Restructuring the Military Hierarchy- Can it be Made More Horizontal?

Colonel P S James

Management thinkers consider Catholic Church as an epitome of horizontal organisation, with just one layer, the bishops, between the pope and the priest.[1] Ancient India was no less, with just the minister between the king and the subject. The essential difference between them is that the former has withstood the test of time and complexity, while the latter has not. The former grew and flourished and continues to do so even in the current era of complex social, economic, political and technological revolutions created by the knowledge worker.[2] So did General Electric (GE), the symbol of American emancipation from Japanese corporate onslaught, by adopting Welch's boundary-less organisation.[3] Surely, there is more than that meets the eye, there is an undercurrent of social phenomenon, or a socio-technical revolution from which the military cannot cocoon itself, and this deserves a hard and impassionate look sans emotions.

Purpose

The purpose of this article is to analyse the effectiveness of current organisational structure of the military and to evaluate whether greater horizontalisation would enhance efficiency and effectiveness.

Scope

The article proposes to discuss the following:-

(a) Current and future strategic and operational realities.

(b) Relative merits and demerits of a vertical and horizontal hierarchy in relation to future strategic realities.

(c) Goal of horizontalisation.

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(d) Different models and their evaluation.

(e) Evaluation of the impact of 'Porous Organisation' structure (proposed model) on the organisational goal.

Current and Future Strategic and Operational Realities

Structure can never be de-linked from strategy. A structure is meant to achieve objectives and since objectives are derivatives of strategy, by axiom, the structure follows strategy.

The erstwhile generic strategy of a military, irrespective of the country, was essentially based on two fundamental types of operations namely the offensive and the defensive. In each of these, capture of territory, destruction of war resources or denial of these were the specific objectives and force on force was the method employed. Application of force on force, e.g., an infantry attack or armoured attack, were surely not supported by as many components of force as today, and battles were remote (fought far from the gaze of the strategy creator), demanding a high degree of standardisation and predictability, without which chaos would have ruled. Standardisation demanded formalisation and strict control of resources in a linear hierarchy with narrow span of control. The necessity was not of a genius forward commander, taking independent bold actions; but of a mediocre one adhering to standard procedures to overcome the enemy force.

Contemporary and future strategy are quite different from the erstwhile one. The strategy of Operation Iraqi Freedom was not force on force; but decimation of a regime. The proxy war that we fight is incapacitation of the militant organisation through use of psychological, social, economic, and political force. Asymmetry is created not by superior forces, but by application of force multipliers (quality force) such as electromagnetic spectrum, command, control, computers, special forces, 'netwar', information war, nuclear, biological and chemical (NBC) war and its threat and precision weapons in a contextually relevant[4] distributed fashion rather than on the concept of force on force at a decisive point. On the other hand, flag showing like Operation Parakram against the backdrop of NBC warfare are also engines for creating asymmetry. The soul of the modern strategy is the breadth of its spectrum - micro and

mini operations, which are localised in action, but global in impact, through conventional war set in NBC environment to NBC threat set in proxy war context.

Relative Merits and Demerits of a Vertical and Horizontal Hierarchy

Any structure is intended to fulfill certain functions and processes. A comparison of merits and demerits of the vertical versus horizontal hierarchy would therefore be best discussed in the light of the fundamental parameters governing a structure i.e. efficiency or observe, orient, decide, act (OODA) cycle and effectiveness (quality and contextual relevance) and key components of an organisational structure namely work specialisation, departmentalisation, chain of command, span of control, and centralisation :-

(a) **Work Specialisation.** Commanders and managers have been viewing work specialisation as an unending source of efficiency. The Henry Ford's assembly line concept[5] probably existed even before he formalised it, as would be seen in a gun detachment, wherein one of the numbers merely loaded, and another merely fired or the observation officer merely executed or corrected a fire plan. Work specialisation implies narrow span of control and a deep knowledge of a small component of the work. Though vertical hierarchy is very suited for specialisation, because of automation, it has almost become redundant, having been replaced by autopilots and auto loaders. However, man, rather than becoming redundant as a consequence of it, has been propelled into delivering greater value. Thus the technical assistant of the artillery would be called upon to design the battlefield geometry, the ship's navigator to understand the nuances of missile and nuclear threat and the pilot of a fighter plane to search for his own targets, thus becoming value adders. This is because of the discontinuous change in the battlefield, coupled with rate of change. Specialisation has given way to orchestration or the generalist-specialist[6], and such a specialist is required to be proactive with a broad spectrum of knowledge, which in turn demands a horizontal organisation.

