The notion of using technology to offset demographic and economic limitations on Australia’s military emerged in the early 1970s alongside the concept of defence self-reliance. It began as a means to bolster Australia’s credibility as a regional security partner as US and British presence in Southeast Asia waned. By the twenty-first century it became a recurring policy concept and featured in public statements and diplomatic signals at the highest levels of government. Although the need for an ‘edge’ in military capability was articulated consistently in policy and political statements, the meaning of the concept changed over time. This evolution provides insight into key strategic policy decisions and offer lessons for scholars, policymakers and analysts alike, but is yet to be examined directly. This study traces transformations of the strategic edge concept from its emergence in the 1970s through to the twenty-first century. It conducts a comparative analysis of publicly-released policy documents and archival records of speeches made by Prime Ministers and Ministers for Defence in order to identify the ways in which the concept evolved and how transformations were represented in political statements. The paper finds that primary drivers of change related to political needs rather than internally-consistent policy impetus. Politicians have utilised the strategic edge concept in defence debates to reflect and often legitimate political goals relating to: changing policy contexts, particularly the scope of Australia’s strategic ambitions; other strategic concepts, such as ideas about force posturing and the way technology should be used to enhance military capability; and different communication needs, often the need to signal specific audiences in order to facilitate other policy objectives. This politicisation of the edge highlights the need for further scrutiny of ideas which inform the interpretation of policy challenges and solutions.
Introduction

Australia spends billions of dollars every year on acquiring and maintaining cutting edge defence technology. Currently planned major capital expenditure projects are by far the most expensive in Australia’s history. \(^1\) Nonetheless, successive governments have upheld commitments to ensure that the Australian Defence force (ADF) is equipped with high technology weapons and communications systems. This practice began in the 1960s and has intensified significantly since. The rationale for maintaining a high-technology defence force emerged in Australian strategic policy during the late 1960s and early 1970s, largely in response to significant changes in the strategic environment in Southeast Asia caused or exacerbated by the waning interest of the US and Britain. Emphasis on Australia’s advanced technological and industrial capacity paralleled the emergence of the concept of self-reliance in defence at first. However, by the late 1970s technological advantage had become a discrete policy concept. Since the 1976 Defence white paper\(^2\) the stated policy need for qualitative advantage continued to evolve, both in Australian strategic policy and in policy guidance delivered publicly by senior politicians.

Impetus for cutting edge technology began as a way to bolster Australia’s credibility as a security partner as Canberra’s forward defence ambitions and commitments became less reliable. By the twenty-first century it had become a central concept espoused in publicly released strategic policy documents and featured prominently in Ministerial public statements and diplomatic signals. Yet, the rationale had changed from offsetting vulnerabilities to a maintaining a “traditional technological edge in [Australia’s] region.”\(^3\) While the need for a cutting

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\(^1\) See Department of Defence, *Defence capability plan 2009: December 2010 update* Canberra: Defence Publishing Service, December 2010
\(^3\) Ray, Robert, *Defence into the future: maintaining the edge* Canberra: National Press Club, 22 November 1995, 3
edge defence force became an engrained fact of Australian strategic policy over the last forty years, the reasons for holding this belief slowly changed without being directly examined. This paper clarifies the concept of relative advantage as it was articulated in policy, traces its evolution in policy documents and policy statements throughout the period of defence self-reliance and examines the relationships that existed between relative advantage and other concepts which have dominated strategic policy and related discourse.

This study is concerned with the strategic policy discourse in Australia and is focused on the concept of an ‘edge’ or advantage in military capability. The broad conceptual family of qualitative advantage in military capability stems from a general idea of an edge in military technology that emerged and evolved since the late 1960s. For the purposes of this paper, the time frame under examination will be broadly labelled the era of defence self-reliance in Australian strategic policy. Throughout the era of self-reliance a focus on high-technology military capability and relative advantage in qualitative terms has underpinned the evolving concept of an edge. An umbrella term for the concept under examination is ‘relative qualitative advantage in military capability and systems.’ For the purpose of clarity this can be shortened to: relative advantage. The concept of relative advantage has featured prominently in discussions regarding Australia’s force structure and posture, major acquisitions and strategic policy. The study seeks to investigate the evolution of a frequently deployed but hitherto under-examined political concept. This examination of relative advantage contributes to existing debates by introducing unique data and a different perspective to inform policy formulation and analysis.

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4 See White, Hugh, "Four decades of the Defence of Australia: reflections on Australian defence policy over the past 40 years," *History as Policy*, (eds.) Ron Huisken and Thatcher, Meredith Canberra: ANU ePress, 2007
The paper proceeds in three parts. The first examines the evolution of relative advantage throughout the period 1968-2009 in order to demonstrate that there has been a qualitative change in the way that the concept has been expressed. The second section examines the role of political rhetoric in representing policy ideas which influence institutional thinking and may come to frame policy changes. It also explains the data set and the research model used to analyse the representation of relative advantage in policy documents and statements. The third section presents the research findings in four parts. The first examines the period 1968-1979, during which relative advantage was conceived primarily in terms of buttressing Australia's credibility as a security partner. The second examines the period 1980-1986, during which relative advantage was expressed both in terms of credibility and also technological level as a base for expansion of the ADF. The third examines the period 1987-1996, in which relative advantage was largely reoriented toward material capability advantage and force multiplication. The fourth examines the period 1997-2009, which saw the emergence of communication technologies and emphasis on coordination between force elements to maximise effectiveness.

**The evolution of relative advantage**

For four decades, Australian defence policy has featured a recurring theme emphasising a qualitative lead in military capability. The concept emerged in defence policy and discourse during the 1970s at roughly the same time as policy was adopting and then endorsing the notion of defence self-reliance. It has featured prominently in major open-source strategic policy documents since. The importance of Australia’s technological level was stressed in the 1970s. The formal use of relative advantage began in a discussion about the technological level of

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Australia’s military forces in the 1975 strategic basis of Australian defence policy. The technological level had initially referred primarily to Australia's industrial base and capacity for expansion to sustain conventional force generation. Based on ideas that had emerged in the early 1970s, the technological level debate sparked a larger discourse about the degree of relative advantage that Australia ought to pursue, precisely which countries that advantage should be relative to and whether high-technology capabilities were to be prioritised according to their capacity for expansion, their deterrent value or their suitability for operational use in low-level ‘credible contingencies.’

