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Mission command: Elasticity, equilibrium, culture, and intent

Keith G. Stewart

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Principal Author

Original signed by Keith G Stewart

Keith G Stewart

Author

Approved by

Original signed by Carol McCann

Carol McCann

Head/Adversarial Intent Section

Approved for release by

Original signed by KM Sutton

KM Sutton

Chair/ Document Review and Library Committee

Abstract

Mission command is based upon the exercise of local initiative within the framework of command intent. It is enabled by decentralisation of authority and responsibility that allows subordinate commanders the latitude to plan and conduct operations based upon their understanding of the local situation. This paper argues that forces with the capability to decentralise can also harness network technology to step down to centralization in order to manage risk. Shifting along a continuum of command approaches represents a form of short-term organisational adaptability that has been dubbed 'elasticity' in this paper. It is argued that the roots of this elasticity lie in the concept of command intent, specifically implicit intent. The ability to operate in a decentralised fashion requires that forces create a deep, broad, reservoir of implicit intent. A force that is optimised for centralised operation, for example because of its training, its organisation structure, its organisational culture, and its equipment, will not have the same degree of 'elasticity' because it will not have a comparable reserve of implicit intent. All military organisations have a point of equilibrium on the command approach continuum and will experience stress during the period that they move away from this point. These two aspects of a military force – elasticity and equilibrium – provide an indication of its capacity for flexibility of command approach. In theory, elasticity increases as the point of equilibrium shifts towards the decentralised end of the continuum. In an age when centralised command is theoretically possible owing to technological advances, forces with the capability for decentralisation will retain the advantage. This paper is a defence of mission command. Nevertheless, it is stressed that forces with the capability for decentralised command cannot be created quickly on demand – *no matter how much technology is available*. Decentralised command is built on intangible qualities of the force such as trust, expertise, and broad experience, all of which take time to develop and are fragile, thus requiring careful maintenance.

Résumé

Le commandement de mission est fondé sur la prise d'initiative locale dans le cadre des intentions de commandement. Il est possible grâce à une décentralisation du pouvoir et de la responsabilité qui donne aux subordonnés la latitude de planifier et de mener des opérations en fonction de leur compréhension de la situation locale. La présente étude soutient que les forces aptes à la décentralisation peuvent tirer profit de la technologie des réseaux pour aller vers la centralisation afin de gérer les risques. La capacité de se déplacer le long d'un continuum de méthodes de commandement représente une forme d'adaptabilité organisationnelle à court terme appelée « élasticité » dans la présente étude. L'étude fait valoir que les racines de cette élasticité résident dans le concept d'intention de commandement, plus particulièrement l'intention implicite. La capacité de mener des activités de façon décentralisée exige que les forces constituent un réservoir grand et profond d'intentions implicites. Une force optimisée en vue d'opérations centralisée, par exemple en raison de son entraînement, de sa structure organisationnelle, de sa culture organisationnelle et de son équipement, n'aura pas le même degré « d'élasticité », car elle n'aura pas une réserve comparable d'intentions implicites. Toutes les organisations militaires ont un point d'équilibre le long du continuum des méthodes de commandement et connaîtront des périodes de tensions lorsqu'elles s'éloigneront de ce point. Ces deux aspects – l'élasticité et l'équilibre – offrent une indication de la souplesse d'une force militaire en matière de méthode de commandement. En théorie, l'élasticité augmente lorsque le point d'équilibre se déplace vers l'extrémité du continuum visant la décentralisation. À l'heure où un commandement centralisé est théoriquement possible en raison des progrès technologiques, les forces aptes à la décentralisation garderont l'avantage. La présente étude soutient le commandement de mission. Néanmoins, elle souligne que les forces aptes à un commandement décentralisé ne peuvent pas être mises sur pied rapide sur demande – peu importe les technologies disponibles. Un commandement décentralisé est fondé sur des qualités intangibles comme la confiance, l'expertise et un large éventail d'expériences, qui prennent tous du temps à acquérir et sont fragiles; il est donc nécessaire de les préserver avec soin.

Executive summary

Mission Command: Elasticity, Equilibrium, Culture, and Intent

Keith G Stewart; DRDC Toronto TR 2006-254; Defence R&D Canada – Toronto; November 2006.

Mission command is a command approach that is based upon the exercise of local initiative within the framework of command intent. This is enabled by an appropriate delegation of authority and responsibility that allows subordinate commanders the latitude to plan and conduct operations based upon their understanding of the local situation. A number of authors have examined the different command approaches that are available. At the heart of most of these discussions is the key issue of the extent to which command authority is held tightly at the organisational core or is delegated to subordinates as in mission command. The former class of command approach is commonly referred to as 'centralised' and the latter 'decentralised'. Forces that have the capability to adopt decentralised approaches, such as mission command, retain the advantage in the contemporary operating environment owing to their ability to adapt their tactical activities rapidly as situations evolve.

Choice of command approach should, in part, be driven by the operational and strategic context with a view to achieving an appropriate balance of risk. Thus, command approach is part of a class of control levers that commanders can manipulate with a view to optimizing effectiveness in the light of operational circumstances and as those circumstances change. This paper examines the issues associated with short-term adaptation of command approach, for example from a decentralised to a centralised approach. A theoretical discussion is presented that is grounded in the framework for control and command proposed by Pigeau and McCann, specifically their development of the notion of command intent. Two simple ideas are introduced. First, it is proposed that military organisations have a point of 'command and control equilibrium', based on the extent to which they are optimised for centralised or decentralised operation. Second, it is argued that the ability to move away from that point of equilibrium differs substantially between organisations and can be characterised as 'elasticity'.

Military organisations that have the capability to employ mission command have the capacity to centralise if necessary. Three theoretical scenarios are presented in this paper that draw upon the concept of intent to illustrate the adaptation of command approach. According to Pigeau and McCann, common intent has a causal relationship with performance. Therefore, we can propose that should common intent fall below a theoretical threshold level, the risk of inappropriate performance would be seen as unacceptable. Pigeau and McCann define common intent as explicit intent plus *operationally relevant* implicit intent (emphasis added). Thus, at any time there is likely to be a residual store of potential implicit intent. A decentralized organisation can adapt rapidly to its circumstances in the short-term either by drawing on reserves of implicit intent or by harnessing technology to increase explicit intent through reachback. This capability is indicative of the organisation's 'elasticity'. Compared to the decentralised organisation, a centralised force has much smaller reserves of potential implicit intent and consequently, the full reserve is often insufficient to pull the organisation above the risk threshold if explicit intent is lost. Until explicit intent can be re-established, the force is at risk of inappropriate and / or uncoordinated action. Even for decentralized organisations, elasticity is time-limited.

Organisations should seek to return to their point of equilibrium to avoid performance deterioration.

It is important to consider why one organisation might have low potential implicit intent when compared to another. A key issue is the extent to which the organisation's command 'culture' promotes or hampers the development of implicit intent. Cultural enablers are embedded in the three factors underpinning choice of command approach that have been described by Pigeau and McCann. These are: shared knowledge, comparable reasoning ability, and shared commitment and motivation. The degree to which these are developed directly underpins the reserves of implicit intent an organisation has available when it operates. They heavily influence and / or restrict the choice of the point of command equilibrium for any military organisation. Moreover, these factors are the primary determinants of potential implicit intent and therefore underpin the degree of elasticity that the organisation has.

Choice of command approach (point of command equilibrium) is not merely a decision about process, but concerns all organisational lines of development and therefore is, in part, a balance of investment question. Creating an organisation that has a decentralised equilibrium is expensive and time consuming. An efficient system of training and education is essential to build shared knowledge, to reinforce appropriate behaviour and values, and to ensure that personnel are appointed to positions that suit their talents. Economically, it is relatively cheap to operate at the centralised end of the continuum. Such an organisation will structure itself in such a way that decision making can be centralised, for example by creating a large central staff organisation devoted to planning. In addition, organisation processes will support such centralisation, in particular by constraining and limiting the decision making freedom afforded subordinates. However, perhaps most important is the personnel line of development. It is proposed here that Pigeau and McCann's three factors are all part of this line of development. Moreover, without denying the challenges associated with altering organisation structure, drafting new doctrine, or introducing new technology, it is the personnel line of development that is the most difficult to change.

It is not appropriate to impose command doctrine top-down without ensuring that it will be appropriate to the culture and capability of the organisation concerned. In this vein, a long-term shift in a military organisation's point of command equilibrium toward decentralisation is enabled by a circular process built on an appropriate organisational culture. In the first place, a culture that allows the exercise of initiative must exist. This permissive culture is reinforced by the organisation being seen to reward appropriate behaviour and, most importantly, being seen not to punish the mistakes that are an inevitable consequence of personnel exercising new found authority and responsibility. Gradually, reserves of implicit intent are built up and, because of this, the organisation becomes capable at its new point of C2 equilibrium.

In order to be able to operate effectively in an adaptive fashion, military organisations must develop criteria for which circumstances make it reasonable to alter command approach. Moreover, they must develop procedures for managing this change. In so doing, they have the potential to eradicate inappropriate command styles, such as micromanagement through the 'long-handled screwdriver', by defining, and bounding, when and how centralisation should occur and when and how it should stop. For decentralised organisations, there is the opportunity to protect and reassert the predominance of tried and tested approaches such as mission command from any creeping tendency to centralisation.

The question of whether or not new technology, amongst other things, will render decentralised command approaches such as mission command redundant, owing to the theoretical possibility of a centralisation of directive authority, is very important. Forces that have their point of equilibrium in the centralised region cannot be expected to step up to decentralised command and remain efficient: although they are relatively cheap, and quick, to train. Therefore, even in an age when centralised command is theoretically possible owing to technological advance, forces with the capability for decentralisation will retain the advantage. There is no good reason to undermine mission command. It should be remembered that forces with the capability for decentralised command cannot be created quickly on demand – *no matter how much technology is available*. Decentralised command is built on intangible qualities of the force such as trust, expertise, and broad experience, all of which take time to develop and are fragile, thus requiring careful maintenance. It is essential to realise that mission command is, as was ever the case, entirely dependent on the capability and culture shared by the individuals making up the military organisation. In this regard, technology is simply one enabler.

Sommaire

Commandement de mission : élasticité, équilibre, culture et intention

Keith G Stewart; DRDC Toronto TR 2006-254; R & D pour la défense Canada – Toronto; Novembre 2006.

