

Conceptualising the Conceptual Component: One Airman's Perspective



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Introduction

*'Which of the two worlds do you inhabit as an individual and as a leader? Are you part of the new world, with your dreams and inspiration, or are you part of the old world, which is... being conquered and replaced even though you don't see it?'*¹

The Royal Air Force (RAF) is once more facing up to an old problem, one whose origin dates back to its genesis as the World's first independent air force - how to conceptualise what it is for and express this in terms of the role it will play in the Nation's future security, prosperity and growth. At the very core of this issue is the RAF's ability to leverage and exploit the Conceptual Component which, together with the Physical and Moral Components, forms the doctrinal basis of UK Fighting Power.² This issue is not unique to the RAF or the armed forces of the UK; indeed, it is arguably applicable to most Western militaries and has been a perennial issue since the beginning of the end of the Cold War in the late 1980s. However, the global financial crisis of 2008 and the sustained period of austerity that followed it have now brought the issue into a renewed and very sharp focus.

For the UK this is a particularly acute issue. The assumption is that the UK retains the desire to remain a strategic player on the World stage. William Hague, the then new Foreign Secretary writing in the Telegraph in 2010 set the current vector when he said 'we [UK] will maintain an active foreign policy, a global diplomatic network, and the ability to act to protect our interests with military force, preventing the shrinkage of Britain's influence.'³ This was codified in the National Security Strategy (NSS) of 2010: 'our national interest requires us to stand up for the values our country believes in - the rule of law, democracy, free speech, tolerance and human rights' which 'requires us to project power...maintain[ing] the capability to act well beyond our shores and work with our allies to have a strategic presence wherever we need it.'⁴ Putting aside debates on the validity of the NSS and Strategic Defence and Security Review (SDSR) of 2010 and the requirements of the next NSS/SDSR iteration, a new issue - proliferation of advanced technology - has added to the now omnipresent financial challenges faced by Western militaries. Latest UK Defence thinking suggests that 'globalisation of technology will lead to greater proliferation, as well as cost reductions for lower-end equipment, and this will allow a wider range of actors to access comparatively sophisticated weapons. The previous technological advantage enjoyed by Western militaries will continue to be reduced as a consequence of higher costs, in relation to procuring the latest and most capable systems.'⁵ These two issues therefore place a premium on the capacity of a Nation's armed forces to think very carefully how the military instrument can be configured and employed in support of political objectives. If it fails to think effectively, then aspirations to retain a comparative advantage over potential challengers will be lost and the ability to shape the outcome of UK policy goals along with it. The RAF (as should the Army and Royal Navy) must therefore constantly think hard about what it is for, not just what it does. For it is a requirement of some importance to the Nation's future security and defence - this then is the matter of the RAF's Conceptual Component (CC) of Fighting Power.

In the context of outlining his plans for the RAF's part in Future Force 2020, the Chief of the Air Staff (CAS) has stated that he wishes to 'put the Conceptual Component at the heart of the way we do things in order to deliver tangible improvements to the effectiveness, affordability and political value of UK air power, and inform choices for air power capability growth'.⁶ This implies that, in his view, the CC may not hold this position in today's RAF and, more significantly, if this is the case, then something should be done about it. The intention in this paper is to set the scene for the work ahead of the RAF and, by association, all those who contribute to the delivery of UK air power. It does not offer clear answers but it will propose a framework for thinking about the CC. First, it considers the issue in front of the RAF before proposing how it might begin to conceptualise the CC challenge and the factors which may form part of its solution. In doing so, it will also highlight the destructive potential of the many symptoms that must be managed while their causes are unravelled and treated. Ultimately, this *Editorial* provides an extended introduction for the articles that follow in this Conceptual Component-themed volume of *Air Power Review*. It is however just one airman's perspective - fellow airmen and women are invited to consider the points it makes, take a view and join the debate.

Is there a problem with the RAF's Conceptual Component?

It would appear that many in the RAF do not understand what the CC is or its relative importance in the contemporary context. Few airmen and women seem interested in learning about its significance and even fewer demonstrate any intent to act in its name. But this is exactly what the CAS requires his Air Force to now do, including all those who support it through the Whole Force approach.⁷ Even limited engagement with RAF students passing through the various command and staff courses at the UK's Defence Academy is quite revealing. Many believe that the CC does not apply to them suggesting it is the preserve of very senior officers or solely for those operating at the Operational and Strategic levels of war. Others claim to recognise its significance but believe they can do nothing about what they see as its current moribund status. Many RAF students apparently do not recognise their own contribution to the CC even as they make it. For example, developing new tactics, techniques and procedures, planning exercises, undertaking a *Continuous Improvement* event or submitting lessons are simply not recognised as being activity within the CC. The deduction is clear – the CC is neither recognised nor understood; it needs to be brought alive for UK airmen and women and its label – the CC – may even be part of the problem. In his excellent 2014 article *The Conceptual Component*, Air Vice-Marshal (Retd) Mike Harwood RAF – a former Director of the Higher Command and Staff Course – captured the essence of this issue perfectly stating: 'when the "Conceptual Component" is mentioned, clouds of inaccessibility usually gather'.⁸ This is a condition that needs to be addressed.

It would be reasonable to expect the answer to lie within doctrine, somewhat ironically itself one of the three doctrinal parts of the UK definition of the CC? A review of UK doctrine, however, simply adds to the perception that there is a deeper problem. The UK's highest level

