

# Clausewitz and Centres of Gravity

## Turning the esoteric into practical outcomes

*“where more than twenty interpretations take to the field, the addition of one more cannot be deemed an impertinence.” - Isiah Berlin*

### Introduction

Clausewitz's *On War* is a monumental military classic for many reasons. In his attempt to distil his experience and reflections into a general philosophy of war, Clausewitz swept a broad but mighty hand over many facets of warfare. His book lives as a pivotal and fundamental touchstone for military theorists and practitioners alike. It is dense, complex, and thorough. In his attempt to cover as broad and deep a topic as war, Clausewitz immerses his reader in a way that few others have.

Or at least, that is what many will have you think. Clausewitz is a tough read, and many give up early on – it is perhaps instructive that most of his oft-quoted lines are in the first few chapters.

Clausewitz died before he had the opportunity to revise most of the book, and he writes in an unusual dialectical manner that has certainly had this reader's eyes glazing over many times. And here lies the first point: no-one really knows what Clausewitz *meant* when he wrote *On War*. We can all read what he wrote, but – for the very good reason that Clausewitz is long dead – everyone has to then interpret what he wrote to understand what he meant. So, always be a little careful when someone (including me!) makes comment on how to interpret Clausewitz. The key word is interpretation rather than established fact. Words are for all to see; interpretation is personal and debatable.

Of all Clausewitz's contributions to military thought, one of the most important and at the same time most bewitching is his concept of centre of gravity. Muller over and debated by many eminent practitioners, it is held up as the centrepiece of military wisdom on one hand, and on the other as a poorly applied physics analogy of little practical use. Despite my first point that no-one can ever state with certainty what Clausewitz meant by centre of gravity, there continues to be passionate and heartfelt debates amongst academics and practitioners alike about the utility of the idea. At the risk of breaking the meniscus on an overflowing pool of opinion: here is my drop in the bucket. The intent is to turn the esoteric into something that tactical practitioners can use and apply.

### What did Clausewitz write?

Based on my experience leading and teaching throughout a 40+ and ongoing military career, I can state with some confidence that there are more people who use Clausewitz's concept of centre of gravity than have actually read what Clausewitz wrote.<sup>1</sup> That is, the concept is taught and applied, and often vigorously debated, without its source being read. And this is understandable; as noted above, most either tire of Clausewitz early in the read, or quickly skim it to find that juicy quotation they need for their staff college essay. This is usually well before the first mention of centre of

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<sup>1</sup> Brodie, B. 'The Continuing Relevance of *On War*' in Clausewitz, C. 'On War' ed./trs. Howard, M. and Paret, P. Princetown University Press, New Jersey, 1976, p. 45.

gravity in Book 4 Chapter 9<sup>2</sup>, or the first discussions in Book Six Chapter 27, a mere 485 pages into the Howard/Paret translation<sup>3</sup>. So, instead of actually reading Clausewitz, many get their first taste of a definition from military instruction or from doctrine, such as this one from the US Operations Manual FM 100-5, 1986:

“The center [sic] of gravity of an armed force refers to those sources of strength or balance. It is that characteristic, capability, or locality from which the force derives its freedom of action, physical strength, or will to fight. Clausewitz defined it as "the hub of all power and movement, on which everything depends." Its attack is - or should be - the focus of all operations.”<sup>4</sup>

The term centre of gravity entered Australian Army doctrine in 1992 and ADF joint doctrine in 1998.<sup>5</sup> The definition of centre of gravity that featured in the 1998 interim edition of the Joint Military Appreciation Process remained essentially unchanged between then and 2016, and was remarkably similar to the US quoted above:

“The key characteristic, capability or locality from which a military force, nation or alliance derives its freedom of action, strength or will to fight at that level of conflict.”<sup>6</sup>

So, are these quotes what Clausewitz wrote? The answer is: sort of. You can see the similarities with this quote from Clausewitz from Book Eight Chapter 4:

“What the theorist has to say here is this: one must keep the dominant characteristics of both belligerents in mind. Out of these characteristics a certain **centre of gravity** develops, the hub of all power and movement, on which everything depends. That is the point against which all our energies should be directed.”<sup>7</sup>

What is arguably problematic with this quote from Clausewitz is that it is Clausewitz at his most obscure. It is easy to see why many have seen the centre of gravity as an intangible force or even some kind of mystical presence that motivates or energises real strength. It is perhaps why I have seen intangibles as ‘tempo’ or ‘cohesion’ expressed as an enemy’s centre of gravity. And these are not useful and lead nowhere, at least if one is looking for practical applicability.

