



3.1 MODERATOR'S SUMMARY

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Access to resources, including agricultural, land, minerals, timber, and energy sources, has driven conflicts since earliest recorded history for unfettered access to resources is the lifeblood of national wealth and power. This suggests that aggression to obtain and defend those resources, or to deny them to an adversary, is a biologically adaptive behavior. Some historians argue that such competition is at the root of all human conflict.

Throughout history, the interdiction of enemy supplies through blockade, capture, or destruction has been an effective strategy in warfare. America's own continental Navy was formed to intercept the movement of British arms and supplies as well as to reduce British profits from commercial trade. German U-boats conducted highly effective, unrestricted submarine warfare campaigns to interdict Allied supply lines in World Wars I and II, and the Allies'

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extensive bombing of German oil facilities was arguably the most significant factor causing the collapse of Nazi Germany.

The very notion of “enemy” has become increasingly blurred as globalization has spurred the expansion of a complex, interconnected web of economic and diplomatic adversaries, rivals, and shifting alliances. The preemptive nature of unrestricted warfare potentially redraws the once bright line between denying an enemy the means to make war on you and denying a potential adversary the means to compete with you.

“Warfare must always include attack on resources as well as attack on life. If the enemy can be cut off from his supplies he must yield.”

— Rear Admiral William L. Rodgers USN, The American Journal of International Law, October 1929

Further, this increased interconnectedness, coupled with recent technological advances, has provided terrorists, pirates, and even corporations with the means of motivation to enter the field of combat and inflict the kind of punishment that was once the sole province of states with military capacity. Such nonstate actors have fewer assets of their own to protect against retaliation and fewer qualms about inflicting civilian hardships and casualties.

Although there is considerable international maneuvering among the world’s nations, including the U.S., China, and Russia, to ensure access to their own future energy needs, such actions currently remain largely in the competition category. China cannot afford to clash directly with the West over energy. Russia’s leadership recently acknowledged mistakes in that country’s dealings with other nations on energy issues, possibly signaling recognition that in anything short of a hot war scenario, such tactics can result in unintended and undesirable consequences.

That said, the nature of global energy competition is projected to become increasingly intense over the coming years. China is currently the number two consumer of oil behind the U.S. and, before the recent economic downturn, was poised to overtake the U.S. in 2010. Russia has been seeking means to expand its

own oil and gas reserves in the Arctic by laying claim to vastly larger territory than is currently recognized under international law—a claim that includes an estimated 13 percent of the world’s remaining undiscovered oil and 30 percent of its undiscovered natural gas.

Although competition is clearly not the same thing as conflict, the likely increased intensity of this competition will help to create an environment in which states’ hunger for energy places them in an adversarial posture. Although, “No Blood for Oil” presents an appealing antiwar sentiment, the economic devastation to the U.S. that would be caused by an interruption of our access to foreign oil is undeniable. The Carter Doctrine, proclaimed in the 1980 State of the Union Address, warned the Soviet Union against attempts to limit the free movement of Middle East oil.

However, state actors are no longer the only, or even the largest, threat to such access. As previously mentioned and as previous attacks have shown, kinetic attacks on resources are no longer the purview of state actors alone. Terrorists and pirates are capable of inflicting significant damage to further their own ideological ends, influence markets and nations, and finance their operations. Osama bin Laden has called upon terrorists to strike supply routes and oil lines and to assassinate company owners who provide the enemy with supplies.

Resources can also be attacked by subtler, nonkinetic means. The role corporations can play in these attacks was highlighted this winter by Gazprom’s role in cutting off natural gas supplies to much of Eastern Europe. In the U.S., Enron and other corporations ruthlessly manipulated electricity markets, resulting in widespread blackouts in California in 2000 and 2001.

The U.S. is fortunate in that we are self-sustaining in many resources, including agricultural products. However, by one estimate, the U.S. now relies on imports for more than 50 percent of at least 45 key mineral commodities, double the number from 1996. Also, we remain critically dependent on foreign sources of energy. According to the U.S. Department of Energy, the strategic

oil reserve now stands at a 62-day supply, down from a peak of 118 days in 1985.

Dependence on long pipelines and complex distribution infrastructures makes modern industrialized nations remarkably vulnerable to interruptions of supply. U.S. domestic manufacturing is increasingly reliant on resources such as oil and minerals that can only be obtained in the quantities required from foreign sources, necessitating an elaborate transportation network as well as diplomatic obligations or foreign entanglements—with all the baggage that phrase implies—to help ensure uninterrupted access to those resources.

Susceptibility to resource attacks is not confined to those resources that need to be imported from foreign sources. Public health experts believe that contamination of food and water supplies would be the easiest method for terrorists to distribute biological or chemical warfare agents. A 2003 Rand study suggested that factors including concentrated and intensive farming practices and insufficient security and surveillance make the U.S. food supply especially vulnerable to attack.

The nation's electrical grid is also at risk, judging from the results of recent natural disasters and our own systemic failures. In August 2003, the largest blackout in North American history left large swaths of the U.S. without power for four days. In addition to destruction of oil and natural gas production wells and import facilities brought by hurricane Katrina, damage to the regional electricity generation and distribution infrastructure had a far-reaching impact and forced the local electrical utility into bankruptcy.

The concept of unrestricted warfare with its emphasis on non-military means of attacking one's adversaries provides a possible framework for understanding the broad range of resource targets susceptible to attack and the conditions under which such attacks might be possible. In this roundtable, our panelists will explore the potential adversaries, tactics, vulnerabilities, and defensive actions associated with resource attacks.

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