

## **PAPER 2 - SOME THOUGHTS ON AUSTRALIA'S DEFENCE CAPABILITIES**

### *The Threat*

The perceived threat against which Australia was to be prepared during the 1930s was what was called the 'Light Raids' policy. This provided for the development of a capability to counter a force of not more than 200 men, landed from a Japanese cruiser and supported by naval gunfire. This distorted our defence preparations for decades, but fortunately the resulting problems were, in the long term, not critical as Australia had developed an industrial base and defence industry infrastructure which, in span, depth and capabilities, could handle most contingencies, probably including threatened invasion.

Since the end of World War II, threat assessments have continued to be defined in terms of defending the Country against specified numbers and types of forces possessed by neighbouring countries. One is left to wonder whether these specific scenarios would ever be likely to eventuate in the manner imagined. Certainly, the practice provides much scope for conjecture by the local press and can create friction and suspicion amongst our neighbours.

Some analysts believe that trying to assess the threat is largely a futile and self-blinding action, and quote the Swedish policy of creating a defence capability which is sufficiently strong to inflict damage to an antagonist sufficiently great to justify scarcely the attempted prize.

The question that arises is whether it might be better to develop our defence forces and defence industry to provide an adequate capability against a general and continuing assessment and measure of uncertainty, whether this be political, military, civil, terrorism, or a natural disaster. There is an important role for scenarios in detailed planning in terms of generating contingency plans, but perhaps not so much at the higher political and Defence planning level. Here, they usually result in political/bureaucratic decisions based on scant fact and non-military pressures which sound good but often cannot be implemented for at least five years, by which time things have changed again.

It is thus important that our current defence capability and developing capabilities be approached at all levels in such a manner that they stand as a bulwark against, rather than become a constant victim of, political indecision and conflict at home.

Reliance on friends for military support, whether direct military support or logistic aid, means that we must rely upon the political will and freedom of action of other nations to act on our behalf. Consequently, the debt incurred may have to be redeemed under conditions that may be very difficult for us. Reliance thus hardly provides for a comfortable level of 'self containment' or gives us the control necessary over our own destiny.

## *The Budget*

While many factors go to make up the strength and capabilities of our defence force, the Defence Budget is the most critical. The level of the Defence budget reflects generally the demands of the current defence force and our commitments to future defence capability programmes, but the budget is also impacted directly by the state of the national economy, the competing demands of other Government sectors and the continuing assessment of those external factors impacting our defence preparedness. Despite Government protestations that Defence outlays have been maintained, the level of allocation in terms of GDP is still about the lowest since 1939 and compares unfavourably with our neighbours whose outlays, technologies and capabilities are increasing. Despite some belated injection of funds, our technological and force capabilities edge, built up with much effort over past years, seem to be in considerable danger of being overtaken, and once lost they will be extremely difficult and expensive to regain.

The Department of Defence, in a recent Budget Inquiry Submission, called for an end to Defence spending being based upon a percentage of GDP and for spending to be based on strategic considerations. Whatever method is adopted finally, there needs to be a better way of funding what is, in effect, Government's most important responsibility to the people of Australia – the security of the Nation.

## *Defence and Foreign Affairs*

As the 1972 Australian Defence Review put it: 'Defence policy and foreign policy should march together'. However, the confidence and consistency with which we conduct our foreign affairs, and conversely the way we are seen by others depend very much upon our ability to demonstrate a firm resolve to protect our vital interests and the interests of those with whom we have defence and other agreements. An obviously weak and inadequately funded defence capability must send the wrong messages. Conversely, an inadequately funded and inexperienced Foreign Affairs Department must also send messages of weakness, indecision, and a lack of real understanding or concern for other nations.

The currently-approved, core defence force of uniformed members, the effectiveness of which is reduced by recruitment and retention problems, may give Australia the cheapest defence force possible, and this in turn may suit Department of Finance objectives, but it will hardly provide properly for the defence of Australia, its sea and air approaches, its marine economic zone, or the many overseas 'military/policing' and anti-terrorist roles so popular now. If this situation is not corrected for the long term, it may well lead to our foreign policies being driven more by the need to avoid conflict at all costs, rather than by the confidence provided by a demonstrable deterrent capability with some depth to it.

Current and forecast Service manning difficulties should prompt Defence to review its recruitment-through-advertising contractor approach. The best way to recruit is through the Services interfacing with potential recruits directly, given that the ethos of the Services, and the attraction of the youth of Australia to Service life, can be returned to what it was before the DRP.

