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BURMA'S ARMED FORCES: LOOKING DOWN THE BARREL

Andrew Selth

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Author's Note

After the Burmese armed forces crushed a nation-wide pro-democracy uprising in September 1988, Burma's official name (in

1. Introduction

> Reports that say that something hasn't happened are always interesting to me, because as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say there are some things we do not know. But there are also unknown unknowns – the ones we don't know we don't know.
>
> US Defence Secretary Donald Rumsfeld
> Press Briefing at the Pentagon
> Washington DC, 12 February 2002[1]

Since they were made in 2002, Donald Rumsfeld's comments about 'known knowns', 'known unknowns' and 'unknown unknowns' have been the object of much derisory comment in the news media and on the internet. Even President George W. Bush publicly teased him about them.[2] Yet, in his own inimitable fashion, the then US Secretary of Defence was making a perfectly valid point. Intelligence agencies, strategic think tanks and independent analysts have long known that some security issues are quickly recognised, easily researched and well understood, while others pose much greater challenges. There is rarely enough reliable data to answer all possible questions, or to permit the elimination of alternative interpretations. In addition, there will always be important matters about which observers remain completely unaware – until these issues are discovered or reveal themselves.

These problems assume many different guises, but they immediately become apparent when attempting to make comprehensive assessments of national military capabilities. For, in professional hands, this is a very demanding analytical exercise that goes well beyond the simple lists of equipment and broad generalisations about a country's defence posture that periodically appear in popular journals.

The study of Burma's armed forces (or Tatmadaw) is a case in point. Since General Ne Win's coup d'etat in 1962, officials and other observers of the country have monitored public events, commented on certain well publicised developments and pondered observable trends. Defence Attaches posted to Rangoon have followed changes in the military hierarchy and noted arms and equipment displayed to the foreign community. To the extent that these issues have been understood, they can be called 'known knowns'. Increased efforts to research the Tatmadaw since the abortive 1988 pro-democracy uprising, however, have exposed the dearth of reliable information. More is available now than in the past but, in Donald Rumsfeld's terms, there is still a disconcertingly large number of 'known unknowns'. Also, Burma has its share of mysteries, and its armed forces continue to surprise observers, reflecting the many 'unknown unknowns'.

These information gaps have not dissuaded popular pundits and other commentators from making some bold pronouncements about the larger, better equipped Tatmadaw which has emerged in Burma over the past 20 years. Most have claimed 'inside knowledge' and unique insights. Whether or not these claims can be justified, it remains the case that a detailed, accurate and nuanced assessment of Burma's military capabilities – of the kind routinely demanded by governments, defence forces and strategic think tanks – is simply impossible to achieve. It is difficult even to make confident judgements about the Tatmadaw's basic order of battle and annual defence expenditure. There is almost no reliable information about the Tatmadaw's combat proficiency. As for the internal dynamics of the armed forces, in particular their morale, loyalty and cohesion, they too are virtually a closed book.

As a result of these and other challenges, the picture of the Tatmadaw gained from contemporary sources is often inaccurate, incomplete or lacking in nuance. There has been a tendency to accept unverified reports as fact, and to draw broad conclusions from fragmentary and anecdotal evidence. At times, closely reasoned analysis and cautious commentary has been crowded out by ill-informed speculation or politically biased assertion. A few commentators appear to have taken the Naypyidaw regime's claims at face value. Even academic observers normally aware of the pitfalls inherent in the analysis of armed forces have fallen into the traps of equating the acquisition of new weapon systems with the development of new combat skills, and assuming that an expanded order of battle automatically means increased military capabilities.

These problems have helped create a number of myths and misconceptions. Indeed, by surveying the works produced on this subject since 1988, it is possible to gain two quite different impressions of the modern Tatmadaw. At one extreme, it is portrayed as an enormous, well resourced and efficient military machine that completely dominates Burma and threatens regional stability.[3] At the other end of the scale, it is characterised as a lumbering behemoth, lacking professional skills, riven by internal tensions and preoccupied with the crude maintenance of political power.[4] In a few publications both propositions have been put forward. The truth about the Tatmadaw probably lies somewhere between these two extremes but, without hard evidence, determining the precise point on the spectrum is very difficult.

Anyone courageous – or foolhardy – enough to attempt a comprehensive assessment of Burma's military capabilities faces a wide range of analytical problems, at three distinct levels. At the first level are the personal and professional challenges faced by all those who engage in intellectual exercises of

2. The Imperfect Analyst

> To know what one knows, and to know what one does not know, that indeed is knowledge.
>
> Confucius
> *The Analects*

The challenges facing strategic analysts in intelligence agencies, academic institutions and think tanks are already widely known. The controversies over the 11 September 2001 Islamist terrorist attacks and the 2003 US invasion of Iraq thrust such issues into the world's headlines, but well before then they were the subject of lively debates among professionals and independent commentators.[5] This is not the place for an in-depth discussion of esoteric questions relating to the nature of scholarly enquiry, objective empiricism or analytical tradecraft. Suffice it to say that any attempt to make a comprehensive assessment of military capability – regardless of the country targeted, or the nature of the institution or person initiating the study – will be affected by such issues, to a greater or lesser degree.[6]

For example, it has long been recognised that analysts approach these kinds of projects with certain personal views, political inclinations and cognitive predispositions. They may try to set aside such influences, in order to deliver an accurate and balanced result, but such factors are still likely to affect the way the research question is framed, which methodology is employed and how the findings are presented. Lawrence Freedman has also cautioned that it is unrealistic to expect analysts completely to divorce themselves from their social and cultural milieu. Indeed, to avoid what he calls a 'paralysing eclecticism', they need to have a conceptual framework in which to situate their judgements.[7] Even so, analysts need to be aware that they will always have unconscious biases or deeply embedded preconceptions, which can colour their treatment of an issue.