Le commandement de mission est une méthode fondée sur la prise d'initiative locale dans le cadre des intentions du commandement. Ceci est possible grâce à une délégation appropriée d'autorité et de responsabilité qui laisse aux commandants subordonnés la latitude pour planifier et mener des opérations selon la façon dont ils interprètent la situation locale. Un certain nombre d'auteurs ont examiné les différentes méthodes de commandement qui existent. Au cœur de la plupart de ces études est la question clé de la mesure dans laquelle l'autorité de commandement est gardée fermement au centre organisationnel ou est déléguée aux subordonnés comme pour le commandement de mission. La première méthode de commandement est communément appelée commandement centralisé et la deuxième, commandement décentralisé. Les forces militaires qui peuvent adopter une méthode décentralisée, telle que le commandement de mission, ont un avantage dans le milieu opérationnel contemporain puisqu'elles sont capables d'adapter rapidement leurs activités tactiques au fur et à mesure que les situations changent.

Le choix de la méthode de commandement, doit, en partie, être axé sur le contexte opérationnel et stratégique et l'établissement d'un juste équilibre entre les risques. Ainsi, la méthode de commandement fait partie d'une série de leviers de contrôle dont les commandants peuvent se servir pour optimiser l'efficacité en tenant compte des circonstances opérationnelles et de l'évolution de ces dernières. Le présent document examine les enjeux liés à l'adaptation à court terme d'une méthode de commandement, par exemple pour passer d'une méthode décentralisée à une méthode centralisée. On y présente un examen théorique qui repose sur le cadre de contrôle et de commandement proposé par Pigeau et McCann, et plus précisément sur leur élaboration de la notion d'intention de commandement. Deux idées simples sont présentées. Premièrement, on propose que les organisations militaires aient un point d'équilibre entre le commandement et le contrôle en fonction de la mesure dans laquelle elles sont optimisées pour une opération centralisée ou décentralisée. Deuxièmement, on avance que la capacité de se détacher de ce point d'équilibre diffère considérablement d'une organisation à l'autre et peut être caractérisée par le terme « élasticité ».

Les organisations militaires qui ont la capacité d'utiliser le commandement de mission sont en mesure d'effectuer, au besoin, une centralisation. Le présent document comprend trois scénarios théoriques qui s'inspirent du concept de l'intention pour illustrer l'adaptation d'une méthode de commandement. Selon Pigeau et McCann, l'intention commune a une relation de cause à effet avec le rendement. Nous pouvons donc proposer que, si l'intention commune tombe sous un seuil théorique, le risque d'un rendement inapproprié serait perçu comme étant inacceptable. D'après Pigeau et McCann, l'intention commune peut être définie comme l'intention explicite plus l'intention implicite pertinente au niveau opérationnel (les caractères italiques sont ajoutés). Ainsi, il est probable qu'il reste une intention implicite potentielle. Une organisation décentralisée peut s'adapter rapidement à ses circonstances à court terme soit en ayant recours à des réserves d'intentions implicites ou en utilisant la technologie pour

augmenter l'intention explicite à l'aide d'un appui extérieur. Cette capacité met en évidence « l'élasticité » de l'organisation. Comparativement à l'organisation décentralisée, une force centralisée possède une réserve beaucoup plus petite d'intentions implicites potentielles et, par conséquent, même une pleine réserve est insuffisante pour tirer l'organisation au-dessus du seuil de risque si l'intention explicite est perdue. Jusqu'à ce que l'intention explicite puisse être rétablie, des mesures inappropriées et/ou non coordonnées pourraient être prises par la force. Même pour les organisations décentralisées, l'élasticité est d'une durée limitée. Les organisations doivent retourner à leur point d'équilibre pour éviter une détérioration dans le rendement.

Il est important d'étudier pourquoi une organisation peut avoir une faible intention implicite potentiel comparativement à une autre. La mesure dans laquelle la culture de commandement de l'organisation encourage ou ralentit le développement de l'intention implicite constitue un point clé. Les outils culturels sont compris dans les trois facteurs qui soutiennent le choix de la méthode de commandement décrits par Pigeau et McCann. Ces trois facteurs sont : le partage des connaissances, la capacité de raisonnement comparable et l'engagement et la motivation partagés. Le degré de développement de ces facteurs soutient directement les réserves d'intentions implicites qu'une organisation possède lorsqu'elle fonctionne. Ces facteurs influent grandement et/ou limitent le choix du point d'équilibre du commandement pour toute organisation militaire. De plus ces facteurs sont les déterminants principaux de l'intention implicite potentielle; ils sont donc à la base du degré d'élasticité d'une organisation.

Le choix d'une méthode de commandement (le point d'équilibre de commandement) ne consiste pas simplement à prendre une décision en matière de procédure, mais a trait à toutes les lignes organisationnelles de développement, et, par conséquent, est en partie une question d'équilibre en matière d'investissement. Créer une organisation dont l'équilibre est décentralisé est coûteux et long. Un système efficace de formation et d'éducation est essentiel à l'échange des connaissances, au renforcement des valeurs et des comportements appropriés ainsi qu'à la nomination des personnes aux postes qui conviennent le mieux à leurs talents. Du point de vue financier, il est relativement peu coûteux de mener des opérations au sein d'une organisation entièrement centralisée. Une telle organisation est structurée de manière à centraliser les prises de décision, par exemple en créant une grande structure fonctionnelle centrale chargée de la planification. De plus, les processus organisationnels soutiennent une telle centralisation, particulièrement en limitant la liberté accordée aux subordonnés en matière de prise de décision. Toutefois, ce qui est probablement le plus important est la ligne de développement du personnel. L'étude suggère que les trois facteurs de Pigeau et McCann font partie de cette ligne de développement. En outre, sans nier les défis liés à un changement de structure organisationnelle, à l'élaboration d'une nouvelle doctrine ou à l'introduction d'une nouvelle technologie, la ligne de développement du personnel est ce qui est le plus difficile à changer.

Il n'est pas approprié d'imposer d'en haut une doctrine de commandement sans d'abord s'assurer qu'elle convient à la culture de l'organisation concernée et à ses capacités. Dans le même ordre d'idées, un changement à long terme du point d'équilibre de commandement d'une organisation militaire en vue d'une décentralisation est possible grâce à un processus circulaire basé sur une culture organisationnelle appropriée. En premier lieu, la culture doit permettre qu'on prenne des initiatives. Cette culture qui permet les initiatives est renforcée lorsque l'organisation est perçue comme un organisme qui récompense les comportements

appropriés et, plus important encore, ne punit pas les erreurs qui sont une conséquence inévitable du fait que le personnel exerce un pouvoir et une responsabilité qu'il n'avait pas avant. Graduellement, des réserves d'intentions implicites sont constituées et, pour cette raison, l'organisation devient apte à mener ses activités en fonction de son nouveau point d'équilibre C2.

Afin d'être en mesure de fonctionner efficacement d'une façon adaptative, les organisations militaires doivent élaborer des critères pour lesquels des circonstances justifient le changement de la méthode de commandement. En outre, elles doivent élaborer des procédures pour gérer ce changement. En ce faisant, elles peuvent éliminer les styles de commandement inappropriés, comme la microgestion au moyen d'un « tournevis à long manche », en définissant le moment où la centralisation devrait avoir lieu et la façon dont elle devrait se faire ainsi que le moment où elle devrait prendre fin et la façon de le faire. Pour les organisations décentralisées, il est possible de protéger les approches éprouvées comme le commandement de mission de toute tendance sournoise à la centralisation et de réaffirmer la primauté de ces approches.

La question de savoir si les nouvelles technologies, entre autres choses, rendront redondantes on non les méthodes de commandement décentralisées comme le commandement de mission, en raison de la possibilité théorique d'une centralisation de l'autorité directive, est très importante. On ne peut pas s'attendre à ce que les forces dont le point d'équilibre est au centre du continuum aillent vers un commandement décentralisé et demeurent efficaces – bien qu'elles puissent être entraînées de façon relativement peu coûteuse et rapide. Par conséquent, même si un commandement centralisé est maintenant possible en raison des progrès technologiques, les forces aptes à la décentralisation garderont l'avantage. Il n'y a aucune bonne raison de saper le commandement de mission. Il ne faut pas oublier que les forces aptes au commandement décentralisé ne peuvent pas être mises sur pied rapidement sur demande – peu importe les technologies disponibles. Un commandement décentralisé est basé sur des qualités intangibles comme la confiance, l'expertise et un large éventail d'expériences, qui prennent tous du temps à acquérir et sont fragiles; il est donc nécessaire de les préserver avec soin. Il est essentiel de réaliser que le commandement de mission est, comme cela a toujours été le cas, entièrement lié aux capacités et à la culture des individus qui forment l'organisation militaire. À cet égard, la technologie n'est qu'un simple catalyseur.

Table of contents

List of figures

1 Introduction

Examination of recent doctrinal and scholarly publications indicates a growing consensus across western militaries that the operational capability of network-enabled forces will be optimised by the adoption of a 'mission command'[1] philosophy. Mission command is a command approach[2] that is based upon the exercise of local initiative within the framework of command intent. It is enabled by an appropriate decentralisation of authority and responsibility that allows subordinate commanders the latitude to plan and conduct operations based upon their understanding of the local situation. Macklin and Stewart [1] argued that command approach itself could be used as a tool to manage the risk inherent in modern operations. They proposed that there may be merit in considering how a command approach, specifically mission command, could be adapted to the requirements of different situations, taking into account the resources available, the ability and experience of the force, and the nature of the operation. They also argued that network technologies have the potential to support the full spectrum of command approaches from decentralised to centralised. This paper builds upon that discussion.

It is argued here that, even with the substantial benefits of net-enablement, forces that have the capability to adopt decentralised approaches, such as mission command, retain the advantage in the contemporary operating environment owing to their ability to adapt their tactical activities rapidly as situations evolve. Nevertheless, a decentralised command approach is not like a technology. It cannot be bought off the shelf and it cannot quickly be integrated into a military organisation. Later in this paper, the organisational and cultural enablers of decentralisation are considered. It is argued that military organisations that aspire to decentralisation have little choice but to invest heavily in terms of time and resource to develop a robust culture of trust between commanders and their subordinates.

The paper examines the issues associated with short-term adaptation of command approach. A theoretical discussion is presented that is grounded in the framework for control and command proposed by McCann and Pigeau (e.g. [2], [3]), specifically their development of the notion of command intent. Two simple ideas are introduced here. First, it is proposed that military organisations have a point of 'command and control equilibrium', based on the extent to which they are optimised for centralised or decentralised operation. Second, it is argued that the ability to move away from that point of equilibrium differs substantially between organisations and can be characterised as 'elasticity'. This paper argues that military organisations that have the capability to employ mission command have the capacity to centralise if necessary. Although it argues that it is advantageous for military organisations to have the capacity to adapt their command approach, this paper is essentially a defence of mission command. While there is little

[1] Mission command is a very widely-used term that is not used consistently. There is no single authoritative definition in use. A number of terms are used as synonyms, for example 'directive command', 'command by initiative' and 'decentralised command'.

