

My model of demographic contraction will have to be tested against further pieces of empirical evidence. For the time being, the preponderance of the documentary sources are consistent with the notion that for several generations following the Antonine plague, Roman Egypt (or parts thereof) experienced limited growth in *per capita* output facilitated by significant population loss.⁹⁴

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matic evidence and falling prices in the fourteenth century," *Economic History Review* 27 (1974) 1-15; Farmer (supra n.38) 441-42. Credit could not compensate for the lack of cash because its availability was tied to that of bullion: P. Nightingale, "Monetary contraction and mercantile credit: later medieval England," *Economic History Review* 43 (1990) 560-75.

⁹⁴ *Postscript*: In a forthcoming paper, J. Greenberg challenges Duncan-Jones' contention that numerous samples of documentary evidence reflect the impact of the Antonine plague. To my mind, his critique further underscores the need for comprehensive deductive models that reduce the likelihood of *ad hoc* reasoning.

The effects of plague: model and evidence

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In the foregoing article, W. Scheidel builds on earlier work, most notably that of R. P. Duncan-Jones in *JRA* 9, to offer a model for the predicted effects of the Antonine plague and to argue that the model fits the evidence from Roman Egypt reasonably well within the limits of the quantity and quality of the latter. In his second footnote, he encourages critical response, suggesting that it "may either corroborate or undermine my interpretation." The following pages are intended as a contribution to that discussion, but with lesser ambitions than either corroborating or undermining the model as a whole. They offer some of both, in fact, but more in the direction of undermining it.

There are three reasons for not claiming too much at this point and not offering any general conclusion (as I do not). The first is that I do not have any fixed views on the degree to which the plague was the prime mover behind the changes visible in late 2nd- and 3rd-c. Egypt.¹ In the absence of any concerted attempt to formulate and test other hypotheses about the engines of social and economic change, it is hard to say if the degree of fit of evidence to model is impressive or not. The most obvious counter-candidate is the increased municipalization of Egypt during just this period, especially from A.D. 200 onward. It would be useful to generate a model of economic change from this force and see if it is equally capable of accounting for the evidence.

A second reason for circumspection is that it would take much more time than has been at my disposition to look at all of the evidence with the critical care it deserves. Scheidel's data come almost entirely from H.-J. Drexhage,² a work of considerable utility but not executed with a high level of critical care (as has been noted by D. Rathbone); nor has Scheidel himself done much to look critically at the character of the evidence and how far that might require more caution in its use. Some soundings of this sort appear in the following remarks, but it must be emphasized that they are only the beginning of an investigation.

¹ This may come as a surprise to the reader who has remarked Scheidel's polemical engagement with my remarks on *P.Oxy.* 4527 (above, pp. 112-13). I shall return to this text later, but for the moment I may simply note that it was scepticism — not yet laid to rest — about the quality of the evidence for the effects of the plague, not adherence to another hypothesis, that lay behind my earlier comments.

² H.-J. Drexhage, *Preise, Mieten/Pachten, Kosten und Löhne im Römischen Ägypten bis zum Regierungsantritt Diokletians* (St. Katharinen 1991).