In Burma's case, some scholars and journalists – and most activists – have eschewed the ideal of objective, value-free analysis and allowed their political or personal views to influence their work. This has resulted in a large number of publications since 1988 that consciously – and at times unconsciously – have aimed to persuade as well as to inform.[8] Some are unashamedly policy prescriptive, such as those produced by the International Crisis Group.[9] There can be no objection to this approach, provided that the resulting product is acknowledged to constitute advocacy or policy advice, rather than unbiased journalism, objective academic enquiry or intelligence analysis. If the goal is a politically neutral, empirical assessment of Burma's military capabilities, however, then analysts are obliged to resist the temptation to let their own private philosophies and social agendas influence their judgement.

There is also the problem known as 'group think'. There are often subtle but strong pressures on analysts and commentators to share the conventional wisdom, and to express views that conform to those of the majority – or the most powerful.[10] Since 1988, for example, an informal coalition of politicians, human rights campaigners and expatriate groups have attempted to dominate discussions of Burma in the news media and on internet sites. They have effectively painted a stark picture of the military government and armed forces that has informed both public opinion and official policy. Attempts to challenge this 'new orthodoxy' have usually provoked a harsh response.[11] This has inhibited open debate on a number of important issues. It has also discouraged original and independent research on Burma, thus limiting knowledge about the country and a wider understanding of its complex problems.[12]

Another challenge faced by analysts is 'mirror-imaging'. As Mark Lowenthal has written, this is the assumption that 'other leaders, states, and groups share motivations or goals similar to those most familiar to the analyst'.[13] There is a need to develop an appreciation of different perceptions, different motivations, different rationales and actions based on national differences. For example, Burma's military leaders clearly view the world differently from the governments of many other countries, and perceive Burma's vital security interests in ways not even shared by many of their fellow citizens. It has been argued that, by failing to take this into account, Western policy makers have committed some serious errors of judgement.[14] As Herb Meyer has observed, figuring out how governments and national leaders think – their 'mindset' – is one of the toughest questions to ask analysts, but it is also one of the most essential.[15]

Conversely, there is the danger of analysts going to the opposite extreme, and seeing a government or military institution as so foreign and strange that the customary rules of intellectual enquiry are suspended. The fact that Burma is a remote and in many ways unusual place has led some commentators to view it as a rare and exotic subject that is deserving of special treatment, including the use of criteria that they would not apply to more familiar countries. For example, the popularity of astrology, numerology and *nat* (spirit) worship in Burma does not mean that the Tatmadaw's officer corps is dangerously superstitious and prone to irrational behaviour.[16] Also, reports of Burma's poverty, predominantly rural economy and failed state education system does not mean that Burma's armed forces consist largely of ignorant peasants.[17] Yet, political cartoons aside, such caricatures periodically appear in the news media and on websites.

These sorts of problems usually arise through political bias, a lack of emotional detachment or simply weak analytical technique. However, they can reflect more insidious failings. For example, some comments made about Burma's armed forces since 1988 have appeared to reflect a certain arrogance on the part of observers – both civilian and military – from richer and technologically more advanced countries. At times, the rather dismissive attitude shown towards the Tatmadaw has been reminiscent of the thinly disguised racism found before the Second World War, when foreign analysts of Japan's armed forces questioned their ability to use modern weapon systems and to prevail against more 'civilised' countries.[18] Whether it is by foreigners referring to the Burmese, or the other way around, there is no intellectual basis for the adoption of stereotypes.

Clearly, the sorts of challenges faced by strategic analysts and other researchers need to be kept in perspective. Not all publications about the Tatmadaw – whether they are found in books, journals, newspapers or on the web – suffer from all the weaknesses identified above. Indeed, there are many reports and commentaries that observe high standards and make major contributions to the open literature on modern Burma. Also, not everyone is interested in producing the kind of in-depth capability studies that are the usual fare of academic institutions and intelligence agencies. Even so, it is important to recognise that Burma-watchers – including those who comment on the country's armed forces – are only human, and as such are potential victims of the many traps that lie in wait for unwary analysts.

4. Researching Burma

This is Burma, and it will be quite unlike any land you know about.

Rudyard Kipling

Despite their infinitely greater resources and access to privileged information, even foreign intelligence agencies appear to have trouble obtaining sufficient data about Burma's armed forces to formulate detailed capability assessments.[40]

Another problem encountered by researchers is the highly charged atmosphere that has surrounded Burma since the 1988 uprising. Due largely to the regime's human rights abuses, most contemporary issues have become highly politicised. For example, there is a large activist community – both inside and outside the country – dedicated to the immediate replacement of the regime with a democratically elected civilian government.