doctrine states the aim of the Conceptual Component is to: 'provide the intellectual basis for our Armed Forces; theoretically justify providing and employing our Armed Forces; and preserve and take forward corporate memory, experience and knowledge.'⁹ So far so good but now things become less clear. When this doctrine unpacks the CC into its three elements of: the principles of war, doctrine and conceptual innovation, it does so in a markedly uneven way. For of the four pages allocated to this overall task, three articulate the principles of war in some detail, one-half of one page is utilised to explain the rationale for doctrine (this author accepts that the UK is quite adept at writing doctrine and takes it as being sufficient evidence of its perceived importance to the Armed Forces) but, crucially, there are just a few lines on the significance of conceptual innovation. In fact, there is arguably just one line that explains it: 'the Conceptual Component is also updated by conceptual innovation, capturing how our thinking changes over time in response to new technologies, structures and challenges.'¹⁰ Unfortunately the UK's senior air and space power doctrine offers little more with the same bias towards the principles of war although it does add a useful hint as to the CC's perceived importance: 'to use such sophisticated combat capabilities, potential adversaries would need to develop a supporting culture and philosophy. This originates within the conceptual component of fighting power, and ultimately depends on the quality of people. Given the likely constraints we face elsewhere, we must strive to gain and maintain an edge in the Conceptual Component.'¹¹ Any expansion on conceptual innovation, like its senior joint doctrine, is simply absent. This perhaps points to the nub of the issue and offers some explanation as to why many have difficulty in identifying with the CC. If our understanding of this aspect is so limited, indeed superficial, then logically it is here at this most fundamental level that we should start to address the problem. A simple test to confirm this would be to ask a colleague to name the three elements of the CC. In all likelihood, most would probably be able to name just one - doctrine. A few might add the principles of war although many will have thought it to be actually part of doctrine but only a small minority would name conceptual innovation. Yet in the context of the issue facing the RAF, this is arguably the most important of the three elements at this particular time thus, conceptual innovation is the point of departure.

Conceptual Innovation

The problem is simply this. In a future that is uncertain, that will change rapidly and where the RAF's comparative technical advantage is being eroded, conceptual innovation – the ability to do things differently and adapt to the environment – will be essential to the RAF's continued success. Similarly, if the RAF is to keep the Ends, Ways and Means in balance when the 'Means' are likely to shrink, but the 'Ends' unlikely to change, it will need to innovate and change its 'Ways'. So if UK air power is to remain credible, affordable and therefore relevant to the Nation, the RAF - as its custodian - must actively embrace and promote an innovation culture across its entirety. Indeed, this would appear to be fundamental to CAS' aiming point for the RAF of 2020 in his Command Plan: 'more than ever before, we need to think better and innovate more if we are to deliver our outputs in the most intelligent way.'¹² The big question of course is how to do that?

Some clues as to the likely way forward for the RAF lie within that same Plan where it is perceived that 'an increased focus on the CC will stimulate the innovation needed to ensure that air power remains effective, affordable and able to deliver the best value for money and return on investment.'¹³ The RAF Strategy for People reinforces this message: 'although we must continue to invest in advanced systems, people are and must remain at the centre of our capability... Our success depends on the people across the Whole Force...who, directly or indirectly, generate, operate and sustain air power. We must recruit, develop and retain people of the right quality across the Whole Force and nurture them in a meaningful way.'¹⁴ Furthermore, the CAS identifies there is a need to 'deliver the cultural shift to unlock the talent and potential of all our people...to enhance agility.'¹⁵

Others are thinking along similar lines. The Secretary of State for Defence, addressing the Institute for Government in early 2015, said: 'we recognised that...to provide the military capability our country needs it had to become more effective and efficient... Whether that means giving greater freedom to Service Chiefs to incentivise innovation and deliver the structures to achieve military results... Or whether ensuring we are focused on maximising our assets. The private sector pays interest on the capital it borrows to invest. That's a strong incentive not to hoard assets... For example, what's the right number of airfields?'¹⁶ This is an interesting question for those who operate aircraft or reside on airfields (with or without an active runway) but one which the CC can help to answer. Lord Levene said in his 3rd Annual Report on Defence Reform in late 2014: 'the challenge now is for Ministry of Defence to apply to the management of its people the same senior focus and all-round effort that has successfully transformed its financial position.'¹⁷ Describing the outcome of his Command Review in early 2015, the Chief of the General Staff (CGS) indicated that the British Army will 'make a structural and philosophical distinction between the requirement to construct strategy and plan future capability, and the delivery and execution of current capability'¹⁸, before going on to say that 'rigour and a "brains-based" approach will be at the heart of the General Staff's ethos.'¹⁹ In the USAF strategy document *America's Air Force: A Call to the Future*, General Mark Welsh III says: 'strengthening the Air Force culture requires capitalizing on the diversity that has made our service so successful, and the attributes that have drawn Americans to serve. Diversity of thought, enabled by an organization of innovative Airmen who represent and are valued for differing backgrounds, cultures, experiences, and highly-specialized competencies contribute to the greater agility we seek.'²⁰ Thus placing the CC at the centre of the RAF's business chimes with the thinking of the higher management of UK Defence, a sister Service and our principal Air Force partner. We can also deduce that an ability to innovate, the people who work in the organisation and the organisation's culture are key factors in the journey ahead for the RAF.

Innovation, People and Culture

A review of relevant literature suggests that the RAF is on the right track by focussing on these three areas as the way to develop its CC. Writing in 2001, Williamson Murray highlighted that 'technology has rarely been more than an enabler of revolutions in military affairs in the past,

and there is no reason to believe that things will be different in the future.'²¹ Murray adding that 'the emphasis...has been, more often than not, on technology and platforms, as embodying in themselves the necessary direction of innovation.'²² Air Vice-Marshal (Retd) Tony Mason RAF, writing in 1986, points out that 'sometimes the vision of the innovators has outrun the capability of technology (the early submariners, the early aircraft carrier advocates, etc)... Yet without such visionaries and without innovation, a nation's way of war becomes predictable; and predictable means vulnerable.'²³ But Mason also acknowledges the problems innovators face: 'such are the day-to-day pressures on the modern serviceman that he has little time either for reflection - the essential prerequisite for innovation - or even the time to develop the habits of reflection.'²⁴ Thomas Williams, citing Kanter, says 'something that is "innovative" involves highly problematic situations that cross organisational lines and threaten to disrupt existing arrangements. Such problematic situations require resources and skills beyond what we need to do our jobs.'²⁵ Williams also alerts us to the fact that the term innovator was a pejorative term in the late 18th Century before citing business guru Tom Peters: 'destruction and failure are essential to creativity and innovation' and 'innovation is frightening to many of us because it represents a loss of control and authority.'²⁶ Therefore being prepared to fail appears to be a prerequisite for innovation to occur.

