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When Carl von Clausewitz wrote *On War*, it is unlikely that he could ever imagine the philosophical debate that he would unleash nearly 200 years after his death. Three simple words have been the focus of a decade's long debate as to their true meaning: centre of gravity. Simple words; but to borrow another concept from von Clausewitz, even the simplest things become very complex. Before wading into the debate as to the meaning of centre of gravity it is important to have a brief explanation and understanding of the perspective from which von Clausewitz was writing. A Prussian Officer, he wrote as a commander of land forces in a nation that had almost no maritime tradition. Moreover, he wrote in a day and age well before the advent of aircraft, and thus was never able to conceptualize the impact that air power would have on his theories. During the time of Clausewitz's writing communications technology was limited to signaling with flags or sending dispatch riders on horseback about the field. Finally, he was strongly influenced by the applied mathematics and sciences of the day, which proposed that all structures had a natural, single, centre of gravity which could be calculated and exploited. These factors and many more need to be kept in mind when one considers what Clausewitz was trying to convey. The danger in thinking about his writings from our modern perspective lies in the difficulty in divorcing modern thought, norms, and technologies from the paradigms within which Clausewitz was working.

In this paper I will examine the pure and applied schools of thought with regards to the interpretation of centre of gravity. I will also consider the argument that there can only be a single centre of gravity in any given conflict, and that it will be found at the

strategic level. I will then use aspects of the 1982 Falklands War to test the interpretations and in doing so will demonstrate that both sides have strong merit. Finally, I will argue, based on the analysis, that due to the complexity of modern warfare, there are in fact multiple centres of gravity to be found at the three levels of warfare and within the three major elements of land, sea, and air, and thus Clausewitz's understanding and concept of the centre of gravity is no longer valid as it is far too simple a paradigm.

In terms of the pure concept of centre of gravity, Clausewitz saw a centre of gravity as a thing which if struck would lead to decisive victory. Logically then, one would want to seek this out in an effort to gain an easy victory. The term decisive, though, is misleading. Decisive to the strategist is a rather different thing than to the Battalion commander or the ship's Captain. The fact that this is necessarily so does not denigrate the concept, it simply means that one must always be aware of the level of conflict being discussed. Assuming the enemy has identified the same centre of gravity, however, means that this may not be so easy; Clausewitz was aware of this fact. Striking the centre of gravity in a modern conflict can be a remarkably difficult thing to do as it will be either very well defended, difficult to determine, remarkably hard to reach, or all three. In Clausewitz's time this may have been an easier task as armies often moved *en masse* and were thus, at the least, easy to identify.

With regards to the applied concept of centre of gravity, Clausewitz referred to the connectivity and interdependence with respect to a force and the space it occupies.⁴ He spoke about the centre of gravity being that place where the mass of forces were concentrated.⁵ More than a physical concentration of force, however, he spoke of the ability of the concentration to exert outwards pressure and influence the area around it.⁶

This being the case, defeating smaller elements of a force elsewhere, even to the point that the casualties may exceed the size of the centralized force, will not exert the same influence as defeating the force at the centre of gravity. This argument implies that the centre of gravity must, therefore, be found at the strategic level of warfare. Defeating anything else does not necessarily lead to a decisive victory; however, defeating the centre of gravity does. That being said, it is likely that Clausewitz did not distinguish between tactical, operational, or strategic centres of gravity. The centre of gravity was defined by the whole system of the enemy; hence the notion of connectivity or interdependence.⁸ A force not reliant on that connectivity or interdependence could, therefore, have its own centre of gravity as it exists as a separate entity. The trouble with this interpretation, of course, is that just about everything in the military world is connected or interdependent in one way or another. Indeed, Clausewitz emphasized that a centre of gravity could only truly exist in a war designed to defeat the enemy completely. 10 Anything less than a total effort against ones adversary could not produce the elements necessary to form a centre of gravity. 11 This is where the traditional interpretation of centre of gravity begins to unravel in the modern world, as most wars are now fought with somewhat more limited objectives.

Notwithstanding the differences between the pure and applied concept of the centre of gravity, the question is further confused by the argument between those that see it as a singular entity and those that perceive multiple centres. For his part, Clausewitz believed that there could only be one centre of gravity, that being where the "mass is concentrated most densely." Describing any use of forces that did not directly bring

about victory as something which should be "condemned," Clausewitz clearly sees the centre of gravity existing on the strategic level. This interpretation must again be considered in light of his experience. Developing his theories in the wake of the Napoleonic period, where set piece battles on a massive scale, such as Waterloo or Borodino, normally determined the outcome of the war, Clausewitz was bound to identify a single centre of gravity. Moreover, as there was no air element in existence, or joint activity with the Navy, it is easy to see why this interpretation would be entirely logical at the time. In addition to all this, it must be remembered that Clausewitz was strongly influenced by the physical sciences and their notion of a centre of gravity. That being said, in accordance with the laws of physics, there could be only one centre of gravity.