The picture changes, however, if we give Clausewitz a chance and read what else he has to say about centre of gravity. For example, when Clausewitz writes in Book Six Chapter 7:

“A **centre of gravity** is always found where the mass is concentrated most densely. It presents the most effective target for a blow; furthermore, the heaviest blow is that struck by the **centre of gravity**.”<sup>8</sup>

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<sup>2</sup> Clausewitz, C. ‘On War’, ed./trs. Howard, M. and Paret, P. Princetown University Press, New Jersey, 1976, p. 248.

<sup>3</sup> Ibid, p. 485

<sup>4</sup> Available via <https://cgsc.contentdm.oclc.org/digital/collection/p4013coll9/id/893u>, p. 179

<sup>5</sup> Michael Evans, *Forward from the Past: The Development of Australian Army Doctrine 1972–Present* (Canberra: Australian Army Land Warfare Studies Centre, 1999), 43; Australian Defence Force (ADF), *Joint Military Appreciation Process [JMAP]: A Guide to Planning at the Operational Level: Interim Edition* (Canberra: Defence Publishing and Visual Communications, 1998).

<sup>6</sup> ADFP, Glossary, 1998.

<sup>7</sup> Clausewitz, Op Cit, p. 595-6

<sup>8</sup> Ibid, 485-6

And in Book Six Chapter 27:

“A major battle in a theatre of operations is a collision between two **centres of gravity**; the more forces we can concentrate in our **centre of gravity**, the more certain and massive the effect will be.”<sup>9</sup>

It is difficult to read this and still see the centre of gravity as an intangible force but instead it is a real and tangible strength that is applied. There is nothing obscure here. And, in terms of practical utility, Clausewitz makes it crystal clear in Book Eight Chapter 4:

“the defeat of the enemy consists in overcoming the resistance concentrated in his **centre of gravity**.”<sup>10</sup>

So, reading everything that Clausewitz wrote on centre of gravity is helpful – rather than cherry-picking one quote or relying on its interpretation in doctrine. To Clausewitz, the centre of gravity is where the mass is concentrated. It is the most effective target for a blow and the defeat of the enemy consists in defeating their centre of gravity, which is their mass or strength.

Dr Joe Strange is his Perspectives on Warfighting Number 4 reinforces the point that the centre of gravity is not intangible, nor a weakness, but is a strength.<sup>11</sup>

To be scrupulously fair, modern doctrinal definitions are much better. In the revised 2016 Joint Military Appreciation Process, the centre of gravity is defined as:

“The primary entity that possesses the inherent capability to achieve an objective or the desired end state.”<sup>12</sup>

This definition is not only tangible and practical – the centre of gravity is a thing rather than an essence – but it is far truer to what Clausewitz wrote. We will return to its utility after a somewhat pedantic – but which I hope is illuminating – detour into translations.

### **Any other dead German quotes? First interlude**

Barbara Tuchmann once wrote in *The Guns of August* that: “Nothing so comforts the military mind as the maxim of a great but dead general.”<sup>13</sup> If it can be a dead *German* general then so much the better. Which leads me to my first pedantic interlude on our way to a better understanding of centre of gravity. It started with a recent re-reading of Danny Parker’s book *Hitlers Ardennes Offensive* in which he edits the transcripts of interviews with the senior German commanders involved in the Offensive.<sup>14</sup> What caught my eye was the interview with Manteuffel, commander of Fifth Panzer Army. Most will know the broad outline of the Ardennes Offensive: 6<sup>th</sup> Panzer Army attacks in the north while 5<sup>th</sup> Panzer Army attacks in the south; 6<sup>th</sup> Panzer makes little progress while 5<sup>th</sup> Panzer does better; the main effort then switches to 5<sup>th</sup> Panzer. Manteuffel discusses this switching of the main effort in his interview, but the translator kept using the term centre of gravity instead of main effort.<sup>15</sup> As I was reading this it was clear to me that Manteuffel was talking about the shifting of

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<sup>9</sup> P. 489

<sup>10</sup> P. 596

<sup>11</sup> Strange, J. ‘Centres of Gravity and Critical Vulnerabilities’, Marine Corps University Foundation, Quantico, 1996, p. 12.

