

PLANNING, FAST AND SLOW¹:
OR HOW TO MAKE MILITARY PLANNING WORK FOR YOU

by Major Daniel Hebditch

In preparing for battle, I have always found that plans are useless but planning is indispensable.

Dwight D Eisenhower

INTRODUCTION

Great generals through history are distinguished by their capacity to assess and react to rapidly changing military situations. This ability is a combination of natural talent and experience, but how do we train this ability in the 21st century commander and planner? This essay outlines the historical context, modern cognitive theories and contemporary limitations and how we can answer this question.

HISTORICAL CONTEXT

Since the time of Frederick the Great of Prussia the mark of the great military commander has been their ability to take in the advantages and disadvantages of the terrain and the situation in a single glance – the *coup d'oeil*. This has also been remarked upon by such luminaries as Clausewitz and Liddell Hart; the latter described it as a ‘*gift from God*’² while Napoleon himself declared it as ‘*inborn in great generals*’³.

The great captains of history were perhaps fortunate in their repeated exposure to campaigns and battle to develop their professional skills. This allowed them the opportunity to combine practical experience with natural talent to nourish this rare ability. Napoleon was a general at 24 and led his first campaign in Italy two years later. His rival, the Duke of Wellington, had commanded a battalion in that same year and had gained significant experience of battle and campaigning in India before commanding British forces in the Iberian Peninsula.

The increasing complexity of conflict and the existential threats of modern warfare since the World Wars has limited the opportunities for the emergence of such commanders in the modern era. Rommel may be a notable exception but since the end of WW1 it has been hard to find a western general upon whom the mantle of genuine military genius could be bestowed.

So how in the modern day do we acquire a touch of this genius without the benefit of years in high intensity campaigning? The manoeuvrist approach adopted by most western nations places a premium on maintaining a high tempo of operations and obtaining ‘decision superiority’ over enemies. Yet our formal planning processes are universally lengthy and

¹ With apologies to Daniel Kahneman
² pp. xi, *Thoughts on War*, 1944, BH Liddell Hart
³ *Memoires 1769-1821*, Napoleon I

process driven; on our training courses it is not uncommon spend a full 24 hours developing a relatively simple plan to be articulated in a ten minute back brief. In addition most require the development of volumes of product, including orders and overlays, to support the eventual planning outcomes.

During the conduct of these estimate processes most planners realise that they already have a likely course of action selected and are often going through the motions to justify it. Others may be struggling through an unfamiliar and unwieldy process to come up with a basic plan while failing to include many of the fundamental considerations. How can we make this process more effective?

SYSTEM 1/SYSTEM 2

Developments in cognitive psychology in the last few decades have derived theories of cognition which may assist military commanders. These describe the existence of two systems of thinking present in the human brain which have been labelled (somewhat unimaginatively) 'System 1' and 'System 2'. System 1 thinking is rapid and instinctive and is built on our previous experience. It is capable of dealing quickly with complex problems. System 2 thinking is controlled, rational, and systematic and is a slow process which is excellent for dealing with simple problems.

System 1 allows for rapid decision making but is poor at detail and is heavily reliant on previous experience to allow it to be effective. A good example is in the purchasing of a car – System 1 might lead you to buy a particular brand of sports car. System 2 planning would encourage you to examine characteristics, such as reliability, fuel consumption, insurance and servicing costs, more dispassionately. This might lead you to buy a more practical if prosaic vehicle. Therefore System 1 thinking needs to know when to switch to System 2 thinking in order to gain more systematic inputs.

System 2 thinking - controlled, rational and slow - has certain key physiological characteristics. Experiments have confirmed that people conducting System 2 thinking experience elevated heart rates and pupil dilation. There has also been observed the phenomenon of 'ego depletion', linked to increased consumption of glucose in the brain, that sees people that have conducted System 2 thinking recently less likely to repeat the experience soon after they have finished. In short System 2 thinking is hard work, time consuming and likely to lead to short cuts if it is needed to be repeated.

System 2 thinking in particular significantly reduces situational awareness. The brain is concentrating so hard on systematically breaking down and analysing a problem it effectively 'puts the blinkers on' to achieve this. In the *Invisible Gorilla* experiment, while watching a film clip of a short basketball game and being told to count the number of passes made, almost half of the people miss a person in a gorilla costume walk through the scene⁴. The

⁴ pg 25, *Thinking, Fast and Slow*, Daniel Kahneman referencing C Chabris and D Simons *The Invisible Gorilla*

implications are obvious for those operating in a fluid military environment when a dynamically changing situation may be missed with significant impacts.

