Abstract:
A functional conceptualisation of morale is proposed, which focuses its meaning on motivation and the willingness to act rather than mood and group dynamics. Morale, it is argued, emerges from the subtle interrelationships of the many factors known to affect military means. It can be assessed both qualitatively and quantitatively, allowing the interaction between morale and policy to be explored in a manner that facilitates insight into the strategic process. A case study from the North African campaign of World War II is presented to explore in detail the relationship between morale and the art of war – strategy.

Key Words:
Morale, Strategy, Combat Effectiveness, El Alamein, North African Campaign, World War II
‘In Search of the ‘X’ Factor: Morale and the Study of Strategy’.

Samuel A. Stouffer et al began their four-volume study of social psychology in the Second World War (1949) with a quote from Leo Tolstoy’s *War and Peace*.

In warfare the force of armies is the product of the mass multiplied by something else, an unknown X. Military science, seeing in history an immense number of examples in which the mass of an army does not correspond with its force, and in which small numbers conquer large ones, vaguely recognises the existence of this unknown factor, and tries to find it sometimes in some geometrical disposition of the troops, sometimes in the superiority of weapons, and most often in the genius of the leaders. But none of those factors yield results that agree with the historical facts.¹

The psychologist Frederick J. Manning began his own study on ‘Morale, Cohesion, and Esprit de Corps’ in 1991 with the exact same quote. He was quick, however, to point out that both Tolstoy and Stouffer might have ‘been overly harsh in their judgment of military science and its practitioners’;² for throughout history, soldiers and military theorists have identified morale as an important factor in combat performance. Four hundred years before Christ, Xenophon argued that ‘in action, the sustaining of morale was an imperative,’³ and when ‘morale’ was ‘high action must be sought.’⁴ Napoleon had his dictum that the moral outweighs the material by three to one.⁵ Clausewitz argued that moral elements were ‘among the most important in war,’⁶ while du Picq wrote that ‘nothing can wisely be described in an army . . . without exact knowledge of the fundamental instrument, man, and his state of mind,

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⁴ Ibid. p. 191.
his morale.’ Foch’s famous formula ‘Victory=Will’ was ‘representative of opinion among military professionals throughout Europe’ at the time of the First World War. Liddell Hart argued, between the wars, for ‘the predominance of moral factors in all military decisions.’ Referring to the Second World War, Patton claimed that 80 percent of a commander’s role was ‘to arouse morale in his men.’ Even today, General Sir Rupert Smith argues that ‘the will to win is the paramount factor in any battle’ and that ‘we call this will morale.’

Although the maintenance of morale has long been recognised in military circles as an important factor in war, ‘outside these circles’, as John Baynes has pointed out, ‘there is sometimes difficulty in appreciating why this is so.’ Morale is a nebulous and difficult to define concept and is not obviously amenable to quantification. General Sir Ronald Adam, the Adjutant General of the British Army during the Second World War, said that morale could only be ‘painted with the impressionistic brush of a Turner and not with the microscopic detail of a Canaletto.’ More recently, André Loez has gone so far as to say that ‘le “moral” des soldats n’existe pas’. Without a clear and reliable definition of morale, or an accepted approach to assess or ‘measure’ morale, it is extremely difficult to make connections between military outcomes and morale. Scholars, as opposed to military practitioners and theorists, have, therefore, and perhaps quite wisely, concentrated on more quantifiable factors such as technology, economics, logistics and tactics to explain the outcomes of battles and wars.

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This article aims to make a contribution to the understanding of morale in military affairs. It argues that the concept of military morale remains ill defined, inconsistently used and poorly understood. The article proposes that the concept of morale has no place in a critical analysis of the past unless it is clearly differentiated from definitions associated solely or primarily with mood or cohesion and the group. Instead, for morale to have explanatory value, particularly in a combat environment, a functional conceptualisation is proposed, which, while not excluding the role of mood or group cohesion, focuses its meaning and relevance on motivation and the willingness to act in a manner required by an authority or institution. By drawing on studies made across the social sciences and on primary archival evidence from the British and Commonwealth Army’s experiences in North Africa in the Second World War, the article generates a multi-dimensional model of morale. It suggests that morale can best be understood as emerging from the subtle interdependencies and interrelationships of the many factors known to affect military means. This perspective on morale allows the interaction between morale and policy to be explored in a manner that facilitates insight into the art of war (strategy). The article explores methodologies to ‘measure’ and assess morale and argues, through the use of a case study on the North African Campaign of the Second World War, that the theories, models, definitions and methodologies explored can be employed by policymakers, military leaders and scholars to better understand and develop strategy.

**Defining Morale**

Finding agreement on what the term morale actually means is a considerable challenge. There are, according to some, almost as many definitions of morale as there are people writing about it.\(^{16}\) In 1958, the industrial psychologist Robert Guion listed seven different commonly used definitions of the term:

1. Morale is the absence of conflict
2. Morale is a feeling of happiness
3. Morale is good personal adjustment

4. Morale is ego involvement in one’s job
5. Morale is the extent of ‘we-feeling’ or cohesiveness of the group
6. Morale is a collection of job related attitudes
7. Morale is a personal acceptance of the goals of the group.