[2] In this paper, the term 'command approach' is used to refer to the way command is exercised within a military organisation. Thus, command approach is an organisation-level variable. The term 'command style' is used here to refer to the way in which different individuals exercise their command. Moreover, rather than representing aspiration, command approach is used to refer to the way in which command is exercised in practice. It is stressed that a military organisation's 'command approach' does not necessarily align with its espoused doctrine.

new about promoting the advantages of mission command, the intention is that by providing the beginnings of an argument based in theory, this paper will contribute effectively to a debate that is most often based on experience.

2 Command Approach

The way in which command is exercised in a military force is shaped by at least two elements: the personal style of the individual fulfilling the command role and the accepted command approach of the organisation that is often enshrined in doctrine. This paper is primarily concerned with the latter, although it should be recognised that these are by no means independent of one another. For example, although an individual's command style will be, in part, a function of trait variables such as personality, it will also be affected by enculturation and, as such, is very likely to reflect organisational orthodoxy to some extent[3].

A simple way to consider command approach is to view it in terms of two main factors: direction and supervision. Direction deals with the way in which those under command are tasked. In large part it includes the extent to which command intent is communicated explicitly or implicitly; for example, whether command outlines just the desired outcome of a task or supplements this with detail as to the ways and means required to complete that task (McCann and Pigeau [2]). A related issue is the frequency with which direction is given since, even where the possible avenues for development of an operation are relatively predictable and options for response are planned in advance, organisations that rely on explicit direction are likely to have a requirement to update orders regularly. Supervision covers the degree to which the command function monitors subordinate units during task completion. Included in this is the frequency with which it requests information and the amount of information that is required.

A number of authors have examined the different command approaches that are available. Van Creveld [4] (cited in Czerwinski [5]) proposed three categories: 'command by direction', characterised by attempts to control the whole force all the time; 'command by plan', an approach that relies on predicting how events will unfold, planning for every eventuality, and providing sub-elements of the force with those plans in advance; and 'command by influence', which is broadly equivalent to mission command. Alberts and Hayes [6] propose that command approaches can be categorised into mission specific, objective specific, and order specific in ascending order of directive specificity. They sub-divide this categorisation into six command approaches that range from a 'cyclic' approach, characterised by the regular issue of detailed orders from a central command organisation, to a 'control free' system where subordinates are provided detail of command intent relating to mission objectives and are provided considerable freedom in the planning and execution of the mission within that intent. At the heart of most of these discussions is the key issue of the extent to which command authority is held tightly at the organisational core or is delegated to subordinates as in mission command. The former class of command approach is commonly referred to as 'centralised' and the latter 'decentralised'.

2.1 Short-Term Adaptation in Command Approach

Despite the vehemence with which some authors have felt it necessary to defend mission command, it is difficult to find a cogent argument for its abandonment. A more reasoned

[3] Conversely, anecdotal evidence - collected informally from doctrine writers - suggests that command doctrine can be affected by the personality of senior commanders.

argument is that in some circumstances, it is appropriate, within a mission command approach, to restrict subordinates' freedom of action with a view to managing risk. For example, Burridge[4] [7] points out that there is a requirement for what he terms 'adaptive control'. "There are circumstances in which, on one day, I may need to command certain assets centrally, and on another day, I may not. And there are some strategically important assets which I shall always want to control in an adaptive sense."

Likewise, British Doctrine states that "Mission command allows [the commander] the latitude, as well as the means, to select and execute the most appropriate course of action necessary to achieve his objectives. However, reality dictates that the degree of freedom afforded will depend on the nature of the conflict" [7]. This situation specific application of command approach appears to apply in the real world too. In interviews with military personnel from different nations and environments, the author has been provided several anecdotal examples of doctrinally decentralised military organisations operating in a centralised fashion (not always appropriately). For example:

- in exercises of digitised formations, it was observed that commanders used the new technology to support their own personal command approach. Although decentralisers were reported to have used the technology to assist with the transmission of intent, those with a tendency to micromanagement were able to 'wield the long-handled screwdriver';
- the commander of a deployed formation reported that, at the commencement of offensive operations, he held command and control tightly at the centre while the initial plan was put into operation and gradually released his grip as events played out, eventually reverting to a highly decentralised approach;
- in one particular environment it was reported that operations were sometimes run in a centralised fashion, with the 2 star commander listening in on the secure net and contributing as he saw fit;
- a formation commander who assumed his command at a highly sensitive stage of an operation described how, at first, he and his staff engaged in a high level of supervision of subordinate units and their progress against plan. Intervention was occasionally necessary, but once he had gained confidence in the capability of those under his command and their understanding of his intent, he stressed that he was able to reduce supervision and concentrate his HQ on its primary tasks.

With respect to this last anecdote, it is also interesting to consider the findings of an interview study by Beausang [9]. He found some consensus within a sample of Swedish and Canadian commanders that they would work hard to ensure that their intent was clear during the early phases of an operation and gradually reduce this effort as the operation continued. In addition, Beausang's interviewees stressed their preference for face to face rather than technologically mediated communication with a view to ensuring that intent has been adequately transferred. Critically, he notes that "many interviewees underlined that initiative and trust are not universally applied; it depends on situation, mission, the intensity of the conflict, experience, shared intent etc." (p60). Thus, Beausang's sample is in sympathy with the idea that in practice, choice of

[4] Air Chief Marshall Sir Brian Burridge is Commander in Chief Headquarters United Kingdom Strike Command. Between October 2002 and May 2003 he was the UK's National Contingent Commander for operations against Iraq.

command approach is manipulated in response to a range of situational and organisational factors. The implication is that this manipulation is necessary to manage risk.

In the terms of the command framework devised by Pigeau and McCann, command approach is part of control, which they define as "structures and processes devised by command to enable it and to manage risk" [3]. Control is subordinate to command; therefore, where choice is available, deciding how command is to be exercised is a function of command. It is proposed here that choice of command approach should, in part, be driven by the operational and strategic context with a view to achieving an appropriate balance of risk. Thus, command approach is part of a class of control levers that commanders can manipulate with a view to optimizing effectiveness in the light of operational circumstances and as those circumstances change.

Like it or not, there is choice in how command and control can be exercised and, as is discussed in a later section, new technology is affecting this choice. Moreover, there may be situations in which it is necessary to centralise and so it appears that there is advantage to being able to move between 'control modes'. In order to be able to adapt effectively, military organisations must develop criteria for which circumstances make it reasonable to alter command approach. Moreover, they must develop procedures for managing this change. In so doing, military organisations have the potential to eradicate inappropriate command styles, such as micromanagement[5], by defining and bounding when and how centralisation should occur and when and how it should stop. For decentralised organisations, there is the opportunity to protect and reassert the predominance of tried and tested approaches such as mission command from any creeping tendency to centralisation.

[5] Command approaches can be considered in terms of two factors: direction and supervision. Micromanagement, or the 'long-handled screwdriver' effect, is usually considered in terms of an inappropriate degree of direction. Of the anecdotal examples provided earlier, perhaps only the first provides an example of true micromanagement. The others describe high levels of supervision and a form of 'management by exception'. Perceptions by subordinates that they are victims of micromanagement are probably more often engendered by a regular requirement for information – which here is deemed to be part of 'supervision' – rather than direction.

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3 Elasticity, Equilibrium, and Intent

In this section of the paper the concept of command intent is exploited to enable an examination of how organisations can change their command approach in the short-term, and why organisations differ in terms of their ability to achieve this flexibility. In this theoretical discussion, the notion of elasticity is introduced to describe an organisation's capacity for adapting command approach. Moreover, it is proposed that, no matter what degree of elasticity they possess, all military organisations have a point of command equilibrium and their ability to move away from this point is both time limited and stressful for the organisation.

Within their theoretical framework, Pigeau and McCann [10] have defined command and control as "the establishment of common intent to achieve co-ordinated action". The implication is that action is both co-ordinated and appropriate, that is, the intent that is shared contains the basis for understanding what to achieve, how to achieve it, and what others will likely do within overall command intent. Common intent underpins effective performance and is defined by Pigeau and McCann [10] as "the sum of shared explicit intent plus operationally relevant shared implicit intent". It incorporates the extent to which superiors' and subordinates' appreciations of objectives and the means for achieving those objectives overlap. Moreover, the achievement of co-ordination between the various elements under command is a product of common intent. Common intent is therefore central to the achievement of both vertical and horizontal integration within the force.

Pigeau and McCann [3] have proposed that control can be defined as "structures and processes devised by command to enable it and to manage risk". For the purposes of this discussion, risk is considered to refer to all aspects of performance. Thus, there is a risk that performance will fail to achieve mission objectives or will result in unwanted effects. Moreover, there is the risk that the performance of the various force elements will, individually, be adequate, but will fail to contribute to a successful outcome owing to a lack of co-ordination. Given that effective performance is dependent upon the establishment of common intent, it is appropriate to use common intent in defining risk. Therefore, we can propose that should common intent fall below a theoretical threshold level, risk levels would be seen as unacceptable.[6] One solution is to alter control by manipulating command approach. In the sections that follow, 3 theoretical scenarios are presented that draw upon the concept of intent to illustrate the adaptation of command approach.

The relationship between implicit intent, explicit intent, and common intent is depicted in Figure 1 (adapted, and simplified, from Pigeau and McCann [3],[10]). Units of shared intent are plotted on the y axis and degree of centralisation on the x axis. A 'risk threshold' level of common intent has been overlaid on this diagram. This demonstrates that the range of command approaches depicted will all, in theory, maintain common intent above the threshold level. The hypothetical military organisation illustrated has chosen to operate at point 'α', that is, it has a decentralised approach to command. As will be discussed later, this point can be considered to be where the

[6] Risk is clearly related to both the nature of the situation at tactical, operational, and strategic levels and the characteristics and capabilities of the force. A major question is how to define a threshold level of risk both in absolute terms and in relation to the situation – this is a topic for future research and is not developed further in this paper.

organisation has 'equilibrium'. For organisations at this end of the continuum, best practice in terms of training, selection, procedures, organisation structure and even equipment, ensures that implicit intent is maximised. The essential issue is that the organisation is optimised, by design, to operate at this point on the continuum.

