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TASK FORCE HAWK: OPERATIONAL MOBILITY LESSONS FOR THE JOINT FORCE COMMANDER

by

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The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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The JFC, understanding the lessons for operational mobility of TF Hawk, can take action to overcome and mitigate the challenges that threaten to undermine responsiveness and flexibility and limit his courses of action. Close coordination and cooperation between the supported commander, the supporting commanders, and their respective component commanders will ensure operational mobility is achievable using the right mix of inter- and intra-theater transportation assets. In addition, enhanced efficiency during deployment and careful consideration of attainability while planning for deployment will ensure the right forces are delivered to the right place at the right time to support the commander's concept of operations.

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The deployment of the U.S. Army Task Force (TF) Hawk during Operation Allied Force challenged the ability of the U.S. military to provide a robust capability for operational mobility in the overlap between inter- and intra-theater mobility. This paper identifies operational mobility challenges faced by the Joint Force Commander (JFC) by studying the deployment of TF Hawk and makes recommendations for the JFC to solve the problem. TF Hawk is briefly reviewed, and then specific operational mobility lessons are identified using the Principles of Logistics as a framework.

The JFC, understanding the lessons for operational mobility of TF Hawk, can take action to overcome and mitigate the challenges that threaten to undermine responsiveness and flexibility and limit his courses of action. Close coordination and cooperation between the supported commander, the supporting commanders, and their respective component commanders will ensure operational mobility using the right mix of inter- and intra-theater transportation assets. In addition, enhanced efficiency during deployment and careful consideration of attainability while planning for deployment will ensure the right forces are delivered to the right place at the right time to support the commander's concept of operations.

Joint Vision 2020 describes the ongoing transformation of the U.S. military as it seeks to improve on today's capabilities to achieve dominant maneuver, precision engagement, focused logistics, and full dimensional protection.[1] Dominant maneuver and focused logistics are inseparable as focused logistics is an enabler for dominant maneuver by providing "the right equipment, supplies, and personnel, in the right quantities, to the right place, at the right time."[2] The joint force capable of dominant maneuver must be able to quickly and easily move tailored forces from widely dispersed locations in order to achieve operational objectives. Inherent in this vision for dominant maneuver is the requirement to achieve positional advantage, requiring mobility at the operational level covering strategic distances.[3]

In order to achieve dominant maneuver, efficient and responsive operational mobility must be seamlessly integrated with strategic and tactical mobility. Dr. Milan Vego, a professor at the U.S. Naval War College and authority on operational art, defines operational maneuver as a combination of operational movement and operational mobility with its purpose being "to have a decisive impact on the outcome of a major operation or campaign, either by securing the advantages of position prior to combat or by exploiting tactical success to accomplish operational (and sometimes strategic) objective(s)."[4] Vego further states that operational mobility "facilitates the movement of joint and combined operational-size formations in a major operation or campaign, overcoming operationally significant physical, natural, or human-made obstacles without delay."[5] The successful accomplishment of operational maneuver sometimes requires the employment of a combination of strategic mobility assets and tactical mobility assets. This area of overlap and integration between the

strategic and tactical, the area of operational mobility, poses one problem toward achieving dominant maneuver.

The deployment of the U.S. Army Task Force (TF) Hawk during Operation Allied Force challenged the ability of the U.S. military to provide a robust capability for operational mobility in the overlap between inter- and intra-theater transportation. This paper seeks to identify the operational mobility challenges faced by the Joint Force Commander (JFC) by studying the deployment of TF Hawk and to propose some alternatives for the JFC to overcome or mitigate these challenges. TF Hawk will be briefly reviewed first for relevance to the JFC today. Then, specific operational mobility lessons will be identified from the experience of TF Hawk using the Principles of Logistics as a framework.[6] In particular, this paper will examine the principles of responsiveness, flexibility, simplicity, economy, and attainability. Finally, this paper will present several recommendations for the JFC's consideration.

Task Force Hawk

TF Hawk is a useful illustrative example in studying operational mobility for several reasons; each of which are likely to face a JFC again in the future. First, although an Army Task Force, Hawk was formed as part of a NATO operation (Allied Force) to complement the execution of combined, joint air strikes. Second, the requirement to deploy TF Hawk developed quickly in response to a need identified during the course of the NATO air strikes. The task force was neither pre-planned nor did it have the capability to conduct the operational maneuver required with its organic resources. Third, TF Hawk was a non-standard Army unit formed to provide a mix of capabilities to fit a specific mission requirement—to be prepared to conduct deep operations against Serbian forces in Kosovo.