The conceptualisation of military technology has been a key influence on Australian strategic guidance since at least the 1987 defence white paper, *the Defence of Australia.* A ‘clear military technological advantage’ relative to Australia’s region was cemented in policy as a cornerstone of Australia’s capacity to defend itself and contribute to cooperative security arrangements in the 1980s. At this point, the role of technology in providing an advantage had been clearly linked to qualitative performance. This reflected not only a change in the role of technology in facilitating relative advantage, but also a significant change in the way self-reliant defence was conceptualised in policy. Paul Dibb, principal author of *the Defence of Australia,* noted that the

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6 Defence Committee, *Strategic basis of Australian defence policy* Canberra: Department of Defence, 3 October 1975


two key features of the approach to strategic guidance offered by the 1987 white paper were the focus on strategic geography and the specific need for technology-based military advantage in Australia’s region.\textsuperscript{11} A strategy of air and maritime denial coupled with a relative capability advantage has become a staple feature of Australian strategic guidance and force structure planning since.

Relative advantage was further expanded throughout the 1990s in tandem with the so-called Revolution in Military Affairs (RMA)\textsuperscript{12} to incorporate popular Western ideas which emphasised information-superiority in the coordination of military forces, leading to an emphasis of what Australia termed the ‘knowledge edge.’\textsuperscript{13} Technology was considered to be a force multiplier, a critical enabler and a means for coordinating joint forces to disproportionately increase their combat effectiveness. By the 2000s, the concept included new military-scientific concepts, in particular Network-Centric Warfare (NCW) and Network-Enabled Capability (NEC),\textsuperscript{14} which feature prominently in Australia’s defence vernacular,\textsuperscript{15} and is termed strategic capability.
advantage in current Australian defence policy.\textsuperscript{16} This evolution of relative advantage conceptualised technology as qualitatively superior weapons, essentially the ‘technological edge’ of the 1980s, in combination with the communication and intelligence technologies that facilitated the ‘knowledge edge’ of the 1990s and the technical and doctrinal expertise to maintain and operate a high-technology military.\textsuperscript{17} This conception of relative advantage has been validated by the latest defence white paper and has been widely disseminated in the public domain. Community consultation conducted by Defence in 2008 found that a majority of respondents supported the maintenance of a capability edge for the ADF in three areas: technology, information and training. The community consultation program also reported broad support for further investment in high-technology force enablers, such as intelligence, surveillance and reconnaissance assets and electronic warfare systems.\textsuperscript{18}

The broad conceptual family of relative advantage in military capability stems from a general idea of an edge in military technology that emerged and evolved throughout the period 1970-2010. For the purposes of the thesis, this period will be broadly labelled the era of self-reliance in Australian defence policy.\textsuperscript{19} Throughout the era of self-reliance a focus on high-technology military capability and relative advantage in qualitative terms has underpinned the evolving concept of an edge. An umbrella term for the concept under examination is ‘relative qualitative advantage in military capability and systems.’ For the purpose of clarity this can be shortened

\textsuperscript{16} Department of Defence, \textit{Defending Australia in the Asia Pacific century: Force 2030}, para 8.53; see also Department of Defence, \textit{Defence 2000: our future defence force} Canberra: Commonwealth of Australia, 2000


\textsuperscript{18} Department of Defence, \textit{Looking over the horizon: Australians consider Defence} Canberra: Defence Publishing Service, December 2008, 13-7

\textsuperscript{19} See White, "Four decades of the Defence of Australia: reflections on Australian defence policy over the past 40 years,"
to: *relative advantage*. Relative advantage has featured prominently in discussions regarding Australia’s force structure and posture, major acquisitions and strategic policy. The fundamental principle of investing in high-technology weapon platforms and systems has become widely accepted by politicians, the bureaucracy and the Australian public.\(^{20}\) The 2009 defence white paper explicitly prioritised investment in the exploitation and application of ‘new advanced technologies’\(^{21}\) in order to offset some of Australia’s strategic constraints,\(^{22}\) chief among them an exceptionally weak force-to-space ratio.\(^{23}\)

Relative advantage has been employed in one way with great consistency: as a policy solution to Australia’s strategic circumstances. Although relative advantage is not the only solution presented, it is a significant conceptual approach to mitigate the gross disparity between Australia’s landmass and maritime patrol zones and the size and capacity of the ADF. Politicians, bureaucrats and analysts are often preoccupied with searching for a solution to confounding policy challenges. Political concepts and policies are often deployed as solutions to problems. In practice, none has been.\(^{24}\) The norm lies with gradated policy effects: incremental changes which unfold in a largely unpredictable and recursive pattern. From an analytical perspective, the effectiveness of a policy is not measured strictly by its performance against its objectives, but also by the effect it had on the nature of the issue it was intended to address and whether or not it opened new avenues for future action.\(^{25}\) However, the general policy impetus to search for a new solution when merged with the infatuation of Western militaries with high-tech military platforms leads to a technocratic imperative. This has manifested in Australian

\(^{20}\)Department of Defence, *Looking over the horizon: Australians consider Defence*, 13-7

\(^{21}\)Department of Defence, *Defending Australia in the Asia Pacific century: Force 2030*, para 8.57

\(^{22}\)Ibid., para 8.54

\(^{23}\)Evans, Michael, "Australia and the quest for the knowledge edge," *Joint Force Quarterly* (30) 2002


\(^{25}\)Ibid.
strategic policy as a penchant for high-tech solutions to fundamental strategic and operational challenges, despite a rising potential for concomitant ‘technology traps.’

