

19 THE NEW FACE OF BATTLE

PJD's opening remarks

It is clear that networking and AI technology are transforming the space of warfighting. In 1979 John Keegan published a book *The Face of Battle*, in which he analyzed the practical mechanics of battle and how they affected the outcomes. He believed that the mechanics strongly shaped the outcomes, and could produce poor outcomes if strategy is not consistent with the possibilities allowed by mechanics.

Today, John Arquilla will discuss how networking and AI are radically transforming the space of possibilities available to commanders and warfighters. In this space, the network has become a dominant shaping force, making it possible to create virtual capital ships composed of armadas of small ships, and enabling tactics of massive swarms that can overcome defenses. AI adds a new dimension, where individual nodes in the network may have their own decision-making autonomy.

John is a distinguished professor in the Defense Analysis Department. He has proposed many seminal ideas for new ways of thinking about future warfare. He was the inventor of the idea of "netwar", which undergirded the DOD's interest in network centric warfare in the early 2000s. He is now concerned that AI is changing sea power in ways we do not fully understand but which we must if we are to prevail.