Fourth, operational mobility was critical to achieving operational effectiveness—getting the right force to the right place at the right time. The execution of both inter- and intra-theater deployments using strategic mobility assets for operational mobility were required in order to construct TF Hawk and to place the task force in the position of advantage desired by the JFC.

TF Hawk was developed to complement the then on-going NATO air strikes of Operation Allied Force in Yugoslavia. TF Hawk deployed to Albania beginning in April 1999 and prepared to perform its mission of conducting deep attacks against Serbian forces in Kosovo. Far more than just 24 AH-64 Apache helicopters as portrayed by the media, TF Hawk was actually an Army Aviation Brigade Combat Team that included a supporting force structure designed to provide command and control, defense, security, and logistics capabilities.[7] The majority of TF Hawk's units were based in Germany as part of the forward presence forces of U.S. Army Europe. The 82nd Airborne Division from the United States provided the remainder.[8] TF Hawk was originally planned to operate from the Former Yugoslavian Republic of Macedonia (FYROM) where it would have been able to take advantage of in-place facilities and infrastructure. When the FYROM government determined that it could not allow the helicopter task force to base in their country, the destination was changed to Albania. This change increased force protection and infrastructure requirements such that the material to be deployed grew by a factor of three.[9]

The operational maneuver phase of TF Hawk required 38 days from verbal warning order to initial deep operations mission capability. The final force package completed deployment eleven days later bringing the total to 49 days.[10] The bulk of the deployment, both inter- and intra-theater was accomplished by airlift using a combination of theater-

assigned and strategic assets. By examining the challenges TF Hawk faced in its deployment to Albania, several key lessons for the JFC become evident in the areas of responsiveness, flexibility, simplicity, economy, and attainability.

Responsiveness

Of all the Principles of Logistics, responsiveness is the most critical for strategic and operational maneuver and, when combined with flexibility, dominant maneuver. As stated in Joint Pub 4-0, "all else becomes irrelevant if the logistic system cannot support the concept of operations of the supported commander."[11] Mobility assets encompassing strategic, theater-assigned, and service-unique transportation assets are the part of the logistic system that enable a JFC to get the right forces to the right place at the right time. However, having enough mobility assets in terms of sheer numbers in the U.S. military is not enough to ensure strategic responsiveness or operational mobility. In order to be responsive to the JFC and support his concept of operations, the right mobility assets must be in the right place at the right time.

In order to ensure a successful deployment, detailed planning must be conducted to include accurate descriptions of all units to be moved, their point of origin and destination, and their composition in terms of weight, volume, and personnel. This detailed planning is contained in the Time Phased Force and Deployment Data (TPFDD) document used in the Joint Operation Planning and Execution System (JOPES). It is the TPFDD that drives the allocation of transportation assets to solve problems of strategic and operational mobility.[12]

During Operation Allied Force, development of a specific, validatable TPFDD generally required four to seven days after the release of a deployment order. These lags in TPFDD development caused spikes in demand for transportation and sometimes caused

delays in force closure.[13] Changes in the operational situation also impacted TPFDD development and stability. As living documents, TPFDDs must be continuously updated to accurately reflect the equipment and personnel required to support the commander's concept of operations. In the case of TF Hawk, huge change was introduced in the deployment process when the deployment destination shifted from FYROM to Albania. This change required a large portion of the TPFDD to be rapidly reworked just one day before the flow of forces was to begin.[14] U.S. Transportation Command (USTRANSCOM), its component commands and the existing theater transportation and logistics infrastructure struggled to respond quickly.

Further, the sealift portion of the strategic mobility triad did not prove responsive to the deployment of TF Hawk. As noted above, a threefold increase in the force structure of the task force was required when the deployment destination changed. However, airlift remained the primary operational mobility provider. At the time of TF Hawk deployment planning, no common-user strategic sealift assets were available in theater. Military Sealift Command did have the ability, from its Washington, D.C. headquarters, to charter ships from the commercial market in Europe to provide lift but would not do so until a validated TPFDD required sealift. Thus, no ships were guaranteed to be available with a guaranteed capacity and speed.[15] The uncertainty of sealift availability and capacity made sealift an unattractive option for TF Hawk even though the quantity and type of cargo required in the augmented force structure for Albania would more typically use sealift. The reactionary nature of the current system for assigning sealift can cause problems for the planner at the operational level because it increases uncertainty and limits options.