The current move to resurrect the Reserves seems rather ambitious when the poor history of the past in this area is reviewed. Time and again, the Reserves card has been played as a 'quick fix', but has failed on every occasion, usually for reasons of lack of resources or over-ambitious expectations, or both. The current expectation that employers of the type of person needed by Defence will be freed to undertake annual training regimens from a month to several months, as well as be made available to deploy at short notice all the year round, is somewhat naïve. Throwing money at the problem is not a good solution either. It smacks of Governments' practice of buying votes. The money may be taken, but much respect is lost and our forces tend more to resemble mercenary ones.

Australia needs well trained, experienced, uniformed, permanent, and highly motivated members for its defence forces. The adversity towards permanent, uniformed personnel displayed so strongly and habitually by Defence bureaucrats and Government remains a mystery, but one that would benefit from a serious study. It can not be based upon cost or effectiveness considerations.

### *The Management of Defence*

In 1972, the best defence of Australia's interests was seen by the Australian Defence Review to go beyond the defence of Australian territory alone and to call for a military capability that was evident to other countries to project Australian strength beyond our continental boundaries. At the higher policy level, the following twenty five years saw Australia's defence posture change sharply from a policy of 'forward defence', under which we would fight, if necessary, on foreign soil, to one based on defence of the Australian mainland. In recent times, this policy in turn came under question and we now have a new policy based on a greater military reach to cover the sea and air gap to our north and possibly beyond. In this, we have one of the professed reasons for the major reorganization of Defence – to fund the airborne early warning and air refuelling capabilities upon which the greater reach policy depends. However, any intention to expand Australia's defence reach and range of capabilities seems to be at odds with the marked contraction in Service numbers, skills, and experience that has taken place.

In terms of force disposition, there has been a steady shift of military units away from the more heavily populated areas of Australia in the east and south to the north and the west. The Army has moved into the Townsville area while the Navy is now based on both the eastern and western seaboard. The RAAF also has a major base at Tindal and has 'bare' bases around the northern arc of the Country to permit the rapid deployment of air and ground forces.

The Defence organization that existed pre-Tange followed that established during the early years of the War to meet the demands of rapid mobilization and expansion. There were separate Departments for Defence, Navy, Army and Air and Supply. However, this was to change with the implementation of the Tange Review of 1974. The resulting organization, said to be 'designed for peace but adapted for war', seemed to many involved to be a proliferation of overlapping bureaucracies, which seemed to frustrate many and satisfy few. 26 years after Tange, the then Secretary for Defence noted that he felt the Defence organization had lost focus on its core business, which was to maintain and develop highly capable military forces. The many changes that resulted from the Tange reorganization may also have diverted attention from how industry might best meet Defence's needs, as focus was directed more towards the organizational changes that were set in train rather than what needed to be done. A second Minister was then established to manage Defence Science and Personnel, due to the Department's large span of control.

However, since Tange, there has been a steady stream of Defence studies and reorganizations, mostly looking at various aspects of Defence structure and management in isolation. Defence change seemed to have become an industry in itself. In the four years preceding 1990 alone, five separate Joint Force Headquarters were established to oversee the operations of Australia's small defence force, but the changes did not stop there. The major reorganization resulting from the Defence Efficiency Review (DER), followed by the Defence Reform Programme (DRP), aimed to establish a structure 'organized for war, but adapted for peace', but this did not seem to change anything in the bureaucracy.

The Commercial Support Programme (CSP), instituted after the Tange Review, saw a dramatic shift in support tasks from the Services to industry. This policy, which increased both the scope and the depth of industry support, was welcomed by industry, but reservations have grown, especially amongst the small to medium contractors, who have lost much ground to the large foreign majors. The pace and direction of the changes initiated by the DRP, which have had a considerable impact on the Defence organization, the Services, and industry, give cause for concern.

The wave of major changes to the Defence structure when implementing the DRP seem to have been driven by the same narrowly-focussed philosophy of 'economic rationalization' (or 'bottom line cost management') as used by industry. While there is little doubt that there was some scope for change and economies within the defence forces, the DRP's excesses leave a sense of unease, summarised as follows:

- With the loss of their Engineering, Logistics and Material infrastructure, the Service Chiefs do not have, either within their organizations, or under their control or influence, the resources or skills necessary to express their operational requirements, evaluate proposals, manage all aspects of

technological change within their Service, or guarantee the engineering or logistics support of their operations. Too many organizational, managerial, administrative and financial barriers have to be crossed to bring together, in time and space, all those activities needed to mount and sustain operations. It is thus doubtful that the new organization will provide the responsiveness, mobility, flexibility and sustainability so critical to our defence capabilities, particularly in regard to the high technology services.