While the challenges of System 2 thinking are acknowledged, it also plays a key role in educating System 1 thinking. This lies at the heart of Eisenhower's dictum about the value of planning. Once a situation has been thoroughly analysed and understood then changes in the situation can be rapidly assessed and a plan quickly modified by System 1 thinking without laboriously returning to the System 2 based analysis.

CONVERGENT AND DIVERGENT THINKING

UK doctrine⁵, based on research from the University of Cranwell, introduces an additional variable into how people think. It recognises System 1 and 2 as non-conscious and conscious Means of Thinking. It also considers divergent and convergent Ways of Thinking. Divergent thinking takes into account a wide array of inputs and can include additional options, ideas and possibilities. Convergent thinking on the other hand reduces the number of additional factors to concentrate only on those that are most relevant to the problem. By combining these two factors we are able to see what sort of results are achieved by the way people think. This is shown in Figure 1 below:

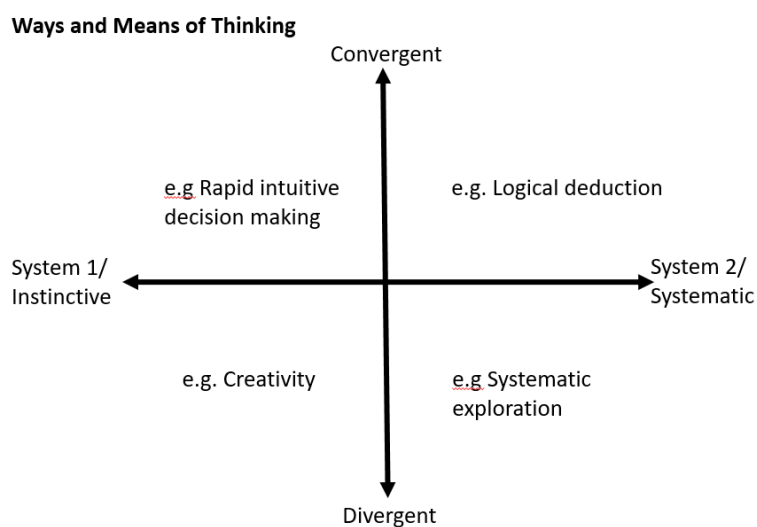


Figure 1 – Ways and Means of Thinking

So to develop commanders and planners with the *coup d'oeil* what form of thinking should we require? Ultimately System 1/Convergent thinking will provide a commander, hopefully with sufficient System 2 experience behind them, who can execute their mission with tempo and a chance of achieving decision superiority. System 1/Divergent thinking may result in a commander who can rapidly devise innovative and creative plans. This may be hard to achieve through systematic, formal training and so it is likely that the former is the ideal goal for most soldiers.

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pp.91-96 *Developing Leaders – A British Army Guide*

MILITARY APPLICATIONS

System 1 and System 2 thinking can plainly be aligned to military planning. System 1 thinking at its most highly developed is clearly a model for King Frederick's *coup d'oeil*, the ability for a commander to rapidly assimilate a situation and understand the military possibilities. It is well-primed System 1 thinking that will allow a commander to make sound and timely decisions.

One example of this is Major General Rupert Smith, the commander of the 1st British Armoured Division in the 1991 Gulf War (and later author of *The Utility of Force*), who deliberately decided not to plan his division's operations past the initial Forward Passage of Lines. He declared that he wanted to '*fight the battle not the plan*'⁶ as the Iraqi reserve that was his objective would surely not be at its initial positions once the battle was underway. This decision was based on the strength of the analysis Smith and his staff had already conducted, combined with a Division which was well drilled and conditioned to expect to fight in a fluid situation.

