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The ripple that drowns? Twentieth-century famines in China and India as economic history

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**The Ripple that Drowns?
Twentieth-century famines in China and India as
economic history**

Cormac Ó Gráda, University College Dublin

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THE RIPPLE THAT DROWNS? TWENTIETH-CENTURY FAMINES IN CHINA
AND INDIA AS ECONOMIC HISTORY

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I. Introduction

Major famines are rare today, and tend to be 'man-made'. Where crop failure is the main threat, as in southern Africa in 2002 and Niger in 2005, a combination of public action, market forces, and food aid tends to mitigate excess mortality. Although non-crisis death rates in sub-Saharan Africa remain high, excess mortality from famine in 2002 and 2005 was miniscule. The twentieth century saw the virtual elimination of famines caused simply by crop failures. Indeed, were it not for famines due to civil strife or autarkic despotism, mankind today would be on the verge of 'making famine history'.

The past century also witnessed some of the greatest and most notorious famines on record. Those famines highlight a key feature of twentieth-century famines that would seem to distinguish them from earlier famines. Analysis of earlier famines is usually couched in 'Malthusian'¹ terms, the regrettable but likely outcomes of land hunger and overpopulation. Analysis of twentieth-century famines stresses instead the role of human agency and public policy: such famines are the product, not of food shortages *per se*, but of the mismanagement or brutality of elites or else the greed of speculators. The distinction oversimplifies the reality, though not the way famines are broadly perceived.

This paper focuses on two of the last century's most emblematic famines, the Great Leap Forward famine of 1959-61 and the Great Bengal Famine of 1943-44. The first involved massive harvest shortfalls, the causes of which remain controversial; whether the second involved a decline in food availability is still moot. The first highlights the

capacity of totalitarian regimes to wreak humanitarian havoc; the second raises the age-old issue whether famines can stem from a conspiracy of farmers and merchants against those who purchased food. Most accounts judge both famines to have been ‘artificial’, the avoidable products of human agency rather than of major adverse shocks to food supplies. Each raises issues common to other twentieth-century famines; and we can learn more about both from the history of earlier famines.

The historiographies of the two famines have followed rather different paths. Firstly, the Great Leap famine remains poorly documented, while the Bengali famine is amply represented in published and archival sources. For that reason, no account of the Chinese famine has the narrative richness of studies such those by Paul Greenough, Lance Brennan, or Rakesh Batabyal on Bengal.² Secondly, analysis of the Chinese famine has focused on its roots in Maoist political economy and on its demographic cost, while Amartya Sen’s mould-breaking *Poverty and Famines* (1981) has heavily influenced writing on the latter. Inevitably, these differences influence the analyses of the two famines in this study.

In what follows, Section II discusses the Chinese famine from a range of perspectives. Section III is concerned with Bengal. Section IV concludes.

II.1. *China in Economic-historical Context*

R.H. Tawney memorably described the position of the rural population in northern China in the early 1930s as resembling ‘that of a man standing permanently up

to the neck in water, so that even a ripple is sufficient to drown him'. Even more than Walter Mallory's depiction of China as 'the land of famine', Tawney's metaphor has been elevated to the status of *cliché*.³

For the two centuries or so before 1949 major famines in China were probably frequent enough to warrant Mallory's and Tawney's descriptions.⁴ In *Land and Labour in China* (1932), Tawney noted that the famine of 1849 'is said to have destroyed 13,750,000 persons', though clearly no exact number may be given. Again, although specialist scholars have lent credence to contemporary claims that the Great North China Famine of 1876-79 killed a further 9.5 million to 13 million, it is unclear how excess deaths could have been estimated with any precision at the time.⁵ Famine mortality probably declined thereafter in relative terms, but even so, Tawney noted that 'in Shensi [Shaanxi] three million had died of hunger in the last few years' and that in Gansu⁶ 'one-third of the population ha[d] died since 1926 owing to famine, civil war, banditry, and typhus'⁷. These famines were much more than ripples; a more appropriate metaphor for them would be tsunamis.

Parts of China would suffer from major famines in 1935-6 and again in 1942-3. Famine in the Yellow River region in 1935 resulted in significant female infanticide in 1935-6, while Theodore White's graphic accounts from Henan in 1942-3 describe other classic symptoms of extreme famine: famine foods such as cooked elm bark and cottonseed, suicides, beggars at every city gate, voluntary slavery, dogs eating bodies by the roadside, and even cannibalism. White reported parents tying children to a tree 'so they would not follow them as they went in search for food'; 'larger' children being sold

for less than ten dollars; and a mother who was charged with eating her little girl merely denying that she had killed her. Yet, as is common, not everyone was starving. Before leaving Henan's capital city, White and a colleague were treated to a banquet by Kuomintang officials:⁸

We had two soups. We had spiced lotus, peppered chicken, beef and water chestnut. We had spring rolls, hot wheat buns, rice, bean-curd, chicken and fish. We had three cakes with sugar frosting.

That was just a decade and a half before the Great Leap famine, which would bring the era of famines in China to a sensational end.

For some time the Chinese famine of 1959-61 remained shrouded in mystery. Reports of famine were widespread in Taiwan and in the West in 1960-61, but never fully credited.⁹ In 1969 eminent Harvard sinologist Dwight Perkins declared that a famine had been averted despite three poor harvests in succession; in the past such a shortfall 'would have meant many millions of deaths in the areas most severely affected', but effective rationing and the railway meant that 'few if any starved outright'. Perkins was not alone in believing that the regime had 'averted a major disaster'.¹⁰ Although the Chinese authorities at the time declared that the harvests of 1959 and 1960 were poor, they denied that this had led to famine. Only with the release in the early 1980s of new demographic data by the post-Mao leadership, coupled with cryptic accounts in Chinese sources¹¹, could the extent of the crisis be guessed at. Much has been written about the famine since then but even today much remains hidden.