- The drastic reduction in the uniformed strength of the Services, together with a much reduced investment in training, a much narrower employment scope, and a very restricted mobility of labour across weapon streams, will inevitably lead to an insidious deterioration in skills and experience.
- The de-skilling and reduced experience levels in the Services, particularly in the high technology services, will have wide ranging implications not only for the Services and their capabilities but also for defence industry which draws its skills and experience, to a large degree, from the Services. Reducing the numbers, skills, and experience levels in the Services will reduce markedly the skilled effort available from the Services to meet the needs of both the Services and Industry. Contractors will then have to increase wages in competition for scarce resources, or establish their own training capabilities. Either way, contractor costs will increase, making something of a mockery of the cost basis upon which the Commercial Support Programme was imposed on the Services, to the detriment of Service numbers and expertise.

On a more general level, the DRP has failed to consider those important qualitative characteristics of a defence force that cannot be subject to quantitative evaluation of the 'bottom line' type. If military force is to be used effectively, we need to remember that the outcome of a conflict will often be determined less by the quantifiable elements of military power than by such intangibles as professional leadership, strategy and tactics, training, morale, unit cohesion, experience in combat, and of course the whims of that old Roman Goddess Fortuna. Conversely, a military force will be weakened when managerial and technocratic values are substituted for these traditional warrior values. The Defence bureaucracy has had a long and continuing unease in living with these values, and the serious problems that this situation causes will only be aggravated by the current, single-minded drive towards imposing arbitrary managerial and technocratic change at all levels of the Defence organization.

Finally, the Secretary's comments in 2000 regarding the Defence organization's loss of focus on its core business opened the question as to whether the changes that have been introduced at the higher level by the DRP will be in the right direction or will consist of merely reshuffling the old layers of management,

and even adding further layers. In looking at the new higher Defence machinery, one is mindful of the unique organizational challenges presented by bureaucracies, including Defence. Bureaucracies tend to compartmentalize professional responsibility in such a way as to exempt most bureaucrats from individual accountability for doing anything more than meeting the internal requirements of the bureaucracy itself. For Defence, this practice needs to be kept well in focus. In addition, bureaucracies tend to supplant their primary reason for being with values overriding to the bureaucracy, particularly those of career advancement, ensuring an orderly flow of both people and paper within the system, and protection of the system from external disturbances. The bureaucracy will also do everything in its power to ensure that only they can access the Minister, and hence Government. The very thought that advice might come from outside the bureaucracy is abhorrent. All of these characteristics, unfortunately, characterise the current Defence Department.

A brief look at the recently formed Defence Source Selection Board (DSSB) shows an organization with members drawn from seven different functional areas with responsibility for:

- *Endorsing* capital equipment acquisition strategies,
- *Recommending* a preferred supply source,
- *Providing guidance* on contract negotiation issues, and
- Acting as an independent *advisory board*.

These seem to be 'management' tasks, with an embedded conflict of interest, not 'doing' tasks, which prompts the question as to why those with the prime responsibility for a function need such overheads if they are competent? A similar question can be asked of the other committees, forums and review boards that have been formed from the many previous similar organizational arrangements.

### *National Industry Policy*

The effectiveness of defence industry is tied directly to the general health of our national industrial base. Indeed, defence industry policy cannot be treated in isolation from national industry policy, we are far too small a player and too vulnerable. Since the mid-1970s, industry policy focussed almost entirely upon the progressive reduction in tariffs. Unfortunately, this policy seems to have been implemented with an almost 'hands-off' approach, seemingly on the basis of 'industry, heal thyself'. The result has been a debilitating loss of needed intellectual capital and a transfer of company ownership from Australian to overseas hands. A similar approach was taken in regard to deregulation where the Government's implementation of its policies resulted in a national debt and crisis of confidence that remained for many years. From experience, the 'hands-off' approach does not seem to work very well, but the extent to which direction and guidance are needed requires a deft hand born of experience, wisdom, and a clear and consistent vision for the future. Various flurries of Government interest in

industry policy, generally spawning conflicting reports and recommendations, seem to have been too centred on the political pain associated with the future of tariff cuts and does not show much evidence of the deft hand and vision that is needed.

The DRP's recommended 'non interventionist' policy for defence industry is in direct contrast with the recommendations of the Mortimer Report, so the solution might well lie somewhere between the two extremes, but then Defence Industry policies seem to change as often as Melbourne's weather.

A carefully structured national policy is sorely needed, with sufficient Government guidance to ensure that national capabilities are developed that are appropriate to current and long-term, national objectives. Our education and training policies should then follow in harmony with our industry policy.