The dominant technocratic rationale in Australia’s strategic policy discourse and has been used to justify large capital expenditure in capability debates, the acquisition of in-service military platforms and in current procurement policy. Yet, the validity of the strategic imperative to pursue relative advantage has not been substantiated or debated in policy, strategic guidance from political leaders or through policy analysis. This suggests that the underlying principle of relative advantage, that is a perceived need for the Australia to maintain a defence force that is technologically advanced relative to potential adversaries, has become entrenched in the way key policy makers understand Australia’s strategic circumstances and needs. In this sense, it is an institutional idea: an idea which is embedded in the logic common to an institution which is self-reinforcing. In Searle’s terminology, this situation represents an institutional fact: social facts which are common to a group and are often self-referential in the sense that they create the circumstances they represent. Thus, for an institutional fact to exist, it must be accepted as existing. This is different to objective facts, which are true without agreement or consensus.

27 Technocracy is not unique to matters of Defence and is prevalent in a wide variety of public policy debates. See Fenna, Alan, *Australian public policy* Sydney: Pearson Longman, 2004 11
28 Department of Defence, *Defence capability plan 2009: December 2010 update* ; see also Joint Committee on Foreign Affairs and Defence, *Australian defence procurement* Canberra: Australian Government Publishing Service, November 1979
29 It is important to note that the specific adversaries envisaged in this concept have changed over time.
32 For example, a mountain remains the same geographical feature regardless of whether or not people agree what it is. Conversely, money has no inherent value and is only valuable to the extent that people in a community agree to attribute value to it. See Ibid. 32-3
Representing the edge

Viewing relative advantage as an institutional idea or fact highlights the role that it may play in shaping perceptions of Australia’s circumstances. This is important because institutional facts underwrite the perceptions of key decision makers. Political ideas in general, including institutional facts, also underpin constellations of concepts which frame the ways in which political actors interpret events. Political leaders, like all human beings, have interpretive schemes which they use to understand policy issues. These perceptions are influenced by institutional facts and contexts and, once entrenched, they often endure despite changing circumstances because they provide the basis for an individual’s conception of the world. The ideas which inform a leader’s worldview are important to understanding their decision-making process because ideas influence policy agendas, validate assumptions about political issues and can legitimate particular institutions or policies. Because leaders approach policy challenges within the context of their individual worldview, knowledge, values and experience, political ideas like relative advantage can potentially be integral to key decisions even if they do not have a direct bearing on the issue at hand. A concept that reflects the scope of the influence that longstanding ideas can have on the policy process is Vickers’ appreciative system, which encapsulates the combination of ‘values, preferences, norms and ideas’ used by humans to understand the world.

36 Breuning, Foreign Policy Analysis: A Comparative Introduction 54
38 Rein, Martin and Schon, Donald, "Reframing policy discourse," The argumentative turn in policy analysis and plannign. (eds.) Frank Fischer and Forester, John Durham and London: Duke University Press, 1993; 146
The role of relative advantage in influencing policy it is not limited to a matter of perception. It is also active in shaping and influencing policy decisions, primarily through discourse. Leaders use terms which re-emerge in political rhetoric and can influence institutions by legitimating certain ideas and values. The rhetoric of speeches, memos and guidance delivered by leaders can legitimate specific terms and ideas in four ways: institutional or personal authority, by reference to value systems, by reference to goals and exercise of institutional action and through political narrative which reward legitimate ideas and punish defection.\textsuperscript{39} In particular, the legitimation of ideas and terms through policy narrative, which marginalises defection from key concepts,\textsuperscript{40} can create a dominant discourse in which it is difficult to challenge or alter ideas. Frequent reinforcement of a dominant discourse through pervasive institutional adoption makes it very difficult to challenge the political concepts associated with the discourse within a bureaucratic knowledge community.\textsuperscript{41} Because the discourse employs political concepts that contain the fundamental assumptions, conceptual tools and appreciative systems used to interpret policy issues and formulate policy, the range of options perceived by actors and the prioritisation of policy issues becomes skewed and this constrains policy action.\textsuperscript{42}


\textsuperscript{40} Fairclough elaborates on this in his discussion of the technologisation of discourse, one aspect of which is the standardisation of discourse practices. See Fairclough, Norman, "The technologisation of discourse," \textit{Texts and Practices: Readings in Critical Discourse Analysis}, (eds.) Carmen Rosa Caldas-Coulthard and Coulthard, Malcolm London and New York: Routledge, 2002; 73, 7


Relative advantage can be conceptualised as an institutional idea that has been incorporated into the current approach to conceiving strategic issues and appropriate policy responses. That paradigm fundamentally shapes Australia’s strategic outlook and is, therefore, of paramount significance to understanding Australian defence policy. This raises several contingent questions. First, has relative advantage been used in discourse as a prescriptive concept or a descriptor? In other words, is relative advantage a concept that is applied in force structure planning and then reported on or shorthand used to explain decisions already made for other reasons? Second, is it used for other reasons not related to force planning? Some other purposes for relative advantage could include reassuring or deterring other states and validating defence expenditure to the Australian public. Third, has relative advantage created a discourse trap in which Australia has explicitly linked its credibility and force structure planning to advanced military technology to the extent that opposition is discouraged or marginalised?

In order to answer these questions, a mixed-method Qualitative Data Analysis (QDA) research model was used to capture and analyse empirical data drawn from the official Australian strategic policy discourse during the era of self-reliance. The model utilised a quantitative Content Analysis (CA) method to identify the policy contexts of key concepts, such as capability, advantage or edge and technology. It then used a thematic narrative analysis of the data set to identify themes in the data. The data set was then divided into four discrete periods according to key themes in primary policy documents. This periodisation was informed by a review of policy documents and then validated by CA and Key Words in Context (KWIC) analyses. Finally, themes identified by the narrative analysis were used in a matrix comparison query to

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demonstrate correlations between conceptual transformations in relative advantage and contextual factors.

The data set included all principal policy documents released in the public domain and selected public speeches and statements made by the Prime Minister and Minister for Defence, as the two most authoritative sources of credible signalling of Australia’s strategic policy, regarding military capability and relative advantage. Selection criteria for inclusion in the data set was reference to any issue relevant to: existing or planned military capability at the strategic level, capability development and force structure planning, the role of technology in force posture or employment decisions, the use of military technology to provide security to the Australian public, the adoption of military capabilities or technologies that influenced concepts of operations or military doctrine, Australia’s strategic interests or objectives, the scope of Australia’s military interests and the signalling of Australia’s intentions vis-à-vis any of the above. Not included in the data set were items which related to: specific operational-level policies, policy implementation and specific material procurement projects. The scope of the discourse was delineated by the relevance of modes of communication in influencing common conceptions of political concepts. Thus, strategic-level communication was prioritised as it is more likely to influence strategic-level political concepts than discourse reflecting policy machinations.

