

# Modernising the Australian Army within the joint force: a discussion<sup>1</sup>

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In the end we all come to be cured of our sentiments.... The world is quite ruthless in selecting between the dream and the reality, even where we will not. Between the wish and the thing, the world lies waiting.

Cormac McCarthy,  
*All the Pretty Horses*, 1992

## Introduction

The conduct of warfare is changing rapidly. Indeed, in the words of the Chief of Army, ‘we are probably at some sort of inflexion point’.<sup>2</sup> But contrary to much of the pessimistic discourse on warfare’s ongoing evolution, contemporary developments offer immense opportunities for militaries to reimagine themselves, technically and tactically.

The proliferation of precision-weapon systems and sensor suites, the increased lethality of

man-portable weapons, exponential advances in computing capacity, rapid improvement in the capacity of autonomous systems, and the potential for manned-unmanned teaming are just some of the relevant technical developments.<sup>3</sup> Each of these developments is challenging in themselves—and even more so when considered against the geopolitical context of events in Europe, East Asia and the Middle East.

A variety of conceptual responses have already emerged from militaries around the world. So-called ‘multi-domain battle’ is one prominent example, although it should be treated with scepticism, as already observed by a number of commentators.<sup>4</sup> It appears dubious that much of this thinking actually describes or argues anything genuinely novel. Therefore, it may be more fruitful to think in plainer language: how are current developments likely to impact on how the land force executes both fires and manoeuvre?



This article is, in large measure, a response to Chris Smith and Al Palazzo's 2016 publication, *Coming to terms with the modern way of war: precision missiles and the land component of Australia's joint force*.<sup>5</sup> It is not a rebuttal or rejection of that piece. Rather, it takes that work as a start-state for a number of discussion points, proceeding in two parts. In the first, it seeks to establish a useful though artificial delineation between 'the deep fight' and 'close combat'. In doing so, it discusses how we might need to alter what precisely we mean by close combat. In the second, it discusses the place of technical and technological solutions in the emerging operating environment, arguing that in exercising caution against technical panaceas, we must not reject necessary technical solutions.

## 'The deep fight' and 'close combat'

Smith and Palazzo's paper nominally discusses the development and proliferation of precision missiles by land forces, with their resulting capacity to reach into and touch the air and maritime domains as never before. This discussion has been catalysed not just by futures thinking but by Australia's 2016 Defence White Paper, which flags the ADF's acquisition of significant new capabilities, such as land-based anti-shiping missiles (new, that is, for the ADF).<sup>6</sup>

Smith and Palazzo identify a helpful analogy for their vision of the future fight:

Land warfare ... seems to resemble the island-hopping campaign in the Western Pacific of the Second World War. Close terrain is akin to the islands from which the Japanese established their fortresses. Open terrain is like the oceans between except that now the 'oceans' are far more dangerous places to be and where troops are most vulnerable.

Within this context, the Australian Army—and the broader joint force—will face a new level of advanced sensor and precision-strike technologies, impeding access to objectives (indeed, potentially to whole theatres). Emerging US Navy doctrine on 'distributed lethality' further describes this vision, and has been an important influence on futures thinking in this area.<sup>7</sup> The challenges of close terrain and intimate killing, by comparison, will likely remain relatively unchanged.

The Chief of Army has clearly elucidated the implications of this geographic and technological context, and is worth quoting at length:

The use of force and coercion will increasingly be generated and delivered across, and with reach, to and by all the domains of land, sea, air, space and cyber, and soon I think AI [artificial intelligence]; a next domain because it is possibly no longer a human domain.... We need to generate, coordinate and anticipate multiple cross-domain actions and reactions.... Variations in technological capacity across the region require a force to have the agility to operate across the continuum from high tech to the primitive—perhaps simultaneously.<sup>8</sup>

In light of this work, it is worth considering how the Australian Army understands 'close combat'. Army's core business is preparing to fight and win Australia's wars, with its doctrine asserting that 'the conduct of sustained close combat in combined arms teams is the Army's unique contribution to [the] joint or coalition force with a whole-of-government approach to war'.<sup>9</sup>

Much of Army is built around thinking that places manoeuvre force elements 'front and centre', being uniquely equipped and trained to close with and kill the enemy.<sup>10</sup> It seems safe to venture that in the professional imagination, this entails combined-arms teams moving onto and clearing objectives, be that clearing complex terrain or achieving break-in of forward weapon pits. It has also been recognised for some time that even combat service support elements need, at the very least, to be able to protect themselves in a cluttered and fluid battlespace.