Guion concluded that none of these definitions was adequate and offered an eighth:
‘Morale is the extent to which an individual’s needs are satisfied and the extent to which the individual perceives that satisfaction as stemming from his total job situation’.\(^{17}\)

More recently (1987), the psychologists Gal and Manning outlined another three commonly used definitions:

1. Morale is confidence in one’s self, team, weapon or commanders
2. Morale is perceived group cohesion
3. Morale is a sense of contribution or commitment.\(^{18}\)

In their 1976 study of ‘Motivation, Satisfaction and Morale in Army Careers’, Stephan Motowidlo et al set out yet another three broad approaches to the definition of morale:

1. Motivation (goals, determination, persistence, tenacity, progress)
2. Satisfaction (cheerfulness, contentment, freedom from worry, satisfaction of physical needs for food, water, rest etc.)
3. Group cohesiveness (solidarity, cooperation, self-sacrifice for the group, esprit de corps, traditions).\(^{19}\)

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Building on the approach of Guion, Gal, Manning, Motowidlo et al and others, it is certainly possible to identify broad approaches to the definition of morale in the literature. The most common approach would appear to describe morale as primarily an affective state (psychological orientations that are an expression of or dependent on emotions or feelings). Another considers morale as an aspect of group dynamics and yet another associates morale more closely with motivation (see Table 1). However, many definitions of morale cut across neat delineations and conceptualisations and conflate and combine different ideas related to morale. Manning, for instance, describes morale as the ‘enthusiasm and persistence with which a member of a group engages in the prescribed activities of that group’. Thus, he conflates morale as an affective state, a motivational state, and an aspect of group dynamics. Thomas Britt and James Dickinson define morale as ‘a service member’s level of motivation and enthusiasm for accomplishing mission objectives’, thus combining morale as motivation and morale as an affective state.

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Table 1: Broad Approaches to the Definition of Military Morale

19 Motowidlo, Dowell, Borman, Johnson and Dunnette, *Motivation, Satisfaction, and Morale in Army Careers*, p. 49.
At the risk of being overly prescriptive, there are major problems with approaches that include affective states or group dynamics as necessary elements in the definition of morale. These problems arise particularly when the relationship between levels of morale and military performance is considered. Almost all treatments of the subject point to a strong relationship between high levels of morale and positive military performance. However, there is much evidence to suggest that troops can experience positive affective states while also behaving in manners that are completely contrary to the best interests of the military establishment. For instance, a combatant might feel ‘happy’, ‘satisfied’ or ‘optimistic’ due to the fact that he has run away and is now safe from harm, or, equally, fight with great determination whilst being personally quite miserable. Similarly, strong group bonds can undermine positive military performance. A soldier might stop to aid a wounded comrade in spite of orders to press the attack. A group that regards a war as pointless or incompetently directed might see its commanders as the real enemies, since it is these commanders and their orders that expose them to danger. Group desertions and mutiny can evidence small group cohesion, yet they are clearly actions contrary to the needs of the military institution.\textsuperscript{22} For instance, in Vietnam, the importance of group survival often outweighed the need to complete assigned tasks.\textsuperscript{23} Furthermore, it is reductive to suggest that morale can only exist in the context of a group. Individual morale is influenced by a complex range of multi-dimensional factors that go far beyond simple group dynamics (see figure 1).

It would appear, therefore, that definitions of morale that include affective states or aspects of group dynamics as necessary components are unhelpful in developing a functional understanding of military morale. If we are to consider definitions that link morale more closely with motivation, it is important to stress that motivation does not require the individual or group to be positive (or enthusiastic, as Britt and Dickinson suggested) about assigned objectives. Combatants can be highly motivated to carry out tasks that they don’t want to engage with, that they are not hopeful, optimistic or confident will succeed, due to the fact that they are disciplined or even coerced into


action. John Keegan has pointed out that ‘when the killing starts, when men are confronted by the realisation that to go further forward, to expose more of their bodies than is exposed already, entails a likelihood of death’, positive motivational factors ‘risk failing’.

“Kill or be killed” is the logic of battle – to which military law adds the rider, “Risk being killed by the enemy or else risk being killed by your own provost-marshal”. 24

This coercive dynamic, Keegan claims, has been present in warfare throughout the ages. 25 Hew Strachan has also argued that coercion is not always given enough recognition as a motivational tool. 26 Soldiers have to accept ‘the basic philosophy governing human relationships within an army,’ 27 said S.L.A. Marshall, or take what Stouffer et al referred to as ‘the institutionally sanctioned consequences.’ 28 Brigadier A.B. McPherson, who, in 1950, compiled the British War Office monograph on discipline, remarked that ‘in the inculcation of “morale” discipline is an indispensable factor. Self-respect, self-control and obedience to authority, which go hand in hand in training in discipline, are sturdy elements also in the foundation of morale.’ 29

There is evidence to suggest that military professionals link morale closely with motivation and distance it from associations with positive affective states or the group. For example, General Sir Bernard Law Montgomery defined morale, in a paper he wrote on the subject in April 1946, as ‘endurance and courage in supporting fatigue and danger . . . the quality which makes men go forward in an attack and hold their ground in defence.’ 30 He stated categorically that high morale ‘is not

25 Ibid.
contentment or satisfaction’ or ‘happiness’. Happiness, according to Montgomery, ‘may be a contributory factor in the maintenance of morale over a long period, but it is no more than that. A man can be unhappy but can still, regularly and without complaining, advance and defend’. He saw group dynamics in very much the same light. Morale, according to Montgomery, is clearly like an overall causative influence on a soldier's conduct; indeed some psychologists use the term 'motivation' in similar contexts.

Montgomery’s definition gets to the heart of the concept of military morale. He defined morale as ‘courage’ or ‘a quality’ which makes soldiers ‘go forward’ or ‘hold their ground’, or to put it another way, act in an institutionally required manner. Morale, therefore, can be defined as the willingness of an individual or group to engage in an action required by an authority or institution; this willingness may be engendered by a positive desire for action and/or by the discipline to accept orders to take such action. The degree of morale of an individual or army relates to the extent of their willingness or discipline to act, or their determination to see an action through. This is the broad approach to the conceptualisation of morale that is taken in this paper. It clearly links morale with positive military performance and, therefore, makes sense of the strong emphasis that military organisations place on morale. It does not conflate morale with mood or group dynamics (while not excluding the possible benefit of positive emotions or group cohesion on military morale). Instead it recognises that military institutions require their personnel, first and foremost, to be willing to carry out orders. If troops are willing to carry out orders, any military organisation will have a chance of success irrespective of the mood of their men and women or the cohesiveness of their groups.