The data set was used to examine three core variables. The first variable examines the policy context in which relative advantage has been used and elements of that context which correspond with conceptual changes within and across periods. The first step in establishing the

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45 See appendices A-C for details
46 The term operational is used here in the public policy sense, rather than the military sense. The military equivalent would be the tactical level of analysis. See Gyngell, Allan and Wesley, Michael, *Making Australian foreign policy* Cambridge: Cambridge University Press, 2003 33-5
policy context is a qualitative examination of the use of key terms in discourse. Specifically, terms which relate to technology, capability and advantage are counted and analysed. The CA is followed by a KWIC analysis of key terms to verify contextual usage. This indicates the meaning attributed to key terms by political organisations and leaders in each period. The second step is an examination of the scope of Australia’s strategic interests and objectives as communicated in official documents and by political leaders in public addresses and Parliamentary questions. This indicates the potential strategic reach of relative advantage. The final step involves measuring the emphasis placed on referents of relative advantage. The referent actor(s) for the concept are the state or states that a military advantage is intended to be relative to. This determines the quality and type of capabilities required to maintain an advantage relative to the capabilities of the states identified.

The second variable is the role of institutional ideas in shaping conceptual change. The most important institutional ideas to relative advantage are dominant approaches to force structure planning and force employment concepts of operations. These ideas may also indicate the degree of influence that the availability of new technologies had on force structure planning and whether strategic objectives determined capability needs or available capability influenced Australia’s strategic ambition. Another key institutional idea is the role of technology in how the purpose of relative advantage is conceptualised, what technology or capability is intended to do within the concept and what the purpose of relative advantage was in achieving the strategic objectives of the time. The role of technology in institutional thinking establishes the purpose of the concept: what it is intended to do in terms of strategic objectives. It also conceptualises how technology is intended to be used to achieve this purpose. These considerations are

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interrelated. For example, if the technological level is primarily about a) an expansion base for the actual capability we want and b) signalling Australia’s industrial strengths to adversaries, allies and the Australian public, then there is a discrete relationship between the purpose of technology, as an expansion base, and the purpose of generating and sustaining the terminal force.

The third variable is communicating and signalling intentions. At the highest level, this is performed by the Prime Minister and Minister for Defence. At the organisational level, strategic signalling is performed by the Department of Defence and the ADF. The combination of policy statements which signal political intent with demonstrations that show the ADF to be a skilled and formidable military creates the ADFs force posture. The political communication of the relative advantage concept demonstrates themes in the discourse that are directed toward three audiences: potential adversaries, allies and regional security partners, and the Australian public. This variable examines signalling themes that relate to deterring potential adversaries or competitors, reassurance of allies and regional security partners, and validation of Australia’s capacity for self-reliant defence to the public. Validation to the public also involves justification for significant defence procurement expenditure and provides a discursive mechanism in the public policy process.

Findings
Although the need for a qualitative ‘edge’ has been reiterated in consistent ways in policy and rhetoric, the meaning of the concept has changed over time. The conceptual evolution of relative advantage has occurred in four phases, which have emphasised credibility, expansion, material advantage and coordination advantage. In its first manifestation, during the period

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1968-1979, relative advantage accentuated Australia’s credibility as a reliable and capable security partner to its regional allies. After the Soviet invasion of Afghanistan, concerns that global conflict could seriously threaten Australia’s security affected attitudes towards defence planning and lagging progress towards greater self-reliance promised in 1976. Subsequently, defence debates gravitated toward the use of technology as a base for expansion from a small core force to a larger “terminal” fighting force. In 1985, then Defence minister, Kim Beazley appointed Paul Dibb to conduct a review of Australia’s defence capabilities which became the basis for the 1987 white paper. The new approach to technology mandated a clear technological advantage in military capability relative to Australia’s regional neighbours. As Australia encountered the RMA in the 1990s, the role of technology was expanded to include force multiplication, critical enabling and coordination for joint forces in order to disproportionately increase the ADFs combat effectiveness.

1968-1979: Emergence of the relative advantage concept

In 1968, Australian policy began to specifically consider independent defence capability in the context of limited self-reliance. A “self-contained” force was deemed to be best suited to both Australia’s collective security arrangements and the possibility of sustaining independent joint service operations. This precursor to self-reliance is qualified by the concurrent needs for self-reliant capability for the purposes of conducting independent operations and fielding sufficient independent capability to avoid charges of excessive alliance free-riding. Despite the new emphasis on greater self-reliance, the 1968 strategic basis of Australian defence policy also stipulated that the most likely deployment of Australian forces would be in the form of a coalition

50 Defence Committee, Strategic basis of Australian defence policy Canberra: Department of Defence, 5 March 1971, para 17
51 Babbage, Ross, Rethinking Australia’s defence St Lucia: University of Queensland Press, 1980 150
52 Dibb, “The self-reliant defence of Australia: the history of an idea,” 19-20
53 Defence Committee, Strategic basis of Australian defence policy Canberra: Department of Defence, 19 August 1968, para 213
operation led by a major power ally.\textsuperscript{54} Australia continued to define its interests in terms of the security of neighbouring states, lines of communication through maritime Southeast Asia and underwriting regional confidence in collective security measures.\textsuperscript{55} The need to reassure regional security partners was evident in the language of the 1972 \textit{Australian Defence Review}, which stipulated requirements for an “increasingly self-reliant” defence force able to “project Australian strength” beyond the continent.\textsuperscript{56} It further stipulated that Australia had allies in the region that shared its interests and could be strengthened through political and military support.\textsuperscript{57}