Questions about how Army thinks about itself might be considered in view of this disconnect between the future picture of advanced sensors and fires, and the extant imagining of close combat. In the first instance, is our imagining of close combat still relevant? What Army lionises as an organisation, while evolving, is still largely the traits and successes of close combatants in a traditional sense. It may be useful, therefore, to establish a formal distinction between what we might term 'traditional close combat' and what we might term 'the deep fight'.

It is reasonable to say that understanding already exists that the challenges of each problem set are in some ways separate. Expanded

sensor and fires capabilities are not some new conceptualisation but largely the battlespace in which the Royal Australian Air Force (RAAF) and Royal Australian Navy (RAN) have dealt in for some time—although those Services face little competing demand to prosecute the close fight. It is also reasonable to say that this distinction is arbitrary. As has already been the case for many years, joint fires and effects play a role in the close fight. Similarly, intimate close combat is often required to seize ground or destroy an enemy with the ability to affect joint fires with great range.

Nonetheless, it still may be worth of Army, and the ADF, making such a distinction, for at least three modernisation reasons. First, the kind of soldiers and officers that Army recruits and trains to win in close combat seem unlikely to be the best poised to achieve success in other domains. Recent developments and writing, most prominently the announcement of an Australian ‘cyber force’, clearly pre-empt this observation.<sup>11</sup> Secondly, in terms of technological development and acquisition, the platforms required to survive and win in the close fight might be profoundly different from those that excel in other domains. Thirdly, and linked to both the above, is that the organisational structure or design required for success in these different spaces is likely quite different.

Is Army the best ‘owner’ of long-range anti-ship and anti-aircraft missile systems? It is no doubt possible to incorporate such a capability into the Royal Regiment of Australian Artillery’s order of battle. Yet the reality is that the Australian Army is a small force, with a current experience as a missile operator limited to a handful of obsolete point-defence weapons. Batteries of such weapons would presumably sit outside a force generation cycle (whatever that cycle looks like in the future), being very scarce, and see irregular operation as part of Army’s core exercise regime focused on the execution of foundation warfighting.

It may well be the case that the RAAF and RAN are more appropriate homes for these capabilities, both in terms of their technical nature, and the kind of individuals required to operate them. So long as Army remains centred around combat brigades designed for land manoeuvre, facilitated appropriately by fires, rather than as a

force optimised for the delivery of joint fires in the first instance, this appears a fair conclusion.<sup>12</sup>

Army does not need to own more so-called ‘multi-domain’ capabilities to play its part in the future joint force. In such a case, the burden lies with joint headquarters in integrating capabilities into planning and execution, much as is currently the case with scarce or sensitive enablers held at formation levels. The force design or modernisation focus for Army thus remains on equipment and organisation for the prosecution of the traditional close fight, being what the combat brigade and below are likely to experience.

It is worth adding before proceeding further that Army and Defence may yet need to invest time considering the changes to the character of war portended by the unmanned and, more profoundly, the autonomous systems that will be a feature of the future operating environment. It is not rash to say that the traditional Thucydidean formulation of war, as an endeavour defined by the intersection of the fear, honour and interest of humans, is eroded by these developments.

Put simply, a robot does not panic in the face of massed armoured vehicles or cower in fear at a sustained artillery barrage. Nor does it take variously bold or courageous or irrational actions due to considerations of honour, and its interest calculations are clearly of a rather different algorithmic nature to that of a human being.

