

Paweł Suszczenia

Streszczenie rozprawy pt. *Antyczna inżynieria wojskowa. Innowacja i ciągłość idei konstrukcyjnych machin wojennych w świetle traktatów technicznych i źródeł narracyjnych.*

Abstract

The present dissertation examines the development of ancient military engineering, with particular emphasis on the continuity and innovation of constructional ideas behind war machines, from the 5th century BC to the 10th century AD. The primary aim of the study is to determine the chronology, geographical context, and circumstances surrounding the emergence, evolution, and diffusion of specific types of ancient war machines through a critical analysis of both technical treatises and narrative sources.

The research is based on a comparative methodology that integrates diverse categories of evidence, including ancient technical writings, historiographical accounts, epigraphic material, and archaeological findings. Particular attention is devoted to the analysis of original-language sources in order to clarify ambiguous terminology and reconstruct the technical meaning of rarely attested terms. This approach allows for a more precise identification of specific machines described in ancient texts, whose interpretation has often been problematic due to the fragmentary and imprecise nature of the sources.

The dissertation makes several specific contributions to the field. It demonstrates, on the basis of a detailed source analysis, that large-calibre artillery did not exist in the time of Alexander the Great, but emerged only in the period of Demetrius Poliorcetes, thereby challenging a widely accepted assumption. The study also proposes new hypotheses concerning the diffusion of artillery technology in the late fourth and early third centuries BC, highlighting mechanisms such as the reuse of captured machines and the transfer of technical knowledge between allied states. Furthermore, it advances an original argument for locating the invention of torsion-powered artillery in fourth-century Athens, and offers a reinterpretation of selected siege devices, including the sambuca, suggesting its possible derivation from the Roman *corvus*. The dissertation additionally confirms certain technical reconstructions, such as the inward-facing arms of the Hatra catapult, through the application of ancient calibration formulas. By adopting a broad chronological perspective, it identifies previously unnoticed connections between Greek, Hellenistic, and Byzantine engineering traditions, including parallels between later traction artillery and the so-called Claw of Archimedes, as well as

possible continuities in the development of incendiary weapons. Finally, the study re-evaluates the historiographical tendencies of Diodorus Siculus, demonstrating his active role in shaping narratives of military technology and identifying his account as a key factor in the formation of misconceptions regarding early heavy artillery and legendary devices such as Archimedes' mirrors.

The dissertation also contributes to the field by proposing a more consistent terminology for ancient artillery, which may help to resolve long-standing ambiguities in the interpretation of historical sources. Furthermore, it offers a synthetic overview of ancient military engineering that has hitherto been lacking in Polish scholarship, while advancing original interpretations of key problems related to the development and use of war machines.