WEAPONS, TECHNOLOGICAL DETERMINISM, AND ANCIENT WARFARE*

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Introduction

John Keegan pointed out that the discipline of military history comprises many different fields. Generals and generalship, weapons and weapon systems, naval history and technology, institutions and armies, strategic doctrines and political science are all part of Keegan’s list.¹ The focus of the discipline, however, has fluctuated between these fields in the last century, according to the changing interests and outlooks of the period. In the specific field of ancient military history, the study of weapons and weapon systems has been particularly relevant, focusing on typological analysis, comparative works and detailed accounts of the military performance of dozens of different weapons and their tactics. This interest in the tools has been sometimes pushed to its limits, turning them into decisive factors that eventually explain the whole nature and circumstances of war. The idea that the weapon is the decisive item that could by itself win battles, or make a significant difference to their outcomes, entails a certain simplification of the complex reality of warfare. This simplification is what is commonly labeled ‘technological determinism.’

Broadly speaking, technological determinism implies that military tactics and techniques are determined by technological change: the introduction of a new weapon generates an automatic adaptation of tactics. The main criterion to establish the connection between weapons and tactics is superiority: the qualities of the new item, felt to be superior

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to older ones, first prompt a technological substitution and then a tactical adaptation. This swift military change, in turn, is finally supposed to be the main cause of political, social and economic transformation. Thus, technology becomes the engine of historical change.

Determinism operates at several levels. We can differentiate a basic, ‘battlefield’ level, which maintains that there is a direct connection between weapons and tactics. Certain weapons are supposed to determine the choice of specific tactics, and thus victory itself. As a result, better weapons and tactics help to win battles, and victory in turn explains the diffusion of technological innovations and the seemingly automatic replacement of older artifacts by new ones, as if technological change were driven by the principle of progress. A second level of the deterministic approach to warfare, the ‘political’ level, entails that, in view of the crucial role played by weapons in the outcome of war, all decisions, interests, and policies of ancient communities were determined by military factors. As a result, the military becomes a central and all-pervasive concern in ancient political agendas. We can finally differentiate a third, ‘structural’ level, which maintains that military technological transformations, following the previous two steps, produce and explain broader socio-political change. According to this view, military technology is the trigger that fires the gun of historical evolution.

Ancient history has sometimes tended to overestimate the impact of military affairs. Arguments and approaches focusing on weapons and war have regularly figured in studies about the ancient world. Due to the irresistible attraction of technology, the role of weapons on the general dynamics of warfare has sometimes been overrated, as if they were the