somehow expected to also subsidize employment creation and industry development. This dilemma is worsened by being held accountable in commercially competitive terms without any adjustment being made for the costs associated with cross subsidization of other industries. This is an endemic problem across most nations but it does demonstrate that policy makers often reduce competitiveness (in the short term, at least) by not openly sharing knowledge about their wider agenda and what they are imposing obliquely upon defence.

The third issue that has developed greater uncertainty around the knowledge needed for competition is associated with the adoption of a new strategic management process known as Capability Management (CM). CM is defined as the enduring capability to generate a desired operational outcome or effect, and is relative to threat, physical environment and the contribution of coalition partners (MoD, 2007). CM represented a profound change in the philosophical assumptions which informed the MoD practices. Because CM involved greater dependence on suppliers it required changes to the systems and processes needed to generate strategic alignment with all organisational activities including the inputs from suppliers. The assumption was that these reforms, in respect to outsourcing, would lead to vast improvements in overall performance. Independent assessments of overall performance by bodies such as the National Audit Office (NAO) and the Office of Government Commerce (OGC) as well as private consultants (Gray, 2009) have concluded that the MoD has fallen well short of expectations. For example, up until 2012 the MoD had been facing a black hole funding crisis estimated to be £38 billion. The full explanation of why CM has failed to date to deliver the expected benefits is an area of on-going research. At least two factors appear to be involved in the failure to possess requisite levels of knowledge. One factor is that because capability requirements tend to be expressed in very high level abstract terms, it remains a difficult and confusing task to translate these requirements into clear actionable activities. Another factor appears the shift from buying assets to buying services. The knowledge developed by acquisition staff is based largely on the experience of buying goods rather than services. It may be that there is a time lag involved in mastering the skills needed to generate competitive bids for services. However, another possibility is that the ideological policy imperative around outsourcing has either missed, or has severely underestimated, the increasing importance of knowledge management in respect to purchasing the capability delivered by large assets. If correct, this underestimation manifests in at least two areas that require sophisticated and advanced levels of knowledge – commercial acumen and a technological understanding of the assets in relation to the military capability sought. Both forms of knowledge are linked to the concerns being raised by military organisations across the world – how to remain an intelligent customer?

The fourth issue – having the relevant commercial acumen – is a logical extension of the implementation of the neoliberal agenda and is therefore having this sort of knowledge is widely acknowledged as important. It involves generating new procurement methods in line with the

opportunities provided by less heavily regulated markets without necessarily having the requisite knowledge. In the early days of outsourcing, the activities handed over to markets were generally simple and non-core. As the selected market providers had greater competencies, economies of scale and other advantages over the military, realisation of the targeted economic benefits were generally achieved. While such low hanging fruit was relatively easy to capture, the expanding scope of activities being outsourced created the need for far more sophisticated contracts in order to generate benefits. In the UK this led to the era of the Public Private Partnerships, more commonly referred to as Public Finance Initiatives (PFIs). While initially hailed as a success, twenty years on reports by the National Audit Office (NAO: 2012) now claim they have in fact resulted in increased costs. The NAO report concluded that ‘generally, public sector authorities have not been equipped with the skills and information required to challenge investors’ proposed returns rigorously.’ Time is therefore another key dimension to consider when seeking improvements. The UK experience demonstrates that short term gains came at a long term cost. Interestingly, this combination of financial engineering and legal long term contracts was developed and applauded by the commercial elite comprised of lawyers, bankers and economists. This is the same set of occupations that dominate the Boards of modern organizations and therefore play a major role in dominating the discourse which guides strategic direction-setting. The implication for the acquisition professional is, therefore, how to acquire the multidisciplinary skills needed to conduct complex analysis and to also be able to translate various analyses and findings into a language that decision makers at Board level can understand.