Strategic sealift ships are not the only assets for operational mobility by sea. During Operation Allied Force, the U.S. Army recognized the gap and deployed two of its Logistics Support Vessels (LSVs) to the Mediterranean Sea in the spring of 1999. These Army service-unique assets provided some capacity for intratheater sealift to the JFC. Although arriving too late to contribute to the initial deployment of TF Hawk, once the sea line of communication into Albania was opened these two vessels provided sustainment support.[16] As a result of the Albanian experience, the Army plans to procure three more LSVs (joining six already in service) and buy 14 Theater Support Vessels in next ten years. These vessels can carry up to 20 M1A1 tanks at speeds of up to 45 knots over a distance of 1100 nautical miles. To further increase responsiveness, the Army is also exploring the idea of prepositioning some of these vessels overseas.[17] In addition to the challenges of integrating these vessels into the joint theater logistics systems, these vessels will have to be integrated into the existing maritime command and control structure with the required situational awareness and force protection for these vessels and their vital cargo.

Flexibility

Flexibility is defined in joint logistics doctrine as the "ability to adapt logistic structures and procedures to changing situations, missions, and concepts of operation."[18] The ultimate test of the flexibility of the Defense Transportation System is its ability to transition smoothly from peace to war. According to Joint doctrine, "assignment of transportation responsibilities should be the same in peacetime as in wartime."[19] All the gray areas between peace and war, generally grouped under the heading of Military Operations Other Than War, challenge the Defense Transportation System. Flexibility in operational mobility is also key in providing a JFC with options for force employment and achieving dominant maneuver.

The determination of flexibility is in the eye of the beholder and the JFC's view is different from the transportation provider's.

In the case of TF Hawk, flexibility was the order of the day. As discussed earlier, not only did the force structure of the task force change, but the destination changed as well. It is important to note that the change in destination and subsequent force structure increase occurred 17 days after the initial verbal warning order for deployment was issued by the Theater Army Commander and just one day before the lead elements deployed.[20] Without flexibility in employing mobility assets, the deployment would almost certainly have been delayed.

The Defense Transportation System successfully demonstrated flexibility in this case when USTRANSCOM decided to place twelve C-17s under the tactical control (TACON) of the supported commander's air component. In the words of General Tony Robertson, Commander of USTRANSCOM (CINCTRANS), "with [its] large cargo capacity and superb ground maneuverability, the C-17 gave the supported commander the maximum flexibility possible to deploy his forces to Albania."[21] The deployment of TF Hawk marked the first time that USTRANSCOM had delegated TACON of strategic airlift assets to a theater commander for a specific deployment.[22] TACON of these C-17s provided the theater commander the flexibility to allow late validation of intra-theater movement requirements and to overcome the lack of a fully developed TPFDD. However, this flexibility came at the cost of reduced visibility over the movement of forces as the movement became an exercise in moving cargo to the airfield and filling the airplanes as fast as possible thus sacrificing control and documentation in the process.[23]

Operation Allied Force as a whole was unusual from a logistics perspective in that a larger proportion of material was deployed by airlift vice sealift. An imperfect comparison can be drawn between the Operation Desert Shield experience where 9.4 percent of the dry cargo deployed by air and Operation Allied Force where 67 percent of the dry cargo deployed by air. General Robertson, CINCTRANS, attributed this unexpected result to the rapidly changing nature of the operational environment and the austere transportation infrastructure in the region.[24] The words of the Joint Doctrine for Sealift Support state clearly the JFC's requirement: "*Flexible, assured* [emphasis by author] sealift support permits the JFC to expand the strategic, operational, and tactical options available."[25] It seems more likely that airlift carried a larger proportion of the cargo at least partly because of the lack of flexible, assured sealift in theater.