<sup>12</sup> ADFP, Glossary, 2021.

<sup>13</sup> <https://www.goodreads.com/work/quotes/1884932-the-guns-of-august>

<sup>14</sup> Parker, D. ‘Hitler’s Ardennes Offensive’, Greenhill Books, London, 1997.

<sup>15</sup> Ibid, p. 144-5

main effort rather than centre of gravity, but the translator kept using the term centre of gravity. Rather perplexed, I pulled out my German-English dictionary and looked up main effort and there it was: **Schwerpunkt**. Of course! Western militaries had always spiced up their conversations by misappropriating German words such as *schwerpunkt* when talking about a main effort. The translator had incorrectly translated Manteuffel's *schwerpunkt* as centre of gravity when he clearly meant main effort. Mystery solved!

Or was it? Hang on a minute, what's this? – there are other translations of *Schwerpunkt* apart from main effort! And here is a rather interesting one: centre of gravity. Check it yourself: type in *Schwerpunkt* into Google translate and you will see this:

**der Schwerpunkt**

- center of gravity,
- main focus,
- center,
- main emphasis,
- main stress,
- plank

While we can probably safely ignore 'plank', we might be on to something when we realise that *Schwerpunkt* can mean main effort *and* centre of gravity, which means, and here is the punchline, **an enemy's main effort also contains their centre of gravity**. So, if we identify an enemy's main effort, we have also identified their centre of gravity. This seems useful. And is this consistent with Clausewitz? Did Clausewitz also use *Schwerpunkt*? We know he did not write centre of gravity for the very good reason that he wrote in German. A bit of digging whilst avoiding the brag-value of having a German copy of *On War*, I found a PDF of *On War* in its original German.<sup>16</sup> Here is Clausewitz's first mention of centres of gravity in Book Six Chapter 27:

“So wie sich der **Schwerpunkt** immer da findet, wo die meiste Masse beisammen ist, und wie jeder Stoß gegen den **Schwerpunkt** der Last am wirksamsten ist, wie ferner der stärkste Stoß mit dem **Schwerpunkt** der Kraft erhalten wird, so ist es auch im Kriege.”<sup>17</sup>

Which Paret translates as:

“A **centre of gravity** is always found where the mass is concentrated most densely. It presents the most effective target for a blow; furthermore, the heaviest blow is that struck by the **centre of gravity**. The same holds true in war”<sup>18</sup>

But which could be translated without too much of a stretch as:

“A **main effort** is always found where the mass is concentrated most densely. It presents the most effective target for a blow; furthermore, the heaviest blow is that struck by the **main effort**. The same holds true in war.”

This sounds exactly what a main effort does. Now, I am not for a moment suggesting that main effort is always the better translation than centre of gravity when Clausewitz writes *Schwerpunkt*. Indeed, it is clear that when he uses the analogy from physics of a central gravitational point around which stability and cohesion form, he is talking about an actual centre of gravity. But, and here is my

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<sup>16</sup> <https://www.clausewitz-gesellschaft.de/wp-content/uploads/2014/12/VomKriege-a4.pdf>

<sup>17</sup> Clausewitz, C. Op Cit, p 364

<sup>18</sup> Ibid, 485-6

point, Clausewitz is using the term centre of gravity as an analogy<sup>19</sup> and if using main effort makes it easier to apply the concept, especially for practical military outcomes and for instructional purposes, then we should not be afraid to do so. Nor am I suggesting that there is some kind of circular conclusion here: a trainee asked for the centre of gravity cannot smugly reply: 'It is the main effort Sir!' This is just a means to get to the start line a little easier, not a short cut to the finish line.