### *The Management of Industry*

Australia's management structures were traditionally hierarchical, usually providing for an internal accession that took advantage of the corporate wisdom, expertise and skills that had been built up over the years. However, this approach began to change during the 1980s, under the general cloak of 'economic rationalism', and the rate of change accelerated during the 1990s. The main tools of management used during the process of rationalization were flattening of the organizational structure and downsizing, the brunt of the results being felt by middle managers and the 'older' members of the organization, firstly 60 plus, then 55, then 50 and so on, the ones who actually held the corporate wisdom and experience. The result, in retrospect, was a sharp loss, indeed waste, of sorely-needed intellectual capital.

While some fundamental changes were certainly needed, the results seem to have been unnecessarily wasteful. Organizations did not generally apply the lessons of the past and what was not understood was changed by a younger and less experienced management. Many enterprises suffered massive dislocation with cuts amounting to corporate anorexia. Management too often confused 'managing' with 'doing' and 'making'. The new organizations frequently ended up with too many managers for the real 'doers' and 'makers' to support. Many organizations ended up thin, brittle, and inflexible, with little ability to expand or replace losses from within. Manpower requirements still have to be recruited from outside the organization, often from people who have little, if any, understanding of what the organization is about. While this approach may be satisfactory for some tasks, it carries dangers where core competencies are needed, those upon which the continued wellbeing of the enterprise depend. In short, the way in which we have gone about restructuring industry indicates that the level of management expertise that we have is not as high as it was or should be, and that our management structures are as suitable as they should be for the future.

The accumulated problems arising from rationalisation led inevitably to serious failures in industry at corporate level. Previously sound companies failed alarmingly. The resulting flurry of action centred upon the role and effectiveness of accounting in the audit area and corporate governance standards. Strangely, many companies that were subsequently judged poorly against the new corporate governance standards were strong leaders in their field. Regrettably, our corporate governance requirements resulted in many accountants and legal people being appointed to Boards that possessed no knowledge of technology or its function in the enterprise, so the infiltration of 'generalists' spread.

### *The Management of Government*

The methods used by industry were those adopted by Governments in preparing Commonwealth and State instrumentalities for privatization, and were continued by the new owners after privatization. Jobs were lost and functions considered 'non-core' were discarded to get the 'bottom line' down.

Both industry and Government also pursued two policies during their rush towards rationalization which were remarkably short-sighted and will continue to impact Australia's industry and defence capabilities seriously, until the effects are redressed. These were:

- The closure of in-house apprentice and other training facilities, on the assumptions that training was not a core function and that trained personnel could be recruited from outside simply by advertising as and when needed. These closures depleted our pool of trained people and led directly to the current skills shortage in almost every area of technology in Australia.
- The closure of in-house laboratories, research and development facilities, test houses and the like, again to lower costs, has in turn lost us much of our ability to sustain and develop our pool of scientific, engineering and applied technical expertise at the professional level.

The loss of so much of our industrial capability has been both dramatic and traumatic, so that retailing employs today marginally more workers than manufacturing. The signs seen to tell us that we are moving into a future likely to be characterized by low technology and low wage work, leading to a marked deterioration in our traditionally high standard of living. Any waning of our current resources boom will soon lay bare our underlying vulnerability.

If our national drift towards low technology, low wage work continues and we fail to pick up our level of real technological education and training, Australia may well be caught by other international moves that are beginning to appear. For example, a number of German firms, including Varta, Siemens and Daimler-Benz, which moved production off-shore to take advantage of low wage rates in Asia are

now withdrawing back to Europe. Essentially, the high quality standards required of much of their equipment has not been forthcoming and so they have decided to take advantage of the highly trained workforce that exists in Germany. They have found that it costs more, often not much more, but it is worth the cost if the quality is to be kept high. If Australia is to be a competitive and attractive alternative for companies, whether withdrawing from Asia or simply looking for sources of quality products, then we will need to maintain a highly skilled, technological workforce.

### *Defence Industry*

*I do feel that if our relations with the Defence Department were closer, that there were lots of valuable things we could do and at least we could work intelligently towards a common goal...*

*Essington Lewis, BHP, 1931.*

(It took an imminent world war to get the attention of the politicians and their bureaucrats)

One of the more important documents to emerge over the past 25 years or so seems to have been the Department of Defence paper 'The Defence of Australia' in 1987. Its aim was to set the course for the next decade and it put much emphasis on self reliance, a concept raised by the 1976 Defence White Paper, together with new concepts in Naval basing and northern military basing, so as to:

- Maintain and develop the capacity for the independent defence of Australia and its interests.
- Promote strategic stability and security in our region.
- Enhance our ability to contribute to global security.

