## **BOOK REVIEW**

## Douglas W. Allen: The institutional revolution: measurement and the economic emergency of the modern world

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In Douglas Allen's highly readable *The Institutional Revolution*, he argues that high costs of monitoring can explain otherwise strange features of British government from 1550-1850, including patronage and the sale of offices. In the pre-modern period, many governmental positions needed to be filled by people who had an incentive to behave honestly in a setting with high monitoring costs. In this context, appointments were based not on ability, but on trust. Patronage appointments induced patrons to carefully select and monitor appointees, who often were their relatives or relatives of close friends. Appointees were customarily aristocrats who had little to gain—and much to lose—from betraying the trust. Their landed estates and investment in non-marketable activities such as dead languages and courtly skills acted as hostage capital. In other governmental positions, incentives dictated that the offices should be sold. In the Army, for example, selling positions induced sorting. Higher quality candidates were willing to pay higher prices for the commissions. Officers had the incentive to earn high returns on their investment by capturing prizes in battle and earning payments for victory. During the nineteenth century, monitoring costs declined. These declines made it possible to monitor and incentivize workers directly through a modern bureaucracy, enabling the 'institutional revolution.'

Chapter 2 provides a backdrop for understanding the constraints that society faced. The environment was enormously variable. Power varied with weather, particularly rainfall, and animals. As an input to goods and services, the variability in power limited consistency and timeliness of production. Time itself was not accurately measured, which had implications for a wide variety of activities including the coordination of meetings, commencement of battles, and sailing, to name just a few. Weights and measures were not standardized. This limited trade, precluded the standardization of goods, and made replication of recipes, whether for cooking or chemicals, difficult. Disease struck early and often. Given the variability of the environment, it was often difficult to separate the effects of nature and an individual on an outcome.

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Chapters 3 and 4 consider the aristocracy and dueling. As Allen notes, the pre-modern aristocrats faced a set of constraints that "encouraged aristocrats to avoid business enterprises, engage in conspicuous consumption, and invest in the oddest forms of capital" (p. 48). These constraints meant that they had highly immobile capital and required large sums of money for their maintenance, guaranteeing reliance on bureaucratic positions. There was, however, the matter of entrants. As the government expanded and some families died off, new bureaucrats were needed. Some merchant families became wealthy enough to buy in to the aristocracy, giving up their businesses. Other marginal entrants needed a way to prove their trustworthiness. Allen argues that "The duel of honor ... was the ultimate social weapon intended to test the trustworthiness of lower-gentry members trying to move up the social ladder" (p. 82). Dueling was largely restricted to this group. Strikingly, many social groups including the higher aristocracy, the royal family, merchants, the Jews, and military officers during times of war were not allowed to duel.

Chapters 5 and 6 analyze the Army and the Navy. In both branches, officers were paid small salaries and received large payments for the capture of war prizes and for victories. This addressed much of the monitoring problem, by paying for performance. Interestingly, the Army sold commissions, while the Navy did not. The big advantage of the sale of commissions was the sorting it induced. On average, the individuals who were willing to pay the most also had the skills and temperament to be successful officers. These officers had an incentive to train their men well to ensure success in battle. The situation was different for naval officers. They were in possession of a highly valuable government ship, which the government wanted them to use to fight battles. Sale of commissions for the Navy would have incentivized the highest payers to engage in piracy and other raiding, to the detriment of the Crown. Patronage, performance-based payments, and the occasional shooting of naval officers found not to have engaged enemy ships provided them with incentives to act in the interest of the Crown and train their crews well for war.

Chapters 7 and 8 consider a wide variety of topics in less detail, including lighthouses, private roads, tax farming, and the courts, criminal law, and police. Monitoring the provision of services and the resulting revenues was too costly for the government. It was more efficient to sell the rights to individuals, towns, or corporations, who then had the appropriate incentives to provide lights and roads and to collect payments for lights and roads, as well as taxes. The story for the courts is more nuanced. As production moved from heavily monitored craft work to factories, embezzlement of inputs and outputs became a severe problem. At first, factories were located in rural areas and operated more like prisons than factories. The development of the steam engine and the rise of police, courts, and criminal law allowed factories to move back into urban areas. The economies of being in urban areas could be captured, yet theft could be controlled.

This book is aimed at a general audience. Thus, it focuses not on running regressions, but on telling a story. The story uses a transaction-cost lens to understand British government in the pre-modern and modern periods. Seen in this light, otherwise puzzling aspects of British government are rational responses to high monitoring costs. Undergraduates would enjoy selected chapters, and one could easily assign the whole book to a graduate class.

My complaints about the book are fairly minor. The story could have been enhanced by drawings, maps, illustrations and perhaps charts. At many points, I wanted more: more detail, more analysis, and data. This was particularly true in Chap. 4 (dueling) and Chap. 8 (the courts, criminal law, and police). Various strands of the story never quite get integrated. For example, there is little on disease. Power gets integrated only indirectly, primarily in



Chap. 8. One is left to wonder how exactly increased ability to monitor led the government to lower the incentives of military officers. Overall, *The Industrial Revolution* is an intriguing and quite entertaining book, which offers an informative analysis of British government during the pre-modern period.