The fifth issue –technological understanding – is the other aspect related to remaining an intelligent customer. Whereas the previous issue (four) was limited to intelligence around commercial practices (financial and legal), has been widely acknowledged as important the case in respect to technological knowledge has not been given the same support. Why this is so is unclear as this knowledge appear to be even more critical in respect to being able to generate the military capability sought from a sophisticated weapons platform. One explanation is that this knowledge does not typically align with the knowledge held by members found on typical Boards who in turn play a strong role in maintaining the dominant discourse. In the most recent phase of the outsourcing movement, the MoD has not only handed over the through life support of assets to contractors but also the task of creating the knowledge needed to develop battle winning technology. The open innovation literature would suggest this is a good move because accessing a wider pool of resources should generate innovations faster and at a cheaper rate (Chesbrough, 2003). The evidence in respect to consumer (e.g. iPhones, Play Stations) and small assets (e.g. unpiloted aerial vehicles) indeed provides strong support that the private sector can develop superior outcomes in terms of time and cost. However, this model falls down when it comes to large assets. Severe cuts to defence budgets combined with the large cost associated with the very large defence inflation linked to leading edge technology has resulted in far fewer orders. In response, major suppliers such as BAE have shifted the focal point of their strategies from manufacturing to maintenance. This is eminently sensible when it is considered that bulk of cost associated with large assets is for the through life support. Capturing these revenue streams not only helps compensate for the loss of orders but also offers greater commercial certainty. Because the assets are long lived and require high support and upgrades, they offer far greater certainty around ongoing revenue streams across several years. The firm that designs the asset is in a very powerful position to win the through life support work as they own all of the

associated detailed knowledge on the asset. Provided they can retain the knowledge, they are also more than likely to retain the most valuable part component associated with the asset – the through life support contract. The Joint Strike Fighter provides a good example where the UK government, despite being the only level one partner in the project, still cannot gain access to the source codes. Clearly owning the physical asset is meaningless without also owning the knowledge needed to run and maintain the asset. This issue that sits at the heart of the current debate around how defence organizations are going to remain intelligent customers in such circumstances.

Strategic Implications: The global financial crisis (GFS) has created such funding pressures that government has argued it has no option but to vigorously implement a massive array of reforms to defence. Despite the GFS also demonstrating some serious weaknesses in the implementation of the neoliberal agenda, it has not deterred ongoing implementation of this agenda. In the case of the MoD, in fact, the GFS appears to have increased the resolve of government to go even further down the road of expanding the role markets will play in defence. Whether this drive is a reflection of strength of belief or simply the result of the lack of any viable alternative is unclear. What is clear is that government has a very strong interest in capturing the benefits it believes can flow from competition and is not about to move away from that position in the foreseeable future.

The problem for defence, as shown, is that it does not have competitive markets and, despite the aspirations of the neoliberal agenda to the contrary, and if anything have become even less competitive. Under these circumstances, it is clear that one way to treat some of the emerging risks associated with greater dependency on fewer suppliers is to increase capability as an intelligent customer. This in turn requires paying far greater attention to knowledge management issues in the following areas. First is the need to generate the knowledge required for the effective application of commercial skills. This knowledge needs to be aimed at not only effective use of today's tools and techniques but also at developing strategic approaches which better identify and treat the risks as well as seizing the opportunities that are emerging with changing market circumstances. The other, and critical, area of knowledge management required is, and will continue to be, technological understanding. The problem with this latter type of knowledge is that it is expensive to maintain and even harder to justify within a discourse which advocates partnering and leaving it to the supplier to keep and develop the knowledge. As the argument for not retaining in-house knowledge is likely to gain support in times of austerity, it brings the discussion to a third, and as yet not discussed, type of knowledge that will be required – soft skills.

Developing knowledge around the social skills needed for defence acquisition will continue to increase in importance and conversely failure to do so is likely to have adverse impacts. It has already been demonstrated that as no competitive market exist in defence buyers will become increasingly dependent on fewer suppliers to maintain their large assets with long life spans. Even if a defence organisation has the most advanced commercial and technological knowledge, it will still need to work with single suppliers over very long periods in order to maintain capability of key assets. Beyond maintenance there is a need to for defence organisations to have continued access to the highly advanced technology. As many European defence organisations have chosen to use markets to generate this technology they have in effect

determined to engage in an open innovation strategy. The innovation literature makes strong claims as to the importance of social networks in being able to generate the ideas and create new technologies. This literature also posits that the tacit knowledge needed to create the new knowledge that drives innovation is often spread across interorganizational networks. In the case of the MoD this network would include government defence organisations, suppliers, academic organisations and specialist research centres. The shift to generating this new type of knowledge required to work across interorganizational networks will create challenges as it tends to work on a different logic to traditional acquisition practices. In essence both the economic and legal frameworks that have informed defence acquisition have been built on the notion of a “hard” system, governed by linear dynamics and most commonly captured by the machine metaphor. Social systems by contrast are “soft”, self-organising, dynamic, non-linear and possessing emergent properties which mean they are constantly changing. Combining both hard and soft system knowledge, while not an easy task is nonetheless what defence acquisition will require if it is to be effective in the future.