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32 Ibid, pp. 51-3.
34 In fact, one of Britt’s other studies supports this view. He asked a small sample of soldiers to indicate what they thought were the key characteristics of morale. He found that soldiers were most likely to indicate the attributes of motivation and drive in their views of morale (Quoted in Thomas Britt and Dickinson, ‘Morale during Military Operations’, in Britt, Castro and Adler (eds.), Military Life, p. 163).
Influences on Morale

Much of the literature on morale has focused on the influences, antecedents or ‘determinants’ of high and low morale.\(^{35}\) Since 1945, the dominant explanation of what maintains morale in modern war has undoubtedly been primary group theory.\(^{36}\) Primary group theory stresses ‘that men fight not for a higher cause but for their “mates” and “buddies”, bound by war in a relationship which . . . can achieve great intensity.’\(^{37}\)

Another common explanation for combat morale and motivation is ideology or ‘cause’. Strachan has argued that military factors alone do not suffice to explain combat motivation.\(^{38}\) This viewpoint, it has been suggested, is ‘grounded in the belief that the ways and ideals of the combatants, rather than purely internal military logic, often better explain how war is fought.’\(^{39}\) Marshall’s own definition of morale recognised this inherent complexity.

Morale is the thinking of an army. It is the whole complex body of an army’s thought: The way it feels about the soil and about the people from which it springs. The way that it feels about their cause and their politics as compared with other causes and other politics. The way that it feels about its friends and allies, as well as its enemies. About its commanders and goldbricks. About food and shelter. Duty and leisure. Payday and sex. Militarism and civilianism. Freedom and

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slavery. Work and want. Weapons and comradeship. Bunk fatigue and drill. Discipline and disorder. Life and death. God and the devil.\textsuperscript{40}

Indeed, Stouffer \textit{et al} commented that ‘the motivation of combat behaviour was so complex that at most it could be hoped that few major factors have been entirely neglected.’\textsuperscript{41} This, of course, raises some significant problems. Such a view of morale can be seen as ‘so general, pervasive, and complex’ that it is ‘not likely to be readily amenable to rigorous scientific analysis’. Motawidlo \textit{et al} were concerned that morale thus understood explained ‘too much to be heuristically useful and might be too internally complex to be empirically workable’.\textsuperscript{42}

Consequently, perhaps, some studies have focused on overly reductive explanations for what causes and maintains combatant morale. This has especially been the case in literature on primary group cohesion.\textsuperscript{43} Although cohesion, like morale, can be defined in many ways, it is generally agreed that the essence of cohesion ‘is trust among group members (e.g., to watch each other’s back) together with the capacity for teamwork (e.g., pulling together to get the task or job done).’\textsuperscript{44} The published literature on cohesion has added greatly to our understanding of group dynamics in combat. At its best, it has explored the intricate web of interrelationships between the group and the other factors that influence morale and combat performance. However, at its worst it has conflated a complex and multidimensional issue into an oversimplified construct that seeks to function as a catch all explanation for battle morale and combat effectiveness. There is, in fact, as Marshal and Stouffer \textit{et al} have pointed out, an amalgam of influences driving morale, only one of which is group cohesion.

A comprehensive analysis of the many factors identified in the literature as influences on morale can make for a more nuanced understanding of the topic. These factors

\textsuperscript{40} Marshall, \textit{Men Against Fire}, p. 158.
\textsuperscript{41} Stouffer, \textit{Combat and Its Aftermath}, p. 106.
\textsuperscript{42} Motowidlo, Dowell, Borman, Johnson and Dunnette, \textit{Motivation, Satisfaction, and Morale in Army Careers}, p. 49.
\textsuperscript{43} See for example Janowitz and Shils, ‘Cohesion and Disintegration in the Wehrmacht in World War II’ and the special issue on combat cohesion in \textit{Armed Forces and Society}, Vol. 32, No. 4 (2006), and the continuing debate that follows.
may be broadly categorized as endogenous (factors primarily within the military organisation) or exogenous (factors primarily outside of the military organisation). The most obvious of the endogenous factors that influence morale, and the ones that military historians, psychologists and anthropologists pay most attention to, are institutional factors. These are factors clearly under the control of a military organisation and may include, but are not restricted to, dynamics such as command, discipline, selection of personnel, doctrine, welfare and education, ethos and duty, training, efficient organisation and supply (see Figure 1). Social factors such as leadership, cohesion (primary group) and esprit (secondary group) are also important. Individual factors such as a person’s disposition, background, coping strategies, relationship with home, experience and levels of fear, confidence, fatigue and rest cannot be discounted either.

Figure 1: Factors affecting the morale of troops, commanders and the army.

Exogenous factors, issues external to the military organisation, can also play a fundamentally important role in inculcating morale. This approach has been characterised as the ‘cultural’ study of war by some authors:45 ‘Above and beyond any symbol,’ in Marshall’s view, ‘whether it be the individual life or a pillbox commanding a wadi in [the] Sahara – are all of the ideas and ideals which press upon

men, causing them to accept a discipline and to hold to the line even though death may be at hand.’ These factors can be broadly categorized as political (comprising propaganda, stated war aims, ideology and the size of force mobilised), economic (comprising the amount and quality of weapons technology and equipment available), cultural (comprising basic military law/rules of engagement, values/ethics and view of the enemy), environmental (comprising the type of terrain fought over and climate) and situational (comprising the amount and quality of information available, rumours, friction and situational antecedents such as recent successes or failures in battle).