With respect to the Falklands conflict and the pure concept, Port Stanley was the Strategic centre of gravity for both sides. It was the thing, which if struck and seized by the British would lead to the successful conclusion of the campaign. This turned out to be the case as was demonstrated when Argentine forces on West Falkland surrendered without firing a shot after the fall of Stanley. Taken at the political level, assuming this level exists above the strategic, the fall of Stanley was a clear indication of the Argentine failure to retain the Islands. Thus Stanley was also the political centre of gravity as was demonstrated when General Galtieri's government fell within a month of the surrender. ¹³ If, on the other hand, Stanley was held by the Argentines, the British would have been defeated through attrition, and the inability to logistically support the land forces specifically, and the air and naval forces generally. Possession of the hinterland would have meant nothing as there was no symbolic attachment to vast, empty peat bogs. This could not be a repeat of the Medina situation during the First World War where T.E.

Lawrence realized that that Turkish source of strength was, in fact, it's greatest weakness. Unlike Medina which could be left to wither on the vine as the Arab forces freely roamed the countryside, Stanley could not be so invested by the British forces; it had to be physically seized. From the Argentine point of view, we can see that Port Stanley is clearly the centre of gravity as this was the only location through which reinforcements and logistical supplies could be funneled in any significant amount. Port Stanley was the seaport of debarkation and the nearby runway was the airport of debarkation. No other location in the Falkland Islands had similar facilities. Port Stanley was where the bulk of the Argentine forces were necessarily stationed, as no other place could be expected to sustain them. Everything that the Argentines possessed on the Falklands was dependent on Stanley.

With regards to the applied sense, however, we can see that their centre of gravity in the applied sense was not going to be Stanley at all. For the British forces, Port Stanley was an end state, and had little bearing on their ability to act. What was critical to the British Task Force were the Aircraft Carriers *HMS Hermes* and *HMS Invincible*. It was from these two ships that the air defence of the fleet was made possible. Without that air defence, the fleet would not be able to resist the Argentine Air Force and thus the amphibious forces would not be able to disembark their soldiers and equipment. Without those disembarked soldiers, the physical repossession of the Islands, generally, and Port Stanley, specifically, would be impossible. Accordingly, the bulk of the British Forces were centred on the Carriers. Even when the troops had disembarked, their reliance on the air support was critical and thus the interdependence to which Clausewitz referred is demonstrated. Despite the fact that Port Stanley exerted pressure outwards and

represented the most significant concentration of forces, the Argentine Air Force was going to be the applied centre of gravity. The Argentine Air Force, after the sinking of *ARA General Belgrano*, was the only component which could actively engage and defeat the British centre of gravity. The paradox with regards to Clausewitz, however, lies in the fact that an air force can disperse when not in action, but then rapidly concentrate to deliver effects to the battle space. How then can one attack a centre of gravity that is not concentrated for the majority of the time? For the British, attacking the Argentine applied centre of gravity would expose their own forces to an unacceptable degree. Sending ships in to bombard the airstrips would expose them dangerously and deny the British carries the anti-aircraft screen that they required to protect the carriers. In addition, if any of those smaller ships were lost, the resulting weakening of the air defences over an extended period would likely outweigh any advantage that could be gained by temporarily damaging airfields. Herein we again see the interconnectedness of which Clausewitz spoke.

Of particular interest, the strategic centre of gravity, Port Stanley, was never decisively attacked by the British. The 'Black Buck' raids conducted against the airfields and coordinated with Royal Navy Harriers, were tactical actions. Stanley fell after nine tactical land battles, one significant navel engagement, and multiple air engagements which saw the Argentine Air Force lose approximately 1/3 of its fighter strength. All that being said and assuming that Argentine moral had not been broken; the British attack against Stanley would have been conducted at very poor ratios. The Argentine Forces in and around Stanley totaled over 7,000 while the British could only muster about 4,500 fighting men. The centre of gravity fell because the moral of the Argentine had broken

before an attack was made. This fact is quite the opposite of what Clausewitz thought was militarily prudent.