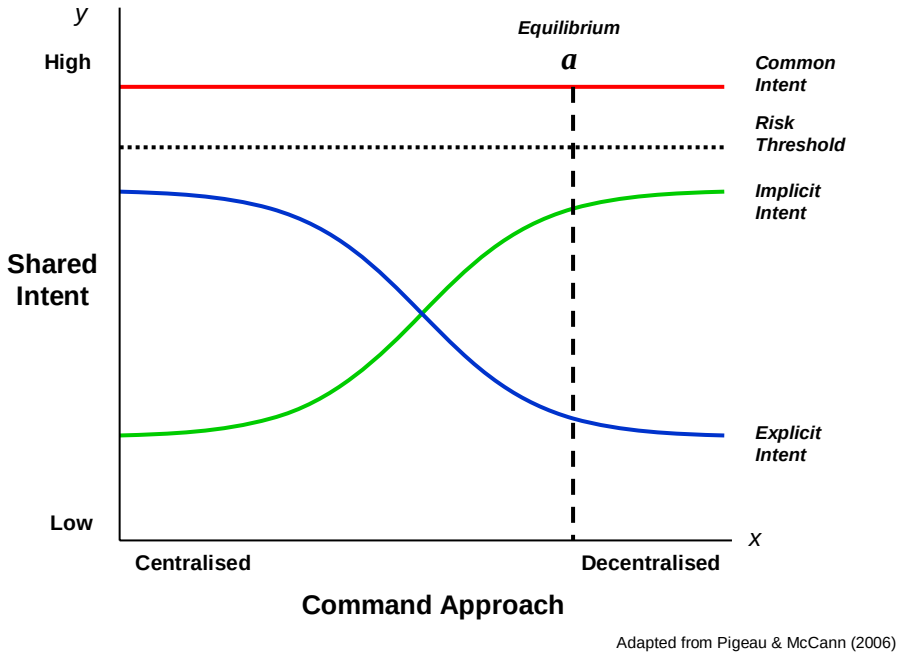

Figure 1: The continuum of command approach

Given that risk is a function of the situation, we can propose that, in theory at least, performance (Common Intent) will remain constant while the situation stays constant. Thus, we need to consider how situations can change and what consequence this might have. Recent British Army Doctrine [11] has provided a simple, yet elegant, description of operational situations. In the past, there have been various attempts to define a 'spectrum of operations' in the hope that any military scenario could be placed at a discrete point on this spectrum. This requirement was emphasised by a growth in the number of 'operations other than war' in the 1990s and the difficulty in identifying an appropriate categorisation for such operations[7]. The British Army's approach recognises that, although the major theme of a military campaign may be 'peace support', at any one time the force may be required to engage in a range of tactical activities including offensive and defensive operations. For the purposes of this paper, a simplified version of this is illustrated in Figure 2 which shows that as the theme of a hypothetical campaign shifts from combat to peace support, the relative proportion of tactical activity also shifts from offensive and defensive operations to stability operations. The key point, however, is that all three elements are represented to different degrees at all times. This idea is clearly in sympathy with General Krulak's characterisation of a '3-block war' [13].

[7] For example, see the discussion of UN "Chapter VI½" operations in Connaughton [12].

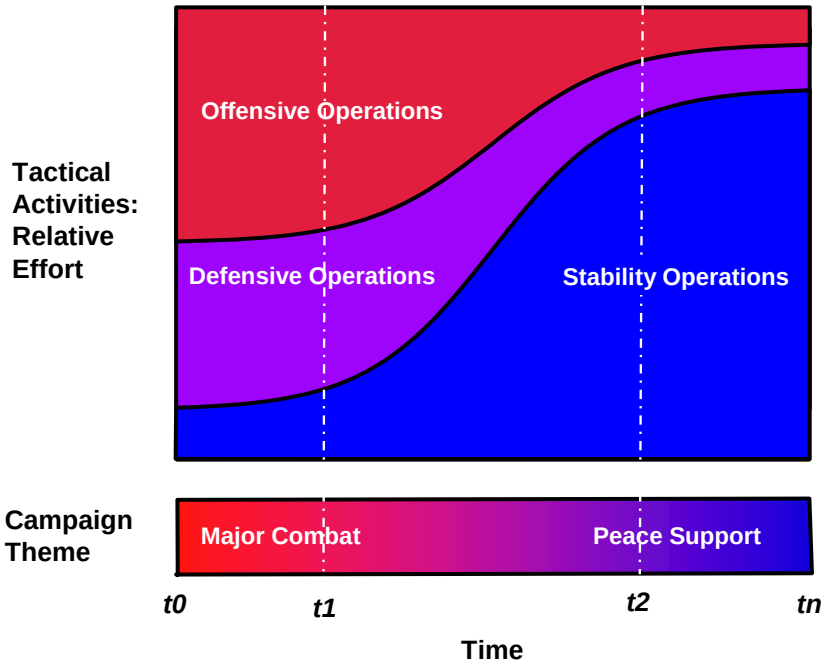

Figure 2: Full spectrum operations: A shift from combat to peace support

3.1 Scenario 1: Reachback.

Performance risk is determined both by features of the situation and by features of the force. In Figure 3 below, the effects of a change in situation on a hypothesised military force are described. We assume that the Pigeau and McCann graphic (Figure 1) has been rotated 90° about the y axis so that we see the elements of intent plotted on the y axis against time plotted on the z axis. The military force is the same decentralised organisation represented in Figure 1. At t0 we see the organisation at equilibrium at point α. As in Figure 2, this force faces a transition from war fighting to peace support. In this hypothetical example, it is proposed that the force and its commanders are optimised for combat operations (for example owing to their doctrine, training and experience) but have little capability for stabilisation operations. Here we see that, as the transition occurs, while explicit intent remains constant, implicit intent rapidly falls away with an effect on common intent. As a consequence, common intent falls below the threshold level that has been defined as presenting unacceptable risk of inappropriate or uncoordinated performance.

In the past, a force placed in this position might have been left to fend for itself, gradually building its knowledge and expertise. In the modern era, technology provides the facility for reachback and allows an element of centralised control to be implemented. This situation is illustrated in Figure 4. Here we see losses in terms of implicit intent being compensated for by an increase in explicit intent. The result is that common intent is maintained above the threshold of acceptable risk.

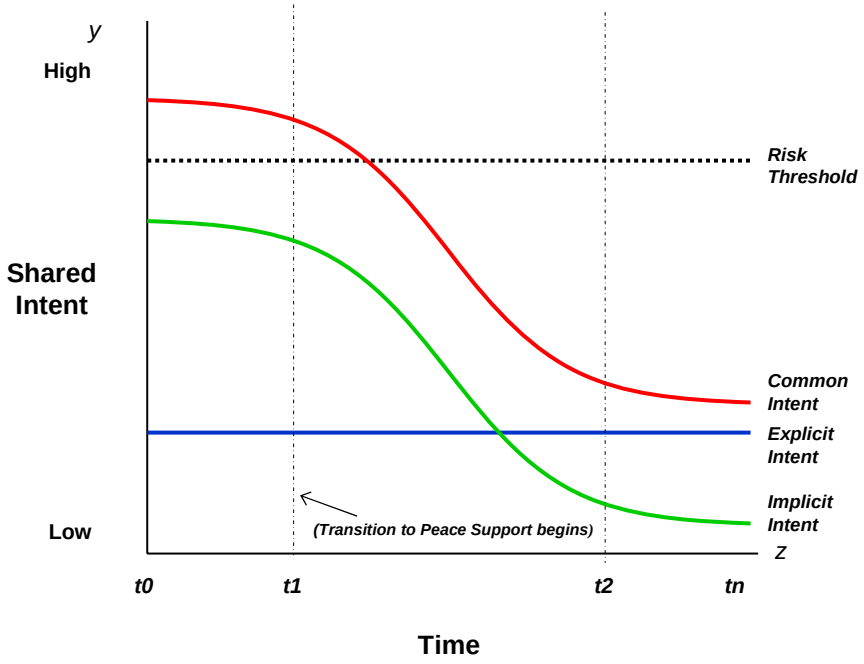

Figure 3: A deficit in shared intent introduces performance risk

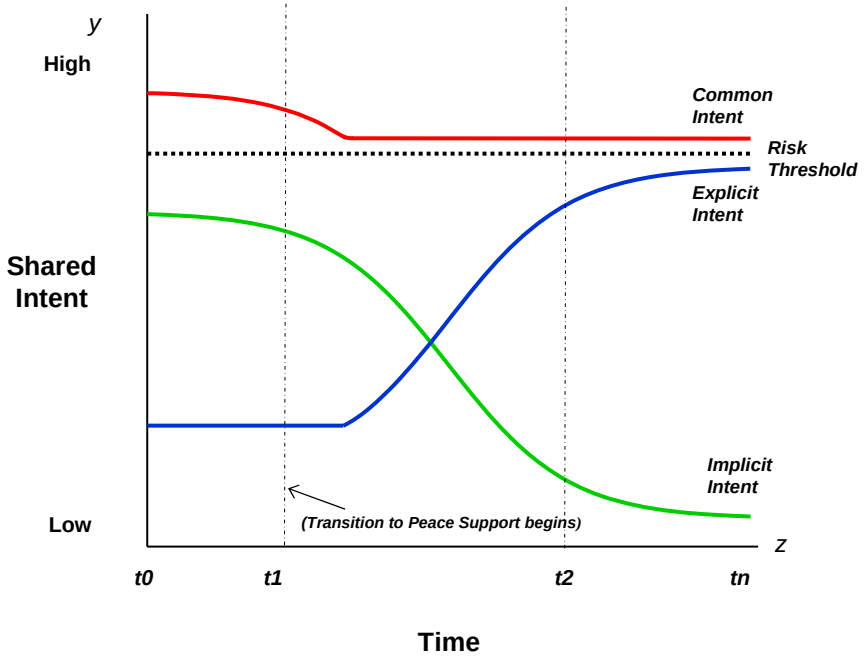

Figure 4: Performance maintained using explicit intent

If we re-consider what has happened in terms of the x axis, we see that the organisation has shifted in the direction of control centralisation as is illustrated in Figure 5 with the move from equilibrium at point α to point β.