The approach taken here does not attempt to list exhaustively the factors that can influence morale. Instead, it focuses on identifying and categorising some of the main antecedents of good and bad morale. It benefits from simplicity, as it does not engage with the manner in which the individual or group interrelates with these dynamics. It does not create a hierarchy of influences or insert intervening variables between the ‘independent’ and the ‘dependent’ ones (morale). It simply outlines the broad categories of factors that must be studied when trying to understand the morale of an individual, group or army. Although these factors will interrelate in a different manner in each war, the nature of morale and the factors that influence it are broadly unchanging. It is clear, therefore, that historians and social scientists have to look far beyond catch-all or reductive explanations for military morale, if they are to fully understand the complex array of issues that influence a soldier’s willingness to fight.

**Morale and Strategy**

Few studies have seriously addressed the connection between the individual’s combat motivation, the morale of a unit or formation, and the art of devising successful strategy. As John A. Lynn has argued, too many histories are founded upon vague assumptions concerning military performance and outcomes in war. Historians,

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perhaps overly focused on building narratives, rarely bother to elaborate the underpinning of their analysis.\textsuperscript{49}

According to Clausewitz, ‘war is an act of force to compel our enemy to do our will’.\textsuperscript{50} This statement suggests that, more often than not, belligerents fight for a goal, or an end, that they try to achieve or impose upon an enemy. That goal does not have to be rational or particularly well thought out; it can be driven by reason, passion and hatred or pure chance. Nevertheless, the challenge of devising a successful strategy to achieve a goal dominates military theory and practice. Indeed strategy was the central and unifying theme of Clausewitz’s \textit{On War}.\textsuperscript{51}

Clausewitz defined strategy as the ‘use of the engagement for the purpose of the war’.\textsuperscript{52} More recently, Colin Gray defined strategy as ‘the use that is made of force and the threat of force for the ends of policy’,\textsuperscript{53} while Liddell Hart described strategy as ‘the art of distributing and applying military means to fulfill the ends of policy’.\textsuperscript{54} Thus, it appears clear that the relationship between military means and policy objectives (or ends) is at the heart of the strategic process.\textsuperscript{55} Military decision makers have constantly to align their means to coincide with policy; vice versa, policy makers have to create policy in line with the available means. As Strachan puts it:

\begin{quote}
In the ideal model of civil–military relations, the democratic head of state sets out his or her policy, and armed forces coordinate the means to enable its achievement. The reality is that this process – a process called strategy – is iterative, a dialogue where ends also reflect means, and where the result – also called strategy – is a compromise between the ends of policy and the military means available to implement it.\textsuperscript{56}
\end{quote}

\textsuperscript{49} Lynn, \textit{The Bayonets of the Republic}, p. 21.
\textsuperscript{50} Clausewitz, \textit{On War}, p. 83.
\textsuperscript{52} Hew Strachan, \textit{On War}, p. 207.
To achieve policy by use of violent means, a belligerent has typically to match his effort against what Clausewitz referred to as an enemy’s ‘power of resistance’. This he expressed as ‘the product of two inseparable factors, viz. the total means at his disposal and the strength of his will.’

The extent of the means at his disposal is a matter – though not exclusively – of figures, and should be measurable. But the strength of his will is much less easy to determine and can only be gauged approximately by the strength of the motive animating it.\footnote{Clausewitz, \textit{On War}, p. 86.}

To put it another way, an enemy must also engage with strategy and balance ends with means. Military means are a product of the interplay between the material capability to fight and the will to fight (morale, as defined above).\footnote{‘Material capability’ encompasses what current British Defence Doctrine (Fourth Edition, November 2011) refers to as the ‘physical’ and ‘conceptual’ components of fighting power. ‘Will to fight’ equates to the ‘moral’ component of fighting power as set out in British Defence Doctrine.} When an enemy can no longer continue to fight, because their material strength has been whittled away through attrition, or is no longer willing to fight, and deserts or surrenders en masse, that enemy must eventually, by engaging in the strategic process, also alter policy (ends must reflect means). Victory ensues when a belligerent comes to the conclusion that he or she no longer has the means, either physical or psychological, or both, to resist the will of the enemy and alters policy (to for example surrender or enter negotiations for a cease fire).

As Michael Howard has put it

The military means used to obtain the purposes of the war were divided by Clausewitz and his successors into two: \textit{Vernichtungsstrategie}, ‘strategy of annihilation’ – the destruction of the enemy capacity to defend himself by destroying his armed forces on the battlefield; and \textit{Ermattungsstrategie}, the use of attrition to wear down his will to resist. The first disarms the adversary, leaving him
literally at the mercy of the victor. The second persuades him that victory is, if not impossible, only obtainable at an unacceptable price.\textsuperscript{59}

Thus, the relationship between morale, military means, strategy and policy can be diagrammatically set forth as follows:

**Figure 2: Morale and the Study of Strategy.**

![Diagram showing the relationship between morale, military means, strategy, and policy]

It must be noted, however, that military outcomes rarely require the complete and utter destruction of the material means at the disposal of an enemy force. As Gray has argued, ‘strategic history demonstrates the prevalence’ of the loss of the ‘enemy’s will’ in deciding military outcomes.\textsuperscript{60} History suggests that conflicts are decided more often than not because one side loses the will to fight and, therefore, changes policy.\textsuperscript{61}

This relationship appears to hold true across the full spectrum of military conflicts and across all ‘levels of war’. For instance, Mao Tse-tung argued that in irregular war ‘the contest of strength is not only a contest of military and economic power, but also a contest of human power and morale’.\textsuperscript{62} Irregular wars, as clearly set out in a number