5. Snapshots in the Dark

> One way to help convey uncertainty is to identify in the analysis the issues about which there is uncertainty or the intelligence that is essentially missing but that would, in the analyst's view, either resolve the unknowns or cause the analyst to re-examine currently held views.
>
> Mark Lowenthal
> *Intelligence: From Secrets to Policy*

As argued above, simply compiling the Tatmadaw's known – or presumed – order of battle does not provide sufficient information on which to base considered judgements about Burma's military capabilities. Nor is it possible in a paper such as this to examine all the analytical criteria listed by institutions like the RAND Corporation. By selecting a number of case studies, however, it is possible to gain some idea of the state of Burma's armed forces, while at the same time illustrating the difficulties encountered in making more comprehensive assessments.

All reputable formulae include baseline issues such as manpower, defence budgets, arms acquisitions and military proficiency.

Manpower

Ever since the armed forces created the State Law and Order Restoration Council in 1988, and launched its ambitious military expansion program, foreign observers have tried to determine the number of men and women in the Tatmadaw.[42] Numerous estimates have been put forward, but none can be considered definitive.

Arms Acquisitions

One of the most obvious and well publicised aspects of the regime's military expansion and modernisation program has been the dramatic increase in its inventories of weapons platforms, weapons and equipment.[74] Yet here again, there are major difficulties in

1988 – and shipyards appear to have been upgraded. Also, a number of new factories have been built, reportedly with Chinese, Singaporean, Israeli or Ukrainian assistance. Burma does not admit to making its own landmines, but it readily acknowledges the manufacture of mortars, light arms, ammunition and basic infantry equipment. Most are foreign weapons made under licence although, probably with some external assistance, Burma has designed and produced a number of its own systems. These have included naval vessels and light armoured vehicles.[80] Yet, once again, details of Burma's defence industries are closely protected. The few foreign experts allowed access to local manufacturing plants are usually quarantined and strictly forbidden from disclosing any information about them. Reports in the open literature are very difficult to verify.

Over the past 20 years, various academics, journalists and activists have compiled lists of Burma's arms purchases, but the results have been mixed.[81] Even if most acquisitions can be identified, it is difficult under current circumstances to state with any confidence the numbers of particular weapons or weapon platforms delivered. All figures cited must be considered estimates only, as they are usually based on unconfirmed reports in the news media or on the internet. Except where they copy each other, few published sources are consistent.[82] It is even more difficult to discover the peculiar characteristics of each system – for example, whether they were modified before or after sale. Even if the details of particular arms deliveries became known, it is not possible to account for all subsequent losses, whether on operations, through accidents, or simply due to a lack of spare parts. Nor is it known what obsolete equipment might have been taken out of active service, and put into storage for use in an emergency.[83]

Without a reliable order of battle, there is a major gap in the literature on Burma's armed forces. As Angelo Codevilla has written, however, 'too often military analysis has been reduced to counting men and machines'.[84] The purchase of new arms and equipment is nothing more than a waste of resources if these acquisitions cannot be properly stored, professionally maintained, operated proficiently and employed effectively. For, ultimately, it is not just the possession of lots of impressive looking bits of hardware which denotes military capability, but what can be done with them.

Combat Proficiency

The RAND Corporation's study of national power measured military proficiency by testing the ability of armed forces to perform a variety of specific combat operations against an adversary, at different levels and under different conditions. Yet, here again, foreign analysts trying to study Burma's armed forces strike major problems. The lack of independently verifiable data, in particular

staff detachment to the United Nations Operation in the Congo in the 1960s, and a few officers served in later UN peace-keeping

recent claim that 'the Tatmadaw has transformed itself from essentially a counter-insurgency force into a force supported by tanks and artillery, capable of fighting a regular conventional war' must be considered premature.[99]

All these judgements revolve around issues to do with arms and the Tatmadaw's ability to operate them effectively in different combat environments. Perhaps more than anything else, however, it is likely that intangible factors such as morale, loyalty and cohesion will decide whether the regime can translate the Tatmadaw's newly acquired material strength and developing professional skills into useable force.

6. Critical Intangibles

In war, considerations of morale make up three quarters of the game: the relative balance of forces accounts only for the remaining quarter

Napoleon Bonaparte
Correspondence

and economic mismanagement. It can also provide opportunities for the accumulation of personal wealth, either through corruption or involvement in private business ventures.