The long-term possibility is that rather than the high-tech but still familiar combat of *Starship Troopers* and *The Forever War*, the deep futures reality may be a much less romantic, hard sci-fi imagining of machines fighting machines in a battlespace liberated of the vagaries of human emotion and decision making. This extreme case is, of course, a very deep future scenario, although we may see parts of it piecemeal much sooner.

## Technical panaceas and technical solutions

Smith and Palazzo’s treatment of technological developments is, at different times, cautious and enthusiastic. On the one hand, their analysis heavily emphasises the art of war—the way we employ new weapon systems, rather than those weapons themselves:

[The use of complex terrain to avoid precision weapons by ISIS is] in essence the logical extension of infiltration tactics of the First World War ... in response to the stalemate of the trenches. From that beginning, such tactics have been refined over a century because of continuous improvement in the lethality, range and precision of weapons.

They later continue:

The experience of the First World War suggests that if those same ideas overcame the defensive anti-access envelope, then (the no-man's land of the Western Front) can be reconceptualised in ways that will restore the equilibrium between the defence and the offence now.

Such analysis suggests a primacy ascribed to the art rather than the science of the military profession. As Colin S. Gray has written, '[w]ar and strategy are so multidimensional that a technical shortfall, even a major one, often can be made good in the coin of other strategic qualities or quantities'.<sup>13</sup> Technology is, of course, deeply relevant to futures thinking. However, as Gray notes, 'the use made of technology typically is more important than the technology itself'.

Conversely, the very title of Smith and Palazzo's paper points to significant, technology-driven shifts. They explain:

Advances in long-range precision weapons, combined with modern sensors, may favour the defender in warfare because they have given them the potential to create theatre-sized 'no-man's-lands' where attacking forces are exposed to precision weapons and can only operate at the risk of high casualties.<sup>14</sup>

In citing various examples (Bosnia, Iraq and Afghanistan) nulling the promise of precision technologies, Smith and Palazzo acknowledge that technologies cannot be a silver bullet. Indeed, they note that 'the incorporation of technological advances is but one part of the art of war'.

What is missing, however—at least explicitly—is that Army needs to identify where technical solutions are non-negotiable and, at once, emphasise other areas where how it employs weapons must be the focus. In general terms, identifying whether technical or tactical solutions are appropriate is useless. Neither has primacy.

However, this is not necessarily the case when we reach the specific.

Referring back to the distinction made between the deep fight and close combat is useful at this point. Smith and Palazzo conclude that the future land force likely needs 'to be able to change quickly from a heavy protected force to a light force and back again, which may be a significant factor in dealing with the immense "no man's lands" of contemporary and future warfare'.<sup>15</sup> In other words, forces need to be light enough to survive the deep fight but heavy enough to win the fight in the direct fire zone. This does seem to be an indisputably desirable factor. Indeed, the seeming conclusion that this would be a desirable quality for a force in almost any context renders the point somewhat null.

Regardless, it may evade the reality that light forces cannot become heavy. More precise and lethal fires in the direct fire zone, that last few hundred metres, are not problems that can be solved—at least predominantly or currently—with new methods of employment. Survivability in the close fight, in a high-threat environment, means armour. Inherently physically protected platforms also grant the force flexibility in the crowded littorals that Army envisions, when shooting first will often not be an option. This reality must continue to underwrite thinking and commitment to programs like Army's Land 400 project [for infantry fighting vehicles].

Physically protected platforms also grant a level of redundancy, in a context in which platforms relying primarily on high levels of network-enabled situational awareness, or on-call joint fires for instance, are presumably going to be subject to persistent cyber or electronic attack. J.C. Wylie's well-known dictum that 'the ultimate determinant in war is the man on the scene with a gun' appears to hold true. The very nature of innovation means that we cannot say that some tactical method will not carve a way forward at some point in the future. Nonetheless, this is currently unforeseeable.