Murray argues that 'there is another crucial element in the innovation equation - the culture of military organisations...The services that innovated with considerable success in the interwar period possessed internal cultures that encouraged debate, study, and honest experimentation in their preparations for war.'²⁷ The example Murray offers is von Seeckt's work with the German Army on manoeuvre warfare. He adds that 'exacerbating the problem of successful innovation over the past century has been the harsh reality that military organisations have rarely been willing to learn from the past' and 'the fact is that military organisations, for the most part, study what makes them feel comfortable about themselves, not the uncongenial lessons of past conflicts.'²⁸ These are strong views but Benjamin Kohlmann, a serving USMC officer, goes even further by suggesting that 'you can't innovate and have a long term impact if you are only surrounded by like-minded people. You must challenge closely-held assumptions daily if you want to have an impact. This...is anathema to a career military person.'²⁹ For Kohlmann the cause of this failure to innovate is down to an ineffective military education: 'a great deal of this lies in how we educate our military members. We educate them in the art of war, but do so with a focus on mere tactics. We educate them when they are well past the age of agile and innovative thought. We preach adaptability, flexibility and manoeuvre warfare, but only do so in relation to the movement of military kit.'³⁰ Peter Munson agrees, he argues that 'PME'³¹ does not provide students with radically different outsider perspectives' but he also notes that 'education and intellectual abilities are not valued.'³² He then suggests that it is the senior leadership who are the least well-equipped: 'the catch-22 is that military leaders have been trained and educated to take bold decisive action on the battlefield, but have been bred to be risk averse in the organisational environment.'³³ Mason however offers some balance when he says 'it should come as no surprise that military education can occasionally give rise to uneasiness within the military as a whole. There are many apparently

incompatible objectives: discipline and individuality, conformity and initiative, responding and innovating, determination and flexibility, imagination and objectivity, fire and dispassion. However, fighting and thinking should not be incompatible, but complementary.³⁴

The symptoms that emerge from the themes of innovation, people and culture are numerous. Overly bureaucratic processes, insufficient time to think, ineffective structures, out-of-touch leadership, poor decision-making mechanisms, an inability to learn lessons, an anti-intellectual bias and an organisational inertia which has a steadfast reluctance to challenge the status quo. But they must be recognised for what they are – symptoms – if their underlying causes, the true barriers to conceptual innovation, are to be addressed. Consequently, the RAF must hold a mirror up to itself and consider, honestly, if any of these symptoms are being reflected back. Clearly diagnosing their underlying condition(s) will be challenging. Instigation of any treatment can only be a leadership-led activity. This is what the RAF Command Plan 2014 hints at in the context of the upcoming SDSR: 'it is through objective and compelling evidence and analysis that we will inform a rational outcome for the RAF., in the best interests of Defence.³⁵ As Williams also points out: 'the successful organisation sets aside unchallenged assumptions, gut-based "facts", and sloppy reasoning, because they prevent objectivity and stifle learning. Learning organisations insist on fact-based decision-making, and insist on data and a careful examination of evidence to ensure the focus is on cause, not on the symptoms of the problem.'³⁶

A [Potential] Framework

What is the RAF trying to achieve? Arguably it needs to develop, or enhance, an attitude of mind which translates perceived ethereal conceptual thinking into relevant day-to-day RAF activity by all personnel who contribute to its outputs. If the Whole Force can conceptualise its challenges now and into the future, and then engage in loyal dissent within the organisation they will better understand their role, and thus make an enhanced contribution to the operational outputs of UK air power. This offers empowerment and will fuel true mission command. It will allow the Service to innovate whilst retaining the military hierarchy which ensures clear command and control in the battle-space and without stifling debate and progress in the business-space. The RAF has always considered itself to be a thinking Service, and rightly so. Now it has the opportunity to demonstrate that once more and lead the way in exploiting the CC thereby allowing it to bolster the Moral and, ultimately, exploit the Physical. The overall result will be more robust and relevant Fighting Power or, in the RAF's case, the lead element of UK air power. To start this analysis, it is proposed that the RAF considers how it might exploit the CC through three distinct but inevitably overlapping lenses of: education, enabling mechanisms and personnel management.

Education

There is perhaps a need to examine how we prepare our brightest and best – the few – for high command appointments in either the business or operations area of the Service. On the former, Lord Levene certainly thinks so. He suggested in his most recent report on

Defence Reform that '[MOD] should consider further changes to the way its people processes work at the very top... and to reinforce their standing as "Chief Executives", should all Service Chiefs (like Permanent Secretaries in future) be sent on stretching and highly intensive MBA training courses before taking up appointment?'³⁷ Munson concurs: 'Just as we learn on our tactical jobs, leaders need to be properly selected and educated for the far different challenges of organisational leadership and management at higher levels.'³⁸ In his recent book *High Command*, which considered UK political-military leadership over the Iraq and Afghanistan campaigns 2000-10, Major General (Retd) Christopher Elliott points out that 'all of the Chiefs of Defence Staff in the decade had escaped the formal intellectual training and broadening experience that a university offers – particularly in conceptual skills – yet they were dealing with their peers in Whitehall almost all of whom had been to university.'³⁹ He adds that only two had attended the Royal College of Defence Studies⁴⁰ and only one had attended the Higher Command and Staff Course⁴¹ before stating 'it would be fair to conclude that none of them had sufficient formal education for the job of leading UK defence forces and certainly none of them had formal training in strategy and statecraft.'⁴²

Considering the requirements of the operational space, Air Vice-Marshal Edward Stringer RAF, a former Assistant Chief of the Air Staff, makes a similar point about what he calls 'Air Generals', ie, those who lead the RAF on operations. He argued in 2014 that the unique demands of commanding air operations require an improved education and training focus for those destined to lead. Without it, Stringer suggests that 'there can be a tendency for them [Air Generals] to think like line mangers rather than air power strategists.'⁴³ Expanding, Stringer says 'an RAF commander may prioritise running his forces or his base as efficiently and effectively as possible, rather than viewing his aircraft and support staff as part of a larger, multifaceted organisation, with a wide spectrum of capabilities across a broad range of political utility.'⁴⁴ Murray seems to agree: 'It becomes increasingly easy, as the complexities, ambiguities, and frictions of combat recede into the past, for militaries to develop concepts, doctrines, and practises that meet the standards of peacetime efficiency rather than those of wartime effectiveness.'⁴⁵ One could imagine that a reinvigorated period of advanced wargaming might be one aspect the RAF will wish to consider as a result.