(b) **Departmentalisation.** Departmentalisation can be defined as grouped work specialisation. As tasks become more complex, specialisation and consequently departmentalisation would have to be diluted. For example, the intelligence section of a battalion is responsible for interrogation, but in a proxy war scenario, when a platoon, which searches a house, stumbles upon a militant, the process demands immediate and 'in situ' interrogation rather than a delayed one by a specialist, leading to a situation where the platoon commander would be acting as an interrogator. For this function, he would need some expertise and background information, which again demands a seamless departmental structure, thus making departmentalisation a hindrance rather than an asset.

(c) **Chain of Command.** This can be defined as an unbroken line of authority that extends from the top of the organisation to the bottom and clarifies as to who reports to whom. Traditionally, it has two components i.e. authority which refers to the rights inherent in a commander to give orders and expect the order to be obeyed and unity of command which refers to an individual having only one superior, which is instrumental in preserving the continuous chain. While this was efficient in a low complexity situation, in the contemporary warfare, there is a need to bring together multitude of forces into a homogenous whole. For example, a special force operations in support of a main operation would entail the special force commander reporting to the main force commander without actually coming under command or coming under command only for a specific duration. This loose command would be very different from the conventional chain of command. Imagine the complexity when there are large number of such entities- missiles, the special forces, Air Force delivering precision ammunition, some representatives of the Air Force or the Army designating the target, artillery not directly under command giving fire support and so on. Because of this intimate interplay of resources, the single point of authority confines itself to the goal and task, the resources being a generic pool. Linear hierarchy can only cause delay and confusion in application of the resources.

(d) **Span of Control.** How many subordinates should a commander control determines the span of control. The military is generally patterned on the triarchical system with no solid reason for it. Span of control facilitates close control but concurrently makes vertical communication more complex. In general, it can be said that smaller the span of control, tighter the control. So, what would happen when an electronic detection and direction finding unit identifies some militants or the radars detect an aircraft? Should they go through their channel and risk the target moving away or getting destroyed or should they report directly to those who are likely to be affected? The enemy tactics and weapon systems transcend spans of control and, therefore, sticking to the vertical hierarchy may not be effective any more.

(e) **Centralisation Versus Decentralisation.** Centralisation is the degree to which decision making is concentrated at a single point in the organisation. Decentralisation, much against the popular belief, is not the opposite of centralisation, but the degree to which the tier/level giving input actually has the discretion to make decisions and act upon that input. In a high tempo operation, where the scenario change is faster than the transmission and processing speed, we encounter discontinuity[7], a hallmark of modern change. For example, in the Iraq war of 2003, 1 Marine Division commander was always just behind the forward battalion and churned out orders for his regiments based on his inputs. The reality is that to make resources deliver where it matters, the channels and the chains have to be short circuited. It worked, and worked very well when in Nasariyah, he stormed the city by driving straight into the key points and held the city. His actions were no different from those Chief Executive Officers like Jack Welch of GE, who propounds and practices "Management by Walking Around". Unprecedented non-standardisation demanded by high fluidity has made the current linear systems and structures incongruent with strategy.

(f) **The OODA Cycle.** Any structure must permit an efficient OODA Cycle.[8] In general, it can be expressed as 'TpDn + Tr should be <= Ls' (where Ls = Life span of the situation, Tp =

Time required for procuring, passing and processing information to one hierarchical level, Dn = No of hierarchies in a decision, Tr = Time required for reaction, such as firing/destruction). Obviously a vertical hierarchy would score low on this.

(g) **Quality of Decision.** A decision taken with all aspects in mind would indeed be of very high quality. Since vertical hierarchies facilitate this, decisions made by such a system should be better, at least theoretically. However, the delays make these decisions redundant in a world where rate of change is very high, thus creating an anomalous situation-high quality decision without relevance. As a result one is compelled to swap quality of decision for relevance.

The Goal of Horizontal Structure

The goal of creating organisational structure is to make the organisation effective by creating congruence between strategy, system and structure. Since strategy has undergone a major paradigm shift, the vertical structure in vogue can no more support execution of the strategy. The goal of horizontalisation can therefore be defined as OODA efficient, independent and interdependent performance, which has adequate standardisation to facilitate replication (Diagram 1).

