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Source: *The Journal of Economic History*, Vol. 57, No. 2 (Jun., 1997), pp. 497-499

Published by: Cambridge University Press on behalf of the Economic History Association

Stable URL: <http://www.jstor.org/stable/2951055>

Accessed: 22/01/2009 07:21

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Time Use in Eighteenth-Century London: Some Evidence from the Old Bailey

Did England work any harder during the Industrial Revolution?¹ Marx said so, and so did E. P. Thompson, but we had no way to know.² Literary sources are difficult to interpret, wage books are few and hardly representative, and clergymen writing about the sloth of their flock did little to validate their complaints. Instead of using these problematic sources, more than 2,000 men and women from eighteenth-century London give evidence in this study. They come from all strata of society and all age groups, and appear as witnesses before the Old Bailey to answer a simple question: “What did you do at the time of the crime?” Each of them gives their name, profession, and main activity—not just at the time of the crime but often before and after it as well. At random hours of day, on random days of the year, these testimonies provide snapshots of everyday life—preserved by the scribes in the Old Bailey courtroom who took down verbatim reports of the proceedings in shorthand.

The data available in the Old Bailey Sessions Papers thus allows us to replicate a technique known to modern sociologists as random hour recall. It is noteworthy both for its accuracy and reliability. Our source is available from the 1670s onwards. Initially a form of the “yellow press,” it provided entertainment in the form of juicy tales of sex and murder. Under the increasing influence of the City of London, which awarded monopolies for the printing of reports from the Old Bailey, the source quickly became more respectable, accurate, and even handed. From the 1730s, full verbatim reports are standard.

The witnesses testifying before the Old Bailey are representative of the London population at large, or so their social background suggests. When compared with the social composition derived by Schwarz, our witnesses do not appear to come from a select subgroup.³ Access to clocks and watches was also not a limiting factor. First, many of the witnesses reporting their activities in front of the court simply used publicly available information on the time of the day, such as churchbells or the night-watchman shouting the hour. Second, watch-ownership—as reflected by the victims of theft—was hardly a question of class, since even members of the most disadvantaged groups owned time-pieces. Was time-use in London representative of the nation as a whole? Almost five-sixths of the population lived elsewhere, yet laborers on a canal in Cheshire worked in a fashion very similar to Londoners.

Sometime between 1750 and 1800, Londoners began to work longer—much longer. Annual working hours increased by at least one-fifth. Yet dramatic change proceeded alongside considerable stability. The average working day by the end of the eighteenth century was very similar to the one 50 years earlier; there were simply many more of them. Starting and stopping work, and the time taken for breaks, barely changed at all. The average working day started at 7 A.M. and ended almost exactly 12 hours later. Taking time for meals into account, this gives approximately 11 hours of work per day. What drove changes in annual labor input was that Monday became a day of regular work and that most of the religious and political holidays that had reduced the workyear in 1750 disappeared. I use logit models to estimate the probability of finding witnesses at work on different days of the week and the year. Whereas Mondays and holy days do not yield estimates signifi-

¹This dissertation was completed in 1996 at Nuffield College, Oxford University under the direction of John Landers, Richard M. Smith, and Avner Offer. I am grateful for support by the ESRC, Nuffield College, and Clare College, Cambridge.

²Thompson, “Time.”

³Schwarz, *London*.

cantly different from Sundays during the 1750s, they appear to be much more similar to the rest of the working week 50 years later. Interestingly, the probability of finding witnesses engaged in leisure activities varies inversely with the probability of finding them at work, thus confirming the validity of our main result.

Seasonality of time-use is still pronounced during the 1750s, with the time of rising in the morning and starting work particularly affected. Seasonality only fades slowly over the next 50 years, with much the same patterns still present in our data set from 1800. The gender division of labor is clearly captured in witnesses' testimonies—in line with expectations, women performed less paid work and much more domestic work. Occupational differences were much harder to trace because dividing the data set into multiple categories rapidly reduces the sample size below the critical threshold.