TF Hawk also experienced limitations in deployment options and an increased deployment timeline because of the austere transportation infrastructure—airports, seaports, roads, and railroads—in and around Albania. Identification and accurate assessment of such problems early in the planning process can mitigate to some extent the problems caused by poor infrastructure. While airfield infrastructure was assessed by U.S. Air Forces Europe as part of planning for the initial air operations deployment, ground and sea infrastructure capabilities were not assessed until later in Operation Allied Force. The end result was that planners did not have enough information to make informed decisions about relying more on strategic sealift or even employing Joint Logistics Over-the-Shore.[26] One of the reasons for the delay in conducting on-site analysis of transportation capabilities in Albania was a strict Department of Defense interpretation of language in the Roberts Amendment providing funding for Operation Allied Force that restricted the deployment of additional forces to

Albania, among other locations, without Congressional consultation and notification. This restriction reduced flexibility for the theater commander by adding delays and complexity to the site survey process and resulting in the inability of the JFC to fully exercise prudent planning measures before initiating the deployment.[27] The JFC also did not fully explore all information sources available on the Albanian transportation infrastructure. According to Colonel Patrick Sweeney, the deputy plans officer for Allied Forces Southern Europe (AFSOUTH) during Operation Allied Force, NATO had conducted an infrastructure survey of Albania just a year earlier but this information was not requested by USEUCOM. Once AFSOUTH became aware of the decision to deploy TF Hawk to Albania, AFSOUTH volunteered the data to USEUCOM.[28]

Simplicity

In the logistics frame of reference, simplicity is more than just a reduction of complexity. Good command and control, standard interoperable procedures, and clear establishment of priorities also contribute to achieving simplicity. Simplicity increases the chances of efficiency and mission success.[29] TF Hawk highlights the need for clear, unambiguous command and control and simple, interoperable systems in order to efficiently and responsively provide operational mobility.

Complexity exists in the current deployment planning structures of the DOD in large part due to the variety of systems at lower levels in the planning process. These lower level systems with limited interoperability feed higher-level systems and eventually the TPFDD. The development of a new, streamlined system is underway within the DOD that will reduce the complexity and could improve the ability of the JFC to efficiently exercise command and control of mobility forces.[30] For TF Hawk, the complexity of the automated data-processing

systems and the layers of effort and review required to arrive at a validated, deployment-ready TPFDD became a stumbling block. The information systems themselves necessary for the deployment process are complex and require skilled operators. One lesson, as reported by USTRANSCOM, was an apparent lack of sufficient JOPES trained personnel in the European theater to support extended operations, thereby hindering TPFDD development efforts.[31] In addition, few policies and procedures could be consistently followed across the spectrum of the multiple planning systems and the layers of the deployment process. Mistakes as simple as failing to specify a desired delivery location for a deploying unit resulted in delays.[32]

TF Hawk also was affected by the lack of simplicity in the command and control structures and theater transportation and logistics hierarchy. Command and control of transportation issues was not consistent or obvious. USTRANSCOM could not perceive during Operation Allied Force a focal point for transportation issues at the theater level that could provide prioritization and clarification. Thus USTRANSCOM collaborated variously with the U.S. European Command (USEUCOM) staff operations and logistics directorates, USEUCOM service component commands, and Joint Task Force Noble Anvil.[33] This confusion resulted in at least one wasted lift in association with TF Hawk when a Military Sealift Command chartered ship sailed to Albania carrying Red Horse engineering equipment after the requirement had been changed. The ship then had to return the equipment to the port of origin.[34]

Economy

According to Joint Doctrine, "logistic economy is achieved when effective support is provided using the fewest resources at the least cost and within acceptable levels of risk."[35]

In the deployment of forces, the JFC must weigh competing demands seeking to find the balance that provides him with the right force at the right time at the right place to support the concept of operations. That balance must be established somewhere between operational effectiveness and deployment efficiency; depending on the situation confronting the JFC. Finding and achieving this balance is a task requiring close coordination and cooperation among process stakeholders to include the supported commander and USTRANSCOM as a supporting commander.[36]

Due care must be taken in achieving economy with mobility assets to ensure the required level of operational effectiveness is not lost in the process of achieving logistic or deployment efficiency. The JFC must equally guard against the converse effect: losing operational effectiveness by failing to achieve adequate efficiency in deployment. It is important to understand who determines acceptable levels of risk and what type of risk is measured. For example, risk as measured by the JFC may include an assessment of the probability of failure of a particular maneuver (to include repercussions such as impact to the overall strategy and increased casualties) if the right force does not arrive at the right place at the right time. Risk as measured by USTRANSCOM may include an assessment of the inherent risk of decreasing strategic mobility assets to support a particular theater in order to support a current contingency in another theater.