(a) **OODA Efficiency.** An evaluation of the OODA cycle concept explained earlier would imply that, firstly, 'Ls' (Life span of the situation) is outside own span on control or within the control of the enemy, secondly, the 'Tr' or time required for reaction is finite and based on the weapons or systems and their capability, thirdly, 'Tp' (time for processing) is based on the currently available C4ISR[9] systems, and lastly and most importantly, since 'Tp' is multiplied by 'Dn' (No of decision hierarchy), it has an exponential implication. This geometric impact of 'Dn' on the OODA cycle would lead to the natural hypothesis that 'greater the number of hierarchy, longer would be the OODA cycle' and would further suggest that flat organisations are at least prima facie more OODA efficient.

(b) **Standardisation.** Since standardisation enables agglomeration of resources and brings in predictability so

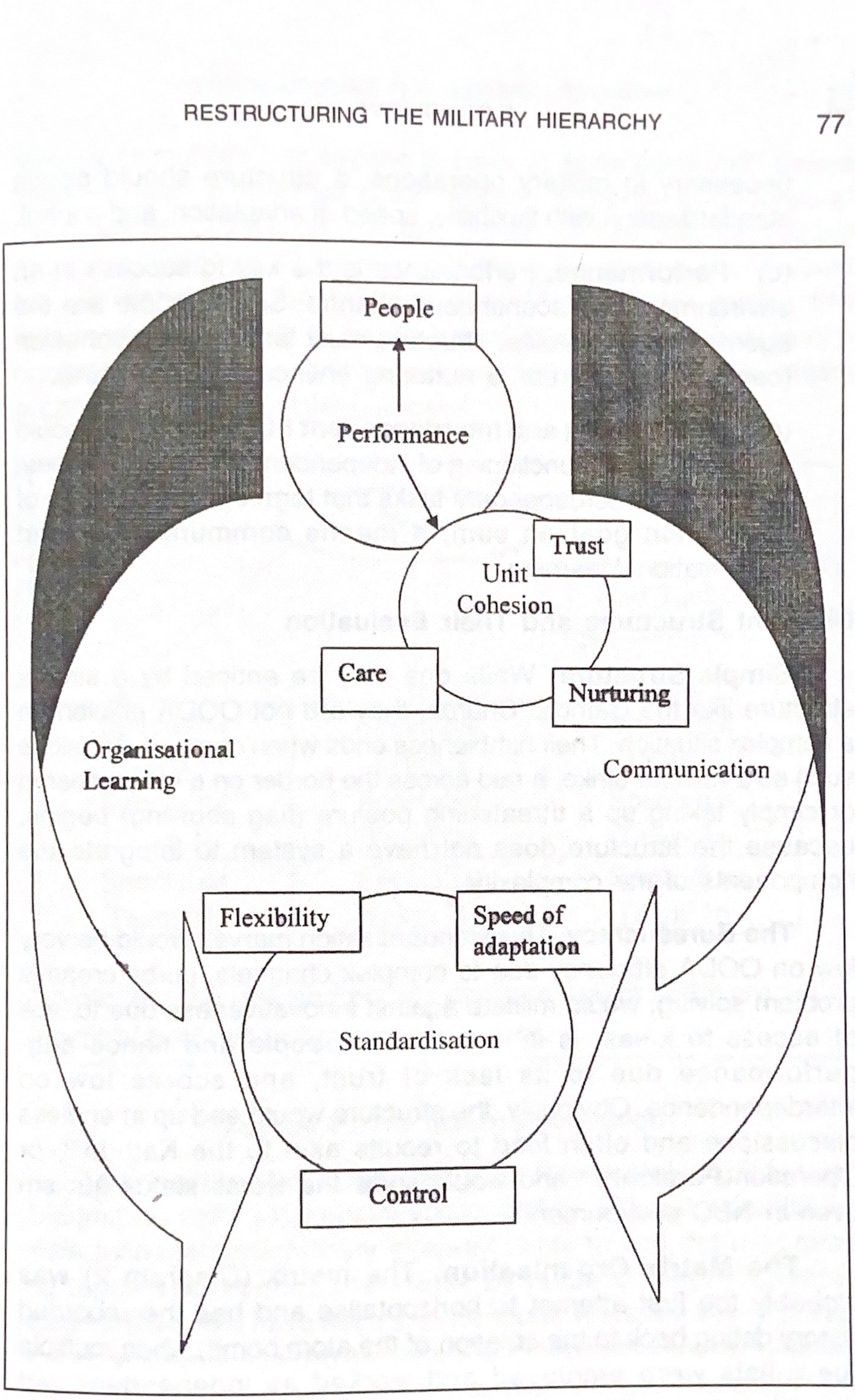

Diagram 1 : How performance and standardisation are interphased using organisational learning and communication.

necessary in military operations, a structure should permit standardisation with flexibility, speed of adaptation, and control.