A failure to distinguish carefully between 'art' and 'science' solutions has been present at times in the Australian debate. James Ellis-Smith wrote a provocative piece in 2016 on the lessons we should draw from events in Ukraine.<sup>16</sup> He argued that:

Barring a significant and sustained increase in size and capacity, the Army must question the assumptions of our approach to conventional land combat ... if we seek to compete against contemporary threat groups. To do so we must embrace truly revolutionary ideas—ideas such as the systematic adoption of asymmetric and insurgent methodologies—as fundamental elements of an ‘Australian way of war’.

On this view, it would seem that a platform like a tank, or the planned infantry fighting vehicle, or conventional artillery, is of little use to Army and Australia for two reasons. First, Australia does not possess the mass to use such a platform with any decisive impact in a conflict. Secondly, it fails to lead Army on a more innovative path of employing forces that would overcome the imposing threat environment.<sup>17</sup>

These reasons are flawed for the same reason the desire to be both light and heavy is flawed. This assertion will, of course, raise debates about what makes a force ‘survivable’, and how we think of ‘light’ and ‘heavy’ land forces. It may, for instance, be argued that the conventional notion of ‘heavy’ forces as those centred on heavy armour and massed indirect fires is outdated. There are certainly indications that survivability will increasingly be provided by active protection measures rather than armour itself, for example. This retort is an important one, to which there appear to be two initial responses.

In the first instance, as discussed above, the changes affecting the deep fight are not the same as the changes in the close fight. Our conception of ‘heavy’ forces as armour-centred close combat elements remains valid in that close fight, which Army ultimately must maintain the ability to prosecute, regardless of the scale or decisiveness of that fight in a broader context. There is no avoiding that in an anti-armour and artillery-rich environment, survivability in the close fight means tanks and infantry fighting vehicles with the mobility to be in the right place, at the right time, as well as the protection, if required, to take a hit and continue the fight. In other times and places, this ability centres on well-equipped and trained infantry holding ground.

Secondly, no concept has yet emerged that actually articulates how ideas such as ‘the systematic adoption of asymmetric and insurgent

methodologies’ will allow Army to carry out close combat as the government requires of Army.

## Conclusion

Distinguishing between what we might term ‘the deep fight’ and the ‘close fight’ is a useful if artificial delineation. Army should remain a force fundamentally focused on winning the latter contest. This will continue to require adaptation. That is not one and the same, however, with assuming responsibility for effects demanding equipment, organisation and people better placed elsewhere. Carefully balancing this tension will be a continuing challenge.

Nothing explored here is novel. Yet, to date, the discussion on these modernisation issues appears far from mature. The battlespace is changing as rapidly as it always has. Army needs to respond with agility to these developments. Thinking about future war requires the profession of arms to seek novel ways of employing emerging technologies and innovating tactically, while still paying heed to the lessons of past wars. The devil lies in striking the right balance between these competing signals.

Army needs to think hard about what close combat will actually look like in 2040. Given the fundamentally speculative nature of those discussions, Army must recognise when to rest on (relatively) traditional solutions to surviving the close fight, and when novel operating concepts may offer an alternate path forward. Army should carefully consider any deviation from a focus on success in the close fight.

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## Notes

- 1 This paper changed drastically over the course of several versions. The author extends his thanks once again to the numerous officers who offered feedback and discussion. Errors of thought and expression remain, of course, solely those of the author.
- 2 Lieutenant General Angus Campbell, ‘A Turning Tide? Australia’s strategic defence interests and the Australian Army’, address to the Lowy Institute for International