Joint doctrine exhorts the careful stewardship of scarce strategic mobility assets.[37] From USTRANSCOM's perspective, the complex theater command and control and lack of a timely, deconflicted portrayal of the theater commander's priorities and concept of operations resulted in inefficient use of strategic mobility assets.[38] However, using the scarcity argument to deny the theater commander access to the strategic mobility pool in

order to obtain flexible, responsive operational mobility assets does not seem to apply in the case of TF Hawk or indeed Operation Allied Force. At the time of the deployment of TF Hawk, strategic sealift ships were available in the United States as part of the Ready Reserve Force (RRF) program administered by the U.S. Maritime Administration, including some suitable for the deployment of TF Hawk. Other ships were available, depending on daily fluctuations, in the charter shipping market. To be sure, not insignificant hurdles would had to have been crossed in order to activate one or more of the RRF ships for Operation Allied Force. Not the least of these hurdles would be DOD and USTRANSCOM policy giving preference to the charter of commercial ships over the use of government owned and operated ships unless commercial service is not available and U.S. Public Law (Cargo Preference Acts of 1904 and 1954) mandating use of privately owned, U.S. flag commercial ships whenever available.[39] These obstacles should not be insurmountable when valid operational mobility requirements are provided by the JFC.

The DOD Report to Congress on Operation Allied Force makes it clear that the rapidly changing and evolving nature of the contingency taxed the ability to quickly develop efficient plans for deployment of forces. It goes on to state:

> "We relied heavily on strategic airlift to deploy forces to the theater, while the sealift component of the strategic mobility triad lay essentially idle. This was due to the understandable desire of the commanders in the field to have needed equipment and personnel transported as quickly as possible; air transport was not, however, mandatory in all cases. The impact on operations was that it overburdened limited strategic airlift assets and was costly. The proper use of all means of strategic lift, supported by earlier assessment of ground and sea infrastructure, might result in faster force closure in future deployments."[40]

Richard Hart Sinnreich, a former director of the U.S. Army School of Advanced Military Studies writing in the Lawton Constitution, argues against the tendency to assume

that additional airframes alone will assure timely strategic mobility. The critical limitations of usable airfields, inadequate infrastructure, and vulnerability to disruption still must be addressed. "Meanwhile," Sinnreich stated, "too little attention has been paid to sealift."[41] The U.S. Army recognizes the limitation on airlift resources and the need for other means of strategic and operational mobility in immature theaters. One way that the Army intends to aid intra-theater deployments is to buy more ships. However, the impact of adding more, faster intra-theater sealift to operational mobility is not clear at this time unless it can be shown to also contribute in the area of inter-theater lift. In order to get combat units in place within the timeline defined by the Army Vision (brigade combat teams deployed anywhere in the world within 96 hours, a warfighting division on the ground in 120 hours, and five divisions in 30 days)[42], the Army must still rely on airplanes for all of the initial inter-theater lift and a large portion of the follow-on strategic mobility.

Finally, the types of resources consumed must be considered. Efficient use of allocated resources should be a goal of the JFC because it is key to optimizing the flow of forces. Extreme caution must be taken, however, to avoid measuring efficiency solely in terms of cost. It is an easy trap for USTRANSCOM and its component commands to fall into given that these organizations are funded as part of the defense Working Capital Fund program. In peacetime, cost considerations play a big role in solving strategic and operational mobility problems associated with normal support provided to exercises and routine force rotations. Using cost as a primary measure of efficiency could do a grave disservice to the JFC and the nation during a contingency by reducing options available for the strategic and operational maneuver of forces. Indeed, after-action reports have made

much of the cost (estimated by USEUCOM to be 30.6 million dollars[43]) of the deployment of TF Hawk.