### Second interlude: Cohesion

There is one other of Clausewitz's ideas that he included as part of a centre of gravity that I think is of key importance for practical application of centre of gravity. That is the concept of **cohesion**. Clausewitz in Book Six Chapter 27 wrote:

"Where there is cohesion, the analogy of the **centre of gravity** can be applied. Thus, these forces will possess certain **centres of gravity**, which, by their movement and direction, govern the rest; and those **centres of gravity** will be found wherever the forces are most concentrated. But in war as in the world of inanimate matter the effect produced on a **centre of gravity** is determined and limited by the cohesion of the parts."<sup>20</sup>

This reminded me of a simple yet profound observation that I first was made aware of in Robert Leonhard's book *Fighting by Minutes*.<sup>21</sup> In this wonderful book, Leonhard makes the observation that military forces are perpetually unready for combat.<sup>22</sup> In stating this he is not admonishing any force but just making the very pertinent and obvious point that most of the time forces are not fully prepared for action but are somewhere on a spectrum. They may be totally unprepared (think of forces in transit, or resting, or conducting maintenance or battle procedure), they may be somewhat ready (moving to an FUP, reorganising after an action) but rarely are they at that moment in time where their full weight of combat power is applied at exactly the right time and place. Think for a moment of all the effort that must be expended to get troops to an objective – the reconnaissance, the orders, the preliminary actions, the feints, the fire-support, the administrative preparation, the coordination etc etc. We set H-Hr and D-Day for good reason: there is a multitude of things that need to happen to focus effort at that time and place. If any one of these is sub-optimal, and the force is not cohesive, then the strength that is actually applied is less than the potential strength could have been. Break the cohesion enough, and the actual strength can be so far short of the potential strength that an action may fail. The force fails to act as a unified force and is now applying force as a disparate, scattered force and failing to develop its potential.

Link this back to Clausewitz's observation on cohesion. To affect the centre of gravity we attack its cohesion, and the effect is determined by how cohesive the centre of gravity is. Attack the cohesion enough, and the centre of gravity cannot produce its potential strength and is somewhere back on that spectrum of being completely unready (perfect outcome for us) to at least somewhat unready (good outcome) and we have gained an advantage, which is what we are after all along.

Perhaps an illustration is in order. Think of a tank troop in a defensive location. While the tank troop will have been allocated a number of battle positions to fire from to support the defending troops, it doesn't sit in that battle position all the time for the very good reasons that it will give the battle position away, be fatigued, be targeted, and may have to respond to several battle positions anyway

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<sup>19</sup> Ibid, p. 486

<sup>20</sup> Ibid, p. 485-6

<sup>21</sup> Leonhard, R. 'Fighting by Minutes', Praeger Publishers, USA, 1994

<sup>22</sup> Ibid, p. 135

so needs to be able to respond to several. The troop sits back, hiding under camouflage nets, like a spider waiting for its prey: ready to attack.

Let's think of the strength the tank troop has sitting under the nets. It certainly has current strength, because it has its crew, it has its ammunition and its fuel, but it cannot *apply* its desired or required strength from where it is. We might say that sitting under those nets the troop's current strength is *latent* or *potential* because its current strength is well below its desired strength. On the readiness spectrum it is somewhat ready. If it was attacked now, or the defensive position was attacked while it was still under its nets, then the troop and the defenders would still fight, but well below their potential and desired strength. They might be defeated without a fight. Things must happen to increase the current strength under the camouflage nets to turn the potential into the desired strength so that the strength is maximised at the right time at the right place. We can think what these are: early-warning is required so that the troop can come out from its nets in time, secure routes need to be available so that it can move to its battle positions in time, target-indication would be useful, obstacles and fire support might be required to fix enemy targets in position for long enough, and some kind of counter-battery or obscuration of observers might be useful to keep enemy indirect fire from suppressing our tanks. These become **critical requirements** so that our potential strength becomes the desired/required and actual strength at the right time and place. If too many of these, or – heaven forbid – all of these requirements are not in place then we cannot generate our strength; our main effort/centre of gravity is not cohesive and has not been applied at the right time and place, and we have been defeated.