Even so, life for the average soldier is very hard. Given the reduction in fighting, there is less risk of becoming a casualty of war. Despite the vast sums spent on new arms, however, on counter-insurgency operations 'the typical soldier is still fighting the same battle'. According to many reports, basic equipment, rations and even ammunition are still in short supply. Timely medical evacuation is rare. There are also consistent and credible reports of poor leadership and brutal discipline.[101] Even back in their barracks, lower ranking servicemen and their families struggle to make ends meet. With salaries around 30,000 kyats (US$30) a month, many privates live just above the poverty line.[102] Corruption at senior levels is rife, and becoming increasingly obvious. This has led to considerable resentment at the growing gap in living standards between the officers and other ranks. Health problems are also a concern, particularly the increased number of soldiers testing positive for HIV, Hepatitis B and malaria.[103]

In 2003, morale and discipline in the armed forces were said to be at 'an all time low'. This judgement was repeated in 2005 and similar claims have been made since.[104] As Mary Callahan has written;

> Although the Tatmadaw's acquisition of higher-tech weaponry since 1988 has ushered in a revolution (by Burmese standards) in military affairs, its institutional development has frequently failed to keep pace with the demands of sustaining its vastly larger rank and file. In other words, no comparable revolution in military social affairs has taken place.[105]

In 2006, an internal Tatmadaw report on these problems apparently expressed concern and urged officers to give a higher priority to the welfare of their troops. Since then, pay has been increased, and some units have provided amenities like movie halls and karaoke bars. Commanders have been told to provide food from unit welfare funds to offset reductions in official rations.[106] As far as can be judged, however, none of these measures seem to have been very effective.

Not surprisingly, given all these problems, there is now a serious shortage of recruits. There are still plenty of applicants for prestigious officer schools, such as the Defence Services Academy at Maymyo (Pyin Oo Lwin), which has in fact increased its annual intake. At lower levels, however, the Tatmadaw seems to be forced more and more to rely on 'conscripts', child soldiers and others forced into uniform against their will.[107] Such recruits can hardly be expected to give their full commitment to military service, or to the regime's political programs. This is also suggested by the high rate of desertions and unauthorised absences. By many accounts, including leaked government documents, this problem has increased in recent years, despite efforts to stem the outflow.[108]

Cohesion

Over the past 20 years there has been a steady drumbeat of reports from journalists, activists and other commentators, to the effect that Burma's senior military leadership is irreparably divided, and the armed forces is about to disintegrate into mutinous factions. Clearly there have been internal tensions, as might be expected in any large institution, but the regime has proven remarkably resilient. Indeed, by continually re-inventing itself, it has become the most durable military dictatorship the modern world has known.

Tensions in the officer corps have had many causes, but most seem to spring from personal and professional differences. The Tatmadaw would not be unique among armed forces in experiencing a degree of competition among ambitious officers, factionalism – based for example on different professional backgrounds or functional corps – or rivalry between the three Services. Burma's pervasive culture of patron-client relationships has led to alliances and power struggles between different cliques.[109] Relations between officers based at Defence Headquarters and those in the field have

been strained. Given the fact that the Tatmadaw also constitutes the government, there are bound to be differences over certain policy issues, such as the country's close relationship with China, or the management of the economy. Before 1988, there were occasional rumblings against paramount leader Ne Win, and similar noises have been heard since then against Senior General Saw Maung and, after 1992, Senior General Than Shwe.

More recently, there have been reports of splits in the officer corps, and growing tensions within the ranks, but as always these have been hard to confirm.[110] For example, following the demonstrations in 2007 it was claimed that two or three 'regional commanders' were dismissed for refusing to send their troops out to attack protesting monks.[111] There were also reports that a number of soldiers sent to Rangoon refused to obey orders. Well-informed observers have since raised doubts over some of these claims, but it does appear that at the time a few army units experienced discipline problems.[112] Also, the proposed transition from direct military rule to government by a military-dominated parliament has reportedly caused tensions. It has been suggested, for example, that those officers likely to remain in uniform are concerned about the transfer of certain powers to the former military officers who currently lead the regime's mass civilian organisation, the Union Solidarity and Development Association.[113]

To date, however, all these stresses and strains have been successfully contained. There are many well established mechanisms to identify and root out potential centres of unrest in the armed forces before they can become a serious challenge to the leadership. From time to time senior officers have been 'permitted to retire', but it has rarely been known precisely what led to these movements. Nor has it been easy to determine the significance of particular promotions and demotions.[114] There was a major development in 2004 when Lieutenant General Khin Nyunt, Burma's then Prime Minister and head of the country's enormously powerful intelligence apparatus, was arrested and thousands of his subordinates purged. This development demonstrated some of the deep divisions within the ruling hierarchy but, even more so, it underlined the regime's ability to survive such internal rifts and still remain firmly in power.

A palace coup within the Tatmadaw's senior leadership could see significant changes in policy, but it would not necessarily mean the end of the regime. That is more likely to be threatened by widespread unrest among the rank and file (including junior officers), on whom the daily enforcement of military rule actually depends. This makes the issue of loyalty of paramount importance. Yet, here again, the hard, verifiable data needed for firm judgements is sadly lacking.[115]

Lowt 0 0-18.1n rious cht the

In one sense, isolated instances of disloyalty should not worry the regime. It faces no military threat from the country's few remaining insurgent groups, none of which are seeking to overthrow the Naypyidaw government. Nor does it need 400,000 men and women in uniform, armed with the latest weapons and equipment, to crush popular dissent and enforce the SPDC's idiosyncratic policies. As it has repeatedly demonstrated, it can easily do that with less than 200,000 – the number in the Tatmadaw before 1988 – armed only with the basic infantry weapons manufactured in Burma.[118] Also, as seen during the disturbances in September 2007, despite any misgivings some soldiers may have about events, there were still units willing and able to use lethal force against civilian protesters, including Buddhist monks, when ordered to do so.