(c) **Performance.** Performance is the key to success in an environment of discontinuous change. Since people are the agents of performance, structure must facilitate unit cohesion (centred around trust, a nurturing environment and care).

(d) **Independent and Interdependent Functioning.** It should facilitate smooth functioning of independent and multifunctional teams, with interdependent tasks that form the components of a common goal. In sum, it means communication and organisational learning.

Different Structures and Their Evaluation

Simple Structure. While one may be enticed by a simple structure like the Catholic Church, they are not OODA efficient in a complex situation. Their nimbleness ends when complex decisions such as a nuclear strike, a raid across the border on a militant camp or simply taking up a threatening posture (flag showing) begins, because the structure does not have a system to integrate the components of the complexity.

The Bureaucracy. This standardisation marvel, would be very low on OODA efficiency due to complex channels, curbs creative problem solving, would militate against innovativeness due to lack of access to ideas, is inherently anti-people and hence anti-performance due to its lack of trust, and scores low on interdependence. Obviously, the structure would end up in endless discussions and often lead to results akin to the Kathua[10], or Operation Parakram[11] and would show the worst' status quoism even in NBC environment.

The Matrix Organisation. The matrix (Diagram 2) was probably the first attempt to horizontalise and has the recorded history dating back to the creation of the atom bomb, when multiple specialists were employed and worked as independent, yet interdependent entities. Each team or the entity in this organisation was self-driven and self-accountable and contributed to the pre-defined aim of the project. Often touted as emancipation from the clutches of vertical bureaucracy, the matrix organisation is slow to

react since multiple entities have to come to some agreement before action is taken. It becomes action oriented only once all understand the intricacies of the problems, and though very suitable for creative problem solving, would make the OODA cycle so long, that it would be impractical in the military context. However, since the independence is likely to trigger lateral thinking, the structure can bring out innovative solutions and could have a role in the military organisations for specific purposes.