Overall, the volume and quality of education for RAF officers, particularly those in the Executive Stream⁴⁶ is considered to be high – the evidence would suggest that this should be preserved and perhaps even enhanced. Underpinned by the strong support of key leadership, the coordinated approach taken by the RAF to internal as well as external education programmes is arguably seen as best practice.⁴⁷ However, this may not in itself be sufficient as development of the CC for Main Stream officers and non-commissioned cadres is visibly less robust. Current data shows that only around 20% of RAF wing commanders progress to the Advanced Command and Staff Course, and that just 2% of this group will go onto complete the Higher Command and Staff Course.⁴⁸ Given that the Intermediate Command and Staff Course (Air) is targeted at newly-promoted squadron leaders, typically in their early 30s, this leaves a large body of the RAF's officer corps without a formal educational

intervention for around 20-23 years should they opt to serve until 55 years of age.⁴⁹ Thus gaining a better understanding of the educational requirements of this group and non-commissioned ranks – the many – while continuing to fine-tune those of the few, might be a good place for the RAF to start.

Enabling Mechanisms

‘It is up to us to create adaptable organisations that permit, encourage and oblige people to be agile rather than preclude them from being so.’⁵⁰ Yet despite RAF education programmes, the CC appears to be isolated from daily activity. Evidently doctrinal knowledge is also quite weak and as a result there is a general habit of relying on best effort rather than considered doctrinal application when delivering effects created by air power. This is neither a new phenomenon nor limited to the RAF. The Foreword to the Army Doctrine Primer 2011 helpfully points out that ‘much of our [UK] doctrine in the past has been good stuff and others have used it effectively, even if we have not. To quote Erwin Rommel: *The British write some of the best doctrine in the world; it is fortunate their officers do not read it* (emphasis in original).⁵¹ More pointedly it adds: ‘yet the very mention of the word doctrine sends some into toxic shock, and claiming not to have read it is a badge of honour amongst some older officers.’⁵²

The key questions are why does this perceived state of affairs continue to prevail, and what can be done about it? Herein lay the clues to address what this author has called the ‘enabling mechanisms.’ Could it be perhaps due to an ingrained ‘anti-intellectual bias’ in the British Military that we must seek to overcome? Colonel (Retd) Lloyd Matthews’ work analysing what he argues is an anti-intellectual bias in the US Army suggests that it has always been present in the British, French and US militaries. He starts by citing Prime Minister Lloyd George caustically observing that ‘military mind regards thinking as a form of mutiny’ and continues by citing a contemporary British commentator (unnamed) suggesting that ‘the legacy of the aristocratic or traditional [that is, anti-intellectual] role model is far from dead.’ This view of the British military may or may not be accurate but Matthews’ final conclusion does seem logical: ‘it is thus a fool’s game to squander precious intellectual capital... The army that rejects seminal thinkers, thereby depriving itself of innovative ideas and instruments for continuous intellectual self-renewal, will ultimately be a defeated army.’⁵⁵ Now therefore might be the time for a revolutionary approach to be adopted into the way the RAF conducts its business. Time for thinking⁵⁶ may need to be institutionalised and its output revered more. To do this, the conceptual process will need to be an invisible but engrained and therefore normal part of the RAF’s daily battle rhythm, and recognised and rewarded as such. In High Command, Elliott warns that Britain is destined for more military failure without reform of the chain of command. ‘At the moment the UK is bound to fall on its face unless someone makes an honest appreciation of what they want [armed] forces for... a coherent, thinking “brain” either does not exist in the MOD, or the circumstances of Whitehall do not allow it to flourish.’⁵⁷ Mason meanwhile cautions that ‘In our military hierarchies, the accumulation of experience and wisdom is associated with increasing seniority. Weight of opinion is usually accredited according to rank’ and that ‘the restless mind can make for an uncomfortable subordinate.

Paradoxically, the more powerful, competent, and confident the general, the more difficult it becomes to convince him that he may not be omniscient.⁵⁸ Kohlmann is typically more forthright: 'many of the "middle management" in today's [US] military are deeply disgruntled with the dysfunctional, if not toxic situations they find themselves in... When they do comment on their perception of the strategic, budgetary, acquisition and institutional failures of their organisation, they are patronisingly told that they do not understand the issues. Their concerns are dismissed, often with disdain, by the guardians of the institution.'⁵⁹ Mason is more subtle but makes the same point: 'If an innovation does come to mind and the service member proposes it as a change, the individual is then challenging the accepted wisdom, which, presumably, is either apparently working successfully or has catastrophically failed.'⁶⁰ Part of the answer might therefore lie in the RAF reviewing how it undertakes its conceptual thinking, who does it, in which fora and what its recognised outputs are. Another might be to consider how it could better institutionalise Red Teaming of new ideas.⁶¹

Personnel Management

'Military personnel policy is equal parts art and science. If it were all science...military services would have figured out long ago how to get the most out of each man and woman in uniform, give them rewarding careers, and win wars to boot'⁶², according to Mark Thompson of Time magazine. Arguably, this hits the proverbial nail on the head. The RAF, like the other Services, must compete in the employment market place to attract, recruit and retain sufficient 'talent' to meet the operational commitments it has today, and might have tomorrow. In this respect, it is of course arguably no different to any other enterprise, public or private. But recently that competition has become fiercer due to demographics reducing the size of the overall pool and an acute global shortage of STEM⁶³ graduates, the staple of a technology-based fighting force. Together, this is increasing the pressure on military personnel management. The macro answer for UK Defence is the Whole Force approach, described by Louth and Quentin of the Royal United Services Institute (RUSI) as 'the UK's reform of its military in which the armed forces change from being solely composed of a volunteer, professional army, navy and air force – wholly enwrapped within the governmental sector – to instead become a partnered arrangement of regular military, regular reserves, volunteer reserves, sponsored reserves and private sector contractors.'⁶⁴ The RAF's subordinate approach is contained in its *Strategy for People: Developing Human Capability* document. It articulates three separate but interdependent human capability goals of full manning, resilience and feeling valued, that it seeks to achieve. In amplifying, it states that 'to maximise the capabilities our people (uniformed and civilian) offer, we must bring together the right number of people, with the right skills, knowledge, experience and motivation, equipped appropriately to deliver our outputs.'⁶⁵ The key question in the context of the CC is what needs to change in personnel management, why and how might this be achieved?