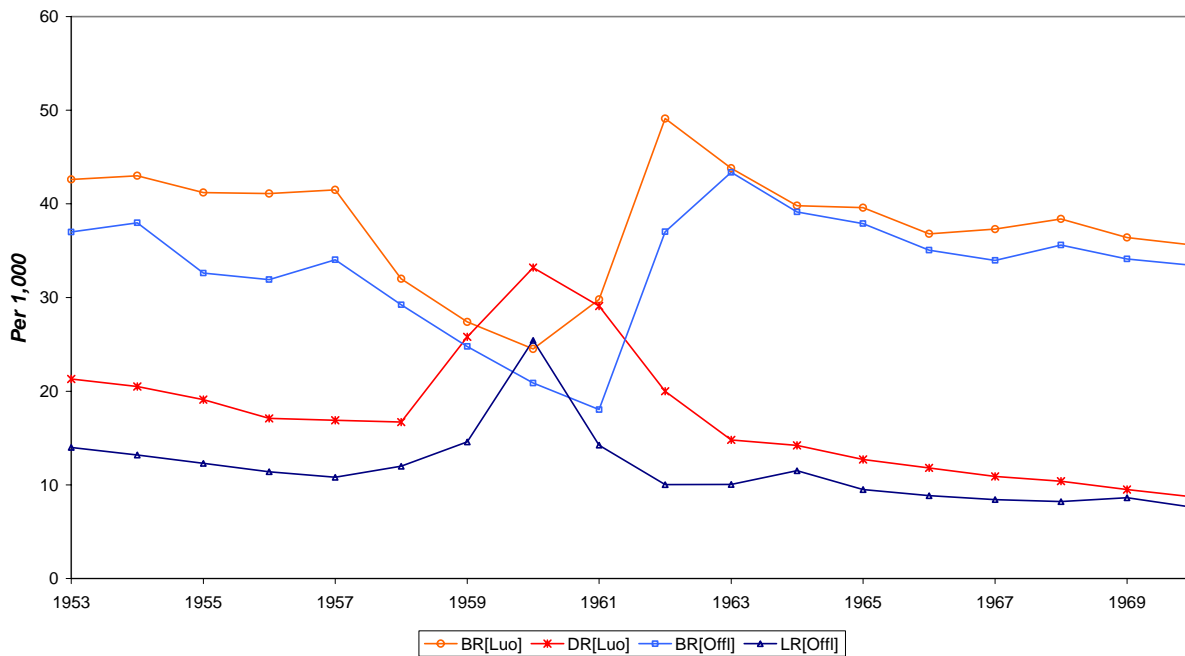
One thing seems certain: this was the biggest famine ever in terms of the number of deaths, even if more recent estimates such as those by Peng (1987; 23 million), Yao (1999; 18 million), and Houser, Sands, and Xiao (2005; 15 million) are lower than the 30 million or more that gained wide currency in the 1980s, never mind the 'figures of fifty and sixty million deaths...cited at internal meetings of senior Party officials' and lent currency by Jasper Becker.¹²

Figure 1 compares the aggregate crude death rate and birth rate for 1950-69, as reported in official sources, with the reconstructed data of demographer Sheng Luo.¹³ China's death rate was falling during this period. Fitting the official mortality data to a polynomial in time and time-squared with dummies for the crisis years 1959-61 and adding the coefficients on the dummy terms translates into an estimated cumulative excess death rate of 23 per thousand. Assuming a population of 650 million on the eve of the 1959-61 famine implies a death toll of 15 million or so, at the low end of the range of estimates cited above.¹⁴

The official data are widely cited by western scholars.¹⁵ Yet the only way to reconcile the pre-1959 death rates behind the above calculation and UN estimates of infant mortality and life expectancy in 1950-55 is to assume considerable under-registration of vital rates in the official data during and before the famine. Attempts by Banister, Ashton *et al.*, and Luo to estimate excess mortality with data that allow for under-registration produce considerably higher mortality tolls. Though perhaps closer to the truth, none of these estimates should be taken as final. As Carl Riskin has pointed out, the baseline child mortality assumed by Ashton *et al.* inflates the number of excess

child deaths; it also yields an age-pattern of excess mortality atypical of famines generally. Demographer Judith Banister candidly points to the ‘arbitrary estimation process’ involved in her adjustments for under-registration, while Luo’s analysis (see Figure 1) implies more excess deaths in 1961-62 than in 1960, which does not square so readily with other evidence, and a trough in births in 1960 rather than 1961. Still, a toll of 25 million is as plausible as one of 15 million. Either way, the Great Leap famine still remains ahead of its nearest competitors.¹⁶

Fig. 1. Birth and Death Rates, 1953-1970: Official and Luo (1988)



The immediate context of the famine was a severe harvest shortfall in 1959 followed by an even worse one in 1960, procurements of food from the countryside that

made scant allowance for this, and massive economic dislocation due to the Great Leap Forward (see Table 1). Policy-related factors listed in the specialist literature range from consumption and production inefficiencies associated with the soup kitchen regime and the people's communes, and the fanaticism of local Party leaders, to the draconian grain procurements of summer and autumn of 1959, and the economic costs of fast-track central planning.¹⁷

Moreover, as research on the political economy of famine suggests, much can be done to mitigate crises, even in the presence of severe supply shortfalls.¹⁸ Clearly the Chinese leadership ignored evidence of unfolding disaster at the Lushan Party conference of July 1959, and blamed the messenger in the person of Defense Minister Peng Dehuai. They continued to export grain, though at a diminishing rate, and failed to import significant quantities until 1961. They denied the very existence of famine, ruling out the option of foreign aid.¹⁹ And although the hostility of both the Soviet Union and the United States at this juncture were constraints, the Communists still made the wrong political choices and were responsible for many million deaths. Nothing in the following paragraphs should be taken as denying the central role of the regime of the day, both for what it did and left undone.

