

The Joint Logistics Enterprise: Machine and Organism

This article, the first in a series of three about how logisticians can view the joint logistics enterprise, discusses the enterprise as both a machine and a complex organism.

■ By Christopher R. Paparone, Ph.D., and George L. Topic Jr.

One of the most intriguing organizing constructs to emerge in the past several years within the military logistics community is the joint logistics enterprise (JLEnt). The recently published Joint Concept for Logistics and the latest Joint Publication 4-0, Joint Logistics, both discuss the JLEnt to give context to the art and science of military logistics.

The JLEnt may be described as the relationships among thousands of logistics providers across the globe, including military organizations that interact in a milieu with other entities, processes, and places. While it is impossible to physically see the entire JLEnt in action, there are multiple ways to visualize how it works.

We offer here and in our next two articles several visions of the JLEnt that may provide military logisticians with compelling insight into its workings. We adapt our thoughts principally from Gareth Morgan's 2007 seminal book *Images of Organization*.

The Machine

While the JLEnt as a named concept is relatively new, it has always been in existence. Our traditional military way of perceiving and managing the JLEnt has been, for the most part, as a machine—something that can be designed, engineered, controlled, and maintained, such as an automobile. In some ways this image is reasonable and effective for logistics support operations.

Indeed, the Department of Defense has spent large sums on enterprise resource planning systems to help con-

trol the performance of our logistics machines. Some aspects of military logistics can be systematically “steered,” guided by mechanical concepts such as “organizational alignment” and “integration and synchronization of functions,” and monitored by a “dashboard” array of performance indicators.

While this machine metaphor is quite useful for solving many problems, especially in applying systems engineering science, there are other useful ways to envision what the JLEnt is, how it works, and how it can be led.

The Organism

Drawing from Morgan, our first alternative to the machine image is that of a complex adaptive system. In this view, a logistician would imagine that the JLEnt is like an organism responding to an ever changing ecosystem (the strategic environment).

With this image, logisticians approach the JLEnt by acknowledging interrelationships. This is similar to the way a medical doctor diagnoses and treats a patient whose health depends on the synergy of the cardiovascular, lymphatic, skeletal, and other systems.

In an even larger scope, we can imagine how the JLEnt works as would a biologist who studies the relationships among species in a natural habitat. These relationships demonstrate the complex interdependencies of food chains, complete with the uncertainties of weather, terrain, and other factors.

In the past 20 years, many articles in highly regarded journals have highlighted research on the organic

character and attributes of civilian logistics organizations. The key characteristics of supply networks that are seen as complex adaptive systems include less reliance on hierarchical control and more on lateral relationship building, the acknowledgment of complex interdependencies that cannot be analyzed simply as component parts, and adaptation while interacting as a “living” network.

The future is going to require more complex and creative views to manage logistics. Hence, the community should not settle for a single view of the JLEnt. The logistician leader who can envision the JLEnt from multiple views will be better able to deal with complexity and uncertainty when faced with novel situations.

Such logisticians are comfortable with leading the traditional systems-engineering approach to problem solving (envisioning the JLEnt as a machine) and also thrive by investing in alternative frames of mind.

Our next two columns will present images of the JLEnt as a political system (with entities that have competing interests and shifting power relationships) and as a holographic-like “brain” (a learning system).

Christopher R. Paparone, Ph.D., is a dean at the Army Logistics University at Fort Lee, Virginia.

George L. Topic Jr. is the vice director of the Center for Joint and Strategic Logistics at Fort McNair, Washington, D.C.