A review of literature suggests there is a significant personnel issue with regards to the way the US military manages its talent today. The inference is that the RAF should check carefully if it too must identify and address similar symptoms and their causes. Tim Kane, a retired

USAF Colonel and author of *Bleeding Talent*, thinks that 'the personnel bureaucracy in the Pentagon is destroying the human capital invested in its troops, bleeding good people out into the civilian world but bleeding even more talent internally through mismanagement.'⁶⁶ Nick Taranto, a CEO and USMC reserve officer, agrees with Kane's view but focuses on what he regards as a failed rewards mechanism, saying 'it's easy to believe that top performers, as in many other industries, are lured away by bigger paychecks. But it's not so simple. The reason overwhelmingly cited by veterans and active-duty officers alike is that the military personnel system is nearly blind to merit. Fitness Reports, the military equivalent of performance evaluations, punish mistakes and reward risk aversion.' Taranto goes on to say that 'retaining the best talent is not all about money. The brightest most innovative people need to be challenged. They need to feel incentivized to work hard. And they need to know that their hard work is recognized, appreciated, and rewarded.'⁶⁷ Munson also suggests that 'a military that needs agility and cultural change would be well served to bring some flexibility into its personnel policies, recognising that some people will internalise more experience in 15 years than others would in 30.'⁶⁸ Some might regard these comments as being too harsh but the spirit of their main message is reflected in recent comments by Ashton Carter, the new US Secretary of Defence. Speaking to his High School alma mater about his plans for the [US] 'force of the future', he said: 'the demands of the 21st Century may require the military to fundamentally change the way it evaluates, promotes and retains service members.'⁶⁹ Carter expands by saying that 'promotion boards should give less weight to seniority and place more emphasis on merit', suggesting '[the US] military should allow well-trained people to begin military service in the middle of their career and grant them an automatic mid-career rank', and that 'retaining the best... will require flexible career paths' including the option for them to take a 'sabbatical... [in order to] get a degree, learn a new skill or start a family.'⁷⁰ Critically, he recognises that, aside from the obvious attracting and retaining talent benefits such an approach brings, that it is also good for the US military because 'they help people bring new skills from outside back into the military.'⁷¹

Somewhat encouragingly, the RAF appears to also recognise these challenges and hints at some of their potential solutions in its *Strategy for People*: 'embracing new equipment types and new roles, such as Lightning II, Remotely-Piloted Air Systems and Cyber will demand new skills, organisational structures and specialisations' and 'we must explore opportunities to allow more flexible employment of personnel across Branch and Trade boundaries and to move - in both directions - between Regular and Reserve services.'⁷² The Strategy also says the RAF will 'make better use of its talent by employing personnel more flexibly, and developing them more robustly, across career fields.'⁷³ The CGS has a similar view. When discussing the outcome of his Command Review he said: 'the work to broaden and lengthen the career structure to maximize talent through diversity is to be incorporated.'⁷⁴ Kane is more specific in his view of the US military, suggesting three priorities: decentralising personnel management and giving commanders the authority to hire; instituting a more honest system of performance evaluations; and, introduction of lateral entry where former officers (and presumably airmen) exit and re-enter and re-exit and re-enter, and to serve as

long a career as they want without career-tenure constraints.⁷⁵ Taranto is also specific, likening the US military's personnel challenges to those of any start-up enterprise: 'we are building management systems that retain the best people by emphasizing merit-based pay, robust mentorship networks, and boundless respect for exceptional talent. We also make sure to separate the wheat from the chaff, and when people aren't performing, or aren't willing to take risks, we quickly show them the door.'⁷⁶

The RAF can obviously see the challenge ahead of it. However, its ability to deliver effective RAF personnel management change will, in part, inevitably determine the extent to which it can embed the CC at its very core and thus enhance its future Fighting Power. The RAF will obviously be best served if it has sufficient access to the best talent, but so too will many others. Thus developing new personnel management policies and their supporting structures, introducing flexible appointment processes and practises, and identifying innovative reward mechanisms would all appear to be fundamental to achievement of the CAS' CC ambition. The obvious deduction here is that the RAF is operating in a contested environment in this regard and must therefore derive its own competitive advantage if it is to be successful in the longer term.

Conclusion

Analysis of future strategic trends has identified a macro problem for Western militaries – the technological edge that has traditionally provided their comparative advantage is beginning to erode and is forecast to continue to do so. The RAF is not immune, a fact recognised by the CAS who appears intent on doing something about it. His plan is to further develop the intellectual professional foundations of UK air power – doctrinally known as the Conceptual Component of the RAF's fighting power. This way the RAF might offset both the reducing mass and increasing proliferation of technology, which is shrinking the strength of its Physical Component. The RAF's twin goals are therefore to think more and innovate better, everywhere across its organisation; its prize to make UK air power more effective, affordable and relevant to the Nation. But there is a problem. The Conceptual Component is apparently not well understood by its airmen and women and hence it will be difficult for the RAF to develop something it does not really know. Doctrine does not really help in this regard despite itself, ironically, being one of the elements of the Conceptual Component, with the element of conceptual innovation particularly poorly articulated in current doctrine publications. Therefore, the RAF's problem in outline appears to be a need to understand the status of its Conceptual Component today, define where it needs it to be in the future and then plot a course to get there. These are the implied tasks set by the CAS in the *RAF Command Plan 2014*.

The RAF is not alone in thinking this way. A literature review identifies many others from its sister Services, partner Air Forces, Government and commercial enterprises doing the same. Their collective wisdom however does offer plenty of advice. A plethora of symptoms are clearly identified which the RAF must now carefully seek out in a ruthless process of

self-examination. Just as with the practice of medicine, the challenge is to then accurately identify their underlying root causes and ultimately prescribe a viable treatment plan to remedy them. The literature suggests that the RAF would be well advised to closely examine three interconnected areas of the organisation as it goes about its work to embed the Conceptual Component. First, it should check its ability to innovate across all levels of the RAF. Next, it should consider the people in the organisation: are they what the RAF needs for today and tomorrow? How can it attract and retain the best talent? Finally, it should consider the RAF's culture within which those people are serving: are its behaviours rewarding innovation or punishing it? Do the RAF's structures promote innovation from its Whole Force or do they contrive to make it a near impossible condition beyond Tactical-level warfighting? These are tough, challenging questions for which the CAS seems determined to demand thoughtful answers.

