

Ready to defend: the importance of a warfighter ethos for space power

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As the world's oldest independent air force, the RAF led the development of a strong ethos for air power which has been adopted by other air forces around the world.¹ The public awareness of military culture means that the tenets of this ethos feel familiar: service before self, courage in the face of adversity, high standards, and a strong sense of tradition are all recognisable military qualities.² The formation of UK Space Command in 2021 highlighted the increasing requirement for military space power, as well as its growing importance to Defence.³ Given that it is a Joint Force Space Component Command, UKSC will draw from the ethos of all three Services which staff it, as well as those of international partners.⁴ However, a warfighter ethos for space power must have its own characteristics which are suited to military space operations.

To understand the importance of a warfighter ethos to space power, recognising how an ethos is formed and how it affects operational effectiveness is key. The nature of a warfighter ethos in a technical military organisation such as the RAF may then be explored further and evaluated in the context of both UKSC and the roles of space power. This will allow for insight into what a warfighter ethos for space power might look like. Central to this study is the concept of a warfighter ethos as a uniquely important feature of military organisations. The first task will therefore be to determine exactly what a warfighter ethos is.

Much attention has been given to military ethos over the years. In his 2004 study of the ethos of the Royal Marines, King argues that an ethos may be simply described as "what a human group does and how it does it".⁵ This is a reductive interpretation, but it is also informative; King suggests that the role of an ethos is to define both the common goals of the group and how the group should go about achieving those goals.⁶ Beyond the military, ethos is variously defined as the application of organisational culture, the spirit of an organisation and the relationship between leaders and their teams.⁷ A common thread across all of these definitions is that they concern how an organisation should be run in practice, and suggest that ethos is a core part of a common organisational identity.

¹ Faustman, 'Establishing a Space Force Culture: Lessons on Artifacts and Organizational Identity', 11.

² Royal Air Force, 'AP1', 6.

³ Royal Air Force, 'UK Space Command Officially Launched'.

⁴ Royal Air Force.

⁵ King, 'The Ethos of the Royal Marines', 2.

⁶ King, 3.

⁷ Glover and Coleman, 'School Culture, Climate and Ethos', 257; Solvason, 'Investigating Specialist School Ethos ... or Do You Mean Culture?', 87; Leader, 'Further Education Middle Managers', 73.

A warfighter ethos serves a greater purpose than a typical organisational ethos. Part of this greater purpose is to give service personnel “the vital moral, emotional and spiritual capacity to overcome fear and cope with the visceral and highly ambiguous nature of war”.⁸ The moral weight of military leadership in turn demands much more of ethos than in other organisations. A warfighter ethos must therefore be robust and also applicable to the conduct of warfare. The other part of this greater purpose is the moral qualities that it imparts. When moral cohesion, motivation and integrity are frequently a matter of life and death, an ethos must guide service personnel to act in the common good even at significant personal risk.⁹ King describes a warfighter ethos as “the precise application of will”, an aphorism which gives particular insight into its purpose for an organisation such as the Royal Marines where “everyone has to dig their own trenches”.¹⁰ The definition offers more insight for the ‘warfighter’ component than the ‘ethos’ component, but nonetheless contributes strongly to an overall understanding of the warfighter ethos. Taking all of these elements together, a warfighter ethos is best understood by its characteristics: it defines common goals, offers guidance on how they should be achieved, and provides a blueprint for building a resilient and moral fighting force.

It is clear that a warfighter ethos has wide implications for organisations such as the RAF. For military organisations, intangible cultural artifacts such as ethos can generate commitment from service personnel and create a framework to understand their roles and missions.¹¹ They can also affect operational effectiveness, recruitment and retention, and the organisation, training and capabilities of a fighting force.¹² This wide impact is impressive, but common to all of these areas is an underlying requirement for motivation and unity of purpose. Individuals in the military are most motivated when they recognise that their work makes a difference, that their Service plays a meaningful part in national defence, and that the Service is in control of both its resources and its direction.¹³ For this reason ethos is best set at the Service level, where these motivational factors are generated and senior leaders are well-placed to shape the Service in line with its ethos.

In the context of space power, there is some discussion about the applicability of the ‘warfighter’ label. Though UK space power doctrine and the National Space Strategy have firmly established space as an operational domain, some scholars argue that the primary role of space is in support to warfighting, rather than warfighting itself.¹⁴ This approach is flawed as it views space power from a historical perspective, where space activity has typically been funded primarily to support operations in other domains. By considering only how space has been typically used in the past, rather than adopting a conceptual perspective that sees the potential for space to be a warfighting domain in its own right, this approach risks irrelevance as strategic competition escalates in the space domain. The accelerating development of anti-satellite weapons, and a growing recognition of the

⁸ Ministry of Defence, ‘JDP 0-01’, 27.

⁹ Ministry of Defence, 27–28.

¹⁰ King, ‘The Ethos of the Royal Marines’, 8, 30.

¹¹ Sine, ‘Discovering Air Force Identity’, 3.

¹² Thomas, ‘The Cultural Identity of the United States Air Force’, 1.