<i>Year</i>	<i>Grain Production (% change)</i>	<i>Rural Retention (% change)</i>	<i>Urban Allocation (% change)</i>	<i>Official Death Rate (per 1,000)</i>
1958	2.5	-1.8	23.2	12.0
1959	-15.0	-22.6	14.0	14.6
1960	-15.6	-8.0	-35.0	25.4
1961	2.8	8.1	-16.5	14.2
1962	8.5	10.3	-0.3	10.0
1963	6.3	5.1	12.4	10.0
1964	10.3	10.3	10.1	11.5
1965	3.7	3.4	5.5	9.4

Source: Lardy, 'Chinese economy under stress', p. 381; National Bureau of Statistics, Comprehensive Statistical Data.

The famine must also be placed in comparative economic and historic context, however. First, although it was the largest ever in terms of deaths, it was probably surpassed by many an earlier famine in relative terms. Scholars repeatedly quote a range of between 9.5 and 13 million for excess mortality during the North China famine of 1876-9, when China's population was little more than half its pre-1959 level, and when (see below) living standards may have been higher. The excess death rate in China in 1959-61 was also modest relative to rates of 120 per thousand in Ireland in the 1840s or 70 per thousand in Finland in 1867-8.²⁰ The lower rate in China does not diminish the human cost of the Great Leap famine, but it matters to the extent that it is likely to have affected the famine's characteristics, in terms of what people died of, the threat of social disorder, and other famine symptoms.

Second, China in the 1950s was a very poor country, perhaps one of the poorest anywhere in the last few centuries. Angus Maddison's estimates imply that Chinese GDP per head in 1950 was much lower than the African average in 1980, and lower than that of *all* African countries except Chad (see Table 2). By 1955 China was still behind all of Africa in 1980 except Chad and Guinea. Moreover, by the same reckoning, even if Irish GDP per head was only one-third that of the United Kingdom as a whole in 1850, that would still place it ahead of Chinese GDP per head in 1950 and 1955. Chinese GDP per head in 1950 was less than it had been in 1870 or 1890, and less in 1870 than in 1820. And China in the 1950s was also much poorer than India in the early 1940s.²¹

Third, what vital statistics there are for China on the eve of the famine corroborate the impression of economic backwardness. According to UN data, the infant mortality rate was 195 per thousand in 1950-55, and life expectancy at birth 39.3 years for males and 42.3 years for females. These admittedly rather speculative numbers would put China roughly on a par with pre-famine Ireland and behind sub-Saharan Africa in 1970 or 1980.²²

<i>Table 2: GDP per head in China and Other Selected Countries (in 1990 Geary-Khamis \$)</i>		
Country	Year	GDP per capita
China	1950	439
China	1955	575
Africa	1980	1,538
Chad	1980	339
Guinea	1980	551
UK	1850	2,330
China	1890	540
China	1870	530
China	1820	600
India	1942	679
<i>Source: http://www.ggdc.net/maddison/</i>		

II.2. *The regional dimension and the weather*

China is a vast country, with huge variations in topography and living standards. In several provinces mortality rates were virtually unaffected in 1959-61,²³ while two provinces – Sichuan and Anhui – accounted for nearly one excess death in two, but only one in six of the pre-famine population (compare Figures 2A and 2B).²⁴ It bears noting that both provinces were infamously famine-prone in the past. In 1907 the *Guardian* placed Anhui at the epicenter of a major famine; four years later an American account described Anhui's 'fame of late years [as] only the bitter fame of her sorrow', and in the 1920s Anhui was the location of Pearl Buck's famine novel, *The Good Earth* (1931).²⁵ Between the 1920s and the 1940s Sichuan was hit three times by major famines. The

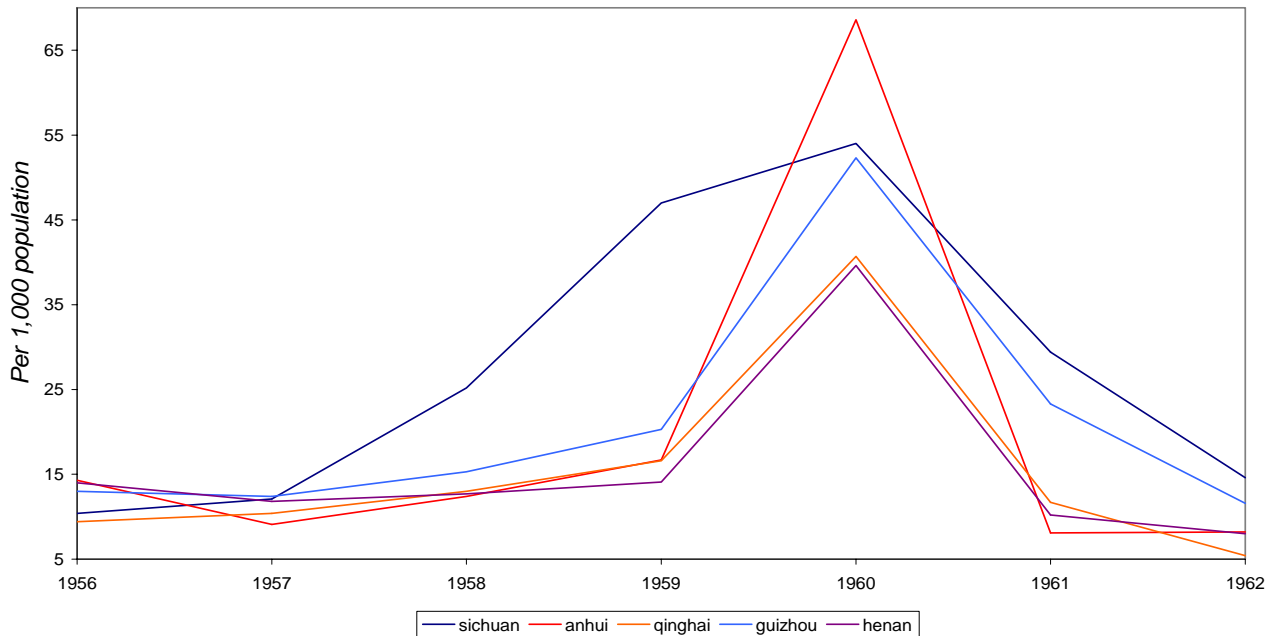
1936 famine, the product of severe drought compounded by civil war, killed up to five million people in Sichuan and led to reports of widespread cannibalism²⁶, while it is estimated that another 2.5 million died in Sichuan in 1941. Henan, another black spot in 1959-61, had been badly hit by the famine of 1876-78, and two million died there in a major famine in 1928-9.²⁷ 'Of all marks on my thinking', wrote U.S. journalist Theodore H. White in 1978, 'the Honan famine [of 1943] remains most indelible'. That famine appears to have killed 3-5 million people.