This paper does not give firm answers to these questions but it does offer an embryonic framework through which they might be considered and its supporting analysis deciphered into a basic understanding. This framework comprises three parts: education, enabling mechanisms and personnel management. Like the factors mentioned in the previous paragraph, each are connected and offer mutually supporting and beneficial outcomes. Inevitably, the three parts are unlikely to be exhaustive but arguably they do represent a reasonable starting point from which to consider the problem. Education is perhaps an obvious and direct first step but it is its nuanced application that must be holistically considered. How to best prepare leadership for the battlefield and the boardroom? How to offer sufficient to the many, while nurturing the few? What education to offer, when, to whom and how might this change over time? Enabling mechanisms on the other hand are more of a wrap-around, slightly less direct part of the framework. Is the organisation truly adaptable or are there barriers that must first be removed? Does leadership actively promote the Conceptual Component, encourage innovation without punishing honest failure? Does every level of the organisation value creative challenge, make sufficient time for thinking and then recognise and reward the development of new ideas? The final part of the framework is personnel management, a largely indirect influence on the Conceptual Component but arguably its most significant. Indeed, if this is deemed not fit for purpose then changes in the other two parts of the framework alone will only yield low-benefit, window-dressing improvements. The RAF's *Strategy for People: Delivering Human Capability* appears to be asking all the right questions of the Service and even identifying potential innovative solutions to be pursued. Indeed, it is just possible that it is this area that will 'deliver the cultural shift to unlock the talent and potential of all of our people'⁷⁷ that is demanded by the CAS. It would seem beyond any doubt that the Conceptual Component will benefit tremendously if it does.

Conceptualising the Conceptual Component highlights that the challenge facing the RAF is fundamentally about thinking better about what you've done, what you're doing and what you might have to do. And this must take place across many levels simultaneously

throughout the Service and involve the Whole Force. People are indeed at the centre of UK air power capability and in seeking to embed the Conceptual Component at the centre of the RAF of 2020 this is recognised by the CAS and he is actively pursuing this ambition. The views offered here is just one airman's perspective. The author, and Editor *Air Power Review*, now invites the airmen and women of the RAF and other air forces, and beyond, to put digital pen to paper and share their thoughts on the Conceptual Component with the RAF Centre for Air Power Studies. This is important work for as Mason and Welsh III both remind us, we would be well-advised to heed the advice of General Hap Arnold USAF just after the conclusion of the Second World War:

*'National safety would be endangered by an air force whose doctrines and techniques are tied solely to the equipment and processes of the moment. Present equipment is but a step in progress, and any air force which does not keep its doctrines ahead of its equipment, and its vision far into the future, can only delude the nation into a false sense of security.'*⁷⁸

Notes

¹ Wilkinson D J *"The Ambiguity Advantage: What Great Leaders Are Great At"* (Palgrave Macmillan: Basingstoke, 2006) p3

² JDP 01-1, *British Defence Doctrine (Fifth Edition) (MOD: 2014)*. p25.

³ <http://www.telegraph.co.uk/news/politics/william-hague/8036093/Strategic-Defence-and-Security-Review-We-have-a-clear-vision-of-Britains-role-in-the-world.html> accessed 1 Apr 15.

⁴ *A Strong Britain in an Age of Uncertainty: The National Security Strategy (MOD: 2010)*. p4.

⁵ DCDC, *Future Operating Environment 2035 (MOD: 2015)*. p3.

⁶ *RAF Command Plan Part 1A, (MOD: 2014)*. p2.

⁷ The Whole Force comprises Regulars, Reserves, Civil Servants and Contractors.

⁸ Harwood, Mike AVM (Retd) RAF. *The Conceptual Component (Air Power 2014/15) (MOD: 2014)*. p18.

⁹ JDP 01-1, *British Defence Doctrine (Fifth Edition) (MOD: 2014)*. p28.

¹⁰ *Ibid.* p32.

¹¹ *Joint Doctrine Publication 0-30, UK Air and Space Doctrine (MOD: 2013)*. p2-5.

¹² *RAF Command Plan Part 1A, (MOD: 2014)*. p2.

¹³ *Ibid.* p3

¹⁴ *RAF Strategy for People: A Strategy for Delivering Human Capability (MOD: 2014)*. p4.

¹⁵ *RAF Command Plan Part 1A, (MOD: 2014)*. p3.

¹⁶ <https://www.gov.uk/government/speeches/reforming-defence-keeping-fighting-fit> accessed 30 Mar 15.

¹⁷ <https://www.gov.uk/government/publications/defence-reform-an-independent-report-into-the-structure-and-management-of-the-ministry-of-defence--2> accessed 30 Mar 15.

¹⁸ Carter, Nick General. *Army Command Review (GS/02/01/13 dated 26 Jan 15)*. p1.

¹⁹ *Ibid.* p5.

- ²⁰ Welsh III, Mark General USAF Chief of Staff. *America's Air Force: A Call to the Future* (US DoD: 2014). p12.
- ²¹ Murray, Williamson. *Thinking About Innovation* (Naval War College Review, Spring 2001, Vol LIV, No 2). p120.
- ²² Ibid. p127.
- ²³ Mason, Tony AVM (Retd) RAF. *Innovation and the Military Mind* (Air University Review, Jan-Feb 1986). <http://www.airpower.maxwell.af.mil/airchronicles/aureview/1986/jan-feb/mason.html> accessed 12 Jan 15.
- ²⁴ Ibid.
- ²⁵ Williams, Thomas M. *Understanding Innovation* (Military Review, July-August 2009). p124.
- ²⁶ Ibid.
- ²⁷ Murray, Williamson. *Thinking About Innovation* (Naval War College Review, Spring 2001, Vol LIV, No 2). p124.
- ²⁸ Ibid. p122.
- ²⁹ Kohlmann, Benjamin. *The Military Needs More Disruptive Thinkers* (Small Wars Journal blog, 5 April 2012) <http://smallwarsjournal.com/jrnl/art/the-military-needs-more-disruptive-thinkers> accessed 30 Mar 15.
- ³⁰ Ibid.
- ³¹ Professional Military Education (PME) is the overarching US term which describes the education programmes of its armed forces.
- ³² Munson, Peter J. *Disruptive Thinkers: Defining the Problem* (Small Wars Journal blog, 9 April 2012). <http://smallwarsjournal.com/jrnl/art/disruptive-thinkers-defining-the-problem> accessed 30 Mar 15.
- ³³ Ibid.
- ³⁴ Mason, Tony AVM (Retd) RAF. *Innovation and the Military Mind* (Air University Review, Jan-Feb 1986). <http://www.airpower.maxwell.af.mil/airchronicles/aureview/1986/jan-feb/mason.html> accessed 12 Jan 15.
- ³⁵ *RAF Command Plan Part 1A*, (MOD: 2014). p2.
- ³⁶ Williams, Thomas M. *Understanding Innovation* (Military Review, July-August 2009). p66.
- ³⁷ <https://www.gov.uk/government/publications/defence-reform-an-independent-report-into-the-structure-and-management-of-the-ministry-of-defence--2> accessed 30 Mar 15.
- ³⁸ Munson, Peter J. *Disruptive Thinkers: Defining the Problem* (Small Wars Journal blog, 9 April 2012). <http://smallwarsjournal.com/jrnl/art/disruptive-thinkers-defining-the-problem> accessed 30 Mar 15.
- ³⁹ Elliot, Christopher L Major-General (Retd). *High Command* (C Hurst & Co (Publishers): 2015). p201.
- ⁴⁰ Admiral Sir Michael Boyce RN and Air Chief Marshal Sir Jock Stirrup RAF.
- ⁴¹ Air Chief Marshal Sir Jock Stirrup RAF.
- ⁴² Elliot, Christopher L Major-General (Retd). *High Command* (C Hurst & Co (Publishers): 2015). p201.
- ⁴³ Stringer, Edward J AVM RAF. *Air Generalship* (Air Power 2014/15) (MOD 2014) p20.
- ⁴⁴ Ibid.
- ⁴⁵ Murray, Williamson. *Thinking About Innovation* (Naval War College Review, Spring 2001, Vol LIV, No 2).