Meanwhile, the growing expense of major capital projects initiated during the early 1960s became a hot political issue and required frequent justification from the highest levels of government. Years before the notion of technological advantage was explicitly expressed in policy documents, then Prime Minister John Gorton stated that “on any criterion the second best is not good enough for any defence requirement that we have, and it is not too expensive for a nation which needs the best in the world.”\textsuperscript{58} This statement coincided with both statements and policy that signalled Australia’s military capability and intentions to regional states, both friendly and potentially hostile. Initially, this emphasis was directed toward the issue of deterrence,\textsuperscript{59} a long standing institutional idea within Defence. However, debates about defence expenditure

\begin{itemize}
\item \textsuperscript{54} Ibid., para 221
\item \textsuperscript{55} Cheeseman, Graeme, "From forward Defence to Self-Reliance: changes and continuities in Australian defence policy 1965-90," \textit{Australian Journal of Political Science} 26(3) 1991; see also Fairhall, A., \textit{Statement of Defence by the Hon. Allen Fairhall, M.P., Minister for Defence Canberra: 2 May 1968.}
\item \textsuperscript{56} Department of Defence, \textit{Australian Defence Review} Canberra: Australian Government Publishing Service, 1972 para 11
\item \textsuperscript{57} Ibid.
\item \textsuperscript{58} Gorton, John Grey, \textit{F11 Aircraft: Ministerial Statement 26 September 1968}; 2.
\item \textsuperscript{59} Defence Committee, \textit{Strategic basis of Australian defence policy}, paras 207, 10
\end{itemize}
quickly became mired in political contests and often resulted in laundry lists of equipment purchases paraded to justify budget peaks and troughs.\textsuperscript{60}

In the early 1970s the tone of Australian policy changed and documents began to emphasise credibility rather than deterrence. In 1970 then Minister for Defence Malcolm Fraser’s public statements regarding Australia’s strike capability needs stressed the need to be able to materially influence stability in the region and frequently referred explicitly to both deterrence and reassurance of security partners.\textsuperscript{61} The earliest example of this shift in policy is the 1971 strategic basis of Australian defence policy, which pinned “Australia’s political and military credibility” to its ability to defend Australian territory, independence and identity.\textsuperscript{62} The 1972 Australian Defence Review further specified that Australia’s capability must be both “evident to other countries”\textsuperscript{63} and balanced between offensive and defensive capabilities to ensure that “considerations of credibility and or long term deterrence”\textsuperscript{64} are substantiated. Demonstrating the credibility of Australia’s defence capability and commitment to collective security was as an important policy imperative,\textsuperscript{65} reinforced by the view that Australia’s military capability was to some degree the “currency of diplomacy and of deterrence in the region.”\textsuperscript{66} Defence policy underscored the need to use Australia’s technical and industrial strength, political stability and

\begin{footnotesize}
\begin{enumerate}
\item For examples, see Fairhall, A., \textit{Speech by the Hon. Allen Fairhall, M.P., Minister for Defence} House of Representatives, Canberra: 26 August 1969.; and Gorton, John Grey, \textit{"Four Corners": Interview given by the Prime Minister, Mr. John Gorton} 28 August 1969.
\item Defence Committee, 1971 #1153@para 17\}
\item Department of Defence, \textit{Australian Defence Review para 11}
\item Ibid. para 58
\item Albiniski, Henry S., \textit{Australian external policy under Labor} St Lucia: University of Queensland Press, 1977 225
\item McMahon, William, \textit{Speech by the Prime Minister, the Rt Hon. William McMahon, CH, MP} St Kilda, VIC: 30 October 1972; 6.
\end{enumerate}
\end{footnotesize}
military capabilities to reassure regional allies and assuage their misgivings regarding
Australia’s ability and intention to influence their security in the event of a crisis.  

In 1973, policy linked Australia’s ability to “demonstrate a military capability that lends credibility
and authority to [its] foreign policy” with technological advantage. In this view Australia’s
unique position in the region was underpinned by its “resources, technology, and ability to
operate and maintain more advanced military equipment” than local states. The issue of
Australia’s increasingly independent foreign policy became a political football, with the criticism
that Australian policy “lacked credibility if based on a weak or misplaced defence policy.” The
result was that “assured defence strength in being” was held to be integral to legitimating self-
reliance and commitments to regional security cooperation that were based on Australia’s
military posture. Meanwhile, Sir Arthur Tange was substantially reforming the Department of
Defence and recommended changes in the way Defence prioritised capability decisions to
ensure that procurement served Australia’s self-reliance needs. The Defence Committee had
noted that Australia enjoyed relative wealth and technological advantage over the countries of
Southeast Asia and the Western Pacific. In combination with Australia’s privileged access to
advanced military technology, Australia’s wealth enabled it to field military capabilities beyond
the reach of its regional neighbours.

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67 Defence Committee, *Strategic basis of Australian defence policy*, para 21
68 Defence Committee, *Strategic basis of Australian defence policy* Canberra: Department of Defence, 1
June 1973, para 21
69 Ibid.
70 Albinski, *Australian external policy under Labor* 226
71 Defence Committee, *Strategic basis of Australian defence policy*, para 22
72 Whitlam, Edward Gough., "Prime Minister’s Address at State Dinner," ed. Department of Foreign Affairs
73 Department of Defence, *Australian Defence reorganisation report* Canberra: Australian Government
Publishing Service, November 1973, para 109
74 Defence Committee, *Strategic basis of Australian defence policy*, para 34
The language used in 1976 in Australia’s first defence white paper introduced a new tone to the discussion of the technological level of military capability. The white paper noted that Australia ought to be “seen as a nation that takes defence matter seriously” and that the newly formed Australian Defence Force should have “capabilities and competence” that commanded respect. It further stated that, as a requirement for defence capability, the ADF “should at all times demonstrate Australia’s serious attitude to defence matters, military competence and capacity to absorb and operate high-technology equipments.” During this period, Prime Minister Fraser often referred publicly to the ADFs technological level, to the need for greater capacity for independent operations and the benefits of greater burden sharing. Thus, as the focus on reinforcing Australia’s image as a credible ally began to diversify to include more capacity to undertake military action in Southeast Asia, coherence between signals sent to various authors also began to diverge.