Attainability

Attainability, according to joint logistics doctrine, is defined as the "ability to provide the minimum essential supplies and services required to begin combat operations."[44] For TF Hawk this definition was important as the time between arrival of the lead elements and the declaration of initial mission capability (20 days) has been carefully scrutinized and criticized by some. However, given the constraints of the situation, the U.S. Army has determined that the time was not excessive, noting in particular the advance party deployment only one day after the destination was formally changed from FYROM to Albania.[45]

Understanding available capability and constraints on that capability are critical for the JFC. Unrealistic TPFDD requirements, a lack of understanding of required lead times, and a failure to properly assess the constraints of theater infrastructure on strategic and operational mobility on the part of the theater commander's staff and component commands plagued Operation Allied Force and TF Hawk.[46] Comparatively, USTRANSCOM's responses to the theater commander's requirements did not reflect an appreciation of the need for synchronization and sequencing of forces. These two divergent views combined with USTRANSCOM's continuing quest for firm, stable requirements and tardiness in providing concrete capabilities on which the theater commander could base plans led to friction between the supported and supporting commanders and eventually to delayed unit movements.

Recommendations

Many of the operational mobility lessons of TF Hawk are not new. The JFC will recognize some of the lessons learned from past deployments for operations and exercises. This does not mean that the JFC cannot prevent their reoccurrence. Indeed, the JFC can take action to overcome and mitigate the challenges found in these lessons and enhance operational mobility by improving responsiveness, flexibility, simplicity, economy, and attainability. In particular the JFC can consider the following recommendations.

1. To gain maximum responsiveness on the part of the Defense Transportation System, the JFC can identify and stabilize requirements as early as possible in the deployment planning process and keep USTRANSCOM informed of all changes. In addition, by including USTRANSCOM and all theater transportation providers early in the planning process, the JFC can ensure unity of effort, a clear understanding of the concept of operations, and benefit from their collaboration in the development of alternative courses of action. This collaboration, in turn, can enable USTRANSCOM and theater transportation providers to be proactive in preparing for the upcoming operation; perhaps to even include initiating contracting actions for commercial airlift and sealift, requesting activation of reserve airlift units, activating RRF ships, or repositioning available strategic and operational mobility assets into theater.

2. The JFC can ensure that adequate JOPES trained personnel are available to support deployment planning and execution. By centrally controlling and demanding discipline in the TPFDD development process, the JFC can minimize confusion.

3. The JFC can improve intra-theater transportation efficiency and inter-theater transportation coordination by simplifying the theater transportation command and control structure. One option is to establish a Joint Theater Support Commander to provide the JFC

with a single subordinate commander with the scope and authority to ensure focused logistics.[47] Another option is for the JFC to clearly establish and enforce a staff focal point for all mobility issues.

4. In order to gain increased flexibility in rapidly evolving operational environments, the JFC can request TACON assignment of C-17s and deployment of LSVs to the theater for use as operational mobility assets. The JFC can also consider requesting withhold shipping, as described in Annex J of the Joint Strategic Capabilities Plan, or requesting operational control of appropriate strategic sealift assets be delegated directly to the theater Navy Component Commander. While the availability of these assets for operational mobility should not be assumed, contingency circumstances could make it their use in this way the most prudent and efficient choice to accomplish operational objectives.

5. The JFC can coordinate with his theater component commanders and USTRANSCOM to ensure enumeration and visibility of all assets available for operational mobility and the articulation of associated constraints and restraints for their use.

6. The JFC can instruct his staff to collaborate fully with USTRANSCOM when rapidly developing alternate courses of actions that make use of a variety of mobility assets. USTRANSCOM can help the JFC's staff understand what tempo and flow of operations is attainable as they are developing a plan. Cooperation and coordination with USTRANSCOM is critical to preventing unrealistic requirements resulting ultimately in delays and confusion and possibly even loss of operational effectiveness

Finally, the Defense Transportation System was also challenged by the deployment of TF Hawk. One area for future study would be to identify changes at the USTRANSCOM level that could provide improvements in operational mobility. One lesson is particularly

clear from the study of TF Hawk: Achieving the capability for dominant maneuver in a rapidly changing operational environment will not be easy. In the view of one Army transportation officer involved in TF Hawk, optimal operational mobility for the JFC can be achieved but will require a fundamental shift in focus. Logisticians and transporters would have to focus not on finding and locking in hard requirements from the JFC, but rather focus on building capabilities that can provide the JFC the flexible, responsive, operational mobility to get the right force to the right place at the right time.[48]