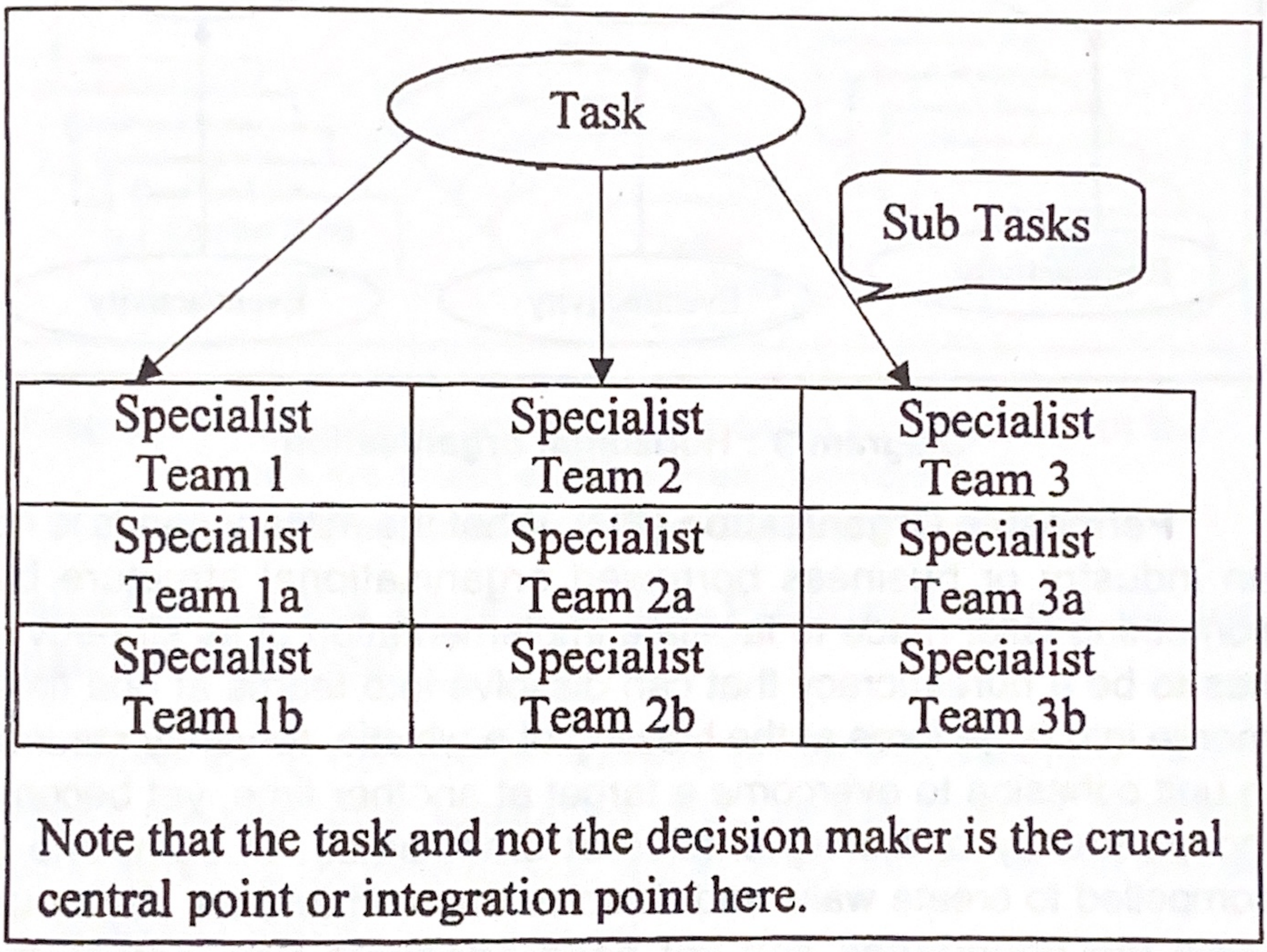

Diagram 2 : The matrix organisation

The Horizontal Organisation. Horizontal organisation (Diagram 3) lacks single point accountability, which is essential for crisis management. Military strategy tends to boil down to crisis management, sooner than later because of unprecedented uncertainities. We have seen it in the World Wars, we saw it in Iraq, and we will see it again in all military operations-the enemy is simply unwilling to fight your battle, leading to spot changes in strategy. The horizontal organisations are not effective where an immediate reaction or OODA constraint exists, though they may be excellent for creative problem solving, flexibility and interdependence.

The Boundary-less Organisation. The boundary-less organisation is a panacea; there being no such organisation sans boundaries. It may be viable to some extent in an environment where a large organisation can act in a disjoint manner with the common goal such as profit or return on investment. This makes it quite unviable in the military context.