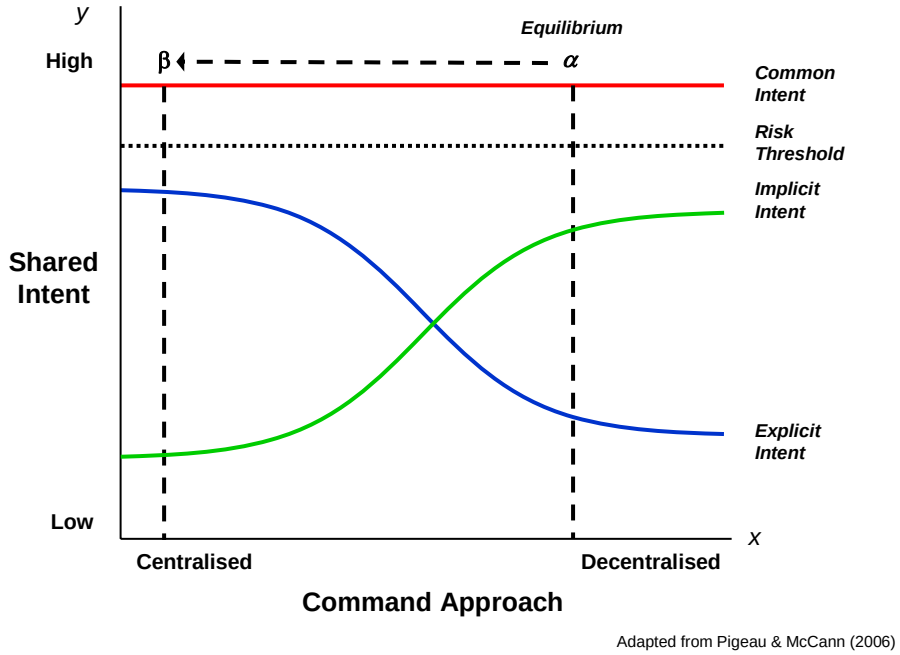

Figure 5: Short-term centralisation of command approach

For this organisation, however, operating in this way is alien. Not only does it over-tax the C2 hierarchy in terms of capacity, it is de-motivating for personnel whose organisational culture is based on expectations of a certain level of autonomy. Thus, it is proposed that the organisation must work to achieve a move back to position α as soon as that is possible or risk 'elasticity' becoming brittle. For this organisation, position α is 'equilibrium'. Thus, the force has the ability to move to position β and operate in a centralised fashion, however such a move can only be temporary otherwise permanent changes to organisation and personnel might be necessary. Given the organisational culture and capability of the personnel required by a decentralised organisation, it is highly likely that this force would begin immediately to rebuild its shared implicit intent in the light of the unfamiliar scenario. This would gradually see a natural shift back towards decentralisation and a release of the tension associated with pulling the organisation in the direction of centralisation.

3.2 Potential Implicit Intent

The previous, hypothetical, example described a situation where a major change in operational situation affected the level of common intent within a military force owing to a reduction in shared implicit intent. This change in common intent had the potential to affect performance by undermining the force's ability to operate appropriately within an acceptable solution space and

in co-ordination with other elements of the force. It is important to explore further why implicit intent was reduced in the previous example. Pigeau and McCann define common intent as explicit intent plus *operationally relevant* implicit intent (emphasis added). Thus, at any time there is likely to be a residual store of shared implicit intent. Some of this is redundant owing to the availability of explicit intent and some is irrelevant. However, some of it represents a pool of potential capacity; for example deep, tacit, knowledge of tangential relevance, and attitudes and previous experience related to adapting to new situations. Adding this pool of potential capacity to 'relevant implicit intent' provides a hypothetical 'absolute' level of implicit intent. The difference between absolute intent and implicit intent provides an indication of reserve capacity - a 'potential' level of implicit intent - and therefore of 'elasticity'. Potential implicit intent is also a function of situation. In the example provided in Figure 3, we can hypothesise that reserve capacity was used up quickly in maintaining a constant level of implicit intent initially, but was not sufficient to prevent it reducing rapidly thereafter. Thus, as the situation alters, the potential implicit intent is dried up as the majority of shared knowledge is rendered irrelevant.

3.3 Scenario 2: Decentralised equilibrium enables effective performance in the absence of explicit intent.

The previous scenario illustrated how an organisation might respond to a situation characterised by a rapid reduction in shared implicit intent. It is possible to draw upon the Pigeau and McCann

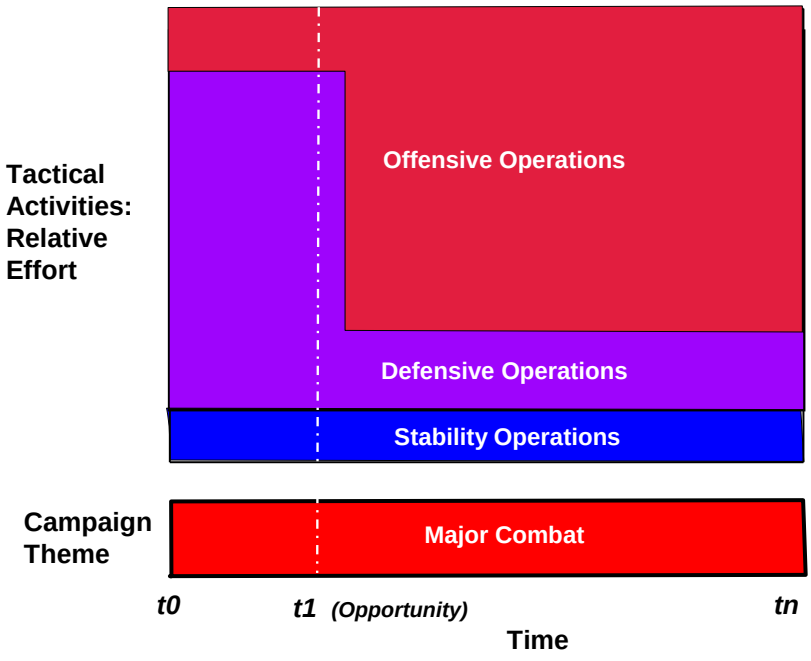

Figure 6: Exploiting opportunity

framework to understand what happens if explicit intent is similarly affected. As illustrated in Figure 6, adaptation of command approach is again necessitated by a change in the situation. At t0 a force is primarily engaged in defensive operations; however, later at t1 they are suddenly faced with an unforeseen opportunity and the balance of the operation shifts to offence. The challenge is to exploit this limited, unexpected, window of opportunity in a timely fashion.

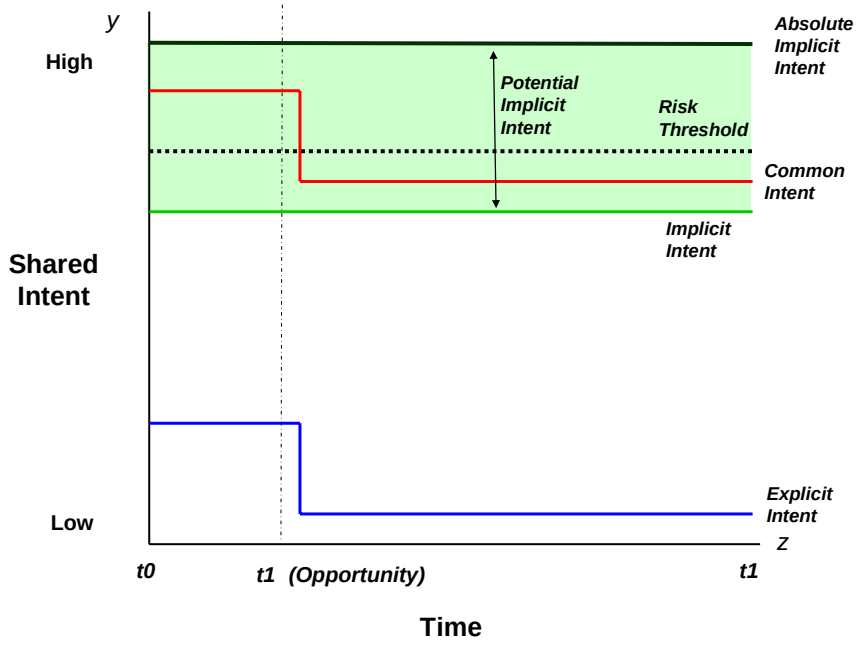

Figure 7: A change in situation renders explicit orders irrelevant

Figure 7 describes the scenario using the framework parameters discussed above. As before, we assume that this is a decentralised force, so that at t0 this force is at equilibrium at position α (Figure 1). In Figure 7, a hypothetical absolute level of implicit intent is illustrated. The shaded area represents reserves of unused implicit intent which constitute potential implicit intent. At t1, available explicit intent quickly becomes irrelevant and common intent is degraded such that the organisation falls below the performance risk threshold. To wait for orders from the centre could entail lag and a loss of opportunity. However, the organisation described here has the capacity to draw upon reserves of shared implicit intent by tapping potential intent. This is illustrated in Figure 8 where, in order to exploit the opportunity, local commanders are able to drag the organisation above the risk threshold and exploit the situation effectively. This shift towards further decentralisation is illustrated in Figure 9 with the force moving from equilibrium at point α to point γ[8].

[8] It is interesting to note that the degree of elasticity that the force could achieve in moving to the right was relatively limited. As will be discussed later, moving to the right of the x axis is effortful. Even a decentralised organisation has only limited resources of potential intent to draw on in moving rightwards.