Henan, Anhui, and Sichuan were also economically very backward even by Chinese standards in the 1950s.²⁸ Given their fragile ecologies and poor track records, it is hardly likely that they would have escaped severe and repeated harvest shortfalls without significant loss of life.

Figure 2A. Mortality in Less Affected Provinces, 1956-62



Figure 2B. Mortality in worst-affected provinces, 1956-62



The role of the weather in 1959-61 remains controversial and under-researched. While Beijing played down the famine, it played up the adverse weather, prompting one critic to quip that ‘the Communists call the natural calamities in every year unprecedented’.²⁹ Impressionistic accounts of drought and flooding are plentiful, however. They range from references to thirty inches of rain at Hong Kong over five days in June 1959 to a hurricane in July 1960 that ruined 777,000 *mu* (or about 130,000 acres) of crops in Shandong province; from people wading across the Yellow River in March and June 1960, to more typhoons than in any year in the previous half-century; and from infestations of locusts to the following briefing to military students by a U.S. China expert:³⁰

Nineteen hundred and fifty nine, gentlemen, was one of the most disastrous years as far as farming is concerned in Red China. Eighty percent of their best agricultural area was just damaged with everything – from rain, drought, pests. If you name it, they had it. They had all kinds of disasters. It was the worst year in a century, in my opinion.

Hard meteorological evidence is less conclusive. Although precipitation over most parts of eastern China was below normal in 1960 and particularly during the summer of 1960, with the Loess Plateau and the northern China experiencing severe drought, the 1960 drought seems to have been mild compared to 1972 and 1997.³¹ Nonetheless, a simple weather index devised by Y.Y. Kueh accounted for 72 percent of the yield shortfall in 1960 and 107 percent of the shortfall in 1961, while a recent analysis of conditions by a team of Chinese meteorologists based on high frequency data from 670 weather stations finds that the number of adverse shocks (drought, floods, typhoons, extreme cold spells) in 1959-61 was 'serious' and 'unfavourable for...agriculture'.³² This analysis also implies that the *regional* incidence of drought broadly corresponded with where harvest shortfalls were greatest.

II.3. A Simple Econometric Exercise:

Backward provinces were most vulnerable to the impact of any adverse shock. In seeking to account for the variation in mortality across China, it is therefore necessary to control for productivity or living standards on the eve of the famine. Backwardness did

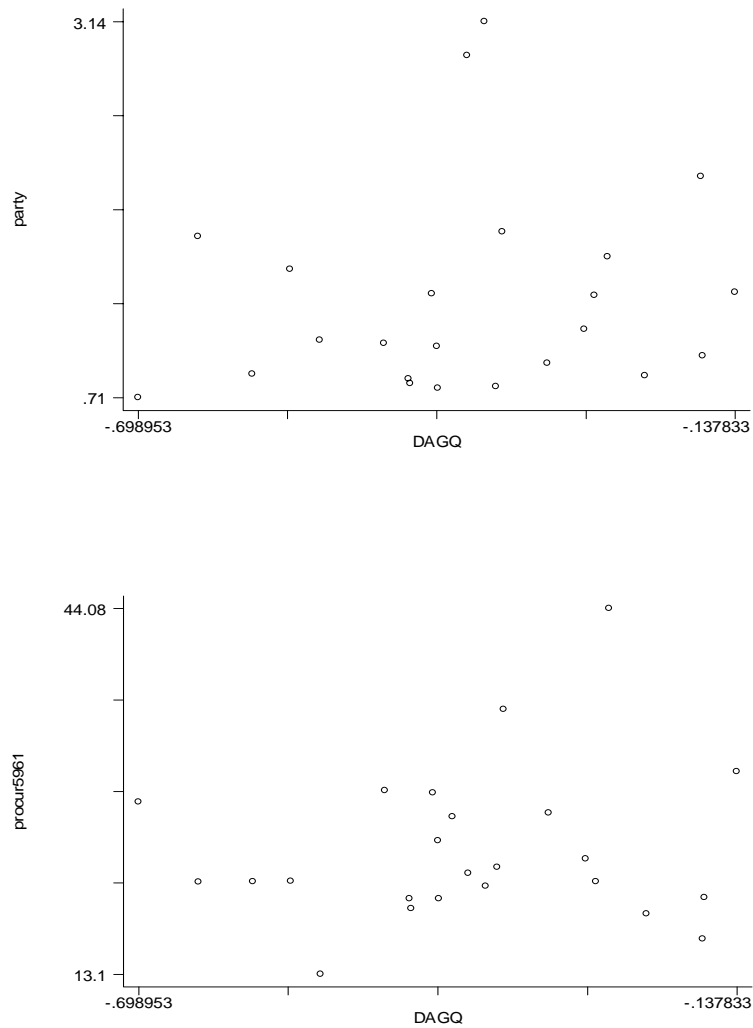
not necessarily entail a relatively poor harvest, however: the correlation across rural provinces between backwardness, proxied by regional output on the eve of the crisis (Y), and proportionate crop loss ($DAGQ$) was only -0.21.

