CHAPTER THREE

EFFICIENCY AND THE PERFECT SIEGE

With over forty sieges to his credit, Vauban’s followers could have chosen other sieges to emphasize. But several reasons converged to focus attention on the 1697 siege of Ath. First, given the importance of Vauban’s legacy to the engineering community, a capstone of his career was only appropriate to show him at the zenith of his art. The last two sieges of his illustrious career (during the War of the Spanish Succession) were less heroic and less worthy of his true talents. His brief, unsuccessful attack on the forts surrounding Hulst in 1702 would hardly be a representative endpoint, as it was the only place to resist the maréchal’s efforts. In defense of Vauban’s reputation, Louis had ordered him to besiege these forts (approachable only along narrow causeways) against the engineer’s better judgment in order to divert the Allies’ attention from their siege of Venlo. Short of men and supplies, Vauban could make little impression against either the forts or the Allies’ focus on Venlo, so he was allowed to lift the siege after a week of lackluster effort. Nor would the 1703 campaign offer a proper tribute to this historical figure: his attack on the Rhenish town of Old Breisach was, like so many others, successful, but its conduct was contested by the commander, and this resistance to his ideas would become an increasingly common obstacle for his few remaining years of life. Ath, on the other hand, was a fitting tribute to chronicle the epitome of Vaubanian siegecraft in all its glory, but it was more than just that. This siege offered engineers the opportunity to illustrate a fundamental tenet of military engineering, the desire to constantly improve the efficiency of siegecraft.

1. The Engineering Pursuit of Efficiency

Vauban’s improvement of the discipline of poliorcetics (attacking fortifications) resided in his detailed exposition of how to attack a fortress by managing the chaos of positional combat as much as in
his successful practice of these skills. In this educational vein he was continuing a long engineering tradition, for since the birth of this profession its members have constantly sought to increase the productivity of labor through mechanical means. Before the development of discrete engineering specialties in the mid-eighteenth century, architects, military engineers, artillery engineers and civil engineers all learned their craft in a common artisanal fashion and all shared an emphasis on efficiency, defined at its simplest as a measure of output per unit of input. This interest in improving productivity is seen most clearly in the literature on the design of fortifications. After decades of predominance the trace italienne-style fortresses began to fall prey to the growing power of siege armies. In response, engineers of the late 17th century sought to shift the balance back towards the defense, often justifying their proliferation of defensive designs in terms of economy: how wasteful, they reminded their readers, to expend so much money on a multi-bastioned stronghold only to see it surrender after a single breach in only one of its bastions! Later in the eighteenth century a representative of the increasingly-professionalized French military engineers, Fourcroy de Ramecourt, would take this to the logical extreme. He proposed a ‘scientific’ technique of determining optimal efficiencies by calculating a “moment of fortification” for each fortress, that is, a numeric ratio of the length of a fortress’s defense during a theoretical siege relative to the expense


2 For example, Blaise-François Pagan, Les Fortifications de Monsieur le Comte de Pagan avec ses theorems sur la fortification, (Brussels, 1668 edition of 1645 original), Preface. Later in the period, we could cite Jacob de La Vergne, Nouvelle fortification imprenable par force d’armes (Vienne, 1700), Dédicatoire; and, much later, Jean-Bernard Virgin, La défense des places, mise en équilibre avec les attaques savantes et furieuses d’aujourd’hui, (Stockholm, 1781), Dédicatoire.