The validity of our findings is tested in a separate section. Crime does not occur with equal frequency during all hours of the day, but the bias arising from this is small. Also, the lag between the average crime and the time when a witness has to recall his or her activities before the court is much longer than is common in modern sociological studies. I examine if the likelihood of making a mistake increases with the length of the recall period and find no evidence to suggest that witnesses recalling more distant events were any more forgetful than the contemporaries having to remember recent activities.

Two findings stand out: the length of the working year in 1800 and the speed and size of the increase during the preceding 50 years. The number of hours worked is unusual compared to any society examined during the twentieth century. Even taking into account that working hours vary with economic development, Londoners toiled exceptionally hard. Six alternative interpretations are presented; I favor two and emphasize one of them. Rising capital/labor ratios were not responsible for the increase in labor input because data on a cross-section of London trades shows a negative elasticity of working hours with respect to capital and as the recent work by Crafts, Feinstein, and others shows, capital/labor ratios were probably not increasing.⁴ The Freudenberger-Cummins hypothesis, which holds that more work was being done by 1800 than in 1750 because food had become more plentiful, also has to be rejected.⁵ First, I examine the claim that work effort during the eighteenth century was energy-constrained. The methodology normally used to demonstrate this is shown to be based on dubious assumptions.⁶ Second, there is little evidence to suggest that nutritional constraints, even if they had existed, were declining between the middle and the end of the eighteenth century. Also, neither reductions in morbidity nor the increase in the dependency ratio (because of accelerating population growth) were responsible for longer hours of work. Some of the rise in labor input can be attributed to backward-bending labor supply curves, but they are an insufficient explanation of the total increase. The explanation favored in my thesis centers on the increasing availability of relatively cheap consumer goods—put simply, there was more to work for by 1800 than there had been during the middle of the eighteenth century. Consumer goods were plentiful and cheap, and fashions changed with increasing speed.⁷ As a wider and more attractive choice of durables and fashion items enriched the relative rewards of work vis-a-vis leisure, the “productivity of leisure” (in Becker's terms) and annual working hours increased.⁸ Using a logit model to predict the probability of observing witnesses engaged in work, it emerges that the largest part of the change between 1750 and 1800 can be attributed to the so-called consumer revolution.

⁴Crafts, *British Economic Growth*, pp. 73–78.

⁵Freudenberger and Cummins, “Health,” pp. 7–9.

⁶Fogel, “Second Thoughts”; and Voth, “Going Short.”

⁷Fine and Leopold, *World of Consumption*.

⁸Becker, “Theory.”

That Londoners—and, probably, all Englishmen—worked many more hours has further implications for the history of the Industrial Revolution. The present estimate of changes in labor input (+0.8 percent p.a. between 1760 and 1800) is based on the Wrigley and Schofield figures for population growth. If the findings presented in my thesis are correct, than this figure has to be revised upwards, giving an estimate of at least 1.2 to 1.3 percent p.a. Thus, one important factor of production grew at a higher rate than previously thought. This implies that the economy's efficiency in combining factors of production did not rise much, if at all, between 1750 and 1800. Using a wide range of plausible elasticities with respect to working hours, I show that the most probable result is negative total factor productivity growth during the second half of the eighteenth century. The finding that working hours increased by at least 20 percent between 1750 and 1800 also helps to resolve a puzzle in the economic history of the Industrial Revolution. Real wages and the world of goods seem to tell conflicting stories—probate inventories show a rise in material possessions at the same time when wages are stagnant or falling.⁹ Also, national accounting exercises suggest that per capita consumption increased at the same time as real wages were falling (and inequality probably remained constant). The puzzle is resolved since it was not higher pay but longer toil that paid for new goods and additional consumption.

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⁸ DeVries, "Purchasing Power," pp. 106–111.

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