A weakening of commitment among the rank and file would be of concern, however, if the regime faced further civil unrest, perhaps led by the country's Buddhist monks, or a genuine external threat. After Cyclone Nargis devastated the Irrawaddy delta in 2008, for example, there were calls for an invasion of Burma – or at least 'coercive humanitarian intervention' – to deliver aid to the cyclone victims. Any attempt to 'bash Burma's doors down', as suggested by the Australian Prime Minister, would have been strongly resisted by the regime, probably using armed force.[119] Some activists have questioned the loyalty of the Tatmadaw in such circumstances.[120] While a blatant challenge to the country's independence and sovereignty, a limited intervention of that kind would probably not have triggered a serious split in the armed forces. The same may not be true, however, in the event of a full scale invasion, specifically aimed at regime change.

Despite the fears of some generals – and the hopes of some activists – an invasion of Burma has never been likely.[121] However, a considerable effort has been made to prepare for such an eventuality. One of the most obvious manifestations of the regime's concerns has been the acquisition of conventional weapon systems clearly unsuited to counter-insurgency operations. Another sign has been the continued refinement of a 'people's war' strategy that, *in extremis*, would see Burma's civilian population mobilised to defend the country. In these circumstances, loyalty to the military government by both the Tatmadaw and the people would be necessary. Given the sense of alienation felt by Burma's minorities, they are unlikely to throw their full support behind Naypyidaw. A case can also be made that the majority Burmans – including many in the Tatmadaw – are now so disillusioned with the regime that in such circumstances their loyalty cannot be guaranteed either.[122]

7. Conclusion

> Where these [sources] are meagre in quantity and/or dubious in reliability and accuracy scholarly expertise, understanding, manipulation and the extraction of every drop of insight has an essential role, but it must also recognise its limits and the fact it can only go so far and will leave many questions unanswered or even unasked. This commonplace experience, and for that matter assertion, is no reason to abandon the enterprise. It does serve to underline the provisional and even tentative character of all scholarship.
>
> P.J. Perry
> *Myanmar (Burma) since 1962:*
> *the Failure of Development*

Hans Morgenthau once wrote that there were eight elements of national power. Only one was military strength.[123] Yet it can be argued that in Burma's case this element is more important than in many other countries, and thus deserves closer attention. Not only have the armed forces governed Burma for the past 47 years – and show no sign

Notes

1 Several slightly different versions of the Defence Secretary's remarks can be found on internet sites. This version is taken from an audio recording posted on 'Rum remark wins Rumsfeld an award', *BBC News*, 2 December 2003, <http://news.bbc.co.uk/2/hi/americas/3254852.stm>.

2 'Known knowns, known unknowns and unknown unknowns: a retrospective', *CBS News*, 10 May 2009, <http://www.cbsnews.com/blogs/2006/11/09/publiceye/entry2165872.shtml>. See also Hart Seely, 'The poetry of D.H. Rumsfeld', *Slate*, 2 April 2003, <http://www.slate.com/id/2081042/>.

3 As early as 1998, for example, the Tatmadaw was described as 'one of the most formidable modern fighting machines in the region'. Micool Brooke, 'The armed forces of Myanmar', *Asian Defence Journal*, (January 1998), p. 13.

4 See, for example, Aung Zaw et al., 'The enemy within', *The Irrawaddy*, vol. 8, no. 3 (March 2000), <http://www. irrawaddy.org/print_article.php?art_id=676>.

5 See, for example, Angelo Codevilla, *Informing Statecraft: Intelligence for a New Century* (New York: Free Press, 1992); and R.J. Heuer, *Psychology of Intelligence Analysis* (Washington, DC: Centre for the Study of Intelligence, 1999). Also useful is M.M. Lowenthal, 'Towards a reasonable standard for analysis: How right, How often on which issues?', *Intelligence and National Security*, vol. 23, no. 3 (June 2008), pp. 303–15.

6 See, for example, 'New Frontiers of Intelligence Analysis', papers presented at the conference on 'New Frontiers of Intelligence Analysis: Shared Threats, Diverse Perspectives, New Communities' (Sherman Kent School for Intelligence Analysis, Langley, 2004); and Rob Johnston, *Analytic Culture in the US Intelligence Community: An Ethnographic Study* (Washington, DC: Centre for the Study of Intelligence, 2005).

7 Lawrence Freedman, *US Intelligence and the Soviet Strategic Threat* (Houndmills: Macmillan, 1986), p. 184.

8 Needless to say, this is not to exclude argument aimed at proving or disproving a thesis, or testing an hypothesis. Rather, it refers to the fact that a number of scholars have actively participated in debates over official policy towards Burma. At least one has even argued that it is incumbent upon all those studying Burma to become actively 'engaged' with the 'fear and suffering' of the Burmese people. See, for example, Monique Skidmore, 'Scholarship, advocacy, and the politics of engagement in Burma (Myanmar)', in Victoria Sanford and Asale Angel-Ajani (eds), *Engaged Observer: Anthropology, Advocacy, and Activism* (New Brunswick: Rutgers University Press, 2006), pp. 42–59.