\textsuperscript{60} Gray, *Modern Strategy*, pp. 18-19;


of recent articles, are in nature exactly the same as conventional ones.\textsuperscript{63} The morale of combatants remains equally important in an insurgency; it is just the manner in which belligerents can influence the antecedents of morale that may differ. In a conventional war, belligerents can affect morale by attacking many of the endogenous influences on morale, for instance through the destruction of the enemy’s forces or through superior tactical deployments and equipment. In an insurgency, ‘war amongst the people’, this process can prove much more difficult. Insurgents do not mass in a definable battle space; they do not wear easily identifiable uniforms and they blend into the civilian population. However, in an irregular war, belligerents can also influence morale by access to other antecedents of the will to fight. These can include exogenous factors such as developing the local economy, delivering accessible and quality education and fostering more accountable and efficient government.\textsuperscript{64}

Western governments and militaries, learning from their experiences in Afghanistan and Iraq and elsewhere, have increasingly recognised that insurgents too must strategise and align ends with means.\textsuperscript{65} It is extremely difficult, however, as the Americans discovered in Vietnam, to destroy the material capability of an insurgency. Instead, western militaries have championed ‘hearts and minds’ approaches that aim to influence and alter the people’s, and therefore the insurgents’, will to fight. Again, by influencing the means at the disposal of the enemy, by targeting enemy morale, western forces attempt to influence strategy and ultimately policy. Vice versa, as Antulio Echevarria puts it, ‘[t]hroughout history, terrorists, guerillas, and similar actors have typically aimed at an opponent’s will to fight rather that his means [military capability]; the difference now is that they enjoy enhanced access to that will.’\textsuperscript{66} Thus, the centrality of morale in counter-insurgency environments has become increasingly evident.

\textsuperscript{64} See John A. Nagl, \textit{Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam} (Chicago, 2005).
\textsuperscript{65} See Fleming, ‘New or Old Wars?’, \textit{Journal of Strategic Studies}; Shuurman, ‘Clausewitz and the “New Wars” Scholars’, \textit{Parameters}.
\textsuperscript{66} Quoted in Shuurman, ‘Clausewitz and the “New Wars” Scholars’, \textit{Parameters}, p. 92.
The primacy of morale in strategy appears to hold true even in the sphere of nuclear conflict. Gray has pointed out that

My intercontinental ballistic missiles may be feeling well, and indeed might be very content to be ordered to exercise their function in action. But, are the humans in the chain of command willing to dispatch them? . . . The brutal arithmetic of combat is important, but it does not tell the whole story. Many factors contribute positively or negatively to fighting power, but there should be no evasion of recognition of the central importance of the willingness of people to fight.67

It is certainly arguable that the basis of Cold War strategy, the doctrines of deterrence and mutually assured destruction, were built on this crucial understanding. The USA and the Soviet Union maintained heretofore unimaginable military capability in the form of nuclear weapons. However, neither could destroy in a first strike the total material (nuclear) means at the disposal of the enemy. Instead, by guaranteeing a second strike capability, both sides targeted the willingness of the enemy to fight and employ their nuclear arsenals. In an environment where technology appeared paramount, it was, in fact, considerations related to morale that significantly influenced strategy, and, therefore, policy.

Assessment of Morale

It would appear, therefore, that morale plays a crucial role in the strategic process. However, a concise conceptualisation of morale, and a clearer understanding of the relationship between morale, military means, strategy and ends, means little if policy makers, military practitioners and scholars cannot realistically assess or ‘measure’ morale and, therefore, make meaningful use of it in devising strategy. As Michael Handell has put it, ‘the assessment of the enemy’s will is fraught with problems today as it was in Clausewitz’s time. The danger is that modern intelligence analysts and

commanders may focus on that which can be measured rather than on the critical but more elusive factor of will.\textsuperscript{68}

The standard method of assessing morale is to rely on individuals’ reported levels of morale. Edward Shils and Morris Janowitz, Marshall and Stouffer \textit{et al} made extensive use of attitudinal surveys in their works on the German and American armies in the Second World War.\textsuperscript{69} More recently, Leonard Wong \textit{et al} employed similar surveys in their report on combat motivation in the 2003 Iraq War.\textsuperscript{70} Such studies, although rare, are invaluable sources on the state of morale in a military organisation.

Historians, who often have to make use of far less suitable sources, are particularly reliant on personal accounts, letters and diaries when attempting to assess morale in a unit or army. Recent studies, such as Alexander Watson’s \textit{Enduring the Great War} and this author’s \textit{Combat and Morale in the North African Campaign} have tried to circumvent this problem by making use of official sources, such as morale reports and censorship summaries. These types of sources cover morale more widely and deeply and tend to express views that represent a considerable body of opinion among troops, not isolated instances of over-exuberance or ill-temper.

Military professionals, theorists and scholars, however, assess morale not only through soldiers’ stated willingness to engage with an enemy, or through their actual fighting behaviour, but by means of a complex web of other factors.\textsuperscript{71} Some of these factors are primarily outcomes or correlates of morale; rates of desertion, sickness, surrender and psychological breakdown among troops fall into this category. Others are influencers or determinants of morale; the whole range of endogenous and exogenous influence on morale, outlined in Figure 1, would fall into this category. Each of these factors can be explored, using available primary and secondary sources.

\textsuperscript{69} Shils and Janowitz, ‘Cohesion and Disintegration in the Wehrmacht in World War II’; Marshall, \textit{Men Against Fire}; Stouffer \textit{et al}, \textit{Combat and Its Aftermath}.
\textsuperscript{71} NA WO 193/453 Assessment of Morale by Statistical Methods (Report by I.S.2), N.D. but probably 1942 or 1943.
thus generating a multi-dimensional contextualisation of morale that not only recognises and gives expression to morale’s complexity but also takes account of the many factors that sustain or undermine morale or are correlates of good or bad morale.