Returning to the discussion of one centre of gravity vs. multiple centres, the Falklands concept clearly demonstrates that multiple centres exist, that they can emerge or disappear as a conflict develops, and that they can exist simultaneously on the land, sea and in the air, and can be found at operational as well as tactical levels. For example, of the five battalion land force massing for the amphibious assault, one battalion was embarked on the HMS Fearless (40 Commando), another aboard HMS Intrepid (3 Para), and a remarkable three battalions, (42 Commando, 45 Commando and 2 Para) were sailing on the Canberra. 17 Had either of the single battalion ships been sunk the loss would have represented 20% of the land forces. Had the Canberra been lost, 60% of the assault force would have been lost, and likely that war. The soon to arrive 5 Brigade was similarly massed with 3 battalions aboard *Queen Elizabeth II.* ¹⁸ In addition to the crippling effect that the loss of these ships would have had on the ground forces, the damage to national pride in terms of casualties would likely have had the strategic effect of ending the war immediately. Proof of this can be found in the HMS Galahad incident here the Welsh Guards suffered 70 casualties, the equivalent of less than a single company. 19 This one attack effectively removed the Welsh Guards from the order of battle, and they were reduced to providing security for jumping off positions during the final battles. This centre of gravity, however, completely disappeared once the land forces had established themselves on the beachheads. Moreover, this was, from the point of view of the Welsh Guards, a tactical centre of gravity while at the same time, from General Menendez's perspective an operational centre of gravity.

Once the land forces were deployed and the amphibious centre of gravity had disappeared, British forces now had to rely on the ships taken up from trade (STUFT) to sustain their activities and thus these ships, such as the *Atlantic Conveyor*, became the centres of gravity at the operational level. However had enough of these ships been destroyed, there may have been a strategic effect. Indeed the sinking of *Atlantic Conveyor* caused a complete reworking of the land campaign plans, as the British would now have to walk everywhere instead of leaping forward utilizing tactical helicopter lifts. Concentrated attacks on similar ships may have crippled the land forces as these ships essentially provided the British land forces with absolutely everything that they needed to execute the land campaign.

Likewise, when the Argentine Navy attempted a double envelopment of the British task force by sending a southern group centred on the *Belgrano* and a northern group built on the *Veinticinco de Mayo*, both ships were in essence centres of gravity, not only within their own task groups, but to the overall mission; the destruction of one or both would lead to the failure of the whole. As it turned out, the sinking of *Belgrano* proved this point as the entire Argentine navy returned to base, never to emerge again. That the sinking of a single ship could remove from play an entire arm of service not only speaks to the centre of gravity as a physical construct, it also emerges as an entity that exist on the moral plane of war. While a discussion with regards to the centre of gravity as it pertains to the moral aspect is beyond the scope of this paper, it is worth remembering that this aspect should not be ignored. Furthermore, it is worth mentioning that the sinking of Belgrano and the subsequent retreat of the Argentine Navy did not

necessarily signal the removal of the threat. The British had no way of knowing that the Argentine navy would not re-emerge²¹ and thus, despite the fact that this centre of gravity had been eliminated, there was no real opportunity to exploit this opportunity.

Clausewitz devised his theory of the centre of gravity in a comparatively simple age. Lacking the air element, disregarding the navy, unfettered by media and the resulting timidity of policy makers concerned with immediate public backlash, his concept of the centre of gravity not only made sense, but it was applicable, identifiable, and easily exploitable. Efforts to define the centre of gravity at the joint strategic level of modern doctrine, however, have proven quite difficult. Each service describes the centre of gravity differently simply because it varies for each service. The issue may well be that something as complex as a joint operation cannot have a single definable centre of gravity. We are trying to simplify the hopelessly complex, and in doing so we are searching not only for the one definition but for the one silver bullet that will lead to victory; where in fact that simply does not exist. Applying a 200 year old theory, in the manner originally conceived of by the author, to the modern joint battlespace is a futile effort to simplify what is, by its nature, complicated. This may in part explain why various theorists and writers have felt the need to 'explain what Clausewitz really meant,' yet have come to quite different conclusions. The Falklands conflict, far removed in time, space, and complexity from that of a mid-19th Century battle clearly demonstrates that while the concept of a centre of gravity is still valid in both the pure and applied sense, the way in which Clausewitz perceived it is no longer valid. Multiple centres of gravity exist at the three levels of war and within the various components at the same time. Some centres of gravity exist throughout while others can emerge and then

disappear as the situation changes. Unlike the pure scientific concept of the centre of gravity where there can be only one centre of gravity, the modern battlefield can, and does, have many.

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END NOTES

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⁴ Ibid., 181.

⁵ Ibid., 181.

⁶ Ibid., 182.

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⁹ Ibid., 14.

¹⁰ Ibid., 15.

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¹² Clausewitz, as cited in Strange, Dr. Joe, and Colonel Richard Iron. "Centre of Gravity: What Clausewitz Really Meant." *JFQ: Joint Force Quarterly*, (no. 35 2004) 21.

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¹⁹ Van der Bijl, Nicholas. *Nine Battles to Stanley*. 248.

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