Another example is the estimate produced by Brigadier Freddie de Guingand, the Chief of Staff of the 8th Army, prior to the 2nd Battle of El Alamein. His appreciation of the situation and outline of the proposed Operation Lightfoot stretches to a concise eight pages for an army level operation. In particular his assessment of the course of action likely taken by the *Panzer Armee Afrika* was a single paragraph, and ultimately proved accurate. By this stage in the war both sides knew each other's capabilities so well that only key changes or considerations needed to be analysed in depth.⁷

The System 1 and System 2 cognition model also has a clear parallel in the process of joint and staff planning. Here the staff perform detailed and systematic planning, progressing through a number of steps shaped by periodic guidance provided by the commander based on his own appreciation of the situation. The staff provide the detailed analysis and number crunching 'mathematics' to ensure that the commander's more instinctive planning guidance can result in a workable plan. The time-poor commander himself is relying on his own experience and a truncated internal planning process, whilst remaining aware of his own internal biases.

As modern soldiers are likely to lack comprehensive exposure to the military situations in which they find themselves, they will be unable to rely on System 1 thinking in most situations. However relying on System 2 thinking during stressful situations will come with significant hazards as previously discussed, in particular the reduction of situational awareness, which will render a commander less likely to make good and timely decisions. Therefore deliberate System 2 thinking is required to build the capability of System 1, both in general, for example gaining proficiency with the planning process; and in particular, understanding specific enemy capabilities, terrain considerations and intent.

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pp. 2-8, *AC71520 Operation Desert Sabre*

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pp.428-435, *Pendulum of War: The Three Battles of El Alamein*, Niall Barr

DEFINING TACTICAL ART AND SCIENCE

The division between the ‘science of tactics’ and the ‘art of tactics’ is often discussed but is often poorly defined. Although there are obvious parallels with System 1 and System 2 as defined above, the mastery of the art of tactics is a key factor in developing the *coup d’oeil*.

One way of defining the science of tactics would be to look at this as the mastery of the understanding of your own force, the enemy and the operational environment. A thorough understanding of these factors should allow the development of sound ‘blue focussed’ plans, and their articulation through verbal and written means to pass them on to subordinates. These however are the very basics, without which a military planner cannot begin to come up with feasible courses of action.

The art of tactics sees the integration of disciplined analysis, founded on the basis of the science of tactics, into a plan aimed at defeating an enemy. This is where the good ‘blue’ plan developed by the science of tactics becomes a manoeuvrist plan capable of undermining the enemy’s will to fight and defeating his plan. This can then be developed into an adaptive plan which can take a flexible, creative and unexpected approach to tactical planning. Ultimately this all builds intuition and the ability to develop plans that enable decision making under pressure. This is outlined in figure 2 below.

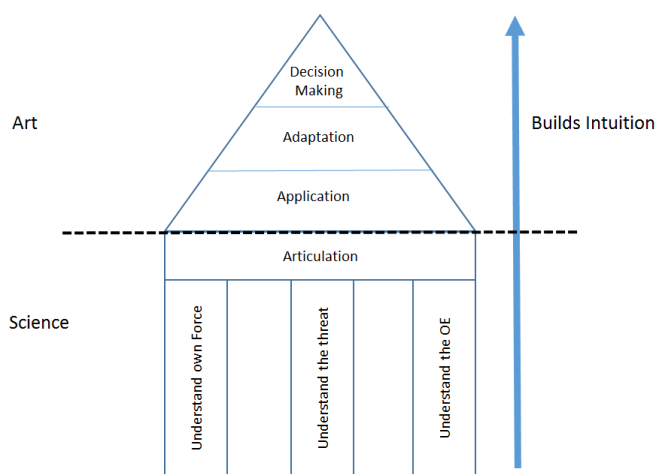


Figure 2 – A model for the art and science of tactics

To get the best effects out of System 1 thinking we must also understand how the fundamentals of the art and science of tactics corresponds with the ways and means of thinking. The art of tactics clearly aligns with System 1 thinking, while the science of tactics accords more with System 2 thinking; but as already described without it System 1 thinking is likely to be unreliable. If we apply the model above to the ways and means of thinking we can achieve the correlation in figure 3 below.

