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## The book of the week: Castles, Battles and Bombs

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What price victory? Huw Dixon weighs the odds

Written by an economist and an historian, this book aims to show how economics can explain military history in the second millennium, starting with the case of the medieval castle and finishing with the Cold War. It is not comprehensive, but rather focuses on a succession of examples from Europe and later the US.

For me, economics sheds light on military matters in three ways. First, there is the macroeconomic level: how the wealth of nations evolved over time and the ability of the state to mobilise resources for the conduct of war. Second, there is the microeconomics of military decision-making: the costs and benefits of alternatives, the problems of imperfect and asymmetric information, and the incentives (monetary and non-monetary) faced by generals. Third, there is the direct interaction of the military and economic. Economic incentives and outcomes play a major role in history: wars might sometimes be fought for religious or ideological reasons, but plunder and the control of resources have always been the predominant motive. Armies need money for pay and equipment: armies are a means to obtaining and securing wealth.

The Bank of England was founded in 1694 to deal with government debt arising from the wars with Louis XIV. Income tax was first introduced in Britain in 1798 to finance the revolutionary and Napoleonic wars. Britain's ability to wage war successfully in the 18th century against a far richer and more populous France was partly a result of the latter's failure to innovate financially. The country continued to rely on moneylenders and tax farmers until the revolution and the resultant unlocking of her true potential.

The focus of the book, however, is on the second microeconomic aspect, as is clear from the opening chapter explaining the basic principles of economics. However, even the microeconomics is not comprehensive. Game theory is largely left out, for example Robert Axelrod's analysis of trench warfare in the First World War. It was in the interests of soldiers to avoid conflict in the trenches, and cooperation evolved on the basis of the tit-for-tat strategy: you left the enemy alone unless they attacked you, in which case you attacked them back. Of course, soldiers put on a great theatrical display of appearing to fight: artillery rounds were set off at the same time to hit the same places, and rifles and machine guns could be shot over enemy heads. Generals often found it hard to make soldiers fight: to kill and be killed. In trench warfare, cooperation evolved all too easily.

The authors' discussion of the case of the medieval castle tries to explain why there was such an outburst of castle building in the High Middle Ages. The cost of castles was truly prodigious: Edward I's average annual income in his 25-year reign was about £67,000. The cost of building a castle could be as much as £27,000. Why were kings (and some nobles) willing to spend so much on them? The authors argue that kings in this period had a choice of spending money on castles or field armies. Field armies were vulnerable, and with few exceptions the ability to raise and maintain large numbers for a sustained period was very limited.

This meant that building castles was the only way to dominate a hostile population (as in the case of Wales) and to provide an effective defensive border. Castles provided logistical and administrative centres and could be defended with few men. There are examples (Harlech, Krak des Chevaliers) of garrisons of fewer than a hundred soldiers seeing off determined besiegers. Field armies could shelter in castles during campaigns. Siege warfare was usually protracted, and to successfully conduct a siege usually required keeping a force in place over a long period. The cost of a prolonged siege could outweigh the cost of building the castle, and some successful sieges led to the victor's financial ruin.

While castles provided a cost-effective alternative to a field army in defence, they could not conduct offensive campaigns: Edward I's Welsh castles were of little help in his invasion of Scotland. Hence the nature of medieval warfare resulted in the construction of castles for long-term defence and domination, and the raising of field armies during short campaigning seasons for offensive purposes, and in response to offensive operations.

One of the main themes of the book is the decision to engage in battle. Clearly, in all periods, generals have to match the benefits with the costs. Engaging in battle is very risky, and throughout the ages generals have avoided battle unless the situation seemed highly propitious (or inescapable). However, the calculus has varied. In periods where the soldiers were "cheap" (plentiful and needing little training), generals were more willing to risk soldiers' lives.

In the Middle Ages, however, armies were small and many soldiers were of high social and economic value. Battle was given only cautiously, and sieges were often more decisive. This changed with the introduction of muskets, which required little training, and population growth. In the Thirty Years' War (1618-48), large armies of less well-trained men made more sense than professional armies, and losses were huge.

Things changed again in the 18th century, when the manoeuvrability of well-trained formations became decisive (indeed, the New Model Army of Cromwell showed this in the English Civil War). Generals became less willing to risk losing their well-trained soldiers, and campaigns became a dance of position. However, some generals had very different attitudes to risk: Frederick the Great and Marlborough were successful and willing to suffer large casualties in order to grasp a decisive victory. In military campaigns, the role of the general can be decisive, and this is a factor that cannot be captured by economic or any other generalisations.

If we turn to the 20th century, the authors concentrate on the heavy bombing campaigns initiated by the British and later joined by the United States Air Force. They concentrate on the question of whether there was "diminishing marginal productivity" of heavy bombing. Apparently there was. The authors provide some interesting insights: the German armaments industry was able to survive owing to its geographic dispersion, which meant that the effect of the bombing was significant only really in the last 18 months of the war. However, the cost of Bomber Harris's heavy campaign was huge: up to as much as 25 per cent of the British war effort, along with much well-educated manpower that was made unavailable to the Army or Navy.

The authors show that there was little effect on German morale and that except at the end it was not very effective. There could be little "economic" rationale for the bombing campaign, and its explanation rests on either mistaken expectations or a political and symbolic desire to show Stalin that we were doing something prior to D-Day in response to his repeated demands that a second front be opened up.

While I enjoyed much of the detail and learned many new things in this book, I was left with the impression that the authors might have focused more on the big picture and certainly on the macroeconomic aspects.

## THE AUTHORS

**Jurgen Brauer** is a tenured professor of economics at Augusta State University in the James M. Hull College of Business, where he was named professor of the year last month. He has worked in nearly every corner of the globe and his three children were born in three different continents - Africa, Europe and America. He enjoys motorcycling, scuba diving and photography, although presumably not all at the same time. Despite forays into multidisciplinary, he says he has no wish to shift his allegiance from economics. "I don't like to say that the grass is greener. I prefer to say I graze at the fence of economics."

**Hubert Van Tuyl** is also at Augusta State University, where he is a professor of history. He was born in the Netherlands but his family emigrated to Canada when he was young, and he found himself in the unenviable position of having to learn English twice after his family moved once more to Alabama. Since then, he has stayed in the South, with roles at Texas A&M University and Union College Barbourville prior to his move to Augusta State. Outside of his academic life, he enjoys playing the organ and describes himself and his wife as "shameless Anglophiles" who are particularly fond of the city of York.  
- Sarah Cunnane

### **Castles, Battles and Bombs: How Economics Explains Military History**

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