In addition, the paper saw self reliance as a task involving the whole nation and described Australia's greatest resource as being the skill of its people.

The paper also spoke of a new relationship with industry, especially in terms of:

- Providing Defence requirements to industry early.
- Having Australian firms made prime contractors for major projects.
- Making industry involvement a major factor in selecting new equipment.

This paper provided a good target for defence industry development, but we fear that the capabilities sought from industry have remained remarkably elusive to

this day. The seeming unwillingness on the part of Defence to give Australian firms prime contractor status is a significant shortcoming.

November 1992 saw a flurry of reports on defence industry, with:

- 'Defence and Australian Industry. Description and Economic Analysis' by the Allen Consulting Group.
- 'Defence and Industry Policy' by the Department of Industry, Technology and Commerce.
- 'The Strategic Priorities for Australian Defence Industry' by Prof. Paul Dibb.

The Dibb Report was, and remains today, another good basic reference on defence industry. It noted that not much progress had been made in the past decade in developing strategic priorities for Australian defence industry. It also saw Australia needing a more self reliant defence industry capability in the next decade and emphasized the importance of self reliant military capabilities to meet the uncertainties of the future, particularly in specified areas of high strategic importance to us.

The report proposed three orders of priority for defence industry support:

- The First Order comprised information technology, communications and electronics, in both manufacture and support.
- The Second Order related to our capacity to build warships and submarines, given that any premiums could be held to 10% or less.
- The Third Order included specialized military vehicles, aircraft and ammunition and clothing.

Finally, Dibb saw a need for Defence to better specify its industry support requirements, particularly in terms of any expansion base planning for a surge capacity, and to improve the policy processes impacting industry.

The 1993 Defence Strategic Review stated that industry plays a central role in Defence and gave guidance on Defence requirements from industry. It emphasised that defence self reliance was enhanced by greater use of local rather than overseas industry.

The 1994 Defence White Paper included the statement that a strong Australian defence industry is important in sustaining operational effectiveness and saw an increasingly important role for defence industry. We feel it also greatly

overstated Government moves that had been taken to improve the international competitiveness of industry, particularly in what had been done in the area of microeconomic reform. With the advent of the current Government and the application of a strong dose of economic rationalism to Defence via the DER, and the implementing DRP, there seems to have been a marked shift in Defence's approach to industry support. Defence ministerial statements were made subsequently to the effect that, for example:

*"We see it largely as a task for the private sector to determine how they will structure themselves to supply our needs". "The record of Government ownership of defence industries around the world shows that public sector ownership is not an effective way to buy equipment".*

*Defence would be taking a back seat in the process of the rationalization of the ship building and ship maintenance area over the next few years. "The final shape of the shipbuilding and maintenance industry will be set largely by industry itself".*

*"The key to the Government's industry policy is to achieve sustainable defence industry. I define a sustainable defence industry as one comprised of firms which can lose an important Department of Defence contract and still stay in business".*

The DER proposed a revised policy environment, built on a philosophical framework that promoted:

*'A non-interventionist approach, which relies on market forces to determine industry structure.*

*The conscious management of Defence's demand for goods and services with 'an eye to the likely impact of the resulting business on the structure and capabilities of industry sectors'.*

*A more open ended interactive approach to developing broad defence industry priorities, which should be for guidance only rather than absolute requirements'.*

(Such statements served only to confuse further.)

In relation to Australian Industry Involvement, Defence called for the onus to be placed on force capability developers to produce guidance on priorities for self-reliant support which 'can convert reliably into meaningful project-specific industry objectives'. It seems doubtful that force definition and capabilities acquisition people would be in any position to carry the overheads in time, effort or money to consider properly defence industry issues and interfaces. They will be too driven by bottom line cost competition with bidders. Nor will they have any real expertise, or

provide a consistently directed, Defence coordinated, focus on industry matters. The smaller Australian defence manufacturers and suppliers that have traditionally and effectively met so many of Defence's needs will be marginalized by the big foreign-owned players and will inevitably be forced out or taken over, resulting in a further lowering of Australian company involvement in defence support. There will be no defence industry support organization to foster local industry involvement. The larger, foreign owned or controlled firms will get a hearing at the higher levels of Defence but the smaller, local firms will find it increasingly difficult to be heard.