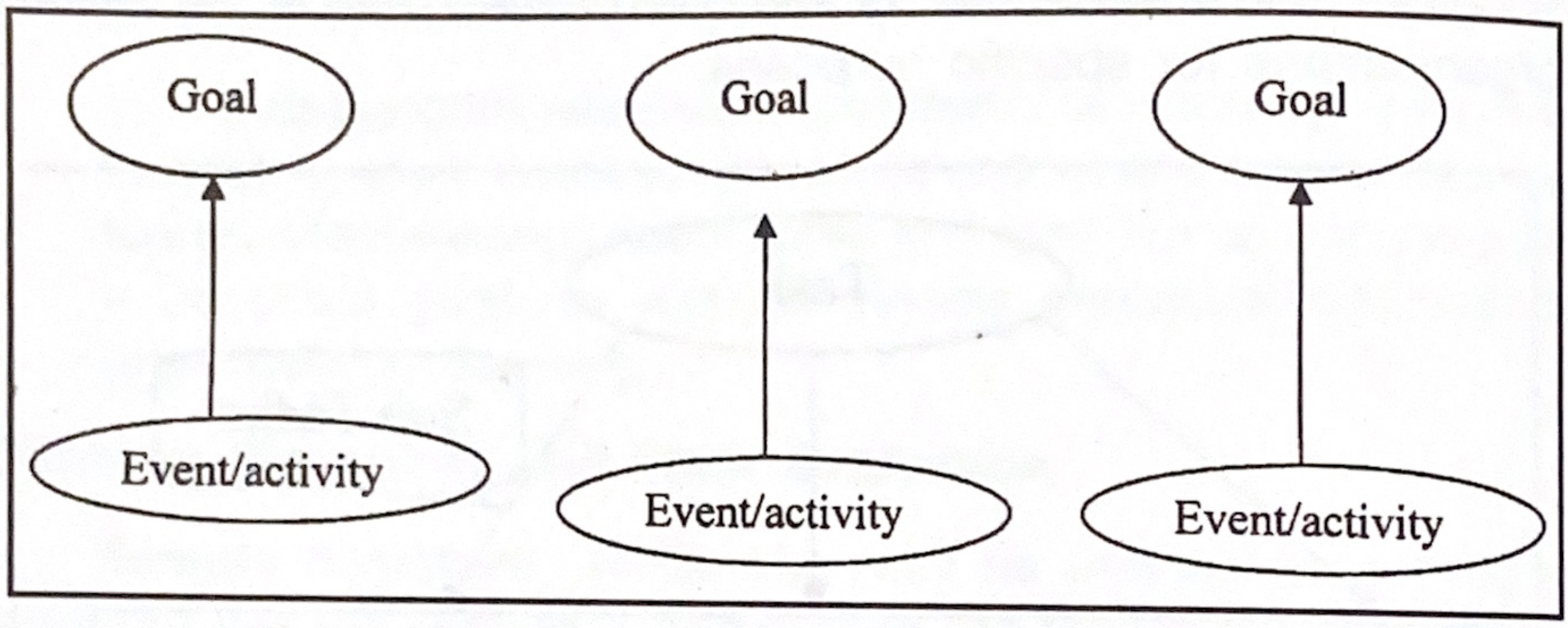

Diagram 3 : Horizontal organisation

Permeable Organisation (PO). What the military needs is not an industry or business borrowed organisational structure but something tailor made to facilitate implementation of its strategy. It has to be a bureaucracy that can dissolve into teams at one time, merge into large force at the blowing of a whistle, fervently staunch in unit cohesion to overcome a target at another time, yet become independently operating entities at other times. In sum, one is compelled to create walls and dissolve them off and on. We would need the boundaries and yet have adequate flow across the boundaries. What we need is not lack of verticality, but porosity across that verticality; what we need is not lack of horizontal wall, but porosity through it and in sum what we need is permeable organisational boundaries. Diagram 4 shows how the combat, combat support and logistic units are independent entities in a corps zone with medium and large headquarters. Based on the task, the resources would be agglomerated under an appropriate headquarters. The headquarters are task dependent, while the units are cohesive and function dependent.