In Tables 3A and 3B below, the variations in excess mortality and ‘lost’ births are analyzed along lines pursued by Mokyr for Ireland and Maharatna for Bengal.³³ In Table 3A the dependent variable, is defined as the natural log of [death rate in 1959 + death rate in 1960]/[death rate in 1957+death rate in 1958]. Equations [1] to [3] rely on two ‘economic’ variables – income per capita ($LN Y$) and proportionate crop loss ($DAGQ$) – while equations [4] to [6] add two ‘institutional’ variables proposed by Dali Yang.³⁴ These proxies for the political factors mentioned earlier are $PARTY$ (the percentage of the population registered as party members in mid-1956) and $MESSHALL$ (percentage of the population reliant on commune mess halls at the end of 1959). Yang hypothesizes that lower party membership and lower reliance on communal dining meant weaker commitment to those radical policies that increased the vulnerability to harvest shortfall. In other words, poor crops were not only a function of the weather, but of also of institutional or political factors. As reported in Equation [3], $LN Y$ and $DAGQ$ together account for over two-fifths of the variation across provinces in excess mortality. Surprisingly, the coefficient on $PARTY$ suggests that, when income and harvest loss are controlled for, high party membership density *reduced* excess mortality, while the coefficients on $MESSHALL$ are small throughout. Measures of the net provincial grain procurement rate and of the proportionate change in procurements in 1959-61 also failed to pack any explanatory punch. Figures 3a and 3b help explain why: the association

between the decline in agricultural output (*DAGQ*) on the one hand, and *PARTY* and the increase in procurements in 1959-61 (*PROCUR5961*), on the other, are weak.³⁵

In Table 3B the dependent variable is defined as the natural log of [birth rate in 1960 + birth rate in 1961]/[birth rate in 1958+birth rate in 1959]. The outcome is analogous to that in Table 3A: high birth rates during the famine were associated with high *LN**Y* and low reductions in grain production, while party membership density tended to mitigate the impact of the crisis. Endogenizing *DAGQ* on *PARTY* and *MES**S**H**A**L**L* (Equation [6]) only strengthens its impact on the dependent variables.

FIGURES 3a and 3b: PARTY MEMBERSHIP, PROCUREMENTS, AND AGRICULTURAL OUTPUT



These results could be refined and perhaps re-interpreted. For example, the negative coefficient on *PARTY* might be explained in terms of areas of strongest support for the leadership being best positioned to benefit from state interventions (including flows of food). The results as they stand are a reminder, however, that while earlier research has (rightly) identified the role of human agency in the Great Leap Forward, it

is also true that the post-1949 regime had to deal with an economy that contained some of the poorest regions in the world and faced harvest shocks like everywhere else.

<i>TABLE 3A. Modelling the Regional Variation in Death Rates</i>			
<i>Variable</i>	<i>[1]</i>	<i>[2]</i>	<i>[3]</i>
<i>LNY</i>	-0.483 [-3.60]		-0.587 [-5.82]
<i>DAGQ</i>		-1.005 [-2.57]	-1.181 [-6.29]
<i>CONSTANT</i>	2.846 [4.14]	0.088 [0.62]	2.893 [5.85]
<i>N</i>	24	24	24
<i>R²</i>	0.203	0.185	0.440
<i>Prob>F</i>	0.0015	0.018	0.0000
	<i>[4]</i>	<i>[5]</i>	<i>[6]</i>
<i>LNY</i>		-0.670 [-4.12]	-0.638 [-3.92]
<i>DAGQ</i>		-1.155 [-5.19]	-1.550 [-1.41]
<i>PARTY</i>	-0.210 [-3.14]	-0.186 [-3.48]	
<i>MESSHALL</i>	0.003 [1.26]	-0.003 [-0.81]	
<i>CONSTANT</i>	0.570 [2.83]	3.743 [4.02]	3.016 [5.47]
<i>N</i>	24	23	23
<i>R²</i>	0.283	0.593	0.464
<i>Prob>F</i>	0.008	0.000	0.001
<i>Est. method</i>	OLS	OLS	IVREG
Robust t-statistics in parentheses; <i>MESSHALL</i> , <i>PARTY</i> , and <i>LNY</i> (the natural log of <i>Y</i>) as given in Yang, Table 7.			

<i>TABLE 3B. Modelling the Regional Variation in Birth Rates</i>			
<i>Variable</i>	<i>[1]</i>	<i>[2]</i>	<i>[3]</i>
<i>LNy</i>	0.330 [2.40]		0.351 [2.77]
<i>DAGQ</i>		0.761 [3.77]	0.867 [4.15]
<i>CONSTANT</i>	-2.115 [-3.13]	-0.212 [-2.54]	-1.889 [-3.28]
<i>N</i>	25	24	24
<i>R²</i>	0.178	0.214	0.397
<i>Prob>F</i>	0.025	0.001	0.002
	<i>[4]</i>	<i>[5]</i>	<i>[6]</i>
<i>LNy</i>		0.297 [1.86]	0.354 [2.43]
<i>DAGQ</i>		0.789 [3.42]	1.240 [2.43]
<i>PARTY</i>	0.010 [1.88]	0.077 [1.65]	
<i>MESSHALL</i>	-0.002 [-0.94]	0.000 [0.12]	
<i>CONSTANT</i>	-0.276 [-0.61]	-1.754 [-2.06]	-1.736 [-2.83]
<i>N</i>	24	23	23
<i>R²</i>	0.186	0.499	0.382
<i>Prob>F</i>	0.013	0.005	0.056
<i>Est. method</i>	OLS	OLS	IVREG
Robust t-statistics in parentheses			