¹³ Halperin and Clapp, *Bureaucratic Politics and Foreign Policy*, 54.

¹⁴ Ministry of Defence, ‘JDP 0-40’, 5; Bowen, ‘A Familiar Frontier: British Defence Strategy and Spacepower’, 11–12.

vulnerability of ground and link segments, highlight that space assets themselves will in the future be valuable platforms for space control. This is highlighted in the National Space Strategy, which defines a role for military space power which will be explored later in this study.¹⁵ A warfighter ethos is therefore as important for space power as it is for other domains of warfare.

Just as important as having a warfighter ethos is having the right one. The RAF offers an example of how different military organisations have different requirements for their ethos. Though there is much in common between the three services of the UK Armed Forces, the RAF naturally has distinctive characteristics as an air force. The most important of these for this study is its inherently technical nature. Air power requires a broad range of technologies that often have minimal overlap, performing highly specialised functions in synchronisation to deliver complex effects, making air forces fundamentally technical organisations.¹⁶ This is reflected even in the most fundamental doctrine: the UK's capstone air power doctrine refers to technology twenty-eight times, compared to seven times for land power and five times for maritime power.¹⁷ For this reason, the lessons of a warfighter ethos from the RAF are highly applicable to space power. Even compared to air power, the concepts of space power are dominated by technical warfighting, with the UK's capstone space power doctrine referring to technology forty-six times.¹⁸ Space is arguably not only a technical warfighting domain in its own right, but is also a technical multiplier for other domains of warfare, increasing their exposure to technology to increase the effectiveness of their operations in other domains. This means that the cultural challenges facing a technical military organisation, of occupationalism and technical subcultures, are particularly applicable to UKSC.

Being inherently technical presents some unique considerations for a warfighter ethos. In air forces, personnel often identify with the technologies that they use to deliver air power, which is unsurprising given the high level of specialisation required both in personnel training and in mission areas.¹⁹ For the RAF, critical warfighting capabilities such as strategic electronic surveillance are sometimes performed exclusively by a single specialised Squadron, which is naturally both a source of pride and a strong cultural influence.²⁰ As Thomas argues, the technical nature of air power has a large impact on the culture of an air force meaning that "small, technology-based subcultures" are likely to form.²¹ This reflects a tendency towards occupationalism, where personnel primarily identify with their technical specialty, over institutionalism, where personnel primarily identify with their organisation.²² The combination of a technical nature and a wide range of specialised capabilities with little overlap makes a warfighter ethos more difficult to define and reinforce, with a service-level sense of unity and purpose competing with

¹⁵ HM Government, 'National Space Strategy'.

¹⁶ Sine, 'Discovering Air Force Identity', 6.

¹⁷ Ministry of Defence, 'JDP 0-10'; Ministry of Defence, 'UK Land Power'; Ministry of Defence, 'UK Air Power'.

¹⁸ Ministry of Defence, 'JDP 0-40'.

¹⁹ Sine, 'Discovering Air Force Identity', 7.

²⁰ Royal Air Force, 'RC-135W Rivet Joint'.

²¹ Thomas, 'The Cultural Identity of the United States Air Force', 1.

²² Moskos, 'From Institution to Occupation', 42–43.

technical subcultures. For space power, a warfighter ethos will serve an additional purpose in mitigating the effects of occupationalism.

There are further benefits to a warfighter ethos for space power. When technical specialists and wide-ranging capabilities are brought together, there is huge potential for innovation which can deliver a decisive warfighting edge.²³ This innovation is a byproduct of the professional and operational diversity of technical organisations. This broader spectrum of specialists also creates cognitive diversity, as personnel take different approaches and lend a wider range of perspectives to a given problem. Cognitive diversity has been shown to increase team effectiveness, and when harnessed under a unifying ethos can further increase operational output.²⁴ For these reasons, a proudly technical ethos is a significant asset for space power.

The technical nature of space power is distinctive from air power in some respects. Of particular relevance to this study is the versatility of space assets. Many satellites as well as ground segments are multi-functional with the capability to perform several mission types, sometimes simultaneously.²⁵ In addition to this, units responsible for space power such as the UK Space Operations Centre have functions which span space domain awareness, space support to operations and co-ordination of space tasking, making them similarly versatile and therefore generalist. These factors suggest that a warfighter ethos for space power may require less emphasis on service-level unity to overcome occupationalism. However, the available evidence suggests that these factors are not as unique as they seem. For example, a similar versatility in capabilities is already being observed in air power. Platforms such as the F-35 Lightning II are multi-mission capable, with sensors able to conducting ISTAR alongside control of the air and attack capabilities on the aircraft.²⁶ Therefore, as the UK's sovereign presence in space increases, platform-specific allegiances such as those already observed in air forces are likely to perpetuate to space power rather than a more naturally unified culture.²⁷ Even if the platforms are versatile, their immense complexity will inevitably require significant specialisation among personnel delivering space power. These specialisms will likely exert a significant occupationalist pressure against a warfighter ethos. Though space assets may be multi-mission and less operationally specialised, the cultural underpinnings of a technical organisation are likely to still exert a significant pressure on a space power ethos.