1980-1986: the technical level as a basis for expansion

The 1976 white paper had grand designs for the new role of the ADF and promises of healthy investment in new capabilities and infrastructure from the Fraser government. What it lacked was a clear idea of how it would translate its new resources into strategic outcomes. A first step toward rectifying this was a range of inquiries, both public and private, into Australia’s strategic circumstances. The 1981 Joint Committee on Foreign Affairs and Defence inquiry report on threats to Australia’s security found four basic types of threats: global war, invasion of

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75 Department of Defence, *Australian defence* para 3-18
76 Ibid. para 3-27
77 For example, see Fraser, J. M., "Address to the R. S. L. Congress," ed. Prime Minister's Department (1976), vol.; Fraser, J. M., "Text of Address Given by the Prime Minister at the Roy Milne Lecture in Sydney,“ ed. Prime Minister’s Department (Sydney: 1976), vol.; Fraser, J. M., "Address to the Symposium of Academy of Technological Sciences,” ed. Prime Minister’s Department (1977), vol.
78 Cheeseman, “From forward Defence to Self-Reliance: changes and continuities in Australian defence policy 1965-90,“
Australia, intermediate threats to Australian interests and low level contingencies.\textsuperscript{79} The report concluded that even though the likelihood of any major threat was very low the ADF needed to retain high technology capabilities with long lead times in order to hedge against the rapid development of offensive capabilities by a regional power and to “act as a deterrent to hostile action.”\textsuperscript{80} A challenge to this conclusion is that being able to meet a challenge is not necessarily the same thing as deterring it.\textsuperscript{81} Deterrence must not only apply to attacks of many varieties, but also to threats of attack.\textsuperscript{82}

An important ideational carryover from the Forward Defence era was the concept of a force in being or core force that would provide an expansion base for a rapid increase in the size of the ADF in response to an emerging threat.\textsuperscript{83} Ostensibly this would provide a wide ranging deterrent at an acceptable cost. One difficulty in maintaining a core force was ensuring that it could provide an acceptable base for expansion. A senate inquiry into the Australian Army tabled in 1974 identified three points which it found underpinned the concept of an expansion base. The first was that there is a critical minimum-sized Army, below which “the nation ceases to have a useful asset.” The second was that Australian forces should be organised, trained and equipped primarily as a base for expansion in the event of a contingency. Thirdly, that parliament and government must be prepared to respond to any deterioration in Australia’s “advantageous strategic and technological position.”\textsuperscript{84} Concurrently, Prime Ministerial statements assured the

\textsuperscript{79} Joint Committee on Foreign Affairs and Defence, \textit{Threats to Australia's security: their nature and probability} Canberra: Australian Government Publishing Service, 1981, vii, para 9
\textsuperscript{80} Ibid., 52, para 3
\textsuperscript{81} Martin, David, \textit{Armed neutrality for Australia} Blackburn, Vic: Dove Communications, 1984 5
\textsuperscript{82} Australia Defence Association, Victorian Branch, \textit{the defence of Australia: a statement of views} Melbourne: Australia Defence Association (Victoria), 1980 1-19
\textsuperscript{83} Defence Committee, \textit{Strategic basis of Australian defence policy}, paras 255-60
\textsuperscript{84} The Parliament of the Commonwealth of Australia, \textit{The Australian Army} Canberra: Australian Government Publishing Service, 1974, para 2.5
public that military modernisation programs would ensure that Australia continued to field most technologically advanced equipment available to it.  

In 1982 the higher defence machinery review found that the concepts of versatility and adaptability used in force structure planning were appropriate as a basis for defence planning. The review noted organisational concerns regarding the ambiguities between the roles of the Force Structure Committee and the Force Development and Analysis Division and the lack of input from the Force Development Branch in shaping strategic guidance. This was problematic because the Australian Strategic Analysis and Defence Policy Objectives (ASADPO) document did not “provide sufficient guidance, particularly for the purpose of determining relative priorities for the development of Defence Force capabilities.” The 1984 Parliament inquiry report *The Australian Defence Force: its structure and capabilities* found that strategic guidance from government was inadequate and that Australia lacked appropriate organisational machinery for translating national security objectives into strategic concepts and force structure. Thus, long held ideas and debates needed to be set aside to ensure that progress could be made toward delivering on the high-technology self-reliant ADF promised in earlier policy guidance.

In response to criticism of the government’s investment in the ANZUS alliance, then Minister for Defence Ian Sinclair shifted emphasis in his strategic calculus away from global level threats and towards regional contingencies in which Australia would expect to operate more

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85 Fraser, J. M., “Address to RSL National Congress,” ed. Prime Minister’s Department (Canberra: 1982), vol.
87 Ibid., para 5.130
88 Ibid., para 4.66
89 Ibid., para 4.9
90 Joint Committee on Foreign Affairs and Defence, *The Australian Defence Force: its structure and capabilities*, para 4.10
independently and in which a technological basis for expansion was integral. Amidst the changing focus of ongoing force structure and defence policy debates, Sinclair made frequent reference to material capabilities being acquired by government, although these not regularly linked to specific strategic policy outcomes or requirements. After the 1983 change of government, incoming Prime Minister Bob Hawke quickly signalled his government’s intentions to maintain Australia’s commitments to its great power and regional security alliances and to reform defence policy to provide for a force structure which effectively utilised military technology and afforded the ADF a qualitative advantage in Southeast Asia. Soon after, then Minister for Defence Gordon Scholes articulated a comprehensive approach to defence policy which would become a significant aspect of strategic guidance for policy formation. Scholes used the term “graduated readiness” to describe his thinking on how best to manage modernisation and budget constraints. Political needs such managing public expectations regarding defence expenditure and reassuring allies that a new government would maintain committed to long-standing relationships had a strong correlation with new expressions of technological advantage in the mid-1980s.