In reality, Defence has talked much about Defence Industry and self reliance since the DRP, but most of it is just words of little if any meaning, spoken by those who have little concept of industry, of the implications of what they are saying. Defence exhibits a 'technological cringe', born of a lack of technical expertise that is a major impediment to retaining, let alone developing, local defence industry. Bureaucrats like decisions that deflect all accountability, and this is usually done by preferring contracts that provide for both supply and through life support. That is, they wish to shift risk back on to the supplier. The concept of coupling supply and support is fundamentally flawed on both management and cost grounds. Companies that manufacture aircraft, ships, and other major items of defence equipment are not skilled in through life support. Their skills, documentation, management systems and procedures, tools and test equipment, and facilities are all geared towards manufacturing, not maintenance. Maintenance requires a much different set of skills, documentation, management systems and procedures, tools and test equipment, and facilities. Maintenance is a completely different technical discipline from manufacturing. Certainly, to get a contract to provide a weapon system contractors may also sign up for through life support, but the latter has generally to be sub-contracted out to a maintenance specialist company, with attendant cost mark-ups. In addition, what company is going to commit for through life support without a very significant cost premium against all the unidentifiable risks of the future? Such contracts are not the 'Holy Grail' that they might appear to an inexperienced bureaucrat.

Defence Industry has to be managed at grass roots level, not from a central bureaucracy. Firstly, the real expertise in and knowledge of Australian defence industry capabilities lies within the industry regions, not the centre. Secondly, this expertise and knowledge, built up over many years, cannot be replaced simply by setting up mere 'shop fronts' linked to the Defence Material Office (DMO) through an Industry and Procurement Infrastructure (IPI) Division. This seems to be a bureaucratic solution to what is really a 'hands-on', close working interface task. Thirdly, the loss of the close working relationships that have been built up between Defence and local industry will inevitably erode rapidly over time. An impression of normality may persist for a few years as the regional defence industry support organization runs down, but without considerable industry expertise the local defence industry support currently provided by the small and medium enterprises will decline and once lost will be very expensive, if possible, to regain. The

inevitable results of eliminating our local defence industry interfaces, seemingly to avoid painful decisions and potential cuts in the centre appear to be in direct conflict with the Defence industry aims professed by the DMO.

Furthermore, a reduction in quality assurance effort will, from experience, tend to result in the approval of unsatisfactory contractors and the acceptance of work that will be found to be lacking. These problems will become more common as contracts drift towards the lower bidders and will in turn impact directly the Services' capabilities and be costly to redress. In short, experience has shown that where quality assurance effort is too thin, costs rise and support suffers.

With the excising of the Defence Industry Development (DID) organization, after progressively reducing its funding over the years, indicates clearly that defence industry matters will be dealt with in a piecemeal way. Industry seems to be an irritating side issue in supposedly running Defence as cheaply as possible, and certainly not an important element in Defence planning. The question is whether the DER was sufficiently well grounded, or if it thought through industry issues over the longer term, or was it a matter of defence industry being just too difficult for our Defence planners? The need to have retained sufficient of the local defence industry expertise that existed in the regions seems to be a matter of fairly obvious common sense.

One has considerable difficulty in accepting the DER position at the time that the effectiveness of the DAO was overwhelmingly more important than its internal efficiency. The same argument could well be put in regard to our operational forces where any shortcomings in either efficiency or effectiveness will have much more sudden and bloodier repercussions for Australia's security, quite the opposite to the bureaucratic position.

### *'Australia's Greatest Resource'*

This phrase has been used often to indicate the importance of our national pool of skills and expertise. There was once a good pool of expertise residing in Government and Defence laboratories and facilities and within industry of which we were justifiably proud. In addition, these organizations generally included in-house training facilities that ensured a steady availability of skills to meet their own needs and, as a by-product, the needs of the nation.

However, since the 1970s, there has been a steady, general decline in the basic numeracy and literacy skills of those leaving both primary and secondary schooling and hence entering the tertiary education system. This was associated with a waning of interest in teaching and studying the more demanding subjects such as English, Mathematics, Physics and Science, and a growth industry in the 'soft' subjects, except of course for our visiting Asian and other overseas students.

However, in recent years, the rate of erosion in our education system has accelerated so that today we have only what can only be called a crisis in education. While 30 odd years of experiment with curriculum and faddish teaching methods have demonstrated their true lack of worth, these failed approaches are still being pursued by state educational bureaucracies. The de-education of Australia started with the abandonment of traditional teaching methods for 'fashionable trends' which required much less effort and avoided those assessments, bothersome to both teacher and student. This trend spread to secondary schools and then to universities, thus completing the debasing of intellect in Australia. If any single thing in Australia, including defence, needed immediate redressing, it would have to be our education system, and within that the proper teaching of the English language should be the first priority, for that is the fundamental tool used in all endeavours and is the primary means of handing on our advances in knowledge.

