

Guerrilla Science and Blitzkrieg Technology: Military Theories for Governing Emerging Technologies

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Abstract:

Military metaphors are frequently used in the science and technology policy realm. Actor Network Theory (Latour, *Science in Action*, 1987) casts science as a battle between opposing rhetorical networks over how factual claims become true, and how certain individuals gain the power to “speak for nature”. Actor Network Theory is a powerful and common analytic framework for understanding how science is made and used, yet its model of battle as a struggle between defined armies of truth-seekers is highly ordered and ‘modern’ (Clausewitz, *On War*, 1832), and does not accurately encompass the political dimensions of science. Standing scientific controversies such as anthropogenic climate change, and emerging ones around the risks and benefits of GRINN technologies, can be better understood as a kind of “guerrilla science” where political credibility and endurance are more important than fact-proving ability.

Similarly, while economists have theorized technology as an exogenous, disruptive force leading to economic growth (Freeman and Louçã, *As Time Goes By*, 2001), the exact mechanisms by which technological innovations spread through society and transform human economic activity are not fully understood. Blitzkrieg warfare and the Observe-Orient-Decide-Act (OODA) theory developed by John Boyd (Osinga, *Science, Strategy, and War*, 2007) develop the objective of military action as not the destruction of enemy forces, but the destruction of their ability to function coherently through strikes on communication lines and systems of command and control. Innovation is a similarly disruptive process, in that new technologies fundamentally reshape the economy, causing firms to become extinct and creating new economic niches. The contemporary impulse for entrepreneurship in both the public and private sectors is counter-balanced by a very real fear that ‘creative destruction’ will eliminate the economic livelihood of the population without an adequate replacement.

This paper will summarize modern military practice and theory, and discuss how these strategic perspectives can be used by policymakers enmeshed in the scientific and technological controversies surrounding emerging technologies.