1987-1996: technological edge

By late 1984 Defence had become dysfunctional and mired in intra-organisational disagreements over definitional and conceptual issues that presented an obstacle to meaningful policy development. Then Defence minister, Kim Beazley appointed Paul Dibb to conduct a review of Australia’s defence capabilities in 1985 and the seminal report was delivered in

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92 For example, Sinclair, I. M., Major Elements of Defence Expenditure 1982-83 26 August 1982.
95 Dibb, "The self-reliant defence of Australia: the history of an idea," 17
1986. The next Defence white paper was released in 1987 and was substantially founded on the approach to defence planning outlined in the Dibb report. During the transition from the old policy approach to the new, Beazley reiterated the phrase *defence in depth* to stress the importance afforded to demonstrating Australia’s material capacity to defend itself with a high-technology defence force. References to military technology where subsequently linked to assertions that Australia’s capacity for self-reliance was credible and desirable. Beazley framed DOA as a catalyst for change in the politics of defence. Changing ideational norms in the debate were, in Beazley’s view, necessary to accommodate the new concepts used in planning and structuring the ADF and major platform acquisitions. Without contradicting the constellation of concepts that underpinned DOA, Beazley also made direct reference to the need to reassure allies of Australia’s commitment to its security relationships and indicated that a high-tech ADF provided material benefits to those relationships.

In 1989 the government released a new defence policy document, *Australia’s strategic planning in the 1990s*, which set strategic level guidance for force acquisition priorities to Defence and explained and validated capital expenditure to the public. The strategic planning document noted the changing security dynamics in Southeast Asia, and the world, and linked force structure decisions to military capabilities which it stated were essential in securing Australia’s

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96 Dibb, *Review of Australia’s defence capabilities*
national interests. As the 1980s drew to a close, Hawke also questioned the implications of strategic changes in the region in the aftermath of the collapse of the Soviet Union and asserted that Australia’s high-technology military would become an integral component of regional stability and security in the 1990s. For example, Hawke noted that:

> The size of our economy, and our technical expertise, means that Australia will continue to maintain significant military capabilities, especially maritime capabilities, which will allow us to make a valuable contribution to the military dimension of regional security.¹⁰²

At this point, the requirement for Australia to sustain a clear technological lead over its region went largely unchallenged. Ministerial statements signalled a willingness to continue to spend on high-technology systems and platforms in order to ensure that Australia continued to be seen as a credible ally, that the ADF was recognised as a well-equipped and formidable force, and that the public was reassured that defence expenditure was purposeful. However, the role that technology played in delivering Australia’s edge had already begun to change.

As early as the 1991 force structure review,¹⁰³ Australia began referring to military technology in terms of coordination. The review made note of the new roles played by information technologies in enabling the military to operate more effectively.¹⁰⁴ Minister for Defence, Robert Ray noted that Australians has come to believe that Australia could defend itself in accordance with the central principles of DOA.¹⁰⁵ This perception allowed political actors to reduce their focus on credibility and place more emphasis on material capability, which had come to the forefront of many defence debates since DOA was released. Technology emerged as a

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¹⁰⁴ Ibid., para 2.  
discussion point in its own right. The 1993 *strategic review* was the first document to expressly link military technology with interoperability,\(^\text{106}\) noting that

> The overall development of the ADF will need to have a particular emphasis on the key principles of joint operations, the selective application of advanced technology, the promotion of competence and professionalism, and the application of a rigorous approach to preparedness.\(^\text{107}\)

Ray noted interoperability requirements as a driver for high-technology military platforms when referring to relative advantage, but sometimes situated it within a broader commitment to alliances, including but not limited to ANZUS.\(^\text{108}\) This coincided with Keating’s push for greater engagement with Asia and may reflect political needs within government to ensure that public statements were signalling positive intentions vis-à-vis other policy priority areas.

Throughout the early 1990s it became clear that DOA did not account for the extensive transition of the strategic landscape in the Asia-Pacific region from the relatively banal Asian security environment of the previous 20 years of the Cold War to the much more dynamic post-Cold War period. Two significant indicators that the doctrinal approach to defence embedded in DOA needed revision were tensions over North Korea’s nuclear program in 1994 and the Taiwan Strait crisis of 1996. A third challenge was the increasing likelihood that Australia might deploy forces to maintain stability in the regional neighbourhood.\(^\text{109}\) Political actors realised that the thinking which had underpinned the 1987 and 1994 white papers\(^\text{110}\) required adjustment and set about commissioning a new policy document which could incorporate systemic changes

\(^{107}\) Ibid. para 5.39
\(^{109}\) White, "Four decades of the Defence of Australia: reflections on Australian defence policy over the past 40 years,"
to the security situation in Asia and new concepts about harnessing information technologies
with strategic guidance which altered but did not abandon central facets of existing defence
policy which drew on key themes from DOA.

1997-2009: capability advantage

After the change of government in 1996, policymakers resolved to generate a new policy
guidance document for Australia’s defence planning. The Howard government identified three
ways in which DOA needed revision. First, by widening the scope of Australia’s regional
interests from Southeast Asia and the Southwest Pacific to the broader Asia-Pacific region in
order to include substantial developments in North Asia which affected the security environment
elsewhere. Second, by overtly acknowledging the potential for great power tension in the region
due to China’s rise. Third, by raising the profile of peacekeeping and humanitarian operations in
Australia’s strategic priorities.111 This widening of Australia’s security outlook coincided with a
change in focus for the way technology was conceptualised in defence policy and statements.
The rhetoric of the early 1990s, which remained locked on material capability, largely faded
away when faced with the new technological paradigm of the RMA.

In the late 1990s, technology became central to Australia’s ‘knowledge edge’112 and enabled
the ADF to coordinate its force elements to a much greater degree than had previously be
possible. Information and communications technologies were viewed as the ultimate kind of
relative advantage in the contemporary strategic environment. The 1997 Australia’s strategic
policy document placed the knowledge edge at the top of the government’s list of defence
capability priorities, stating that

111 White, 2007 #512}
112 Department of Defence, In search of the knowledge edge: the management component; Dibb, The
relevance of the knowledge edge; Joint Committee of Public Accounts and Audit, "Knowledge
systems equipment acquisition projects in Defence," para.5.4
Our highest capability development priority therefore is ‘the knowledge edge,’ that is, the effective exploitation of information technologies to allow us to use our relatively small force to maximum effectiveness.\textsuperscript{113}

Material capabilities now took a back seat to the capacity for coordination that might allow a small nation to increase its strategic weight. This reflected a powerful notion of technocracy which had swept through Western defence establishments.\textsuperscript{114} The government signalled to both external and internal audiences that Network Enabled Capability would deliver significant gains in the ADFs capacity to win conflicts and that it was, for the Australian public, also a worthwhile investment