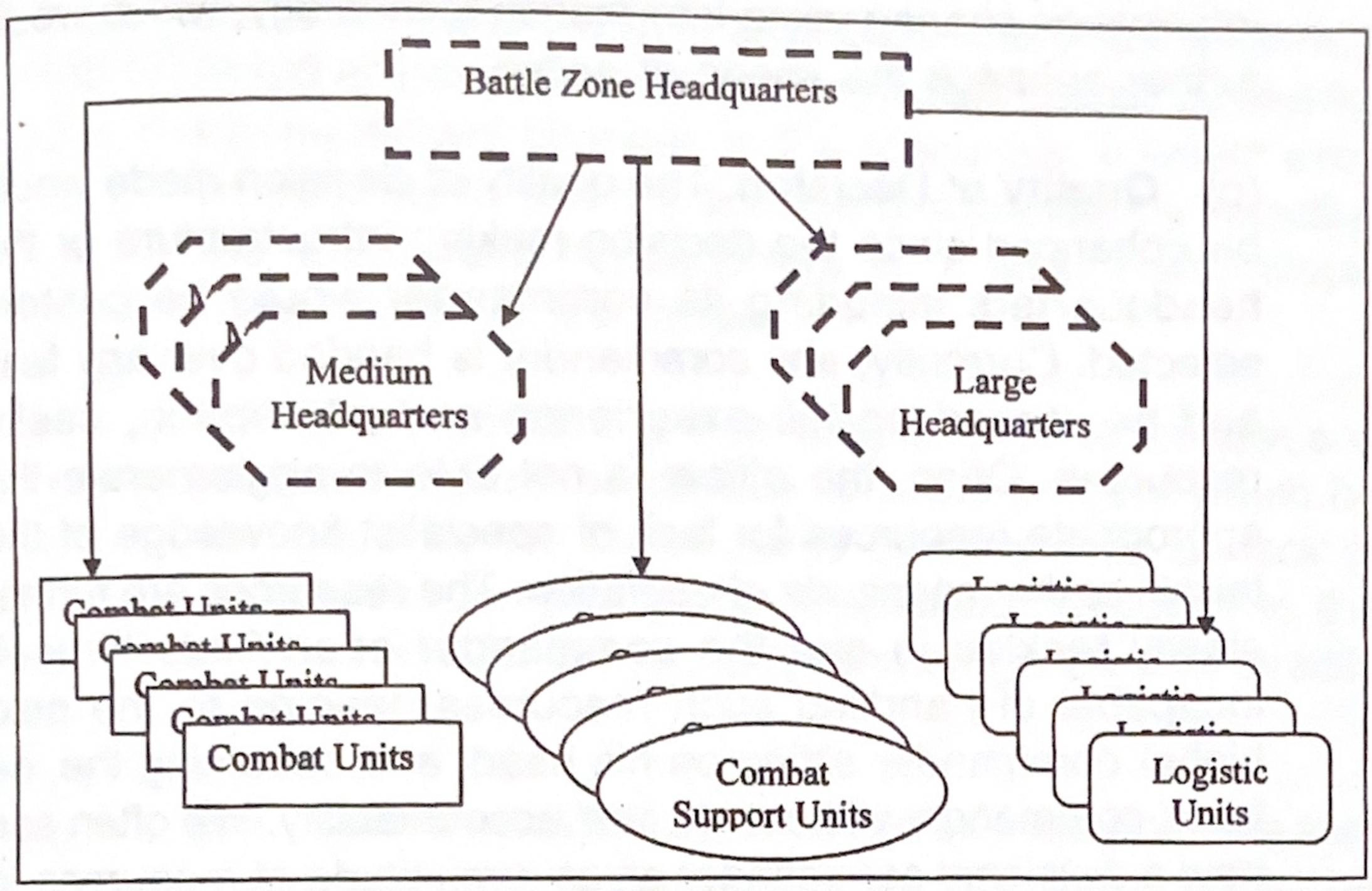

Diagram 4 : Headquarters have permeable boundaries but the units are intact entities. Headquarters and units are free-floated in the corps zone

Evaluation of the Impact of the Proposed Model on the Organisational Goal

There are a number of benefits of the PO structure, which makes it a viable option to align the structure with strategy; however, the fundamental benefits around which other benefits would accrue are analysed below:-

(a) **Binding Through Vision and Mission.** The organisation would have a clear vision and mission as the core characteristics and these would be widely known, respected and accepted throughout the organisation.

(b) **Speed (OODA Cycle).** Speed is the key to a fast changing world. Speed of change is retarded by mindset, unhealthy cultures and perceived values not in consonance with the vision and mission. PO attempts to overcome these. By creating purely task dependent headquarters without intermediaries, the OODA cycle would be made more efficient. The structure would also create an environment for direct

information sharing using Information technology, which would further enhance the speed of action.

(c) **Quality of Decision.** The quality of decision made would be enhanced since the decision-making infrastructure or the headquarters including its commander would be custom selected. Currently, any commander is handed over any task and he, based on his experience and perception, seeks resources. Often, the officer is not able to agglomerate the appropriate resources for lack of specialist knowledge of the terrain or the magnitude of operation. The resources are further slowly trickled in and the commander soon finds himself incapable of handling such resources, leading to the next higher commander sitting on his head, and becoming the 'de facto' commander without 'de jure' accountability. We often see how a divisional commander gives a multitude of resources to a brigade commander, but in trickles. Having given it, the former would breathe down the throat of the latter (obviously, resources committed are large enough to demand the leadership of the general officer), yet the general officer is not accountable but the brigade commander is, by virtue of current ownership of resources. PO would largely overcome this anomaly. Further, information technology enabled direct information flow would enable effective decentralisation.

(d) **Performance Focus.** The performance focus of the PO would also be sharper. Unit entity is retained and made to become the lynch pin in operations. As a result, a unit has no option but to create a high level of trust, care and nurturing attitude for this alone would enhance performance. The selection of the units and the headquarters themselves would be competency based.

(e) **Standardisation.** The components of effective standardisation - flexibility, adaptation and control - would also be higher in a PO as can be seen from the following :-

(i) Since the quantum and type of resources to be brought under a headquarters would be a direct function

of the task and not a vestige of the triarchical system, it would enable a force to transform itself quickly by making the necessary changes in the resources. It would even be possible to select a suitable commander by selecting the appropriate headquarters for a task. These would make the structure flexible.

(ii) There would be greater adaptation since the task and resources would be directly correlated. There would be no scope for the blame game or complaints on lack of resources, compelling the organisation to adapt to the environment for task accomplishment, or be held directly accountable.

(iii) Control would be dynamic and intimate since the task and components accomplishing the tasks would be intimately knitted together with minimum hierarchical levels in between.

Resource Optimisation. Resources used would be optimised since the allocation is of the resource and not of entities. For example, fire can now be allotted rather than fire units. Thus it would be possible to support two or more actions using the same resource, which is difficult in the current scenario since the resources once allocated are not easily reallocated. All of us are witness to the clamours for dedicated helicopters, dedicated guns and so on rather than helicopter lift or fire support. With PO it would even be possible to create resource overkill at a selected place, further facilitating the principle of concentration of force.