It should be noted that there are most likely severe limits as to how far defence organisations can go down the path of entrusting knowledge creation to suppliers. It is therefore not being suggested that the issues and risks associated with how to remain an intelligent customer can be totally addressed by becoming more competent at being sensitive to the social issues involved in managing long-term interorganizational network dependencies. Rather it is being argued that the dominant discourse that currently informs political decisions is such that it does not seem to have very advanced ways of how to value and therefore make informed strategic decisions about knowledge. This situation is in part linked to operating in a discourse which finds it easier to recognise and therefore act upon issues stated almost exclusively in terms of economic value. While economists appreciate the value of knowledge they appear to have left it to accountants to define how this value should be measured. While accounting standards have been grappling with how to measure intangible assets they do not as yet appear to have reached any widespread agreement. The problem that follows is that under present accounting standards it is very easy to define the considerable costs associated with remaining an intelligent customer. Conversely it becomes extremely difficult to conclusively demonstrate how such costs contribute to benefits realised. The risk is therefore not that stakeholders do not appreciate the importance of knowledge but rather that their decision making criteria leave them conceptually blind on such matters. The ideal knowledge that is being argued for here is therefore of an intelligent customer who can also apply the social skills needed for effective long term relationship management.

The risks associated with not being able to value intangible assets also apply to acquisition professionals. The current commercial tools they employ are not well suited to identifying and placing a value upon intangible assets. Yet if, as expected, the present trajectory of increased dependence on key suppliers and network continues to develop then understanding how to work with such assets takes on even greater importance. While factors such as trust, cooperation, and cultural alignment are extremely important enablers for long term partnerships it is yet to be determined how to define, yet alone measure and value such intangible assets. Therefore being able to work more effectively with intangibles assets forms the last component of body of knowledge that acquisition specialists require.

Conclusion: The widespread recognition of the importance of the knowledge economy has coincided with the implementation of neoliberalism which was aimed at increasing market competitiveness. However in the case of large assets in defence it resulted in an already non-competitive market reducing to even fewer suppliers. This market trend has coincided with a clear pattern in which governments continue to increase outsourcing ever more defence activities to the private sector. This movement included moving much of the knowledge held within defence to external organisations. This in turn has generated a great deal of reflection on how defence organisations can remain intelligent customers. While no resolution has yet been developed to answer this question, this paper has suggested that the most appropriate answer would involve the development of a knowledge management strategy for defence acquisition. At its foundation this strategy would include commercial and technical knowledge in order to be able to ensure the benefits of what could normally be expected to be realised in a competitive market. However because of the increasing dependence on suppliers to provide the knowledge needed to maintain assets and develop new generations of technology it is also argued that acquisition practitioners also need to acquire additional knowledge. Specifically the knowledge needed around identifying, developing and applying the soft skills required to work with suppliers in effective long term relationships. Because competition in a true market sense does not exist, defence organisations need to develop additional knowledge beyond that used in competitive markets. The long term nature of buyer and supplier relationships dictates that this additional knowledge has to be around how to make better use of social skills in order to maintain and improve the underpinning social systems. It is posited that developing this knowledge will have several challenges including how to integrate with present acquisition theories, tools and techniques as well as being able to demonstrate its value in economic terms. Despite these challenges it is also contented that if this is not done then it will have adverse consequences for defence acquisition.

Biography: Kevin Burgess (PhD) is a Senior Research Fellow at the Centre for Defence Acquisition, Cranfield University, based at the Defence Academy of the UK. Prior to joining Cranfield in 2009, Kevin held series of senior management and executive positions in asset intensive industries (Telco and Railway). Despite starting off life in engineering, his interests have progressively moved toward the social sciences. His research interests are applying sociotechnical systems to enhance asset management and making more effective use of interorganizational networks to support supply chain management initiatives.

References.

- Bastian, S., Vivek, B., Howard, C., Kitching, J., MacKenzie, J., Oberg, D., Salomon, M. and Wilkinson, D. (2007). *Theory of Knowledge*. Harlow, Essex, UK: Pearson Education Ltd.
- Bialos, J., Fisher, C.E., Koehl, S.L. and Mossberg, C.L. (Eds) (2009) *Fortresses and Icebergs: The Evolution of the Transatlantic Defence Market and the Implications for the US National Security Policy*. Washington. D.C: Centre for Transatlantic Relations.