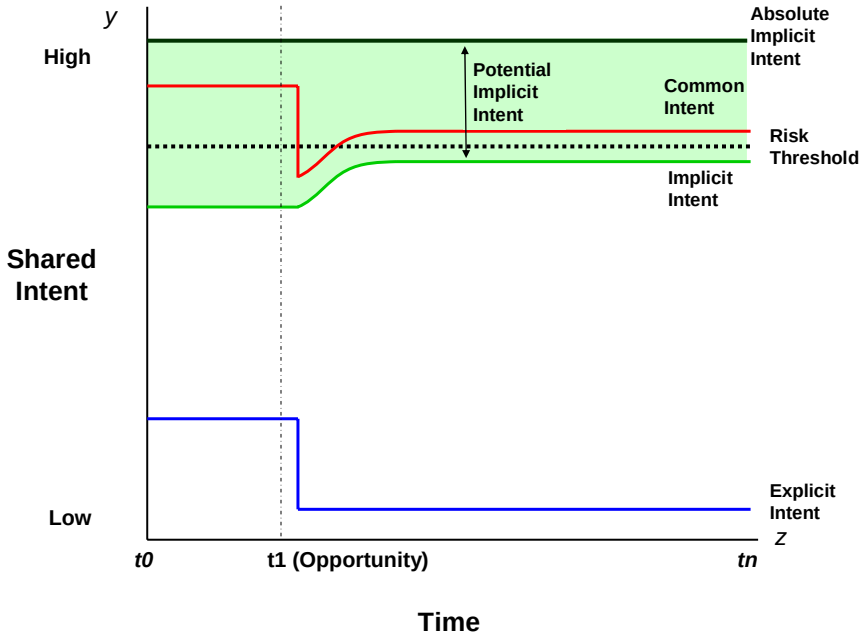

Figure 8: Potential implicit intent enables the exercise of initiative

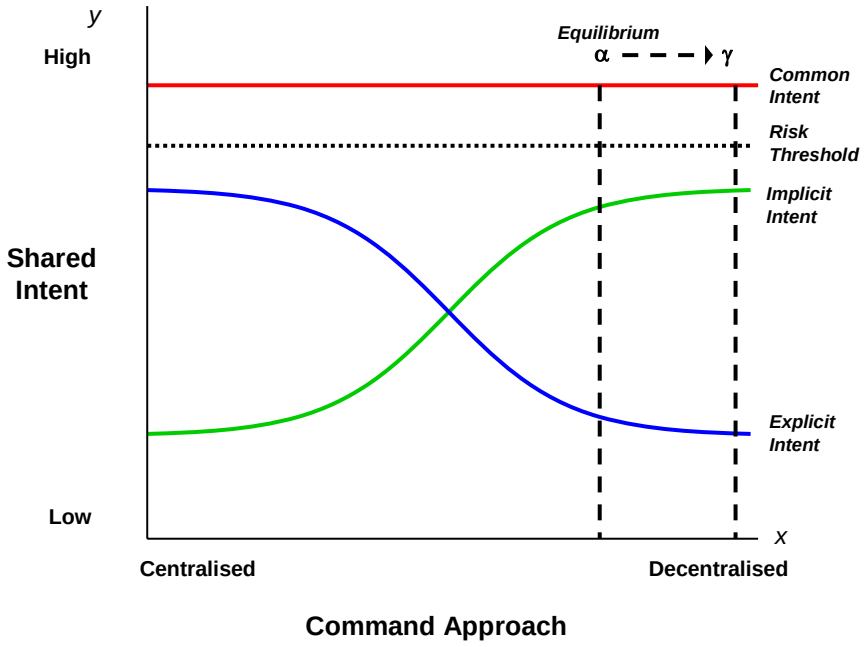

Figure 9: Short-term decentralisation

We have considered how a decentralised organisation might respond to changes in situation that affected its 'supply' of implicit and explicit intent respectively. We saw that, this hypothetical organisation was able to adapt rapidly to its circumstances in the short-term either by harnessing technology to increase explicit intent or by drawing on reserves of implicit intent. It was also proposed that this capability was indicative of the organisation's 'elasticity'. Moreover, it was stressed that this elasticity is time-limited, and that the organisation should seek to return to its point of equilibrium to avoid performance deterioration. For example, a super-ordinate HQ designed for mission command may have the capacity to operate in a centralised fashion, however the increase in workload entailed may not be sustainable. Unless a return to equilibrium is possible, the strain is likely to result in performance decrement. Alternatively, the subordinate HQ could re-structure, perhaps using new technology to 'plug in' extra planning resource as described by Christie, Macklin, and Fidock [14]. However, assuming that overall the force is resource-limited, such changes may not themselves be sustainable. At the risk of over-taxing the metaphor, it might be suggested that over time the stress could result in irrevocable deformation of the organisation – if not in terms of structure, in terms of an adverse effect on the culture of decentralisation: for example by denting individuals' faith in their freedom of action and their motivation to exercise this freedom.

3.4 Scenario 3: Centralised equilibrium restricts flexibility in the absence of explicit intent.

Having considered the case of an organisation that is at equilibrium at the decentralised end of the continuum, we now consider one that is at equilibrium under a centralised style of command. The notion of shared intent is invoked to illustrate why, in theory at least, such organisations would have less elasticity than the decentralised. Moreover, in doing so, an argument is developed to illustrate why, for organisations that have the capability, mission command still offers the most powerful command arrangement.

At equilibrium, achievement of common intent for this force is built upon shared explicit intent with only a small amount of relevant implicit intent contributing. Most importantly, in terms of this discussion, we see in Figure 10 that this organisation has very limited reserves of shared implicit intent as indicated by potential implicit intent. As was illustrated previously in Figure 6, the need to shift command parameters is occasioned by a change in situation that renders available explicit intent irrelevant. As in Scenario 2, common intent is degraded and the organisation falls below the threshold of acceptable risk. The only immediate option is to rely upon implicit intent by moving away from equilibrium. As is illustrated in Figure 11, however, compared to the decentralised organisation in Scenario 2, this force has much smaller reserves of potential implicit intent and consequently, even the full reserve is insufficient to pull the organisation above the risk threshold. Until explicit intent can be re-established, the force is at risk of inappropriate and/or uncoordinated action. The shift in equilibrium from δ to ε is illustrated in Figure 12. Moreover, it is noted that, as with the decentralised force in Figure 9, moving in the direction of increased decentralisation is very difficult.

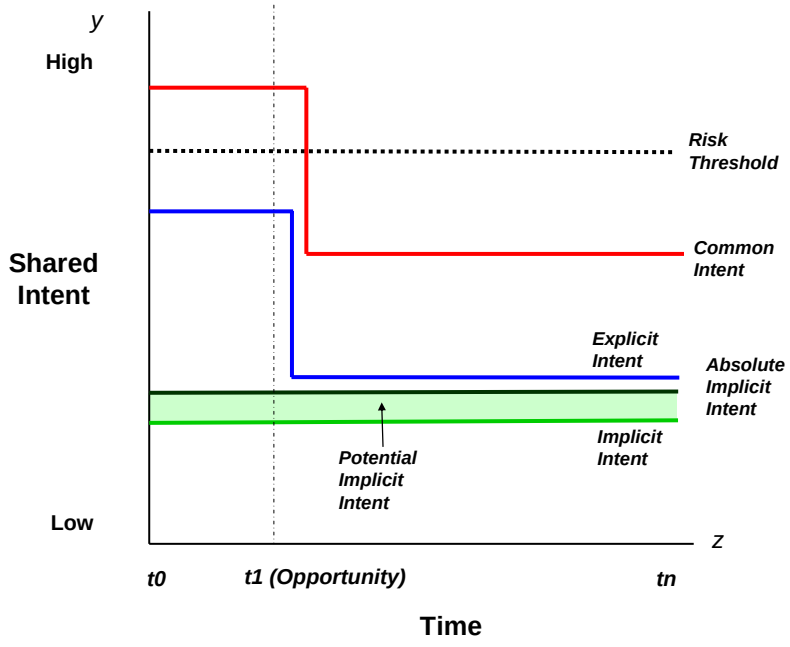

Figure 10: A change in situation renders explicit intent irrelevant

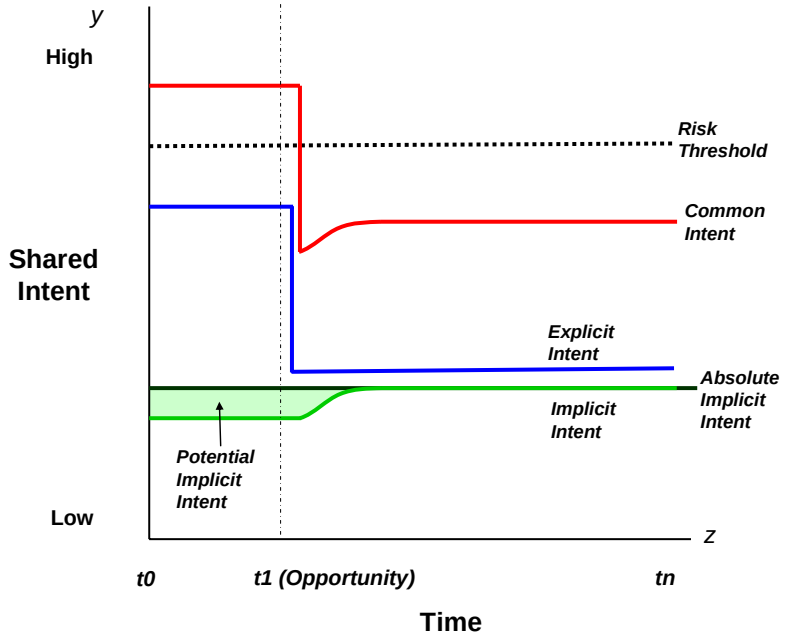

Figure 11: A deficit in implicit intent

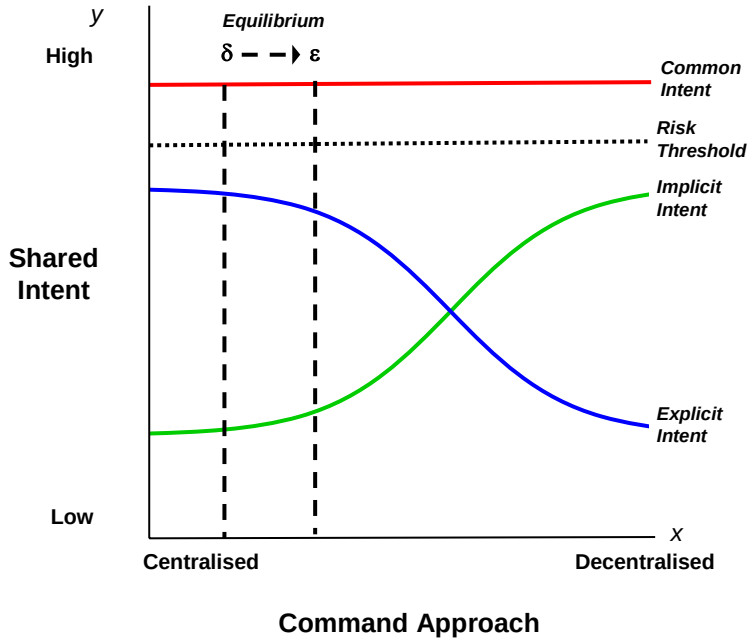

Figure 12: Short-term decentralisation

This section has presented a theoretical illustration of how organisations might adapt their command approach in the short-term. For a specific organisation, this capability can be described in terms of two important variables: its point of equilibrium and the degree of elasticity it has to move away from that point. As is illustrated in Figure 13, elasticity reduces steadily as the organisation's point of equilibrium shifts along the x axis in the direction of the origin since it is a function of potential implicit intent and this is highest for organisations that build the ability to operate based on implicit intent, owing to the redundancy that they must create. Conversely, organisations with their point of equilibrium at the centralised end of the continuum tend to have less elasticity because they have lower potential implicit intent. In the next section, the roots of implicit intent are considered.

