Collins, John M. *Military Geography for Professionals and the Public*. Washington DC: National Defense University Press, 1998.

The conclusion of Operation Desert Fox brought renewed media interest in the effects of new technology on "smart" weapon systems. Military experts were quick to point out the improvements made on these systems based on lessons learned from Operation Desert Storm. Cruise missiles, for example, received guidance information from satellites instead of navigating from preprogrammed map information that reduced accuracy because of a lack of terrain features available in the open desert. Laser guided bombs were upgraded to permit attacks against targets in marginal weather and smoke laden areas. These upgrades were critical in eliminating targets before the holy month of Ramidan commenced thereby making military action more of a political liability. These physical and cultural factors and their effect on political-military policy and operations are just an example of what John Collins seeks to address in his study.

The need for such a study cannot be over emphasized if military leaders and the public want to learn more about the effects of the physical and cultural environments on military operations. Military history is replete with military leaders who failed to properly appreciate military geography and its effects on military operations. Benedict Arnold lost almost half his men advancing toward Quebec through the Maine wilderness, while Hitler (like Napoleon before him) lost armies in the vast expanses of Russia. Collins correctly emphasizes the importance of military geography as its own unique discipline that should be studied by all who practice warfighting from the tactical to the strategic levels. Indeed, the alternative is to simply learn from trial and error, or even worse, relearn lessons already purchased at great cost by armies of the past.

Collins begins his work by defining the term military geography. He writes: "Military geography, one of several subsets within those broad confines, concentrates on the influence of physical and cultural environments over political-military policies, plans, programs, and combat/support operations of all types in global, regional, and local contexts." (p. 3) He also further defines the physical and cultural factors used in his analysis. The author also introduces a framework (similar to one taught to soldiers at the tactical level) for area analysis so the reader can gain a better grasp of the overall topic while reading the subsequent chapters.

Physical geography and its effect on political-military operations is then discussed in some detail. The author begins with an analysis of the size and shape of land masses and their effect on military operations. He then discusses the impact of topography, drainage, geology, soils and vegetation on military operations. Finally, oceans, seashores, climatology, space, natural resources and even regional peculiarities are discussed. Special emphasis (and properly so) is given to natural resources critical to military industrial production such as rare metals and petroleum. It is during this early part of the study where Collins begins to provide his various readers with two distinct lessons drawn from the same base material. The public receives a lesson on the impact of physical geography on its armed forces. Military readers, on the other hand, receive a basic

understanding on the effect of geography on joint operations. These lessons, whether intentional or not, are of great importance for all parties involved.

The study continues with an analysis of cultural geography. Populations and factors that more clearly define them such as language, religion, ethnicity and varying attitudes are analyzed in the context of their impact on military operations. Urbanization in terms of various configurations, structures, utilities and services are discussed with an eye toward the unique problems one confronts when conducting military operations in urban terrain. Lines of communication in terms of road, bridge, railroad, airport, seaport, pipelines, waterways and even space port construction are then studied. Finally, forts/military bases and their contribution toward military readiness and sustainability are studied by looking at the location and number of domestic/foreign bases used by the United States during the Cold War. In the end, the reader is left with a better understanding of why US combat experience in the Hurtgen Forest and the streets of Mogadishu were uniquely and equally horrific for the individual soldier.

The first two sections of the study provide the physical and cultural geographic backdrop for a given conflict. Part three of Collins' study provides a list of catalysts for a potential conflict and which US military players would most likely respond and have primary responsibility for the conflict. This section delves into the influence of political-military geography on various armed service roles and missions. Collins then probes the root causes of geopolitical friction derived from territorial claims, economic issues, cultural factors or environmental concerns. Lastly, the author discusses the complex factors that affect military areas of responsibility. US military unified commands, regional commands, theater commands and tactical commands are discussed in terms of geographic responsibilities at each level.

The last section in this study revisits the framework for an area analysis mentioned in the introduction of the study. First of all, the analysis lays out physical and cultural geographic factors for a given area. The desired type of military mission is then discussed. An analysis is then conducted of the physical and cultural factors and their military implications when conducting the already specified military mission. Effects on friendly and enemy courses of action (COA) are then discussed. This last analysis in terms of effects on friendly and enemy COAs is the most crucial for commanders and policymakers at all levels. Collins then applies this area analyses format to Operation Neptune and Operation El Paso. The author's two case studies show the reader how practical application of military geographical considerations can help military leaders and policy planners determine a specific course of action.

In conclusion, the author does not lose the civilian reader foundering in military jargon and analysis. On the other hand, Collins provides enough military detail and analysis for the military reader to successfully create a basic guidebook/checklist when considering military geography and its impact on military operations. The planning and execution of military operations have become extremely complex. The various planning factors involved have given rise to a large staff and special staff for commanders at all levels. For the public, it is even a greater challenge trying to understand the complexities of

military geography and its impact on political-military operations. However, this study is easily read and understood by all readers. Collins does a credible job in achieving his stated threefold purpose of his book: to provide a textbook for academic use, to provide a handbook for use by political-military professionals, and finally, to enhance public appreciation for the impact of geography on military affairs.

Robert Baer Fort Leavenworth, KS