Another obvious but often forgotten point when we fix our gaze on an enemy diamond symbol is that the enemy is not a single entity. Just like our tank troop, the enemy force is made up of countless entities that have individual strength but must be coordinated/synchronised to achieve unified strength. We know ourselves how hard this is: the immense friction that is involved in turning potential into actual strength of a military force is something hard to imagine until you try it. Everyone knows Clausewitz's own observation (because it is near the front of his book...) that "everything in war is very simple, but the simplest thing is difficult"<sup>23</sup> Think of the enemy as a system of systems rather than a unified single entity. So many things must go right for that system to apply its strength at the right time and place. Throw some sand in the gears and it starts degenerating back from its required to its latent strength. Understanding how that strength is generated, and what it needs, is the central principle behind defeating the enemy's centre of gravity and protecting our own.

A key point emerges: a centre of gravity is **transitory** and for most of the time a force is below its maximum or desired strength. A centre of gravity has to form; like a main effort it has to be built. Forces have to be energised – through the total application of combat power – to apply their maximum possible effect at the optimal time and place. Knowing this, we can identify what we have to do to maximise our combat power at the optimal time and place, thus applying our centre of gravity or main effort. Similarly, by identifying what an adversary has to do to form their centre of gravity and apply it as a main effort we can selectively attack it so that it does not form, and at best retains its potential strength but certainly has not been able to apply its desired or required strength.

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<sup>23</sup> Ibid, p. 119

## Why bother with centre of gravity anyway?

Some may wonder about the value of a centre of gravity discussion in the first place. Is this just some form of intellectual finger-painting that produces fascinating circular discussions in Command Posts between tired officers at 2am in the morning that don't lead anywhere? Well, it can, and I have certainly seen my fair share, but it doesn't have to.

Perhaps a narrowing or focusing of scope is important. When do we use a centre of gravity analysis in our planning? Is it relevant to all planning? Does it produce a magical effect that guarantees victory? Well, no it isn't always relevant and there is no promise of victory. It doesn't really apply at the lowest tactical levels, the stuff of firefights and engagements, where drills and Standard Operating Procedures (SOPs) are more likely to be of use than an intellectual planning process. In fact, if you are pinned down in the middle of an enemy engagement area and start analysing an enemy's centre of gravity then don't worry – you have probably found it, the hard way. Similarly, and this might be a little controversial, it is exceedingly difficult in my experience to apply it at the very highest levels when non-military folk get involved. It is not that it is not relevant at that level; it certainly is. But other agencies do not plan in the way the military do. They do not use a detailed planning process like the military, and some find it rather quaint that the military spends so much time in planning. Just do what the Ambassador tells you to do today. A little flippant perhaps, but I have the scars to prove it. Unless there is an agreed and practiced planning process it will tend to fragment into familiar silos and concentrate on the immediate rather than the important.

Instead, I am going to focus on the level of higher tactics and operations, the place where, as Luttwark puts it so well, we see the struggle between directing minds on both sides.<sup>24</sup> I am writing this in particular for Battalion to Divisional level; the level where higher tactical actions occur, where actions are sequenced, and where there is the interplay between commanders, their subordinates, and their staff. It is a level where military professionals seek to understand the enemy's plan and undermine it, while protecting and energising their own. Ultimately, it is all about having a better plan than your adversary, communicating it clearly and then executing it with violent swiftness and precision. A sound understanding of centres of gravity is the **start point** for superior planning. It is not a stand-alone part, but one that leads to a deeper understanding. This deeper understanding leads to a better relative plan than your adversary, and ultimately to tasks to subordinates – the execution of which defeats your adversary or makes them less able to interfere with your plans. Remember, it doesn't matter how brilliant you are as a commander or a staff; if your subordinates cannot execute what you plan then you have failed in your part to play. It is all about them not you.