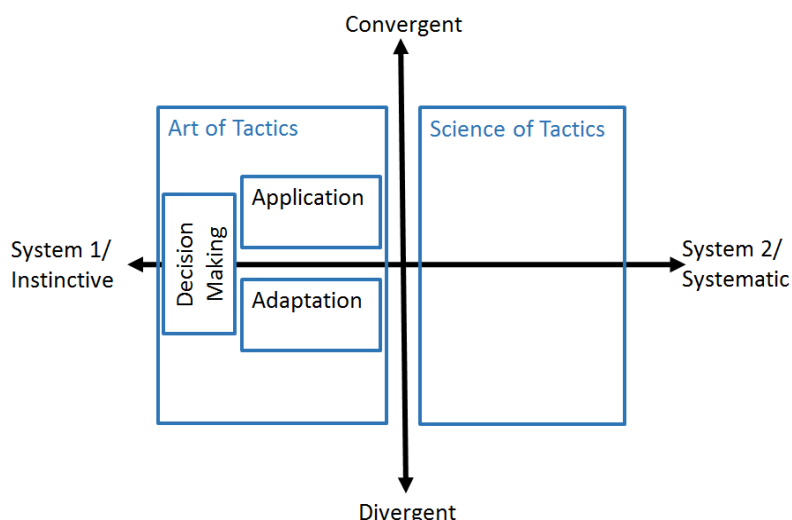


Figure 3 – Ways and Means of Thinking synthesised with the Art and Science of Tactics

STRUGGLING WITH SYSTEM 2

While the western world currently lacks the kind of opportunities for widespread military experience that gave rise to the Great Captains of History, we will need to rely on System 2 thinking to prime the commanders of the future. However it is clear that the majority of Army officers, warrant officers and NCOs are relatively uncomfortable with using systematic planning processes; in Australia's case the Military Appreciation Process (MAP)⁸.

In many ways formal military planning is just plain hard work and the temptation is always there to avoid using the process and use something less formal. We know from the research done on System 2 thinking why this is the case; planning, like any System 2 activity has its own distinct physiological reaction. Combine this with what seems to be an increasingly time-poor generation of officers and NCOs, and it drives a lack of familiarity and ease with the MAP outside of formal training environments. As a result most planners struggle with regular use of the MAP in their regular work environment and especially when on courses.

For example the Combat Officers' Advanced Course (COAC) is Army's premier tactics course and is a watershed point in the careers of the armour, artillery, engineer, infantry and aviation captains who attend it. Yet at the start of this course, despite a focused pre-course, there are relatively few trainees who produce good plans and many who struggle with the process to achieve the minimum standard. This variance is obviously a result of a number of factors - skill fade, differing experiences, professional mentoring as well as the obvious personal characteristics and drive - which mark an individual's journey to 'Professional Mastery'. Yet these officers have already progressed through a thorough range of leadership, staff and regimental/corps specific courses which all utilise the MAP as their planning tool.

Seven weeks later however within a simulated Brigade, Battle Group and Combat Team construct they are able to cope with significant complexity and non-linear injects into the planning process. So how does it achieve this? While it may be tempting to ascribe this result

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Land Warfare Doctrine 5-1-4 *The Military Appreciation Process*

to the standard of instruction and the investment Army makes into the course, the truth is likely somewhat more prosaic.

COAC combines the conduct of lessons, Quick Decision Exercises, Tactical Exercises Without Troops (TEWTs), simulation and historical vignettes in a combined arms environment. One of its key strengths is the sheer repetition of planning serials that force the trainees to repeat the planning process in a variety of different ways. Detailed assessment and feedback ensure that this process is valid and adds value to result in workable plans. By the end of the course they are not only refreshed on the MAP but become used to applying it in both expansive and reductive ways to achieve their required outcomes. The use of simulation in the process also ensures that worthwhile plans are the key outcomes, rather than slavish adherence to the planning process.

While performing well on COAC certainly doesn't result in a tactician who will rival Napoleon, it does produce officers who are significantly more comfortable in planning and execution of tasks than they were at the start of the course.

WEAPONISING SYSTEM 1

So while understanding the outline of the theory and with an example of a process that seems to work how do we 'weaponise' System 1 thinking to enable Fast Planning? The obvious answer is by getting good at Slow Planning first, building a comprehensive knowledge of the science of tactics, and then testing the results.

To be good at any variety of formal planning it is vital to know the actual planning tools intimately first. The MAP for example cannot be used only for courses or set piece exercises and must be used as a matter of routine to ensure the utmost familiarity is gained with it. Once familiar it is then easier to shape the process to more complex or more time-pressured scenarios. This is just another application of the System 2/System 1 model and can be done in conjunction with a thorough understanding of the factors described in the sections above.