9 See, for example, *Burma/Myanmar after Nargis: time to normalise aid relations*, Asia Report No. 161 (Brussels: International Crisis Group, 20 October 2008). For other reports on Burma, see the International Crisis Group's website, <http://www.crisisgroup.org/home/index.cfm?id=2958&l=1>.

10 It has been suggested that this problem is more pronounced in defence intelligence agencies, due to the rigidly hierarchical structure of most armed forces. Freedman, *US Intelligence and the Soviet Strategic Threat*, p. 21. See also W.E. Odom, 'Intelligence analysis', *Intelligence and National Security*, vol. 23, no. 3 (June 2008), p. 319.

11 See, for example, the 'Letters' page of *The Irrawaddy* news magazine. Also relevant is Michael Aung-Thwin, 'Parochial universalism, democracy Jihad and the Orientalist image of Burma: the new Evangelism', *Pacific Affairs*, vol. 74, no. 4 (Winter 2001–02), pp. 483–505; and D.I. Steinberg, 'Minimising the Miasma in Myanmar', *Foreign Policy in Focus*, 18 January 2007, <http://www.fpif.org/fpiftext/ 3916>.

12 Andrew Selth, *Modern Burma studies: a view from the edge*, Working Paper No. 96 (Hong Kong, SAR: Southeast Asia Research Centre, City University of Hong Kong, November 2007), pp. 34–40, <http://www.cityu.edu.hk/searc/WP96_07_ASelth.pdf>.

13 M.M. Lowenthal,

2001); and M.B. Pedersen, *Promoting Human Rights in Burma: A Critique of Western Sanctions Policy* (Lanham: Rowman and Littlefield, 2008), pp. 79–124.

15 Herb Meyer, former Special Assistant to the Director of Central Intelligence, speaking in *Spies R Us: A History of the CIA*, Programme 1: 'The Focus of Evil', BBC Radio 4, 6 February 2003, <http://www.bbc.co.uk/radio4/history/ cia_transcript1.pdf>. See also A.J. Gookins, 'The role of intelligence in policy making', *SAIS Review*, vol. 28, no. 1 (Winter–Spring 2008), pp. 65–73.

16 Senior General Than Shwe's policy decisions are routinely ascribed to supernatural influences, with little attention given to other possible explanations for his (admittedly idiosyncratic) behaviour. See, for example, Aung Zaw, 'Than Shwe, voodoo and the number 11', *The Irrawaddy*, 25 December 2008, <http://www.irrawaddy.org/ print_ article.php?art_id=14844>; and Rosemary Righter, 'A test of the UN's moral authority', *Timesonline*, 12 May 2008, <http://www.timesonline.co.uk/tol/ comment/columnists/rosemary_righter/article3912799.ece>.

17 A large number of senior officers have rural backgrounds, but regulations have been introduced requiring them to earn tertiary degrees before promotion to higher ranks. Maung Aung Myoe, *Building the Tatmadaw: Myanmar Armed Forces Since 1948* (Singapore: Institute of South East Asian Studies, 2009), pp. 199–200. See also 'Why is Burma junta afraid of letting in foreign aid workers?', *Associated Press*, 9 May 2008; and Joshua Kurlantzik, 'Playing us for fools: Burma's government is run by a group of ignorant xenophobes. So how come it keeps outsmarting us?', *The New Republic*, 11 July 2008.

18 Douglas Ford, '"The best equipped army in Asia"?: US military intelligence and the Imperial Japanese Army before the Pacific War, 1919–1941', *Journal of Intelligence and Counter Intelligence*, vol. 21, no. 1 (2008), p. 87. See also B.W. Menning, 'Miscalculating one's enemies: Russian military intelligence before the Russo–Japanese War', *War in History*, vol. 13, no. 2 (2006), pp. 141–70.

19 Alan Hinge, *Australian Defence Preparedness: Principles, Problems and Prospects: Introducing Repertoire of Missions (ROMINS), a Practical Path to Australian Defence Preparedness* (Canberra: Australian Defence Studies Centre, 2000), p. 15. See also US Department of Defense, *Dictionary of Military Terms* (New York: ARCO, 1988), p. 221.

20 See, for example, John Keegan, *Intelligence in War: Knowledge of the Enemy from Napoleon to Al Qaeda* (London: Hutchinson, 2003).

21 Philip Towle, 'Introduction', in Philip Towle (ed.), *Estimating Foreign Military Power* (London: Croom Helm, 1982), p. 28.

22 See, for example, *The division in battle: intelligence*, Pamphlet No. 9 (Canberra: Australian Army, 1965), Annex C.

23 A.J. Tellis, Janice Bially, Christopher Layne and Melissa McPherson, *Measuring National Power in the Post-Industrial Age* (Santa Monica: RAND, 2000), pp. 132–76.