II.4. Demographic Aspects of the Great Leap Famine

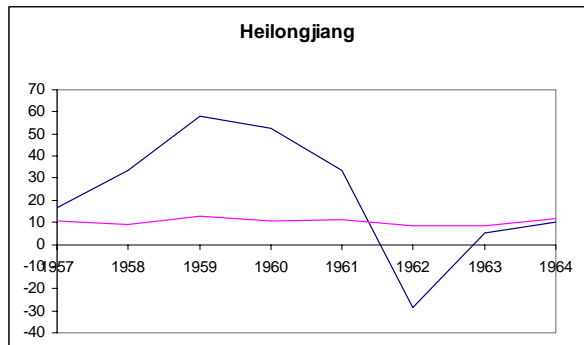
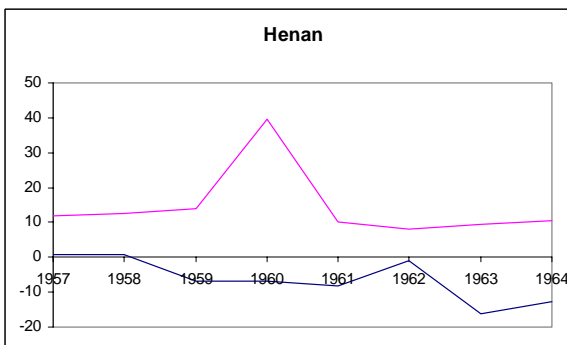
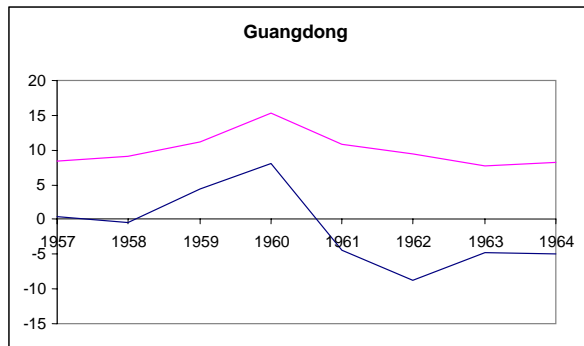
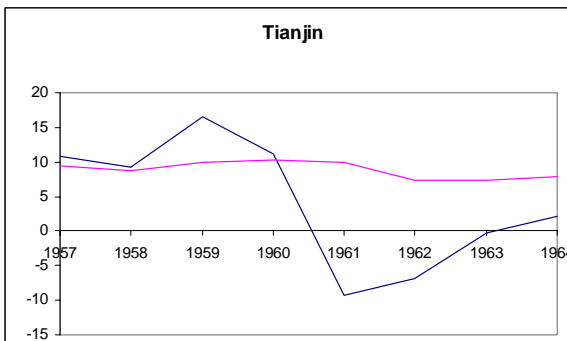
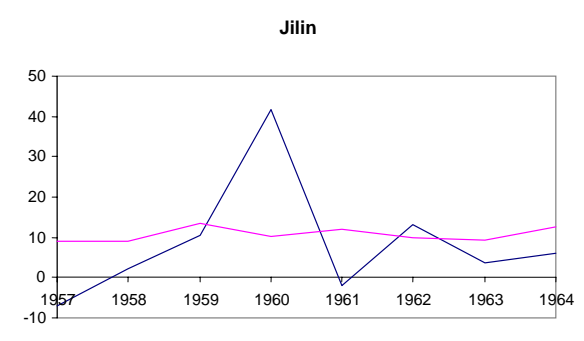
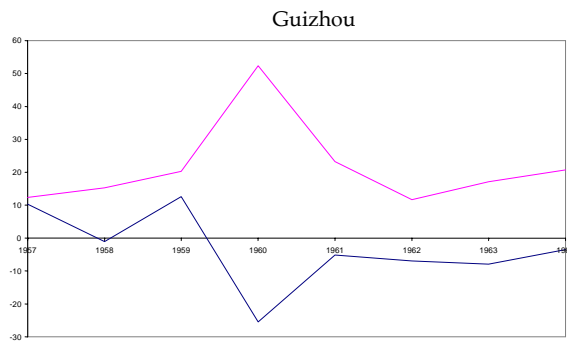
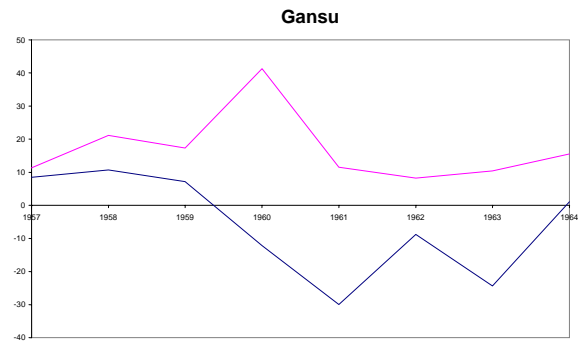
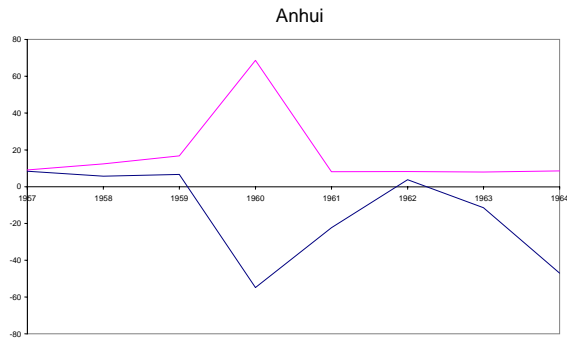
Certain demographic features of the Chinese famine are of particular interest. As noted, it resulted in a dramatic reduction in births. Its demographic cost is often reckoned in excess deaths plus 'lost' births, and estimates of the births deficit run as

high as 43 million.³⁶ The arithmetic is problematic, however, since births in 1962 exceeded those in any year since 1951, and in the following three years the birth rate also exceeded that in any other year in the 1950s and 1960s. Indeed, the surplus over trend in 1962-65 – insofar as any pattern can be detected from these data – far exceeded the deficit in 1960-61. Therefore, the ‘lost’ births seem to have been ‘postponed’ births to a considerable extent.

Another implication of the data, reflecting a common pattern in famine demography, is the proportionately greater impact on the male population.³⁷ In the seven Chinese provinces that lost population between 1957 and 1961 there were 725,000 fewer males and 366,000 fewer females by 1961; in the rest of China both male and female populations rose by 1.5 million.