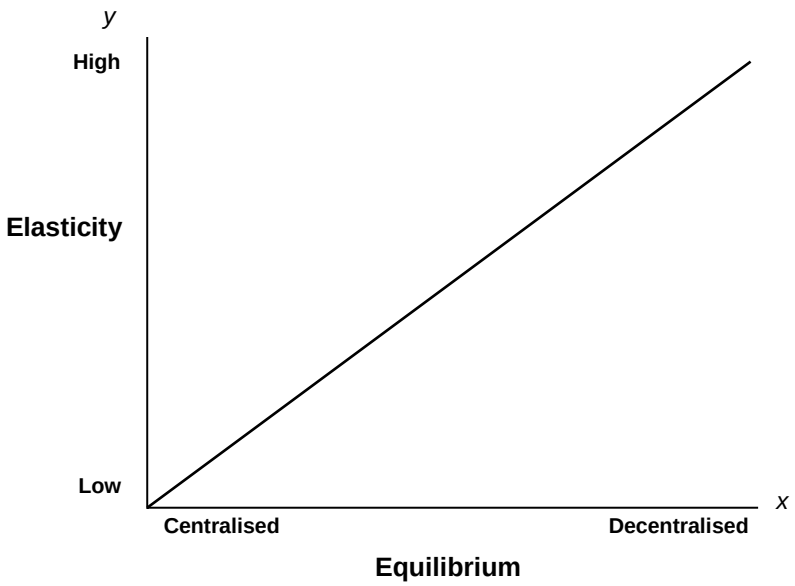

Figure 13: Elasticity increases as a function of decentralisation

4 Discussion

It is important to consider why one organisation might have low potential implicit intent when compared to another. The organisations discussed in Scenarios 2 and 3 provide such a comparison. This has been largely a theoretical discussion up to this point, but in exploring this issue we must consider factors that are central to the development of military organisations. The key issue in this discussion relates to how command 'culture' promotes or hampers the development of implicit intent.

Command Culture

Wyly [15] suggests that doctrine is not sufficient in itself to ensure that command is successful. For example, he attributes to W S Lind the observation that German capability in WWII was as much a result of their 'ways of thinking' as their doctrine. We might equally invoke the notion of culture[9]. It would be a brave analyst who proposed that national culture was the sole contributing factor in this regard (although recently there has been a trend towards seeking such explanations). It seems more reasonable to propose that organisational culture is the key, specifically that part of organisational culture that influences command philosophy. In particular, we should note Wyly's comment that the appropriate mindset did not come automatically to the Germans, but rather was the product of their military education process. The implication of Wyly's comments is that the German forces had to work to develop the appropriate organisational cultural norms to harness their 'auftragstaktik' doctrine optimally. This very important point is revisited later in the discussion. Thus, the success of the doctrine is a function of progress across other lines of capability development[10], particularly personnel.

This view is reinforced by Johnston [19] in an article entitled "doctrine is not enough" where he stresses that doctrine has only an indirect effect on actual behaviour. He notes that, while the British Army in WWII is accepted to have been "ponderous and positional", a reading of the 1935 revision of its Field Service Regulations shows that it possessed doctrine "that Guderian himself or any manoeuvre theorist today could be proud of". Johnston stresses that the doctrine had little effect on the behaviour of the British Army at war. Moreover, he quotes Sir Michael Howard, who suggested that "The British Army in the Second World War was not very good, and those of us who were fighting in it knew where its weaknesses lay. Staff work was rigid. There was little encouragement of initiative or devolution of responsibility."[11]

[9] There are many definitions of 'culture'. The following are provided for illustration. Schein [16] has defined culture as "a pattern of shared basic assumptions, invented, discovered, or developed by a given group, as it learns to cope with its problems of external adaptation and internal integration, that has worked well enough to be considered valid, and, therefore, is to be taught to new members of the group as the correct way to perceive, think, and feel in relation to those problems" (p.247). Hofstede [17] defines culture as "the collective programming of the mind which distinguishes the members of one group from another" (p.21).

[10] The notion of Capability Lines of Development is now widely accepted in Western militaries as a useful tool in the military capability-based planning process [18].

[11] Johnston provides the following reference for this quotation: "Quoted in *The Scholarship on World War II*, The Journal of Military History, 55 (July 1991), 379."

The related notion of trust is emphasised in many discussions of mission command. For example Storr [20] stresses the existence of a mutually-held "contract of trust" (p.78). The superior trusts subordinates to act within command intent, even in situations that the commander did not envisage when planning. Completing the contract is the subordinates' trust that they will be given access to appropriate resources and will be supported in exercising initiative, even if they make mistakes. This idea has some similarity to the concept of the "psychological contract" which has been advanced by Rousseau [21]. She invokes schema theory to illustrate how such contracts are developed and fine tuned in response to individuals' experiences in an organisation. To sustain such a contract of trust, its elements should regularly be tested and reinforced. In the military, the main opportunities for such re-negotiation and reinforcement occur in training and the successful application of the contract in action is clearly dependent upon the common military dictum that organisations should train as they intend to operate.

The related and very important question of how resilient such contracts are in the face of their violation is not developed further in this paper. However, it is essential to understand just how easy it might be to 'burst the bubble'. Most relevant to this discussion is the question of how resilient the contract of trust is in an environment characterised by adaptation of command approach. For example: how often and for how long could the commanders of an organisation with its equilibrium at the decentralised end of the continuum centralise before subordinates felt that they were not being accorded an appropriate level of trust? How is a contract constructed that ensures subordinates understand and believe that commanders will centralise only when necessary operationally? In order to develop the capability to adapt command approach, it would be essential for the appropriate trust contract to be developed through training. Just as mission command orders should state the reason for the mission, orders produced in circumstances where command approach was being adapted in the short-term would need to specify why there was change in the way command was being exercised. It would be cavalier to leave the maintenance of a contract of trust to chance in such circumstances.

In order to employ mission command successfully, it is essential first to understand what the key cultural enablers of such an approach are and to ensure they are in place, or at least have some prospect of taking root within the organisation concerned. In order to go further and formalise a system where command approach might be adapted in the short-term, albeit in an organisation that defaults to decentralisation, it is critical to understand whether such a system has the potential to undermine those enablers. Specifically, we should consider what attitudinal changes the experience of centralisation might engender in the minds of commanders and subordinates used to decentralisation, especially with regard to levels of motivation.

It is proposed here that such cultural enablers are embedded in the three factors underpinning choice of command approach that have been described by Pigeau and McCann [3]. These are: shared knowledge, comparable reasoning ability, and shared commitment and motivation. The degree to which these are developed directly underpins the reserves of implicit intent an organisation has available when it operates. Pigeau and McCann's three factors heavily influence and / or restrict the choice of the point of command equilibrium for any military organisation. Moreover, it is proposed that these factors are the primary determinants of potential implicit intent and therefore underpin the degree of elasticity that the organisation has. For example, organisations such as the centralised organisation described in Scenario 3 tend to operate in a centrally controlled fashion, perhaps relying on a 'playbook' of set piece tactical manoeuvres to

prosecute their aims.[12] As a consequence, there is unlikely to be any significant development of reasoning ability and creativity among junior commanders since it is rarely demanded. Furthermore, if this is rarely necessary, it is unlikely to be used as the basis for promotion and selection decisions. Such organisations might even have distinctly 'inflexible' characteristics such as predictability and lack of initiative as promotion criteria. Likewise, in terms of motivation and commitment, personnel in such organisations are likely to be motivated mainly by the rewards (or at least the absence of punishment) associated with successful implementation of the plan provided. Organisation culture is unlikely to reward doing anything out of the ordinary and mistakes, even well-intentioned ones, are potentially career-limiting events for junior officers. Perhaps, most importantly, owing to the limited experience of the force, there is unlikely to be any significant degree of shared knowledge developed. Precisely the same factors were key to the ability of the organisation described in Scenario 2 to move in the direction of decentralisation. The extent to which this is possible will depend, in large part, on the culture that pertains within the organisation, the beliefs and attitudes that subordinate commanders have developed over time, and the extent to which they feel comfortable in grasping the opportunity presented. Even the most knowledgeable, capable officers within an organisation that rewards risk aversion are not likely to be motivated to act without approval from above.

4.1 Command Adaptation and Organisation Development

It should be stressed that the choice of command approach is, in part, a balance of investment question. The investment includes time and resource. The aspiration to achieve equilibrium further to the right on the x axis in Figure 1 is expensive. An efficient system of training and education is essential to build shared knowledge, to reinforce appropriate behaviour and values, and to ensure that personnel are appointed to positions that suit their talents. This all takes time and is costly. Lucas [22] has stressed the heavy investment in training that was required before the Germans could reap the benefits of their auftragstaktik doctrine. Decentralised command approaches are expensive, they must be nurtured and, once established, carefully maintained. Economically, therefore, it is relatively cheap to operate at the centralised end of the continuum. Indeed, where large scale conscription is required, for example in times of national crisis, centralisation is probably the only option available in terms of time and training resource.

Many of the issues discussed in the preceding sections are illustrated in the following quotation from Field Marshal Slim which appears in UK ADP Land Operations [8]. "Commanders at all levels" of the British 14th Army "had to act more on their own; they were given greater latitude to work out their own plans to achieve what they knew was the Army Commander's intention. In time they developed to a marked degree a flexibility of mind and a firmness of decision that enabled them to act swiftly to take advantage of sudden information or changing circumstances without reference to their superiors. …This requires in the higher command a corresponding flexibility of mind, confidence in subordinates, and the power to make its intentions clear through the force." This paper has concentrated on short-term adaptation of command approach. What is described in the quotation is a long-term shift of command equilibrium from centralisation to decentralisation. This might be regarded as organisational development. The implication is that the Army Slim inherited did not have the required elasticity to adapt its command approach

[12] Consequently, such organisations tend also to be inflexible in terms of the range of operations across the spectrum of conflict that they can undertake. The ability to undertake stabilisation operations where the 'playbook' has been written for combat is likely to be very limited.

instantly[13]. In particular it is interesting to note how his Army had to adapt to a command approach based on initiative. The implication of the quotation is that the benefits of this command approach were only achieved after some time had elapsed. In the terms introduced in this paper this represents a permanent shift in the point of command equilibrium. It is proposed here that the mechanism for this change is the development of reserves of implicit intent which confers a corresponding increase in elasticity.