Then Minister for Defence, Ian McLachlan noted his intention that the document would boost public confidence in the government’s approach to defence in the foreword of the report.

\begin{quote}
I hope this document gives all Australians a sound understanding of those challenges. But more importantly, I am confident it also provides reassurance that the Government is putting in place a strategic approach to ensure those challenges are met.\textsuperscript{115}
\end{quote}

McLachlan also noted that the government no longer prioritised the universal purchase of high-technology equipment, stating that

\begin{quote}
In the past Australia benefited from being the most developed economy in our region, holding the most advanced military equipment and weapons. In some defence areas, that is no longer the case. To stay confident in our ability to defend Australia, we must be more efficient and smarter in using resources.\textsuperscript{116}
\end{quote}

The rationale for this significant shift in approach to conceptualising relative advantage was linked to changing Australian perceptions of power relativities, particularly those in Asia.\textsuperscript{117} This

\begin{itemize}
  \item \textsuperscript{113} Department of Defence, \textit{Australia’s strategic policy} Canberra: Commonwealth of Australia, 1997 56
  \item \textsuperscript{114} Bousquet, Antoine, \textit{The scientific way of warfare: order and chaos on the battlefields of modernity} London: Hurst and Company, 2009
  \item \textsuperscript{115} Department of Defence, \textit{Australia’s strategic policy} iv
  \item \textsuperscript{116} McLachlan, I. M., \textit{Australia’s Strategic Policy} 2 December 1997.
  \item \textsuperscript{117} Ibid.
\end{itemize}
theme would soon re-emerge in policy statements and influenced the creation of a new defence white paper in 2000.

*Our future defence force*[^118] was the Howards government’s second major defence policy document and solidified many of the ideas which had taken hold within defence since *Australia’s strategic policy*. It introduced the term ‘capability edge’ into the popular defence vernacular and announced that “Australia’s defence planning should aim to provide our forces with a clear margin of superiority against any credible adversary.”[^119] The 2000 white paper was also separated technology from other capabilities and treated it as a discrete capability area. After 9/11 defence policy took a rapid turn away from self-reliance and toward expeditionary operations. The defence updates in 2003, 2005 and 2007[^120] took Australia further from fundamental DOA concepts and emphasised interoperability and coalition operations as a driver of capability development[^121]. It was not until the next change of government that defence policy would be directed back toward the conceptualisation of technological edge within the context of the defence of Australia.

In the lead up to the 2009 Defence white paper, *Force 2030: Defending Australia in the Asia-Pacific century*, Defence undertook wide community consultation. This consultation process found that a majority of respondents supported the maintenance of a capability edge for the ADF in three areas: technology, information and training. The community consultation program also reported broad support for further investment in high-technology force enablers, such as

[^118]: Department of Defence, *Defence 2000: our future defence force*
[^119]: Ibid. 5.39
intelligence, surveillance and reconnaissance assets and electronic warfare systems. The subsequent white paper used the phrase *strategic capability advantage* to illustrate the new government’s conception of relative advantage. The 2009 white paper overtly prioritised investment in the exploitation and application of ‘new advanced technologies’ in order to mitigate some of Australia’s strategic limitations. It also, quite controversially, linked Australia’s strategic concerns to China’s rise, sending strong signals to the international community about Australia’s ongoing commitment to international security. By this point, Australia’s declared intentions related more to acquiring communication technologies to enhance coordination between force elements rather than strictly the material advantage of specific platforms.

**Conclusions**

The concept of relative advantage has changed significantly throughout its short history. It began as a limited concept, tied heavily to Australia’s need to be seen as credible alongside the declining presence of its major power allies in the region. It then broadened to include the technological level, which saw Australia as empowered by its industrial capacity and focused on the capacity for rapid expansion to a high-technology terminal force. In the DOA period, technology was no longer primarily viewed as a base for expansion and became an integral component of how Australia would conduct strategic denial in order to demonstrate a credible self-reliant capacity for defence. After the RMA, capability advantage related to the capacity to conduct and coordinate joint operations to substantially increase the sum of the ADFs parts. This suggests that the evolution of relative advantage primarily reflects changing political

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122 Department of Defence, *Looking over the horizon: Australians Defence*: pp.13-17
123 Department of Defence, *Defending Australia in the Asia Pacific century: Force 2030*, para 8.53; see also Department of Defence, *Defence 2000: our future defence force*
124 Department of Defence, *Defending Australia in the Asia Pacific century: Force 2030*, para 8.57
125 Ibid., para 8.54
imperatives to employ the central idea in different ways in order to dominate strategic policy discourse in a variety of contexts and for different purposes.

The primary drivers of change for relative advantage have related to political needs rather than strict and internally-consistent policy impetus. In particular, politicians have utilised relative advantage as a dominant discourse in defence debates to reflect and often legitimate political goals relating to: changing policy contexts, and in particular changes to the scope of Australia’s strategic ambitions and the referent actor(s) of relative advantage; strategic concepts, especially exogenous institutional ideas which changed and where relative advantage changed to reflect them, such as ideas about force posturing, military options and the way technology should be used to enhance military capability; and different communication needs, particularly the need to send different signals to various audiences to facilitate other policy objectives.

Therefore, relative advantage has been both descriptive and prescriptive, but has largely described decisions made for a range of reasons not necessarily limited to technological necessity. It was clearly used for purposes beyond force structure panning and especially as a tool to reassure internal and external audiences of Australia’s capacity to contribute to allies and to defend itself unaided against a credible threat. Relative advantage also has signs of being a discourse trap insofar as it has created an expectation, as demonstrated by the 2008 defence community consultation program,126 that Australia will retain a technological lead over regional militaries even as they modernise and that the ADF needs to field the most advanced capabilities practically available to it in order to defend Australia and its interests.

126 Department of Defence, Looking over the horizon: Australians Defence
### Appendix A: Primary Policy Documents

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**Total = 15**
### Appendix B: Prime Ministerial Speeches

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### Appendix C: Defence Minister Statements

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