Let's start applying our understanding. The first thing we must do is cut Clausewitz some slack. We should not expect that the methods he was used to in his days are still applicable today. Take mass for example. When Clausewitz was writing, a mass of troops was the only tool available so that is what he applied. When he writes:

“A **centre of gravity** is always found where the mass is concentrated most densely. It presents the most effective target for a blow; furthermore, the heaviest blow is that struck by the **centre of gravity**. The same holds true in war”<sup>25</sup>

He means exactly that. The mass of troops is applied and seeks decision through battle. Strength overcomes strength. And if that is not clear enough, he also warns:

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<sup>24</sup> Luttwark, E. 'Strategy. The Logic of War and Peace', Belknap, USA, 2001, p. 112.

<sup>25</sup> Ibid, 485-6

“...there is no higher and simpler law of strategy than that of *keeping one’s forces concentrated*.”<sup>26</sup>

Straight away we need to broaden how we apply this. As Leonhard warns, mass as a concept may never have been that useful but is certainly even less so today.<sup>27</sup> As we think towards multi-domain operations across at least 5 dimensions, it may not be physical mass that we are looking for. We have to broaden our thinking. Start by looking for where ‘the heaviest blow is struck’. By understanding how an adversary will seek decision we can parry that heaviest blow – we might take it on directly as ‘it presents the most effective target for a blow’ but we may also take it on in other ways. The key is to understand the enemy as best you can, understand how they will seek decision and then unravel their plans; whether by attacking the centre of gravity directly, or best of all, not allowing it to form at all and keeping it below its maximum possible strength.

Similarly, the manoeuvre Snobs will quickly drive-by and remind us that strength against strength is the complete anathema of the manoeuvre ideal, and that we should be looking for weakness not strength. And I agree, and again this is where a literal regurgitation of Clausewitz is dangerous. Yes, we have to identify the enemy’s strength, but the key revelation is that we need to act *before* that strength has formed and been applied. We do that by using the manoeuvre principles of pre-emption, dislocation and disruption, applying them to the critical capabilities and critical requirements of our enemy *so that the strength remains latent and cannot form its maximum possible*. We defeat the enemy centre of gravity by not letting it form in the first place, or by allowing a partial formation that is either too late or irrelevant.

So, once again we move from the ethereal to the practical: find the enemy’s main effort and you have found their centre of gravity. Defeat their main effort and you have stopped them from achieving decision. This, after all, is why we bother with centres of gravity: it is not to identify and admire one when we find one, placing it in reverence in some corner of the CP while we crack on with preparing the next Power Point brief, but to form the basis of our planning. It is in order to counter our enemy, defeat their plan, and achieve ours. It needs to be valuable and in order for it to be valuable it needs to be visible and viable, and, above all, useful.

## **Part II. Tying this all together and making it useful**

Let’s now try to take the above thoughts and observations and apply it to understanding an enemy’s centre of gravity and how to defeat it. The reverse, of course, applies to generating and protecting our own.

**Step 1. Identify the enemy main effort.** When we construct enemy courses of action (COA) we identify enemy objectives, the main and supporting efforts, and the decisive points and key decision points. In each COA we ask ourselves: at what time and place will the enemy seek decision and what forces will they use? What does the enemy have to do to force decision, either to achieve their plan or to beat ours? This effort identifies the main actions and main effort and, remembering our earlier juxtaposition, by identifying these key actions and main effort, we are also identifying the enemy centre of gravity. We are looking particularly at how the enemy will generate strength to achieve their objectives, and when and where they will do this. Remember, a centre of gravity is latent and transitory. Like a main effort it has to be built and sustained so that it can be applied at specific times and places. We don’t necessarily look at mass – we are looking at how they will use all the forces at

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<sup>26</sup> Clausewitz, C. Op Cit, p. 204

<sup>27</sup> Leonhard, R. ‘The Principles of War for the Information Age’, Presidio, USA, 1998, p. 115



their disposal to generate strength and seek decision. Strength does not have to be physical, but it is what the enemy applies to bend and break our will.