Demographic data also suggest a role for internal migration during the Chinese famine.³⁸ Figure 4 compares the implied patterns in four badly-hit provinces (Anhui, Guizhou, Henan, and Gansu) and four that escaped relatively lightly (Tianjin, Guangdong, Heilongjiang, Jilin). By and large, out-migration was greatest from the worst hit provinces. In Anhui, an extreme case, a death rate of 69 per thousand in 1960 was almost matched by an emigration rate of 55 per thousand.³⁹ On the other hand, the data indicate that several less affected provinces absorbed large numbers of immigrants during the crisis. The extent to which these movements were state-assisted is hard to gauge. Either way, without the safety valve of migration, the crisis may well have been even more deadly.⁴⁰

Figure 4: Death and Migration in Eight Chinese Provinces, 1958-65
(rates per 1,000)



The final conundrum discussed here concerns what famine victims died of in 1959-61. Throughout history most famine victims have succumbed to infectious diseases rather than literal starvation.⁴¹ Little is known about the causes of mortality in China, however.⁴² Before 1949 it is quite clear that infectious diseases 'plagued the country and threatened many lives'.⁴³ In Notestein's study of a large sample of rural Chinese households in 1929-31, of the sixteen causes of death on which information was sought, the five most important were smallpox, dysentery, typhoid, tuberculosis, and cholera (in that order).⁴⁴ Table 4, based on a study of Yunnan province in southwestern China in the early 1940s, implies that infectious diseases then played a greater role in Yunnan than they did in Ireland on the eve of the Great Famine of the 1840s. Perhaps the most striking differences between the patterns in these two very different places are the much smaller proportion of pre-famine Irish deaths attributed to dysentery/diarrhoea and to cholera. Elsewhere in China (e.g. Henan)⁴⁵ malaria was endemic.

Although Yunnan was relatively poor even by Chinese standards⁴⁶, the comparison suggests that infectious diseases should also have bulked large in 1959-61. Could the Maoist campaigns of the early and mid-1950s to improve water quality and personal hygiene and impose mass inoculation against infectious disease have had such a dramatic effect within the space of a few years, thereby altering the causes of death during the 1959-61 famine? Yet popular accounts of the Great Leap famine emphasize outright starvation rather than disease.⁴⁷ By implication the Chinese famine of 1959-61 was, like those in Leningrad, the western Netherlands, and Greece during World War II,

a ‘modern’ famine in terms of the main causes of death.⁴⁸ If the public health measures taken before the GLF were effective in preventing the spread of disease, perhaps they kept the overall death toll – shocking as was – lower than it would have been otherwise.⁴⁹

<i>Table 4. Main Causes of Death in Ireland in 1840 and in Yunnan Province, China in 1940-4 [%]</i>		
<i>Cause</i>	<i>Ireland, 1840</i>	<i>Yunnan, 1940-4</i>
Smallpox	4.35	6.73
Dysentery/ diarrhea	1.04	14.09
Cholera	0.19	11.97
‘Fever’ (incl. Typhoid)	12.69	12.08
Other infectious (incl. measles, scarlet fever)	12.36	6.66
Convulsions	5.00	7.25
Coronary, respiratory	15.23	12.66
Digestive	11.44	5.54
Infirmity, old age	19.08	6.16
Total violent and sudden (incl. external)	3.32	2.32
Other and unspecified	15.25	14.44
Total	100.0	100.0
Source: Mokyr and Ó Gráda, ‘What do people die of’, Table 1; Chen, <i>Population in Modern China</i> , Tables 25 and 26		

III. Bengal

A few years before the Bengal Famine of 1943-44, an old India hand confidently declared that ‘the old famine of history, with its dreadful death roll, is not likely to recur’⁵⁰. In Bengal, however, as in China, the era of famines would end with a bang

rather than a whimper.⁵¹ The famine of 1943-44 killed over two million people out of a population of sixty million or so. Noteworthy features of the famine's demography include a significant drop in conceptions that coincided with the peak in deaths in September-November 1943, the persistence of excess mortality well into 1944, and the importance of malaria as a cause of death. As was apparently the case in China, males were more likely to succumb than females.⁵²

The famine was presaged by a series of adverse shocks. First, it occurred in wartime. Rangoon, the Burmese capital, had fallen to Japanese forces in March 1942, and in the following months fears grew that the Japanese would soon invade Bengal. In April 1942 the Japanese sank several merchantmen in the Bay of Bengal, as well as a destroyer, and they bombed Calcutta in December 1942. The usual supplies of rice from Burma, albeit a small proportion of aggregate consumption, were cut off. On military advice, officials removed rice and paddy deemed surplus to local requirements from coastal districts such as Midnapur, Bakerganj, and Khulna. They also requisitioned and destroyed boats capable of carrying ten passengers or more to prevent their use by any invading Japanese soldiers. This 'boat denial policy' compromised the livelihoods of two of the most vulnerable groups – fishermen and boatmen – and increased transport costs.

The Bengal famine is the *locus classicus* for Amartya Sen's re-orientation of famine studies away from a Malthusian to a distributionist perspective. In Sen's account, the trigger that set off the crisis that eventually produced the famine was the increase in demand caused by war-related public expenditure. The crisis was then compounded by

bureaucratic bungling and political infighting, and by speculation and panic hoarding. Although in late 1942 the *aman* crop – which accounted for the lion's share of rice harvested in an average year – was indifferent, in Bengal shifts in the exchange entitlements to rice occurred in the absence of any significant food availability decline [henceforth 'FAD'] *per se*. There was no 'remarkable over-all shortage of foodgrains', but war-induced expectations led producers and grain merchants to convert a 'moderate short-fall in *production*... into an exceptional short-fall in *market release*' (emphases in original). The famine was due in large part to 'speculative withdrawal and panic purchase of rice stocks... encouraged by administrative chaos'.⁵³ While Sen's interpretation of the Bengal famine has not escaped criticism, it undoubtedly remains the most influential.⁵⁴

In the following account I argue that food was indeed in short supply in Bengal in 1943 (III.1), and that this was *not* due to excessive hoarding on the part of traders or producers (III.2). I argue that the incidence of the famine by occupational group is consistent with a poor harvest (III.3). Finally, I place the famine squarely in the context of colonialism and ongoing global war (III.4).