Conclusion

TF Hawk can serve as a turning point in U.S. military understanding of the challenges implicit in deployment and operational mobility. The U.S. military is on the path leading to achieving the capability for dominant maneuver articulated in Joint Vision 2020. JFCs, understanding the lessons for operational mobility of TF Hawk, can take action to overcome and mitigate the challenges that threaten to undermine responsiveness and flexibility and limit his courses of action. Close coordination and cooperation between the supported commander, the supporting commanders, and their respective component commanders will ensure that the joint force of the future will be agile in "positioning and repositioning tailored forces from widely dispersed locations to achieve operational objectives quickly and decisively"[49] using the right mix of inter- and intra-theater transportation assets for operational mobility. In addition, enhanced efficiency and careful consideration of attainability in deployment operations will ensure "delivery of the right equipment, supplies, and personnel, in the right quantities, to the right place, at the right time to support operational objectives."[50]

NOTES

[1] Joint Chiefs of Staff, Joint Vision 2020, (Washington, DC: June 2000): 1-2.
[2] Ibid, 24.
[3] Ibid, 20.
[4] Milan Vego, On Operational Art, 4th Draft, (U.S. Naval War College, Newport, RI: September 1999), 237.
[5] Ibid, 247.
[6] Joint Pub 4-0 describes seven Principles of Logistics (responsiveness, simplicity, flexibility, economy, attainability, sustainability, and survivability) that complement the Principles of War. Joint Chiefs of Staff, Doctrine for Logistic Support of Joint Operations, Joint Pub 4-0, (Washington, DC: 6 April 2000): II-2.
[7] Task Force Hawk was comprised of one Attack Helicopter Regiment with 24 AH-64 Apache helicopters, one Corps Aviation Brigade Task Force with 31 support aircraft including UH-60 Blackhawks, CH-47 Chinooks, and C-12 fixed wing aircraft, one reinforced Multiple Launch Rocket System battalion with 27 launchers, one Mechanized Infantry Brigade combat team with one mechanized infantry task force and one airborne infantry battalion, a Deep Operations Coordination Cell composed mainly of corps headquarters personnel, a support package headed by a Corps Support Group including organic transportation, quartermaster, ordnance, medical, finance, and personnel services units and attached engineer units, and one task-organized signal battalion.
[8] Center for Army Lessons Learned, "Tactics, Techniques, and Procedures from Task Force Hawk Deep Operations: Volume I," CALL Newsletter, no. 00-8, (Fort Leavenworth, Kansas: August 2000), iii.
[9] Department of Defense, Report to Congress: Kosovo/Operation Allied Force After-Action Report, (Washington DC, 31 January 2000): 42.
[10] "Tactics, Techniques, and Procedures from Task Force Hawk Deep Operations: Volume I," 2-3.
[11] Doctrine for Logistic Support of Joint Operations, II-1.
[12] Report to Congress: Kosovo/Operation Allied Force After-Action Report, 34.
[13] "Time-Phased Force and Deployment Data (TPFDD) Development: Timeliness," Lesson Learned No. 72631-83069, 16 July 1999. Unclassified. Joint Uniform Lessons Learned (JULLs) Database. Available on Navy Tactical Information Compendium (NTIC) CD-ROM Series A. Washington, DC: Naval Tactical Support Activity, November 2000.
[14] Report to Congress: Kosovo/Operation Allied Force After-Action Report, 34.
[15] Tim Pickering, <tim.pickering@msc.navy.mil> "Task Force Hawk Sealift," [E-mail to Cynthia Womble <womblec@nwc.navy.mil>] 29 January 2001.
[16] Major Stephen Farmen, Executive Officer for U.S. Army Task Force Brindisi during Operation Allied Force, interview by author, 29 January 2001, Naval War College, Newport, R.I.
[17] Ann Roosevelt, "Ground Warriors to Spend Millions on Ships," Defense Week, 8 January 2001, p. 1.
[18] Doctrine for Logistic Support of Joint Operations, II-2.
[19] Joint Chiefs of Staff, Joint Doctrine for the Defense Transportation System, Joint Pub 4-01, (Washington, DC: 17 June 1997): v.
[20] "Tactics, Techniques, and Procedures from Task Force Hawk Deep Operations: Volume I," 2.
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