### **Step 2. Identify the delta between the enemy's current strength and their desired strength.**

Thinking back to both Clausewitz's observation that a centre of gravity has cohesion, and our tank troop sitting under its camouflage nets; what does the enemy now need to happen to transform their current dispositions and capabilities to the strength they desire/require to achieve decision? What are the forces or effects they will use and how will they be coordinated so that their disparate, separate strength is generated as a cohesive and unified whole? One way to understand the cohesion or synchronisation that needs to happen is to look through the lenses of the warfighting functions:

**Know.** What information does the enemy need to know before they can generate their strength?

**Shape.** What preliminary actions must the enemy conduct before they can generate their strength?

**Shield.** What assets or information must the enemy protect before they can generate their strength?

**Strike.** What part of my force must they pre-empt, dislocate or disrupt before they can generate their strength?

**Sustain.** What key sustainment activities must occur before they can generate their strength?

The forces that the enemy needs to generate their strength are their capabilities and the actions that need to occur to coordinate the capabilities into a cohesive whole so that their strength is applied at the decisive time and place are requirements. Not all of these will be important but some of them will be absolutely fundamental to success. We call these critical, so we have critical capabilities and critical requirements. What makes something critical? Well, as always in tactics it will take some judgement, but a good starting point is that if the enemy does not have that capability or requirement the plan cannot work and there is no easy or quick fix without the execution of a branch or sequel. If they can replace a capability in-stride then it is not critical. It might be a numbers thing: they might be able to lose one battery of three and continue, but they can't if they lose two. So, two batteries are a critical capability. If the enemy is successful in getting enough of their critical capabilities at the decisive time at the decisive point to defeat our cohesion, then they have applied their centre of gravity and been successful. They have protected and generated enough of the critical requirements required by their critical capabilities to transform from latent to applied or required strength. If, on the other hand, we have defeated enough of their critical capabilities by targeting and denying them their critical requirements then they have not been able to progress from latent to required strength, has not been able to apply their force as a cohesive whole, and has been defeated.

### **Step 3. Identify all the things that we can do to defeat or degrade their critical requirements.**

Note an important point here: we do not look at the critical capabilities alone but also at the critical requirements. Indeed, if we are to earn our Manoeuvre Warfare Merit Badge, it is the critical requirements we target, and through them defeat the critical requirements (force) by either taking away or reducing what they need to move from latent to required strength. Take away enough and we break the enemy's cohesion, and they cannot generate their centre of gravity. The critical requirements we attack are **critical vulnerabilities**. Note that we are not looking for a Jesus Nut

here: it is most unlikely that we can attack a single point and the whole house of cards collapses. Remember, the enemy is a system of systems: enough targeted attacks at critical requirements and the enemy reaches a threshold where they are unable or unwilling to continue with a course of action, the doctrinal definition of **defeat**. And let's just check back in with Carl here to make sure we are consistent: are we defeating the enemy by taking away their pillars of strength and not letting them be applied?

“In the engagement, the loss of morale has proved the major decisive factor. Once the outcome has been determined, the loss continues to increase, and reaches its peak only at the end of the action. This becomes the means of achieving the margin of profit in the destruction of the enemy's physical forces which is the real purpose of the engagement. Loss of order and cohesion often makes even the resistance of individual units fatal for them.”<sup>28</sup>

For all Clausewitz's emphasis on the engagement and destruction, he is clear that the object is the disarming of the enemy and the way to do that is for their morale to collapse. It is after all a clash of wills. Never forget Major General A.A. Vandergrift's observation:

“Positions are seldom lost because they have been destroyed, but almost invariably because the leader has decided in his own mind that the position cannot be held.”<sup>29</sup>

Once again, we can use the warfighting functions above as our lenses to understand how we might target critical requirements and we also use our manoeuvre defeat mechanisms of **pre-empt, dislocate and disrupt**. So, we might look at what the enemy needs to **know** if they are to generate the strength for a particular course of action and then ask ourselves: how might I pre-empt that (act before they can), how might I dislocate that (make it irrelevant or deceive it), and how might I disrupt that (break down key parts of the knowledge system so that it is unsuccessful). Again, it is most unlikely that a single action will be decisive, and it will invariably be a combination of actions. We might now have to move to emplace a key observation post, conceal a key system, conduct counter-reconnaissance, and transmit false radio traffic. These become **defeat mechanisms** because, by pre-empting, dislocating and disrupting our enemy's critical requirements they cannot generate sufficient force to be decisive. They lack cohesion and cannot generate their latent force to the desired or required force.