In terms of technological skills, the economic rationalization within industry, as mentioned before, prompted many organizations to close down their training activities on the grounds of cost and the perception that training was not a core activity. The result is a very significant reduction in the training facilities available within industry to develop our national science, engineering and technological skills. While statistics covering skills on a national basis have been difficult to pull together due to organizational changes in the way national employment is managed, those available show some disturbing trends for industry.

In 1981, a Group Apprenticeship Scheme was introduced to the existing apprenticeship scheme with the object of sharing the costs of employing and training apprentices between small enterprises. Under this scheme, apprentices would be indentured to a single employing body, the Group Training Company, and placed with host employers in rotation. The scheme was renamed in 1982 as the Group Apprenticeship Support Program and, following expansion to include trainees in non-trade areas (a dilution), become the Group Training Scheme in 1987. The employing bodies under the Group Training Scheme were incorporated bodies that received joint Commonwealth, State and Territory financial assistance towards administrative costs. This scheme provided and encouraged the smaller manufacturer to employ and train apprentices, and gave aspiring apprentices confidence to enter into trade training.

During the period 1990-94, which saw a 23% decline in the number of apprentices across Australia, the number of group training apprentices actually increased by 28%. By June 1994, there were 104 group training companies operating Australia-wide, employing about 13,000 apprentices, representing 10.5% of total apprenticeships, so it was a very successful initiative.

Large declines in the number of apprentices since 1990 have been felt in all States and Territories, except for the Australian Capital Territory where, against the trend, there was a growth of about 6%. The decline has been most apparent in

Victoria, both in numbers and proportion. Victoria had seen a reduction of some 20,000 apprentices by 1994, representing 40% of the numbers in that State.

The records show that, Australia wide, apprenticeships peaked in 1990 at approximately 160,000 persons or 0.9% of the population. Since that time, there has been a continual decline with the latest figures for 1994 showing 123,000 apprentices, or 0.68% of the population.

In 1985, a new training venture was begun, called the Australian Traineeship System (ATS). This introduced a system of training based upon on-the-job training and attendance at TAFE. As a result of this initiative, the number of trainees jumped from 1093 in 1985 to 13659 in 1989. Since then, the number declined each year as a result of pressures to retain students longer in the school system and an economic downturn. The greater number of students in the 15 to 19 year bracket remaining at school reduced significantly the number seeking apprenticeships and trade training courses. In 1981, 35% of the 15 to 19 year olds attended school, but in 1991 this figure had grown to an estimated 48% and the level has grown by about 2% per year throughout the 1990s. Those within the college systems largely elected non-technical subjects, such as Arts and Humanities, Commercial subjects, and Service and Hospitality courses, many in response to a burgeoning hospitality 'industry'.

It is no surprise that, in Victoria, with its drop in manufacturing employment of some 5.4%, and with fewer industries with apprenticeship training schemes, that there has been a drop in metal trades apprenticeships from 25.5% of all apprenticeships in 1982 to 14.5% in 1994.

Whilst it is expected that there must be some realignment of apprentice and trade training requirements to recognize the restructuring that has taken place in industry, there seems to have been an over reaction, which has left us with an inability to meet demand for trades in most industries and a marked reduction in the trade training infrastructure in industry that trains and supervises our trade skills of the future. Thus, in parallel with the need to reclaim the education system, there is an urgent need to resolve how we are to resurrect an effective trade training system.

### *Manpower and Skills Summary*

In summary, deficiencies in education and technological training have been with us for many years and have only become more serious with the passing of time. The problem has been shelved, side-tracked, or given inappropriate 'band aid' treatment, but never handled seriously.

Today, we are faced with an inability in almost every industry, including Defence, to meet the demand for technological skills, not necessarily for expansion but merely to keep enterprises alive and competitive. The AIG/MTIA lists the

future shortage of skills as its primary concern, and Defence is now planning to reduce the entry standards for the Services. The reasons behind our failure are many and inter-related, but relate mainly to:

*At the National Level:*

- There has been a prolonged inability at the highest level to provide the policy and guidance framework within which the education and training needs of the country are identified, funded, and pursued consistently. Too much time, effort, and money have gone to satisfying pressure groups who have led us consistently down the wrong track.
- There is a general tendency at all levels of education to take the 'easy way out' and lower the bar of learning so as to pass the unworthy as being 'educated'.
- We have an education bureaucracy that has exploded over time, uses simplistic training models, makes access to needed training too complex, and keeps changing the fundamentals. The economic models used are also inappropriate to our needs if we are to become once again a 'smart country'. For example, TAFE training attracts about the same \$s/student hour irrespective of the student's contribution to the economy or society. We also have a TAFE system that has been gutted and will not be easy or quick to revive.
- Most importantly, with outsourcing and privatisation, we have seen a wholesale deskilling across our nation. Most, if not all, public utilities, both Federal and State, as well as most major companies, invested traditionally in training as a core function. Apprenticeship schools competed for excellence and tradesmen felt a justifiable pride. There were also many Test Houses and Laboratories that seeded our engineering and science skills base. The skills imparted were a fine blend of the practical and the theoretical, and those involved provided a pool from which we drew many of our best managers. We were indeed a smart country. With privatisation, however, we lost not only the public ownership of the utility, which formed part of the public equity in our 'Commonwealth', without being able to show much for the loss, but we lost practically all our technological breeding grounds. The impact of this has not been well appreciated.
- Another of the direct consequences of these changes has been a management skills gap which resulted in 'generalist' managers, possessing little if any knowledge of what they were managing, taking positions held previously by managers who knew well what they were managing. The new managers were fixed on short-term goals and

plans, and were driven more by cutting costs than anything else. The flattening of organisations in the search for further economies stamped out those positions that had allowed a firm to develop informed and capable workers and managers for the future. The general move to see workers and managers approaching their 50<sup>th</sup> birthday to be 'beyond it' only shed a generation of sorely-needed experience and skills.

- Today, industry still sees training as a 'non-core' function which cannot be justified in terms of cost – a very short term and uninformed 'generalist' approach. Hence, we have the Weekend Australian advertising for a whole range of technical specialists for work in Industry and Defence who aren't there because nobody is training them, let alone giving them any experience (Within DMO, care will need to be taken to guard well those who show any promise, as they will be attractive to 'head hunters' to fill vacancies in industry when projects are in the wind). Engineering and maintenance also need to be seen as 'critical dependencies' by industry and Defence, rather than merely costs to production, if we are to retain any semblance of technological capability and authority.

### *At Defence Level*

All of the factors above have impacted Defence as well as Industry as a whole. However, Defence has also had to contend with some very severe, self-inflicted injuries that have contributed much to the continued paucity of performance of the Department since the Tange reorganisation. The main injuries were:

- Firstly, there was the wholly ill-conceived and inefficient organisation imposed upon the Services from 1974, an organisation unable or unwilling to obtain the funds necessary to maintain a credible force. The bureaucracy competed with the Services for the inadequate funds available, and the Services suffered a long, debilitating run-down, forcing organisational changes in the RAAF that were later swept aside by the DER/DRP.
- Secondly, the DER/DEP were imposed which led eventually to the loss of the Engineer Branch within the RAAF, amongst others, and later to the transfer of responsibilities for new projects and in-Service support from the RAAF to, eventually, the Defence Materiel Office (DMO). The RAAF, which numbered about 22,000 personnel (pre-DRP), although under-funded, was still wholly competent in all areas of operations, and could manage the breadth and depth of maintenance, both in-house and in industry, needed to support itself. In addition, it planned and introduced aircraft and supporting systems over periods of increasing

technology, to specification, on time, and on budget. Its aircraft and other systems were almost invariably operational and supported on delivery, with local industry supported and effective. These tasks required a wide range of skills and experience, but all this was lost with the arbitrary dictates of the DRP. As a result, few in Defence knew anything when it came to new project management or in-service support and it is still facing that problem today.

- Thirdly, the RAAF, probably the most highly technological organisation in Australia, decided to introduce a 'General List' for officers of and above the rank of Group Captain, so we have a combination of extreme technological de-skilling and management by generalists who are generally unlikely to have the necessary knowledge in depth or experience to take the correct decision, but then who might notice?

### *Finally*

Achieving and maintaining our force capabilities as well as regional air superiority will demand a range and depth of technological skills and experience that we do not have because we have wittingly destroyed practically much of what had been built up over decades, both in Defence and in industry. If Australia is to proceed with confidence and security, Defence will have to face the skills/experience problem. We will have to do with what we have, with all the attendant risks and costs involved. In this regard, Defence should take stock of the skills available for the task. There has been much adverse comment over the years of Defence decisions and plans, some ill informed, but some fairly well informed and supportable. Defence should use less energy and good will defending the often indefensible and look closely at who amongst their critics might well assist them, and get them on side and involved as heavily as possible. This will need a bit of a behavioural change in Defence, but it is not impossible, and there are few, if any, alternatives.

However, we also need to do something in the longer term to break out of the problem. One way would be to recognise that the DRP has gone too far, re-skill the RAAF in engineering and expand its responsibilities in the engineering and maintenance fields. A highly technological organisation without an engineering spine makes little common sense.

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