Some factors (such as desertion, surrender, sickness and breakdown rates) are amenable to quantitative analysis and comparisons. Other well-established qualitative procedures for assessing troop morale, such as the examination and interpretation of recorded perceptions of the troops themselves, their leaders, and their politicians can also be examined. This overall integration of quantitative and qualitative analyses of the many factors that are associated with morale allows for the development of a more detailed picture. This can be compared with known battlefield performance, allowing the development of a clear and supportable narrative plotting the relationship between morale, strategy and military outcomes.

_Morale and Strategy: A Case Study_

It may prove useful to explore how these ideas can be practically employed by scholars and policy makers alike. Theory is developed so that practitioners need not start afresh each time a new challenge arises. Clausewitz wrote that

Theory cannot equip the mind with formulas for solving problems, nor can it mark the narrow path on which the sole solution is supposed to lie by planting a hedge of principles on either side. But it can give the mind insight into the great mass of phenomena and of their relationships, then leave it free to rise into the higher realms of action.\(^\text{72}\)

The definitions, theory and methodology set out here are an attempt to see through the complex web of interconnected factors that link morale and strategy in war. Indeed, theory must match practice and history furnishes the student with limitless examples of the centrality of morale in the strategic process. The case of Eighth Army in the

\(^\text{72}\) Clausewitz, _On War_, p. 698
North African campaign of the Second World War might prove particularly instructive.

The defeats suffered by Eighth Army at Gazala and Tobruk, in May and June 1942, and the stalemate on the El Alamein line, in July 1942, were, it can be argued, influenced significantly by a morale crisis that reached a peak in the first two weeks of August 1942. This crisis was not solely manifested in a lack of enthusiasm in Eighth Army or a failure in groups dynamics, but rather by a more general lack of willingness to act in the manner expected by the Army. Endogenous and exogenous influences on morale were significantly deficient; Eighth Army, at the time, was averagely led, inadequately trained, poorly equipped, uncertain of the cause it was fighting for and deprived of the effective support of families back home and sustainable primary groups.\(^{73}\) Deficiencies in for example leadership, training and equipment had an extremely negative impact on the material means available to Eighth Army, but they also impacted seriously on morale. Qualitative assessments of morale, such as those contained in censorship summaries for the period, pointed to a lack of willingness to engage the enemy; the summary for 5 to 11 August 1942, stated categorically that the troops’ mail showed ‘little or no traces of the offensive spirit, and an almost complete absence of any reference to forcing the enemy to give up the ground gained in the last two months.’\(^ {74}\) Eighth Army also exhibited a number of measurable outcomes or outputs of poor morale that strongly suggest that morale was indeed at an all time low. For example, Eighth Army suffered a 73 per cent increase in sickness between March and August 1942.\(^ {75}\) In July, battle exhaustion cases caused between 7 to 10 per cent of the total sick and battle casualties.\(^ {76}\) More specifically, they caused around 26 per cent of South African battle casualties.\(^ {77}\) They caused 28 per cent of New Zealand battle casualties in August.\(^ {78}\) The number of desertions in Eighth Army increased at least tenfold from the February to June period to the

\(^{74}\) Archives New Zealand (ANZ) WAI/1/DA/508/1 Vol. 1 Middle East Military Censorship Weekly Summary (MEMCWS), No. XXXIX (5 to 11 August 1942), p. 1.
\(^{78}\) ANZ WAI/8/Part 2/BBB Freyberg Papers, Morale.
June/July period\textsuperscript{79}; the situation being so serious that, in July 1942, the Commander-in-Chief, Sir Claude Auchinleck, with the unanimous agreement of his army commanders, sought the reintroduction of the death penalty for desertion and cowardice in the field. Auchinleck presented figures to the War Office to support his request showing that around 88 per cent of casualties during the summer fighting could be classified as missing or having surrendered.\textsuperscript{80}

The morale crisis that broke out in Eighth Army in the summer of 1942 significantly influenced strategy in North Africa. Commanders, cognisant that their men were demonstrating behaviours associated with poor morale, had to engage in the strategic process and change goals. Initially this meant a retreat to the El Alamein line after the failures at Gazala and Tobruk, later it led to the cancellation of offensive operations on the El Alamein line in July 1942.\textsuperscript{81} Indeed, Auchinleck admitted, in a letter to General Sir Alan Brooke, the Chief of the Imperial General Staff, on 25 July 1942, that perhaps he had ‘asked too much of [the troops].’\textsuperscript{82} Goals and means had clearly become unbalanced.

These events encouraged Churchill to replace the Commander-in-Chief Middle East Forces, Auchinleck, with General Sir Harold Alexander and Montgomery was appointed Commander of Eighth Army. These new arrivals understood that in order to create an effective strategy for success in North Africa, they had to focus not only on improving and making better use of the means available (both material and morale), but also on reigning in objectives and setting more achievable goals for Eighth Army. A determined and purposeful effort was made by those in charge of strategy to improve the endogenous and exogenous factors influencing morale in the desert: Montgomery built his command style around the need to foster the will to fight in his men; levels of training and equipment were recognised to be deficient and were improved upon; efforts to link the soldier more effectively with his homeland, family and the causes that he was fighting for were implemented; policies of mixing


\textsuperscript{80} NA WO 163/89 Executive Committee of the Army Council (ECAC), The Death Penalty for Offences Committed on Active Service, 21 July 1942.

\textsuperscript{81} Fennell, \textit{Combat and Morale in the North African Campaign}, Chapter 7.