Integration. PO permits better integration of resources. For example precision artillery can replace precision air and the vice versa. Multiple resources can be integrated, however, this would need considerable training. There would be a need to limit the employability of units in terms of zone of operation. This would lead to a situation akin to specialisation, however, within that constraint, specialisation would ensure greater integration.

Innovation. Resistance to change is the primary enemy of creativity and innovation. By its very design, the PO is anchored

on free flow of communications. By preventing undue cohesion[12], which militates against innovation, the PO creates an environment for innovation and change, yet by retaining the unit identity, unit cohesion would be retained.

Organisational Learning. Information is power and the play of power manifests in creation of information asymmetry. Power is sought for achieving rewards and therefore redefinition and reallocation of awards are preconditions to organisational learning. Since achievement would be transparent, awards and benefits would be shared more equitably, which in turn would create an environment for organisational learning by making the tacit knowledge in the corps zone available to all units. In the present system, since there is no direct relation between the corps and the units, the tacit knowledge is seldom shared.

Communication. The removal of avoidable channels also facilitates better communications. Since the corps zone is responsible to identify the headquarters (including its commander) and the units for accomplishment of a task, it would be natural that communications would flow freely. This in turn would increase the operational efficiency and effectiveness.

Conclusion

Militaries are unique organisations. They are result oriented yet intangible, their result orientation being normative i.e. success or failure; monoliths, yet required to be nimble and fast; cocooned from the externalities, yet destined to create that very externalities; and task focused yet goal elusive. These compulsions force us to create a structure that is ever evolving and though militaries may have been 'change-shy' because of the fear of irreversibility, they have always been adaptive evolutionary changers. Keeping this in view and extrapolating into the contextual realities of the strategic spectrum of the day, the military needs to evolve a structure to respond to the paradigm shift in strategy and the Permeable Organisational Structure would be a befitting one.

End Notes

1 There are cardinals in the church, but they are coordinators akin to staff officers and do not wield a true hierarchical power.

2 Peter Drucker pointed out the emergence of the knowledge worker, but the world hardly realised it till it came in full force.

3 Jack Welch, who first used the words boundary-less organisation, steered GE from the most bureaucratic to a flat organisation with over 200 strategic business units employing people across literally every country.

4 Contextually relevant force is the optimum force identified by situation awareness.

5 Henry Ford is considered the father of job specialisation or assembly line concept, although the military probably always followed it.

6 The concept of generalist specialist was first propounded by M Kaeter in his article in "Training".

7 Transmission and processing are crucial precursors to decision making. When scenarios change faster than the transmission and processing speed, the decision making itself gets impaired as the decisions become contextually irrelevant.

8 The OODA cycle, relates to information flow, decision, and action. Though not peculiar to military only; it has tremendous implications for the military because of the short life of situation. The time taken for decision and action has to be considerably less than the life span of the situation.

9 C4ISR refers to command, control, communication, computer, intelligence, surveillance and reconnaissance. C4ISR is the hub of OODA cycle and is an automated system for functional purpose though its fundamental concept is as old as war itself. The term C4ISR, in the current context stands for the degree of integration achieved among the seven components which facilitate creation of asymmetry in war.

10 Kathua military operation conducted in 2003 was supposed to have encircled at least seven militants. Force was gradually built up, and there were reports of militants, being trapped, only to end up in a report that the militants had escaped. The actions carried out by the militants including firing, lull, and transmissions would indicate how discontinuity can be created.

11 Operation 'Parakram' is a classical flag showing operation against the backdrop of nuclear symmetry. It shows how conventional asymmetry and nuclear symmetry can be mixed and matched to create equivalences.

12 Undue cohesion takes place when components of a force not required to have cohesion create cohesion and end up as value destroyers and occurs when cohesion is not task focused but is 'cohesion for the sake of cohesion'.

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Members interested in undertaking research projects under the aegis of the Centre for Research may submit their research proposals for consideration by 31 December each year. **In case of serving officers,** the proposals should be routed through the concerned Service Headquarters. Retired officers may route their proposals through one of the Service Headquarters or send them directly to the Director USI. At present, the Centre awards five fellowships annually, subject to approval by the Board of Management. Copies of the Rules for Award of Fellowship Grants and Conduct of Research may be obtained from the USI or from our website www.usiofindia.org.