⁴⁶ The RAF defines its officer corps as existing in one of 2 self-explanatory groups: the Executive or Main Stream; all officers start out in the former but most end up in the latter as their career unfolds.

⁴⁷ For example, the First Sea Lord launched his own Fellowship Scheme in December 2014 based on the Royal Navy's positive view of the Chief of the Air Staff's Fellowship Scheme, which has been running successfully since 2006.

⁴⁸ This data is drawn from an ongoing piece of work by Director RAF Division within the Joint Services Command and Staff College to inform future RAF education requirements.

⁴⁹ The introduction of the New Employment Model (NEM) on 1 Apr 15 will only exacerbate this situation as many officers will be given the opportunity to serve until 60 years of age, thus potentially increasing this educational hiatus to a period of 25-28 years, a period representing approximately 60% of their potential active service life.

⁵⁰ Dye Peter, *Developing Agile Airmen*, in Ed Parton N, *Air Power: The Agile Airforce*, CAS' Air Power Conference 2006 (RAF: 2006) p16.

⁵¹ *Army Doctrine Publication: Army Doctrine Primer (AC7194)*. (MOD: 2011). p(i).

⁵² Ibid.

⁵³ Matthews, Lloyd J Colonel US Army (Retd). *The Uniformed Intellectual And His Place in American Arms (Part I)*, (ARMY: July 2002). p18. http://www.ausa.org/publications/armymagazine/archive/2002/7/Documents/Matthews_0702.pdf accessed 31 Mar 15.

⁵⁴ Ibid.

⁵⁵ Matthews, Lloyd J Colonel US Army (Retd). *The Uniformed Intellectual And His Place in American Arms (Part II: The Effects of Anti-intellectualism On the Army Profession Today)*, (ARMY: August 2002). p40.

⁵⁶ Google advocates that 20% of an employee's time should be devoted to thinking. E Hayes Google's 20% factor, ABC News May 12 2008. <http://abcnews.go.com/technology/story?id=4839327> accessed 30 Mar 15.

⁵⁷ Elliot, Christopher L Major-General (Retd). High Command (C Hurst & Co (Publishers): 2015). Comments contained in the author's interview with the Times newspaper 1 Jan 15. <http://www.thetimes.co.uk/tto/news/uk/defence/article4311018.ece> accessed 5 Jan 15.

⁵⁸ Mason, Tony AVM (Retd) RAF. *Innovation and the Military Mind (Air University Review, Jan-Feb 1986)*. <http://www.airpower.maxwell.af.mil/airchronicles/aureview/1986/jan-feb/mason.html> accessed 12 Jan 15.

⁵⁹ Kohlmann, Benjamin. *The Military Needs More Disruptive Thinkers (Small Wars Journal blog, 5 April 2012)*. <http://smallwarsjournal.com/jrnl/art/the-military-needs-more-disruptive-thinkers> accessed 30 Mar 15.

⁶⁰ Mason, Tony AVM (Retd) RAF. *Innovation and the Military Mind (Air University Review, Jan-Feb 1986)*. <http://www.airpower.maxwell.af.mil/airchronicles/aureview/1986/jan-feb/mason.html> accessed 12 Jan 15.

⁶¹ Airmen in the Development, Concepts and Doctrine Centre, Air Warfare Centre, Air Capability, Air Staff and CAS' Fellows carry out think tank-type activity.

⁶² <http://nation.time.com/2013/01/21/why-cant-the-u-s-military-grow-better-leaders/> accessed 29 Mar 15.

⁶³ Refers to graduates with a Science, Technology, Engineering or Mathematics (STEM) background.

⁶⁴ Louth, John and Quentin, Pete. *Making the Whole Force Concept a Reality (RUSI Briefing Paper, 2014)*. p1.

⁶⁵ *RAF Strategy for People: A Strategy for Delivering Human Capability (MOD: 2014)*. p8.

⁶⁶ <http://nation.time.com/2013/01/21/why-cant-the-u-s-military-grow-better-leaders/> accessed 29 Mar 15. Mark Thompson of Time magazine was interviewing Tom Kane (a retired USAF officer) on the release of his new book *Bleeding Talent: How the U.S. Military Mismanages Great Leaders and Why It's Time for a Revolution*.

⁶⁷ <http://www.forbes.com/sites/nicktaranto/2013/11/11/the-military-needs-to-learn-people-management-lessons-from-startups/> accessed 29 Mar 15.

⁶⁸ Munson, Peter J. *Disruptive Thinkers: Defining the Problem (Small Wars Journal blog, 9 April 2012)*. <http://smallwarsjournal.com/jrnl/art/disruptive-thinkers-defining-the-problem> accessed 30 Mar 15.

⁶⁹ <http://www.militarytimes.com/story/military/pentagon/2015/03/30/secdef-promotion/70667178/> accessed 31 Mar 15.