24 Peter Paret, 'Military power', *The Journal of Military History*, vol. 53, no. 3 (July 1989), p. 240.

25 Carl von Clausewitz, *On War*, trans J.J. Graham (Harmondsworth: Penguin, 1968), p. 140.

26 The best known of these publications is *The Military Balance*, produced annually by the

divisions keep track of opposing forces down to battalion level, brigades monitor enemy units down to company level, and battalions monitor enemy units to platoon level.

30 See, for example, E.R. May (ed.) *Knowing One's Enemies: Intelligence Assessment Before Two World Wars* (Princeton: Princeton University Press, 1986); and R.K. Betts, 'Analysis, war, and decision: why intelligence failures are inevitable', *World Politics*, vol. 31, no. 1 (October 1978), pp. 61–89.

31 See, for example, W.K. Wark, *The Ultimate Enemy: British Intelligence and Nazi Germany, 1933–1939* (London: Oxford University Press, 1986). A more contemporary perspective of this problem is provided by Kevin Russell, 'The subjectivity of intelligence analysis and implications for the US National Security Strategy', *SAIS Review*, vol. 24, no. 1 (Winter 2004), pp. 147–63.

32 Geoffrey Blainey, *The Causes of War* (Melbourne: Sun Books, 1977), p. 122.

33 During the 1950s, Burma was seen by the US as another Southeast Asian 'domino' threatened by communist subversion. See, for example, *1952 policy statement by US on goals in Southeast Asia*, Key Document No. 2, The Pentagon Papers (Toronto: Bantam Books, 1971), p. 28; and Henry Kissinger, *Diplomacy* (New York: Touchstone, 1995), pp. 624, 632.

34 See, for example, R.H. Taylor, *The State in Myanmar* (London: Hurst and Co., 2009) and D.I. Steinberg, *Burma: The State of Myanmar* (Washington: Georgetown University Press, 2001). Also useful is Martin Smith, 'Army politics as a historical legacy: the experience of Burma', in Kees Koonings and Dirk Kruijt (eds), *Political Armies: The Military and Nation Building in the Age of Democracy* (London: Zed Books, 2002), pp. 270–296.

35 See, for example, M.P. Callahan, *Making Enemies: War and State Building in Burma* (Ithaca: Cornell University Press, 2003).

36 See, for example, Tin Maung Maung Than, 'Burma: the "new professionalism" of the Tatmadaw', in Muthiah Alagappa (ed.), *Military Professionalism in Asia: Conceptual and Empirical Perspectives* (Honolulu: East-West Centre, 2001), pp. 163–78; Win Min, 'Looking inside the Burmese military', *Asian Survey*, vol. 48, no. 6 (November–December 2008), pp. 1018–37; and M.P. Callahan, 'Junta dreams or nightmares? Observations of Burma's military since 1988', *Bulletin of Concerned Asian Scholars*, vol. 31, no. 3 (1999), pp. 52–8.

37 Desmond Ball, *Burma's Military Secrets: Signals Intelligence (SIGINT) from the Second World War to Civil War and Cyber Warfare* (Bangkok: White Lotus, 1998). See also Desmond Ball, *How the Tatmadaw talks: the Burmese army's radio systems*, Working Paper No. 388 (Canberra: Strategic and Defence Studies Centre, Australian National University, 2004).

38 See, for example, Andrew Selth, *Burma's order of battle: an interim assessment*, Working Paper No. 351 (Canberra: Strategic and Defence Studies Centre, Australian National University, 2000); and *Civil and military administrative echelon of state peace and Development Council in Burma* (Mae Sot: Documentation and Research Department, Network for Democracy and Development, May 2007).

39 Andrew Selth, *Burma's Armed Forces: Power Without Glory* (Norwalk: EastBridge, 2002); and Maung Aung Myoe, *Building the Tatmadaw.*

40 For a rare admission of this fact, see 'The Military Capabilities and Limitations', presentation at a conference on 'Strategic Rivalries on the Bay of Bengal: The Burma/Myanmar Nexus', Washington, DC, 1 February 2001. For a summary report of the conference, see <http://www.burmadebate.org/archives/spring01 strategic.html>.

41 This subject is discussed in Selth, *Modern Burma studies*.

42 The Tatmadaw is overwhelmingly male, the small number of Burmese women in uniform being restricted to junior medical and administrative positions.

43 These figures are a little higher than those published by the IISS. Maung Aung Myoe, *Military doctrine and strategy in Myanmar: a historical perspective*, Working Paper No. 339 (Canberra: Strategic and Defence Studies Centre, Australian National University, 1999), p. 13. See also *The Military Balance 1988–1989* (London: IISS, 1989), pp. 159–60.

44 Cited in Maung Aung Myoe, *Building the Tatmadaw*, p. 200. This was the same official who stated in 1999 that the Tatmadaw's strength was 'not over 350,000' and unlikely to grow any further. Barry Wain, 'Myanmar military growth worries the neighbours', *Asian Wall Street Journal*, 22 January 1999.

45 Selth, *Burma's Armed Forces*, p. 296.

46 See, for example, Andrew Tan, *Force modernisation trends in Southeast Asia*, Working Paper No. 59, (Singapore: Institute for Defence and Strategic Studies, 2004).

47 A.H. Cordesman and Martin Kleiber, *The Asian Conventional Military Balance in 2006: Overview of Major Asian Powers* (Washington: Centre for Strategic and International Studies, 2006), p. 35.