- Binham, C. (2011). *BAE to pay £29.5m to Tanzanian government*. The Telegraph. Accessed 10th September, 2011 at <http://www.ft.com/cms/s/0/07f5b414-daf5-11e0-bbf4-00144feabdc0.html#ixzz1XfCw1hz3>
- Carrol, K., and Sapinski, J.P. (2011). Corporate Elites and Intercorporate Networks, in J. Scott and P.J. Carrington (eds), *The Sage Handbook of Social Network Analysis*, London: Sage Publications.
- Castells, M (1996). *The Rise of the Network Society*, (Volume 1). Blackwells, Oxford, UK
- Chesbrough, H.W. (2003). Open Innovation: The new imperative for creating and profiting from technology. Boston: Harvard Business School Press.
- Cook, S., and Brown, J. (1999). Bridging Epistemologies: The Generative Dance between Organizational Knowledge and Organizational Knowing, *Organization Science*, 10/4:381-400
- Fitzgerald, L., and Dopson, S. (2011). Comparative Case Studies: Their Utility and Development in Organizational Research, in D.A. Buchanan and A. Bryman (eds) *The Sage Handbook of Organizational Methods*. London: Sage Publications.
- Galbraith, K.C. (1977). *The Age of Uncertainty*. London: British Broadcasting Corporation.
- Gane, L., and Piero (2008). *Nietzsche: A Graphical Guide*. Malta: Gutenberg Press.
- Gray, B. (2009) *A Review of Acquisition for the Secretary of State for Defence: An Independent report by Bernard Gray*. October 2009, Accessed: 17 March, 2010 at http://www.aof.mod.uk/aofcontent/downloads/gray/gray_report.pdf
- McNulty, P. (1968). Economic Theory and the Meaning of Competition, *Quarterly Journal of Economics*, 82/4:639-56.
- National Audit Office (2012). Equity investment in privately financed projects. London: HM Treasury. Accessed 20th May, 2012 at http://www.nao.org.uk/publications/1012/equity_investment_in_pfi.aspx
- Lemer, J. (2009). Pentagon faces fresh flack over tanker deal. *The Financial Times Limited*. Accessed 30 September, 2009, at http://membership.ft.com/skylinesplitter/UK/MAR013-splitter.html?segid=70556&ftcamp=subs/sem/AD_FT_and_FT.com
- Ministry of Defence (2007) Through Life Capability Management (internal document).
- Murphie, A., and Potts, J. (2003). *Culture & Technology*. New York, USA: Palgrave MacMillan.
- Neal, D and Taylor, T. (2001). Globalisation in the Defence Industry: An exploration of the paradigm for US and European Defence Firms and the implications for being global players. *Defence and Peace Economics*, 12:337-60.

- Nonaka, I., Toyama, R., and Konno, N. (2000). SECI, “Ba” and Leadership: A Unified Model of Dynamic Knowledge Creation, *Long Range Planning*, 33/1:5-34
- Richardson, L. (2000). Writing: a method of inquiry, N. Denzin and Y. Lincoln (eds) *Handbook of Qualitative Research*, 2ndedn. Thousand Oaks, CA:Sage
- Sayer, A. (2000). *Realism and Social Science*. London: Sage Publications
- Scheffler, I. (1965). *Conditions of Knowledge: An introduction to Epistemology and Education*. Glenview, Illinois: Scott, Foresman and Company, Glenview
- Scruton, R. (2004). *Modern Philosophy: An Introduction and Survey*. London: Pimlico,
- Steger, M., and Roy, R. (2010). *Neoliberalism: A very short introduction*. Oxford, UK: Oxford University Press
- Smith, M. (1998) *Social Science in Question*. London: Sage Publications
- Sveiby, K.E. (1997). *The New Organisational Wealth: Managing and Measuring Knowledge-base Assets*. San Francisco, CA, Berrett-Koehler.
- Watt, N. (2012). Rupert Murdoch pressured Tony Blair over Iraq, says Alistair Campbell. *Guardian*, accessed on 15 June 2012, at <http://www.guardian.co.uk/media/2012/jun/15/rupert-murdoch-tony-blair-iraq-alastair-campbell?INTCMP=SRCH>
- Wearing, D. (2012). Economic Policy in the hands of the few serves just those few – just ask Adam Smith. *Guardian*, Accessed 30 July 2012 at <http://www.guardian.co.uk/commentisfree/2012/jul/30/economic-policy-adam-smith?INTCMP=SRCH>
- West, D. (2010). *Continental Philosophy: An Introduction*. Polity Press, Cambridge, UK