The roles of space power offer some insight into what a warfighter ethos for space power might look like. As discussed above, a warfighter ethos should define a common goal and purpose. The first strategic theme of space power in the Defence Space Strategy is Protect and Defend, which focuses on a military responsibility for guardianship of both space assets and the services that these assets provide. Protect and Defend has not passed into UK Space Power doctrine, which instead focuses on the less ambiguous concept of space control, "the use of defensive and offensive capabilities to assure access

²³ Sine, 'Discovering Air Force Identity', 14.

²⁴ Mathuki and Zhang, 'Cognitive Diversity, Creativity and Team Effectiveness', 17.

²⁵ Ministry of Defence, 'JDP 0-40', 19.

²⁶ Gertler, 'F-35 Joint Strike Fighter (JSF) Program', 3.

²⁷ Sine, 'Discovering Air Force Identity', 7.

and freedom of action in space”.²⁸ Nonetheless, the term remains of value as a pithy and evocative description of the value of military space power. This intangible value is likely part of the motivation for the US Space Force referring to their personnel as Guardians.²⁹ Taking the safeguarding posture of space control and borrowing the inspiring ‘defend’ terminology of the Defence Space Strategy to build a warfighter ethos would align space power with its niche both for operations in the space domain and for its military role, and could be captured effectively with a unifying statement that UKSC is ready to defend. In doing so, the warfighter ethos for space power would capture the purpose of space operations, its importance to UK interests, and the distinctively military responsibility of organisations such as UKSC.

The first strategic theme of the Defence Space Strategy can be developed further, deconstructing it into qualities which are required for space operations. One of these characteristics is the concept of resilience across space capabilities and the services that they provide.³⁰ This can be extended to resilience at the individual level, which has long been a feature of the military ethos. UK space power doctrine also emphasises the military use of space for ISR, and for communications and tracking of friendly forces, in space support to operations.³¹ There is also a significant military responsibility for identifying threats and monitoring the congested space domain, known as space domain awareness.³² In both of these contexts there is a common theme of vigilance, both in support to other operations and space activity itself. A warfighter ethos for space power should therefore emphasise the primacy of the safeguarding role of space control, and the importance of resilience and vigilance for organisations which deliver space power.

The other requirement for a warfighter ethos is that it should offer a blueprint for a resilient and moral fighting force. The importance of diversity in technical military organisations has been established above, and a warfighter ethos is an ideal vehicle for harnessing this diversity for operational effect. Diversity in a military organisation is also vital to the wellbeing of personnel and in generating commitment and unity, making it an obvious candidate for inclusion in a warfighter ethos for space power. Looking towards the ethics of space power, the vulnerability of space assets and the catastrophic consequences of miscalculation combine to make escalation one of the most critical risks to space activity.³³ For this reason, an essential moral component of space power is its responsible use. The third strategic theme of the Defence Space Strategy highlights that organisations such as UKSC are also stewards of the space domain, and have a responsibility to share knowledge of space power and integrate it into multi-domain operations.³⁴ Space power leaders must calibrate their operational decision making around responsible use of military capability to avoid miscalculation, and at the organisational level must take responsibility

²⁸ Ministry of Defence, ‘JDP 0-40’, 34.

²⁹ Garamone, ‘Space Force Personnel To Be Called Guardians’.

³⁰ Owens, ‘What Does Protect and Defend Mean for a UK National Approach to Space?’, 120.

³¹ Ministry of Defence, ‘JDP 0-40’, 11, 40.

³² Ministry of Defence, 31.

³³ HM Government, ‘National Space Strategy’, 3; Ministry of Defence, ‘JDP 0-40’, 6.

³⁴ Ministry of Defence, ‘Defence Space Strategy’, 25.

for the space domain. A warfighter ethos for space power that includes both diversity and responsibility will offer a blueprint for a resilient and moral fighting force.

This study has demonstrated that ethos has wide ramifications for a fighting force and is an essential component of operational effectiveness. As well as defining common goals and purpose, a warfighter ethos must withstand the pressures of competition and conflict, and enable personnel to contribute to an organisation which is both resilient and moral. A warfighter ethos has ramifications across recruitment and retention, organisational structure, capabilities, motivation and unity. For technical forces a warfighter ethos serves an additional purpose in counteracting the pressures of occupationalism, which naturally occurs in technical services. However, the inherently technical nature of space power also presents opportunities, particularly for innovation. It is clear that a warfighter ethos is critical to effective space power. The nature of this warfighter ethos is shaped by both these technical factors and also by the characteristics of space power itself. It should include resilience, vigilance, diversity and responsibility, which serve a dual purpose in guiding both the organisation and individual personnel within it. Each of these concepts will contribute to a warfighter ethos that is fit for space power, by focusing on the strengths of space operations and recognising the unique nature of the space domain. These pillars support a unifying mantra which complements the doctrinal concept of space control: Ready to Defend. By applying these elements of a warfighter ethos, organisations such as UKSC will be able to make best use of their capabilities, unleash the potential of their technically focused personnel, and gain a decisive operational edge.

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