48 'Myanmar armed forces', Wikipedia, <http://en.wikipedia. org/wiki/Tatmadaw>.

49 Selth, *Burma's Armed Forces*, pp. 79–80; and Maung Aung Myoe, *Building the Tatmadaw*, p. 200.

50 Maung Aung Myoe, *Building the Tatmadaw*, pp. 88, 90.

51 Citing what was described as a Tatmadaw payroll, the newspaper said that there were 586,196 in the army, 17,349 in the navy and 15,892 in the air force. 'Burma border situation: arms buildup noted', *Bangkok Daily News*, 31 May 1999.

52 Interview, Rangoon, January 2009.

53 M.P. Callahan, 'Of *kyay-zu* and *kyet-su*: the military in 2006', in Monique Skidmore and Trevor Wilson (eds), *Myanmar: The state, Community and the Environment* (Canberra: ANU E Press and Asia Pacific Press, 2007), p. 36.

54 *Sold to be Soldiers: The Recruitment and Use of Child Soldiers in Burma* (New York: Human Rights Watch, 2007), <http://www.hrw.org/en/reports/2007/10/30/sold-be-soldiers>. Lacking the necessary data, Human Rights Watch sensibly refrains from making any estimates of the number of child soldiers in the Tatmadaw.

55 Maung Aung Myoe, *The Tatmadaw in Myanmar since 1988: an interim assessment*, Working Paper No. 342 (Canberra: Strategic and Defence Studies Centre, Australian National University, 1999), p. 13.

56 Samuel Blyth, 'Army conditions leave Myanmar under strength', *Jane's Defence News*, 30 March 2006, <http://www.janes.com/defence/news/jdw/jdw060330_1_n.shtml>. See also Samuel Blythe, 'Myanmar army report spotlights morale problems', *Jane's Defence Weekly*, 4 April 2007, p. 14.

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[73] This was subject to the caveat, however, that SIPRI lacked reliable data on Burma's annual defence expenditure. *SIPRI Yearbook 2005: Armaments, Disarmament and International Security* (Stocholm: Stockholm Peace and Research Institute, 2005), p. 318. See also Taisamyone, 'Disproportionate military expenditure in Burma', *Burma Digest*, 6 July 2007, <http://burmadigest.wordpress.com/ 2007/07/06/editorial-disproportionate-military-expenditure-in-burma/>.

[74] By way of illustration, an aircraft is a weapons platform. The missiles and bombs it carries are weapons. Together, they constitute a weapon system. The term 'equipment' includes items like the pilot's helmet.

[75] See, for example, Shiv Aroor, 'Fleet expansion in mind, Myanmar looks to India for expertise', *Indian Express*, 13 January 2006.

[76] Maung Aung Myoe, *Building the Tatmadaw*, pp. 202–04.

[77] Interview, Rangoon, March 1995.

[78] For example, observers in Rangoon were first alerted to the delivery of Chinese QBZ-95 assault rifles last year, when the body

Country: Armed Struggle for a Free and Independent Karen State in Southeast Asia (New York: iUniverse, 2007).

89 See, for example, Free Burma Rangers, *Burma army using new landmines against villagers in northern Karen State'* FBR Report, 19 December 2008, <http://www.freeburmarangers. org/Reports/2008/20081219.html>. See also International Campaign to Ban Landmines, *Myanmar/Burma*, Landmine Monitor Report *2008*, <http://www.icbl.org/lm/2008/ countries/myanmar.php>.

90 See, for example, *Comments by SLORC Army Defectors* (Karen Human Rights Group, 20 June 1994); 'Interview with an SPDC Child Soldier', Karen Human Rights Group, *Report from the Field*, 26 April 2006; 'Life inside the Burma army: SPDC deserter testimonies', Karen Human Rights Group, *News Bulletin*, 9 May 2008; and 'Interview with an SPDC deserter', Karen Human Rights Group, *News Bulletin*, 28 July 2008.

91 Callahan, *Making Enemies*, p. 220. See also Callahan, 'Junta dreams or nightmares?', p. 54.

92 *The Blue Helmets: A Review of United Nations Peace-Keeping* (New York: United Nations Department of Public Information, 1996) Appendix.

93 'Malaysia, Myanmar look to expand ties', *Jane's Defence Weekly*, 30 May 2001, p. 14.

94 For a rare interview with Myanmar Air Force pilots training overseas (in this case, at the Socialist Federal Republic of Yugoslavia Air Force Military Academy at Zadar in Croatia), see Radoljub Matovic, 'G-4 in the Union of Myanmar', *Military Avionics* (1990).

95 Maung Aung Myoe, *Building the Tatmadaw*, pp. 33–42. See also William Ashton (pseudonym for Andrew Selth), 'Myanmar: invasion fears prompt search for air defences',

uncertainty', *Bangkok Post*, 31 January 2005; Larry Jagan, 'Cracks emerge in Myanmar military unity',

[126] Joseph S. Nye, 'Peering into the future', *Foreign Affairs*, vol. 73, no. 4 (July/August 1994), p. 86.