\textsuperscript{82} Liddell Hart Centre for Military Archives, Alanbrooke Papers, Auchinleck to Brooke, 25 July 1942.
and matching units were abandoned to facilitate the coherence of primary groups and esprit do corps.\textsuperscript{83}

At the same time, Montgomery devised plans to take account of the real state of the means available. He set limited objectives at the battle of Alam Halfa in September 1942; he focused on achieving the possible with the means available rather than what might have been ideally desired. Thus, at Alam Halfa, Montgomery fought an entirely defensive battle and eschewed the opportunity of launching an all out offensive against the Panzerarmee Afrika. He realised that Eighth Army, starved of success, required a victory, no matter how limited, to regain its morale. Thus he reigned in goals to take account of the morale of his men.

Not least as a consequence of this strategy, Eighth Army experienced a dramatic turn around in fortunes in September, October and November 1942. This turnaround, it can be argued, was driven in no small measure by the determined and purposeful efforts by those in charge of strategy to take account of and improve the morale of the troops. The endogenous and exogenous factors influencing morale were addressed and improved upon. These initiatives were not built on a reductive or simplistic understanding of morale, but, rather, on a nuanced appreciation of the almost infinite complexity of human needs and motivations. Better training and equipment were accompanied by welfare and educational initiatives. The troops were informed of their part in the operations to come and their leaders made themselves known and familiar to Eighth Army. Qualitative assessments of morale, such as the censorship summary for 21 October to 3 November 1942, reported that ‘morale displayed in correspondence from forward . . . troops’ had ‘never reached a higher level.’\textsuperscript{84} Assessments of measureable indicators or outputs of morale also pointed to an improvement. The incidence of battle exhaustion during the thirteen days of fighting at El Alamein was remarkably low, especially for an attritional infantry battle.\textsuperscript{85} The monthly statistical reports on the health of Eighth Army for October and November

\textsuperscript{83} See Fennell, \textit{Combat and Morale in the North African Campaign}, Chapters Five, Six and Seven.
\textsuperscript{84} Australian War Memorial (AWM) 54 423/11/43 Middle East Military Censorship Fortnightly Summary (MEMCFS), No. XLIX (21 October to 3 November 1942), p. 27.
1942 stated that the incidence of exhaustion was much smaller during the offensive than it had been in previous battles, the total number of cases for the two months combined being 209. The number for the July battles alone had been 557.86 The 2nd New Zealand Division suffered only 57 instances of battle exhaustion at El Alamein. This represented a ratio of 1 to 100 battle casualties, the lowest New Zealand ratio of the war.87 The South Africans suffered a rate of 2 exhaustion cases per hundred battle casualties. The rate during the summer battles had been 26 cases per hundred battle casualties.88 The daily sick admission rate was also remarkably low. By November, the monthly rate was 47.7 per thousand, a 33 per cent drop from a monthly rate of 75 per thousand in August. The incidence of surrender and desertion also dramatically decreased. At El Alamein, those who were missing or captured made up only 17 per cent of casualties.

This morale turnaround, it can certainly be argued, significantly influenced British and Commonwealth goals at the Battle of El Alamein. The German and Italian Panzerarmee, by any standard, put up a determined defence. In the words of Niall Barr, by the end of the battle ‘Eighth Army had virtually run out of formed infantry units that could still be used in the attack.’89 Many of the front line battalions of Eighth Army suffered over 50 per cent casualties.90 Nevertheless, Montgomery continued to pursue an offensive policy focused on the gradual attrition of the forces facing him. He believed that battles were ‘won primarily in the hearts of men’91 and was able to pursue the objectives he did because he trusted that his men were willing and determined to fight.

Factors relating to morale also significantly influenced German strategy. There is no dispute over the fact that Eighth Army significantly outnumbered the Panzerarmee in terms of material means during the critical months of fighting that led to victory at El Alamein in November 1942. The Panzerarmee’s quantitative inferiority was

87 ANZ WAII/8/Part 2/BBB Freyberg Papers, Morale.
90 Fennell, Combat and Morale in the North African Campaign, pp. 252-6.
exacerbated by the fact that its supply system was compromised by distance, and, perhaps more importantly, by Ultra. The logistical problems facing the *Panzerarmee*, as Martin Kitchen has described, were almost insurmountable. Between January and August 1942 the *Panzerarmee* had to make do with only 40 per cent of the supplies it needed. Such circumstances have prompted Kitchen, echoing Walter Warlimont, to describe El Alamein as a battle of ‘materiel, in which tactical skill, courage and morale were no longer significant. It was a war that the Axis could not possibly win.’

However, the suggestion that German defeat at El Alamein was determined by Eighth Army’s materiel superiority can certainly be challenged. Eighth Army had enjoyed considerable numerical and materiel advantages before, at Gazala and during the July battles, and had been beaten. Recent scholarship has also provided evidence to suggest that there is a weak correlation between materiel advantages and success in war. The best equipped military machine will have little success if an army is unwilling to fight. The evidence from El Alamein, without a doubt, suggests that materiel was important, but, not solely in the manner that Warlimont and Kitchen imply.

The ‘Lessons from Operations’ derived from the battle of El Alamein reported that ‘considering the density of the artillery support during the various attacks, the number of enemy dead and wounded found by the leading troops was surprisingly light, and that enemy automatic weapons quickly opened up when the barrage or concentration . . . passed.’ The report stressed that the killing power of artillery barrages or concentrations against well dug in infantry is often slight. The purpose of the artillery support in an attack is primarily to shake the enemy’s morale, temporarily to stupefy him . . . to enable the attacker to reach the objective with the minimum of casualties.

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The killing or capture of the enemy then follows.’ Reports and accounts written later and after the war tended to lend support to this conclusion. One such report found that the morale effects of bombardments were anywhere between two to six times greater than the material effects.