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² *RAF Strategy for People: A Strategy for Delivering Human Capability (MOD: 2014)*. p7.

⁷³ Ibid. p10.

⁷⁴ Carter, Nick General, Chief of the General Staff. *Army Command Review (GS/02/01/13 dated 26 Jan 15)*. p6.

⁷⁵ <http://nation.time.com/2013/01/21/why-cant-the-u-s-military-grow-better-leaders/> accessed 29 Mar 15. Mark Thompson of Time magazine was interviewing Tom Kane (a retired USAF Officer) on the release of his new book *Bleeding Talent: How the U.S. Military Mismanages Great Leaders and Why It's Time for a Revolution*.

⁷⁶ <http://www.forbes.com/sites/nicktaranto/2013/11/11/the-military-needs-to-learn-people-management-lessons-from-startups/> accessed 29 Mar 15.

⁷⁷ *RAF Command Plan Part 1A, (MOD: 2014)*. p3.

⁷⁸ Cited in Mason, Tony AVM (Retd) RAF. *Innovation and the Military Mind (Air University Review, Jan-Feb 1986)*. <http://www.airpower.maxwell.af.mil/airchronicles/aureview/1986/jan-feb/mason.html> accessed 12 Jan 15. See also Welsh III, Mark General USAF Chief of Staff. *America's Air Force: A Call to the Future (US DoD: 2014)*. p6.

Notes on Contributors

Lieutenant Colonel Dan Brown is a United States Air Force (USAF) C-130J pilot and the Commander of the 19th Operations Support Squadron at Little Rock Air Force Base, Arkansas. During his career, Danny has flown on operations in Bosnia, Kosovo, Afghanistan, Iraq and throughout Africa. On staff, he has served as an assistant and as the speechwriter to the 4-star General in Command of Air Education and Training. In 2012, he graduated from Advanced Command and Staff Course (ACSC) 15, completing an MA in Defence Studies from King's College London. Danny followed ACSC as an exchange officer at the Air Warfare School, RAF College Cranwell, where he was the Course Director for the Senior Officer Studies Programme and instructed on the Air Battle Staff Course. In his current position, he commands 230 personnel and is responsible for seven flights, including airfield operations, weather, aircrew flight equipment, intelligence, training, tactics and current operations. This team is responsible for enabling USAF C-130 missions worldwide.

Group Captain Paul O'Neill is a serving RAF Personnel Officer. He completed a MPhil at the University of Cambridge in 2009 and is currently a visiting Research Fellow at the University of Oxford, as part of the Changing Character of War Programme where he is researching organisational agility as a CAS' Fellow. He is a Chartered Fellow of the Chartered Institute of Personnel and Development (CIPD) and is a member of the CIPD HR Leaders' Forum.

Dr Matthew Powell holds a PhD in Modern History from the University of Birmingham. His thesis investigates the development of tactical air power by the RAF during the First World War and inter-war period and the RAF's Army Co-operation Command development of tactical air power thinking and application in Britain between 1940 and 1943. He holds a degree in Contemporary Military and International History and a Masters degree in Intelligence and Security Studies both from the University of Salford and is a teaching associate at the University of Birmingham.

Air Vice-Marshal Andrew Turner was commissioned into the Royal Air Force in 1985. He is currently AOC 22 (Trg) Group and COS (Trg) at HQ Air Command. He was educated at Kingswood School in Bath, the RAF Colleges Cranwell and Bracknell, the Indian Staff College, the UK Higher Command and Staff College, the Royal College of Defence Studies and the UK Pinnacle and US Capstone courses. He has studied at Oxford, Exeter, King's College London, Chennai and the Open Universities earning Masters in International Relations and Strategic Studies and a Bachelor's degree in Oceanography and Cosmology. A helicopter pilot with 5000 flying hours, he has flown 1850 of those on 19 operational tours in Northern Ireland, Central America, Saudi Arabia, Iraq, Kuwait, Bosnia, Kosovo, Albania and Afghanistan. He has commanded 28 (AC) Sqn, RAF Odiham, the UK Merlin and UK Chinook Forces, the Special Forces Aviation Wing, the Puma Force in Kosovo, Merlin Force in Iraq and the Chinook, Apache, Lynx and Sea King Forces in Afghanistan. Para trained he has completed staff appointments in the UK MOD in planning, operations and media directorates, PJHQ as

the head of military planning, Washington as CDS' Liaison Officer and in brigade, division and corps headquarters. He was appointed as an Officer in the Most Excellent Order of the British Empire (OBE) in the 2006 Birthday Honours "in recognition of distinguished services in the Ministry of Defence in support of operations in Afghanistan, Iraq and in home waters". He was promoted to Commander within the Order of the British Empire (CBE) in the 2010 Birthday Honours "in recognition of distinguished and gallant service in command of RAF Odiham and in Afghanistan during the period 21 November 2007 to 22 November 2009". Married to Catherine with 2 sons, Richard (22) and Benedict (19), Turner lives near Henley-on-Thames and is not responsible for two Jack Russell terriers. He enjoys rowing, riding, watching rugby and occasionally playing polo and skiing badly.

Squadron Leader Paul Withers joined the RAF in 1987 as an Electronics Technician (Telecommunications) and completed a number of tours in the UK and Germany before commissioning into the Engineer Branch in 2006. A Communications Electronics specialist, Withers completed Junior Officer tours at the Tactical Imagery-Intelligence Wing (TIW) at RAF Marham, Joint Service Signals Unit at Digby and 90 Signals Unit at RAF Leeming. He was promoted to Squadron Leader in February 2012 and took up a new post as the SO2 J5 in the Joint Cyber Unit (Cheltenham). This tour was followed by a deployment to Afghanistan, working as a cyber operations planner within the US Cyber Command Expeditionary Cyber Support Element in Kabul. He returned to RAF Marham in September 2014, when he took up his current post as the TIW Senior Engineering Officer. Withers holds BSc(Hons) degrees in Information Technology and Computing, and Engineering Management. In 2011, he was selected for a Dowding Fellowship and graduated in 2014 with the MA *Air Power in the Modern World* from King's College London. In November 2014, Withers was awarded the Lawrence Freedman Award for his MA Dissertation '*What is the Utility of the Fifth Domain?*', which has been adapted for publication in this issue of Air Power Review.

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