As noted earlier, in Clausewitz's day there were few tools to apply to seek decision. If all you have is a mass of troops then that is what you use. In modern and emerging wars, we have to be more agile in our thinking and realise that our adversary, and ourselves for that matter, have many more options to apply. We have more tools. Some of them, like the dominant narrative, become extremely important even if they are a little more difficult to pin down than a motor-rifle battalion. The same process applies but a little discipline is required. If we end up with too many intangibles attacking other intangibles then we may have a concept of great intellectual beauty but one that is difficult to apply, difficult to turn into tangible tasks to subordinates, and difficult to measure. Remember, we are looking for **targetable** critical vulnerabilities, that is, things or effects that we can affect. It is pointless identifying something that we can't affect.

Notice importantly that as we build up our list of defeat mechanisms, we are building a blue force course of action that **directly targets the enemy centre of gravity**. This is not just a plan to achieve an objective that has scant regard for our enemy; this directly relates to what the enemy has to do to either achieve their objective or to thwart us achieving ours. Too many staffs get through mission

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<sup>28</sup> Clausewitz, C. p. 231

<sup>29</sup> Quoted in MCDP 1, 'Warfighting', 1997, p. 1.

analysis as quickly as possible so that they can crack on with writing the plan. Take the time to understand how to defeat your adversary, identify multiple ways that meet FASSDD<sup>30</sup> to defeat the enemy COAs so that they become COA ideas.

**Step 4. Mission Analysis Brief.** The mission analysis brief now takes its place as the critical brief in the process. Instead of being an exchange of information, it becomes a targeted brief that shows a clear understanding of how, when, where and with what the enemy seeks decision and the practical ways that the blue force can either overcome these and achieve the blue objective or defeat the enemy and deny the enemy objective. There is a golden thread of logic back from actual tasks that the blue force can do to pre-empt, disrupt and dislocate key actions the enemy must do to generate its critical capabilities, and the defeat of these reduces the enemy to a point where they are unable or unwilling to continue with a COA. They have not achieved decision, have therefore not been able to apply their main effort successfully and therefore their centre of gravity has been defeated.

These ideas form the basis of COA ideas and become the output from mission analysis. Effectively, they form the start point of create COA concepts, the first step of COA development. The more effort the commander and staff pour into these during the MA process, the less conceptual work the staff need to do during COA development, and they can do what it says on the label: develop ideas into courses of action that can be executed.

The mission analysis brief needs to be a 'purple' brief. By this I don't mean a Joint brief but one that melds the analysis of red and blue into a single product. These should be presented as ideas, the wider and deeper the better, that can then be taken forward. The critical part is the understanding of where, when and with what will the enemy seek decision. Understand that through a centre of gravity analysis and then rip the enemy apart.

## Conclusion

I admire and am at the same time frustrated by Clausewitz: I like the genius he applies to a most difficult topic and yet am frustrated how difficult he is to penetrate sometimes. It is not a case of sorting the wheat from the chaff – his writing is so dense that every word has to be studied and thought about. It takes hard work; whole pages swim before my eyes sometimes. His work is poetry and seductively out of reach at times. If only he had lived long enough for one more read-through and tidy-up. Damn that cholera.

While many have not gone past the First Book in *On War* to discuss Clausewitz's theories on war, strategy and states; the military professional interested in his work on centre of gravity has to wade through to Book Six and Book Eight before the ideas are mentioned. They form, however, a central idea to understand how forces generate strength. By understanding how forces generate strength one can understand the seeds of defeat in an enemy and protect one's own. Planning is about understanding and understanding starts with the realm of the practical and the possible. By combining theory with practical understanding and the desire for practical outcomes, Clausewitz provides a useful and timeless start point for the modern military professional. Of course, he requires interpretation and judgement in application, but he makes one think and realise how much there is always still to learn.

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<sup>30</sup> FASSDD. The concept that each COA must be Feasible, Acceptable, Suitable and Distinguishable. The second S is Sustainable, although that should be addressed in Feasible, and I like to throw in a second D for Deception so that it is built into to every COA Concept from the get-go rather than a hurried afterthought five minutes before the MA brief.

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