By the closing stages of El Alamein the German war diaries reported that their troops were ‘exhausted’ and that, taking all things into consideration, ‘it had to be admitted that after a desperate 10-day struggle against an enemy superior on land and in the air the Army was in no condition to prevent a further attempt at breaking through.’ Ends would have to be altered to take account of the material and morale means available. The war diaries identified four reasons why further resistance would fail and plans had to be altered. The first was ‘the enemy’s great superiority in tanks and artillery.’ However Eighth Army’s armoured units had proved largely ineffective at El Alamein and it is arguable that the artillery did more morale than material damage to the Axis forces. The second reason was ‘the continual heavy day and night bombing attacks, against which there was no defence’ and which ‘only added to the feeling of inferiority’ suffered by the troops of the Panzerarmee. However, air bombardment was notoriously inaccurate and was seen by both sides largely as a morale weapon rather than a material one. The third reason was the ‘almost complete failure of the Italian troops.’ According to the report of the General Officer Commanding Afrika Korps, the Axis problem lay once again with the morale of the Italian formations. The fourth and final reason was the Panzerarmee’s ‘own heavy losses in men and materiel on account of the enemy’s vast superiority in the most modern weapons.’ There can be no doubt that the weight of fire unleashed on the Panzerarmee caused destruction and casualties. However, this arguably was not the

99 ANZ WAII/11/20 German – Italian Forces in Africa 23 October 1942 to 23 February 1943, From German War Narrative, 2 November 1942.
100 Fennell, Combat and Morale in the North African Campaign, pp. 89-94.
102 Fennell, Combat and Morale in the North African Campaign, Chapter Two.
primary drain on the Panzerarmee’s material and manpower resources. In fact, a large proportion of these casualties can be attributed to morale rather than material causes. The statistics show that 40 per cent of German and 63 per cent of Italian casualties were missing or POW; the rate for British and Commonwealth troops during the battle was 17 per cent.\textsuperscript{103} In addition, extremely high sickness rates, a sure sign of morale problems, removed large numbers of men from the front line.\textsuperscript{104} Mark Harrison has estimated that nearly one in five Germans were listed as sick during the battle, with the elite 15\textsuperscript{th} Panzer Division suffering a sickness rate as high as 38 per cent.\textsuperscript{105} Problems with desertion and surrender had prompted Rommel to encourage use of the death penalty at courts martial during July,\textsuperscript{106} these problems persisted into October and November.\textsuperscript{107} Finally, one of the greatest effects of heavy losses of any kind is the impact that they have on group dynamics, which is generally recognised as a key factor in maintaining morale on the front line.\textsuperscript{108}

In the end, Rommel, when faced with material shortcomings and the reality that his German and Italian troops were increasingly de-motivated and unwilling to repel the British and Commonwealth advance, was forced to alter aims (and retreat) to take account of the means available. Morale had played a key role in the strategic process for both sides at the Battle of El Alamein. Eighth Army had won a brutal ‘killing match’ due to sheer determination and will power as much as any other factor. The strategists in the War Office, Middle East Command and Eighth Army had successfully balanced ends and means in a way that their German opponents had clearly failed to do.\textsuperscript{109}

\textsuperscript{104} Kitchen, Rommel’s Desert War, p. 312, 323, 346.
\textsuperscript{105} Harrison, Medicine and Victory, pp. 88-9.
\textsuperscript{106} Kitchen, Rommel’s Desert War, p. 264, 292.
\textsuperscript{107} Ibid., pp. 323-4.
\textsuperscript{108} For a critique of the literature on primary group cohesion and the role played by the primary group in maintaining Eighth Army’s morale in the desert please see Fennell, Combat and Morale in the North African Campaign, Chapter Eight.
\textsuperscript{109} See Fennell, Combat and Morale in the North African Campaign, for a more detailed analysis of the role of morale in the battle of El Alamein.
Conclusion

To conclude, morale, understood as willingness to act in a manner required by an authority or institution rather than solely or primarily an affective state or aspect of group dynamics, can play a fundamentally important role in strategy, as it did in North Africa. It is important, however, to stress that the goal pursued here has not been to suggest that morale, as Montgomery put it, is ‘the big thing in war’. Rather, the intention has been to explore the meaning of morale, the endogenous and exogenous influences on morale, its ‘measurement’ and the interrelationships between morale and the other numerous factors that influence strategy. It is clear from this brief study of military history and theory that material and non-material factors interrelate to affect the military means available to belligerents. Military means affect the goals and objectives set by each side in war in a process called strategy (ends must reflect means).

The evidence presented here suggests that a belligerent’s military means cannot be fully understood without considering morale. This would appear to hold true in all wars, conventional, irregular or nuclear. Consequently, it would appear that morale plays an important part in the strategic process. War, as Clausewitz makes clear, is slaughter, but rarely does one side have to kill everyone to subdue an enemy. Crucially, therefore, it is entirely consistent to suggest that the British and Commonwealth strategy at El Alamein, in October/November 1942, was significantly influenced by a resurgence in morale, while also recognising the enormous impact that leadership and technology had on the strategic process, and, thus, the outcome of that battle. Better weapons and more effective leadership are also absolutely central to encouraging soldiers to close with and kill the enemy. The goal must not be to find one over-riding explanation or another, but to fully understand the interrelationships between multiple explanations for victory and defeat. It is the contention of this paper that morale must play a significant role in the multifaceted considerations that comprise the strategic process. If morale can indeed be comprehensively understood and accurately assessed, or ‘measured’, as suggested here, then historians, military practitioners and policy makers should consider placing morale more at the centre of

their considerations. To that end, it is hoped that the definitions, theories, methodologies and evidence set out will help eliminate the ‘unknown’ element from that ‘X’ factor, which is so widely recognised as an important component of strategy – the art of war.

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