- Policy, Sydney, 4 October 2016, available at <https://www.lowyinstitute.org/news-and-media/multimedia/audio/turning-tide-angus-campbell-australia%E2%80%99s-strategic-defence-interests>; accessed 6 October 2017.
- 3 Kimberly Bratic, 'Army tests manned-unmanned capabilities in Pacific Initiative', *US Army* [website], 31 August 2016, available at [https://www.army.mil/article/174299/tardec\\_tests\\_manned\\_unmanned\\_teaming\\_capabilities\\_in\\_pacific\\_initiative](https://www.army.mil/article/174299/tardec_tests_manned_unmanned_teaming_capabilities_in_pacific_initiative); accessed 29 November 2016; Franz-Stefan Gady, 'Drone swarms: how the US Navy plans to fight wars in 2016', *The Diplomat* [website], 23 April 2015, available at <http://thediplomat.com/2015/04/drone-swarms-how-the-us-navy-plans-to-fight-wars-in-2016/>; accessed 29 November 2016; and Rob Morris, 'The new reality: how augmented, virtual and mixed reality will enhance the future soldier', *Land Power Forum* [blog], 18 July 2016, available at <http://www.army.gov.au/Our-future/Blog/Articles/2016/07/The-New-Reality>; accessed 29 November 2016.
  - 4 US Army, 'Multi-Domain Battle: combined arms for the 21st century', *US Army Training and Doctrine Command* [website], 24 February 2017, p. 4, available at <http://www.tradoc.army.mil/MultiDomainBattle/docs/MDB-WhitePaper.pdf>; accessed 9 May 2016. An internet search should provide critiques but Jim Storr's criticism of 'banal' new military concepts springs to mind: see Jim Storr, *The Human Face of War*, Continuum: London, 2009, pp. 12 and 197-8.
  - 5 Chris Smith and Al Palazzo, *Coming to terms with the modern way of war: precision missiles and the land component of Australia's joint force*, Australian Land Warfare Concept Series, Vol. 1, Department of Defence: Canberra, 2016, available at <https://www.army.gov.au/publications/army-insights-papers/coming-to-terms-with-the-modern-way-of-war-precision-missiles-and>; accessed 6 October 2017.
  - 6 Department of Defence, *2016 Defence White Paper*, Commonwealth of Australia: Canberra, 2016, p. 96.
  - 7 Thomas Rowden, Peter Gumataotao and Peter Fanta, 'Distributed lethality', [US Naval Institute] *Proceedings Magazine*, January 2015, available at <https://www.usni.org/magazines/proceedings/2015-01/distributed-lethality>; accessed 13 September 2017.
  - 8 Campbell, 'A turning tide?'
  - 9 Australian Army, *Land Warfare Doctrine 1: The Fundamentals of Land Power*: Department of Defence: Canberra, 2014, p. 31.
  - 10 Australian Army, *Land Warfare Doctrine 3-0-3: Formation Tactics*, Department of Defence: Canberra, 2016.
  - 11 Ashlyne McGhee, 'Cyber warfare unit set to be launched by Australian Defence Forces', *ABC Online* [website], 30 June 2017, available at <http://www.abc.net.au/news/2017-06-30/cyber-warfare-unit-to-be-launched-by-australian-defence-forces/8665230>; accessed 3 July 2017. See also James Davis, 'Cyber for land lubbers', *Land Power Forum* [blog], 18 June 2017, available at <https://www.army.gov.au/our-future/blog/cyber-space/cyber-for-land-lubbers>; accessed 3 July 2017.
  - 12 There is potentially a further discussion to be had in terms of national capability here. Where would any Australian investment in presumably quite small amounts of new precision fires and sensors be meaningful at the level of national policy, within the context of alliances? Or is this money better spent elsewhere?
  - 13 Colin S. Gray, *Another Bloody Century*, Phoenix: London, 2006, p. 100.
  - 14 It is worth noting that Stephen Biddle's influence, centred on his idea of modern system force employment, is particularly apparent in this part of Smith and Palazzo's work: see Stephen Biddle, *Military power: explaining victory and defeat in modern battle*, Princeton University Press: Princeton, 2004.
  - 15 Gray, *Another Bloody Century*, p. 12.
  - 16 James Ellis-Smith, 'Challenging our approach to conventional war: another view on Ukraine', *Land Power Forum* [blog], 18 August 2016, available at <http://www.army.gov.au/Our-future/Blog/Articles/2016/08/Lets-learn-the-right-lessons-from-Ukraine>; accessed 29 November 2016.
  - 17 In alternate but familiar language, we might say that innovation would attempt to 'dislocate' rather than 'disrupt' the threat.