The factors that enable adaptation of command approach are closely related to those that enable decentralised command. Earlier in this paper it was stressed that choice of command approach (point of command equilibrium) is not merely a decision about process, but concerns all organisational lines of development. For example a heavily centralised organisation will procure communications and information equipment that facilitates upward movement of information for decision making and downward movement of detailed orders. Such an organisation will structure itself in such a way that decision making can be centralised, for example by creating a large central staff organisation devoted to planning. In addition, organisation processes will support such centralisation, in particular by constraining and limiting the decision making freedom afforded subordinates. However, perhaps most important is the personnel line of development. It is proposed here that the three factors which Pigeau and McCann suggest underpin choice of command approach are all part of this line of development. Moreover, without denying the challenges associated with altering organisation structure, drafting new doctrine, or introducing new technology, it is the personnel line of development that is the most difficult to change. As Oliviero [23] describes, the doctrinal notion of 'Führen durch Auftrag' (literally 'leading by means of a mission') was available to the Prussian Army in the early Nineteenth Century, and essential organisational changes were implemented at that time. Nevertheless, since the full development of Prussian and latterly German military culture was only realised at the end of the Century, it was only in the two World Wars that the full advantages of the German doctrine were demonstrated. This lesson should encourage caution amongst those who would seek to introduce mission command overnight merely by rewriting doctrine. It follows therefore that it is not appropriate to impose command doctrine top-down without ensuring that it will be appropriate to the culture and capability of the organisation concerned. In this vein, Oliviero [24] stresses that the "conceptual grafting" of auftragstaktik into other nations' doctrine is mistaken unless the fundamental building blocks, including culture and societal influence are in place. Such cultural aspects should not be underestimated. As a 2-star officer interviewed by Stewart, Cremin, Mills, and Phipps [25], pointed out: "…if you try and adopt a Mission Command style to command people who don't really understand it, or are uneasy with it, you are likely to have chaos. And so this leads coalitions, generally speaking, into command by detailed orders".

A long-term shift in a military organisation's point of command equilibrium toward decentralisation - such as is described in the quotation from Slim - is enabled by a circular process built on an appropriate organisational culture. In the first place, a culture that allows the exercise of initiative must be created. This permissive culture is reinforced by the organisation being seen to reward appropriate behaviour and, most importantly, being seen not to punish the mistakes that are an inevitable consequence of personnel exercising new found authority and responsibility. Gradually, reserves of implicit intent are built up and, because of this, the organisation becomes capable at its new point of command equilibrium. During this period, the organisation is in a state

[13] This is entirely in line with the comments about the rigid culture of the WWII British Army quoted from Johnston in an earlier section of this paper.

of intent deficit as it struggles to build new reserves of implicit intent to fill the vacuum left by a reduction in explicit direction. Two issues seem clear: first, this is a process that would be best experienced during peacetime when mistakes can occur in a benign environment, and, second, this process that will work best as a series of small changes rather than one large-scale transformation, the latter requiring the organisation to experience a lengthy period characterised by a large intent deficit. This notion of incremental changes in command culture is similar to the graduated increases in authority and responsibility as a function of competence that are described in McCann and Pigeau's discussion of the 'balanced command envelope' [26]. In part, this approach to organisational change is desirable in that it reduces the risk of consistent poor performance thus avoiding the danger of disillusionment and loss of confidence amongst personnel.

4.2 Command Approach and New Technology

The question of whether or not new technology, amongst other things, will render decentralised command approaches such as mission command redundant owing to the theoretical possibility of a centralisation of directive authority is very important. Alberts and Hayes [6] observe that, in the modern era, there is more choice as to how command can be exercised. "In general, *greater capability to acquire, integrate, move, and process larger amounts of information rapidly makes more centralized decision making possible."* (p.73, original italics). "Many are now arguing … that emerging technologies will enable the US to move toward true "information warfare", in which fully centralized, optimal decision making becomes possible because of 'total battlefield awareness' and 'information dominance'" (p.66). While we should remember that there is much more to military command than a mechanistic process of moving information and making decisions, we should note the very important general point that these authors do not imply that centralisation is an imperative in future command and control. Indeed, perhaps their most significant observation is that there is no single, correct approach to command, rather optimisation is dependent upon circumstances, a point that they reiterate in a later publication where they emphasise that unless the conditions necessary for self-synchronisation (decentralisation) are met, there is no suggestion that it should be employed [27]. The implication is that, to be effective, forces must have the capability to operate in other ways. Thus, choice of command approach is dependent on characteristics of both the situation and the military organisation that is placed in that situation.

It should be recognised that, as was stressed by Macklin and Stewart [1], the network technologies now being procured have the potential to support the full spectrum of command approaches from decentralised to centralised. For example, whereas British Defence Doctrine [8] stresses that "At the tactical level, network-enabled capabilities enhance forward command", Toffler and Toffler [28] point out that Soviet forces harnessed the early "C3I systems to strengthen top-down authority in a system described as 'forward command from the rear'". This paper has argued for the pre-eminence of mission command and presented a theoretical argument for why that is the case. However, it is essential to realise that mission command is, as was ever the case, entirely dependent on the capability and culture shared by the individuals making up the military organisation. In this regard, technology is simply one enabler.

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5 Conclusions

There has always been choice in command approach, however, in the past 200 years, decentralised forms, such as 'mission command' have proven to be the most efficient in the context of the way military forces have structured both physically in the battlespace and organisationally. More recently, communications and information technology have widened the choice by making centralised approaches to command more feasible[14]. Nevertheless, this paper has argued that forces that have the capability to adopt decentralised approaches to command have the advantage in a contemporary operating environment owing to their ability to adapt to novel situations. It is now possible for forces to adapt their command approach in response to changes in situation risk. Shifting along a continuum of command approaches from decentralised to centralised represents one form of organisational adaptability, which has been dubbed 'elasticity' in this paper. In short, forces that have the capability to be decentralised can, in the short-term, step down to centralisation (and, to a limited extent, step up to be less centralised). However, they retain the same point of 'equilibrium' in the decentralised region of the continuum – that is, such a force is optimised for decentralised operation, for example because of its training, its organisation structure, its organisational culture, and its equipment. Moreover, during the period that the organisation moves away from its point of equilibrium, it is under stress and should seek to return to the equilibrium point or risk permanent deformation. These two aspects of a military force – elasticity and equilibrium – provide an indication of its capacity for flexibility of command approach. In theory, elasticity increases as the point of equilibrium shifts towards the decentralised end of the continuum.

The roots of this elasticity lie in the concept of command intent, specifically implicit intent. The ability to operate in a decentralised fashion requires that forces create a deep, broad, reservoir of implicit intent. This provides a reserve capacity of potential intent that forces can draw upon if required. This potential intent is heavily dependent upon the three factors identified by Pigeau and McCann [3], namely shared knowledge, shared reasoning ability, and motivation and commitment. These factors all relate to the 'personnel' line of capability development; that is they are all aspects of the human. All of these are costly to develop in terms of time and resources – for example time required for training. Thus, amongst other things, the choice as to how to command (equilibrium and elasticity) is an economic consideration. Forces that have their point of equilibrium in the centralised region are quick and relatively cheap to train, but have only a limited repertoire of capability and cannot be expected to step up to decentralised command and remain efficient. Therefore, even in an age when centralised command is theoretically possible owing to technological advance, forces with the capability for decentralisation will retain the advantage. There is no good reason to undermine mission command. However, it should be remembered that forces with the capability for decentralised command cannot be created quickly on demand – *no matter how much technology is available*. Decentralised command is built on intangible qualities of the force such as trust, expertise, and broad experience, all of which take time to develop and are fragile, thus requiring careful maintenance.

[14] Earlier it was proposed that command approaches can be considered in terms of two factors: direction and supervision. Clearly new technology influences both aspects. In terms of supervision, it assists with the collection, collation, and processing of information specific to the operational situation and progress against plan. Direction is aided by the ability to pass information, intent, and orders down the chain of command.

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Mission command is based upon the exercise of local initiative within the framework of command intent. It is enabled by decentralisation of authority and responsibility that allows subordinate commanders the latitude to plan and conduct operations based upon their understanding of the local situation. This paper argues that forces with the capability to decentralise can also harness network technology to step down to centralization in order to manage risk. Shifting along a continuum of command approaches represents a form of short-term organisational adaptability that has been dubbed 'elasticity' in this paper. It is argued that the roots of this elasticity lie in the concept of command intent, specifically implicit intent. The ability to operate in a decentralised fashion requires that forces create a deep, broad, reservoir of implicit intent. A force that is optimised for centralised operation, for example because of its training, its organisation structure, its organisational culture, and its equipment, will not have the same degree of 'elasticity' because it will not have a comparable reserve of implicit intent. All military organisations have a point of equilibrium on the command approach continuum and will experience stress during the period that they move away from this point. These two aspects of a military force – elasticity and equilibrium – provide an indication of its capacity for flexibility of command approach. In theory, elasticity increases as the point of equilibrium shifts towards the decentralised end of the continuum. In an age when centralised command is theoretically possible owing to technological advances, forces with the capability for decentralisation will retain the advantage. This paper is a defence of mission command. Nevertheless, it is stressed that forces with the capability for decentralised command cannot be created quickly on demand – *no matter how much technology is available*. Decentralised command is built on intangible qualities of the force such as trust, expertise, and broad experience, all of which take time to develop and are fragile, thus requiring careful maintenance.

Le commandement de mission est fondé sur la prise d'initiative locale dans le cadre des intentions de commandement. Il est possible grâce à une décentralisation du pouvoir et de la responsabilité qui donne aux subordonnés la latitude de planifier et de mener des opérations en fonction de leur compréhension de la situation locale. La présente étude soutient que les forces aptes à la décentralisation peuvent tirer profit de la technologie des réseaux pour aller vers la centralisation afin de gérer les risques. La capacité de se déplacer le long d'un continuum de méthodes de commandement représente une forme d'adaptabilité organisationnelle à court terme appelée « élasticité » dans la présente étude. L'étude fait valoir que les racines de cette élasticité résident dans le concept d'intention de commandement, plus particulièrement l'intention implicite. La capacité de mener des activités de façon décentralisée exige que les forces constituent un réservoir grand et profond d'intentions implicites. Une force optimisée en vue d'opérations centralisée, par exemple en raison de son entraînement, de sa structure organisationnelle, de sa culture organisationnelle et de son équipement, n'aura pas le même degré « d'élasticité », car elle n'aura pas une réserve comparable d'intentions implicites. Toutes les organisations militaires ont un point d'équilibre le long du continuum des méthodes de commandement et connaîtront des périodes de tensions lorsqu'elles s'éloigneront de ce point. Ces deux aspects – l'élasticité et l'équilibre – offrent une indication de la souplesse d'une force militaire en matière de méthode de commandement. En théorie, l'élasticité augmente lorsque le point d'équilibre se déplace vers l'extrémité du continuum visant la décentralisation. À l'heure où un commandement centralisé est théoriquement possible en raison des progrès

technologiques, les forces aptes à la décentralisation garderont l'avantage. La présente étude soutient le commandement de mission. Néanmoins, elle souligne que les forces aptes à un commandement décentralisé ne peuvent pas être mises sur pied rapide sur demande – peu importe les technologies disponibles. Un commandement décentralisé est fondé sur des qualités intangibles comme la confiance, l'expertise et un large éventail d'expériences, qui prennent tous du temps à acquérir et sont fragiles; il est donc nécessaire de les préserver avec soin.

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