The next step is to build knowledge of the activities being undertaken, and here the review and instruction of doctrine comes into play. Doctrine is itself a distillation of best practice and historical example and should assist in moving to a convergent thought process by reducing factors that lack relevance. The review of historical examples and vignettes will also better allow the internalisation of doctrine to real life examples.

This will then allow the conduct of deliberate TEWTs where a slow and systematic exploration of a specific tactical action or operation can be completed. This will allow the development of a better and in-depth understanding, which needs to be reinforced with good mentoring and feedback of the TEWT. This can then be supplemented by the conduct of Tactical and Quick Decision Exercises with increasing time constraints beginning the movement from System 2 into System 1 thinking.

Once these foundations are laid planning can be put to the test through field exercises or simulation to ground; the theoretical practice in practical execution. Depending on the complexity of the plan it may only be possible to ‘micro task’ and ‘box’ the key tasks of the wider planning activity. Simulation, where available and acknowledging its limitations, can work well here as it can allow scenarios to be quickly played through in a number of different variations.

A key factor here is repetition and the constant practice of System 2 thinking and systematic planning in a range of scenarios built throughout the unit training year. This not only supports the development of leaders, but also is good training for staff and builds cohesion in planning teams. Most important is the requirement for effective feedback to ensure that the right results are being achieved with effective System 1 planning and execution, and an understanding of the art of tactics is developed.

The selection of training methods can be aligned to the diagram we have previously seen and used to help select the right methods in building towards the practice of System 1/Convergent thinking. This is shown in Figure 4 below:

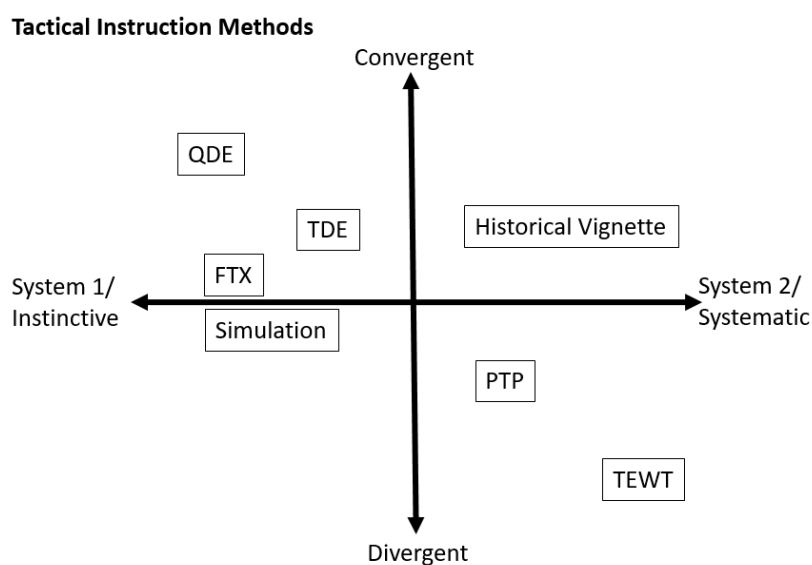


Figure 4 – Tactical Instruction Methods

It should be obvious that none of this is revolutionary, and is only one potential approach. Indeed there is nothing outlined in the paragraphs above that should not be in any well-organised unit training program. It is also obvious that across Army, with a few honourable exceptions, this kind of training is not being conducted with any depth or rigour and is the exception not the rule.

So why is this the case? The key factor is the lack of time to think and analyse across units in order to prepare well-thought-through and in-depth training (which itself is a System 2 focused task). Army in particular has become so time-poor that training for the conduct of planning has been moved into the realm of ‘Professional Military Education’ at best and relegated to monthly CO’s hours. How to win back training time is outside the scope of this

article but surely needs to be addressed if Army is to attain the Professional Mastery it aspires to.

CONCLUSION

Any professional military needs to ensure that its commanders and planners are given the best possible training and education in order to play their role in winning their part of the battle. While historically commanders could rely on extensive personal experience to support their decision making and planning that is not the case for their modern equivalents. Recent developments in cognitive psychology has enabled us to better understand the way people think and allows us to understand the best way to prepare our commanders and planners. If ‘decision superiority’ and the manoeuvrist approach are to be more than mere buzzwords we need to systematically train to achieve the contemporary *coup d’oeil*.

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