III.1. *Food Supply*

When the famine struck, Bengal was even more dependent on rice than Ireland had been on the potato in the 1840s. Rice occupied up to nine-tenths of the cultivated area, with jute accounting for another 7-8 per cent. Bengalis consumed an average of

about four seers [about 8 lb.] of rice per week per adult male equivalent, or at most two thousand kcals daily. This was less than two-thirds of the kcals consumed on average by the potato-dependent pre-famine Irish poor; and potatoes were also much richer in certain essential vitamins than rice. Rice accounted for four-fifths of calorie intake in Bengal; in coastal areas and in the Ganges-Bramaputra deltas fish was an important supplement.⁵⁵

On the eve of the famine Bengal's economy, like Ireland's, was mainly rural and agricultural. Peasant cultivators, either owners or renters of land, were more dominant in Bengal, particularly so in east Bengal, 'home to a predominantly smallholding society overlaid by various rentier and creditor groups'. At the same time, the peasantry was by no means an undifferentiated homogeneous class, and the presence of commercial farmers and substantial landholders entailed sharecropping and wage labour.⁵⁶

Since the publication of Sen's account, the relative importance of shocks to the food supply and the extent of market failure in Bengal have been controversial issues, with ramifications for famines studies far beyond. Long after the crisis became a famine, the official position in London, Delhi, and Calcutta was that Bengal contained enough food to feed everybody. As late as July 1943, when famine deaths were already commonplace, Leo Amery, Secretary of State for India, informed fellow members of the House of Commons that there was 'no overall shortage of foodgrains', and that the 'present difficult situation' was due to 'maldistribution'. The crux was 'a widespread tendency of cultivators to withhold foodgrains from the market, to larger consumption per head as the result of increased family income, to hoarding by consumers and

others'.⁵⁷ The refusal of the coalition led by Fazlul Huq's *Krishak Praja* (Peasants' People's Party) to accept this view had been a factor in its dismissal by the provincial governor in late March 1943. The more accommodating H.S. Suhrawardy of the Muslim League, Minister for Civil Supplies from April 1943 on, held that the problem was 'psychological'. An influential opposition spokesman caricatured Suhrawardy as telling people, 'Don't get panicky. I am sitting here as the civil supplies minister and telling you there is plenty of foodstuffs. We have statistics which we do not want to publish. Everything will be alright. Do not get panicky', and accused him of minimizing 'the gravity of the situation'.⁵⁸ In May 1943 Suhrawardy asked newspaper editors to preach the 'doctrine of sufficiency and sufficiency and sufficiency...*ad nauseam*' against the 'psychological factors' of 'greed and panic'.⁵⁹ A propaganda campaign targeting hoarders was buttressed by an official determination to prove 'statistically' that Bengal contained enough food. The propaganda, however, also described the government as 'rushing grain ships to India, even from rationed Allies, even at the expense of munitions', an assertion that would have been more convincing had the public been given 'some general idea of the quantum of supplies coming forward instead of an occasional photograph of the unloading of a wagon'.⁶⁰

So who was right? The Famine Inquiry Commission's *Report on Bengal*, published in the famine's wake in May 1945, did not stray far from the official line. It found that although 'total supply, including the carry-over, was probably smaller in 1943 than in any of the preceding 15 years', nevertheless, the likely 'absolute deficiency of supply [was] of the order of 3 weeks' requirements'.⁶¹ This finding, buttressed by Sen's

recalculations, has been cited repeatedly since⁶², but it bears noting that those responsible for the *Report on Bengal* placed less trust in the underlying data than did some of its later interpreters. The only agriculturalist on the five-member commission strongly rejected the calculation just summarized, while its chairman, Sir John Woodhead, later admitted that they 'had experienced great difficulty owing to the lack of reliable figures of the acreage and yield of the rice crop'. Woodhead, a former colonial civil servant in Bengal and a very safe pair of hands as far as the authorities were concerned, also confided to a senior India Office official that 'sometimes I thought that our estimate of the shortage of 1943 was on the low side...the figures were so inaccurate – I mean the available data – as to make an accurate estimate impossible'. Rather than admit, however, that no precise estimate of the shortage was possible, Woodhead opted for (in his own words) 'relying on quite unreliable data'. Another member later conceded that 'this calculation was made after the event and of course at the time no one knew what the real position was'.⁶³

Others have argued that the quality of Bengali agricultural statistics is too poor to support contemporary or historical assessments of the aggregate food supply.⁶⁴ Much has been made of the data, nonetheless. Supporters of the *Report on Bengal* position have emphasized the limited extent of the 1942/3 shortfall relative to the 1937/8-1941/2 average; detractors focus on the significant proportional reduction (32 per cent) in the size of the *aman* crop of 1942/3 relative to 1941/2.⁶⁵ The biggest declines were in the west and northwest of the province, a pattern consistent with the claim recently

resurrected by Mark Tauger that the 1942 *aman* harvest in west Bengal – echoes of Ireland in the 1840s – was badly damaged by the fungus *Bipolaris oryzae*.⁶⁶

Confidential memoranda and correspondence between those in high places during the crisis imply from early on that Bengal was suffering from reduced food availability.⁶⁷ For example, evidence presented behind closed doors to the Woodhead Commission shows that the Viceroy, Lord Linlithgow, had been warned of the looming crisis ‘but was forced into a policy of pretence of plenty to meet the view of the Food Department that psychological causes, and not real shortage were at the root of the threatened danger’. The Food Department would ‘not hear of there being a shortage in Bengal’.⁶⁸ In mid-July 1943 Bengal Governor Sir John Herbert – hitherto a strong propagandist for the ‘sufficiency’ position – pleaded with Linlithgow:

I must invoke all my powers of description and persuasion to convey to you the seriousness of the food situation in Bengal. Hitherto I have studiously avoided overstating the case and I have faithfully reported any day-to-day alleviation of the situation: I am now in some doubt as to whether I have not erred in the direction of understatement.

‘Unless’, he added, ‘we can get foodgrains into Bengal from the outside...we cannot keep Bengal fed’. There is much more in the same vein. It was not until early September that Linlithgow relented, conceding the ‘strong possibility that we are face to face with an emergency extending throughout the Province’.⁶⁹ Linlithgow’s previous

disregard for Bengal has been widely remarked on; his anxiety that the Woodhead Commission would castigate him for inaction tells its own story.⁷⁰

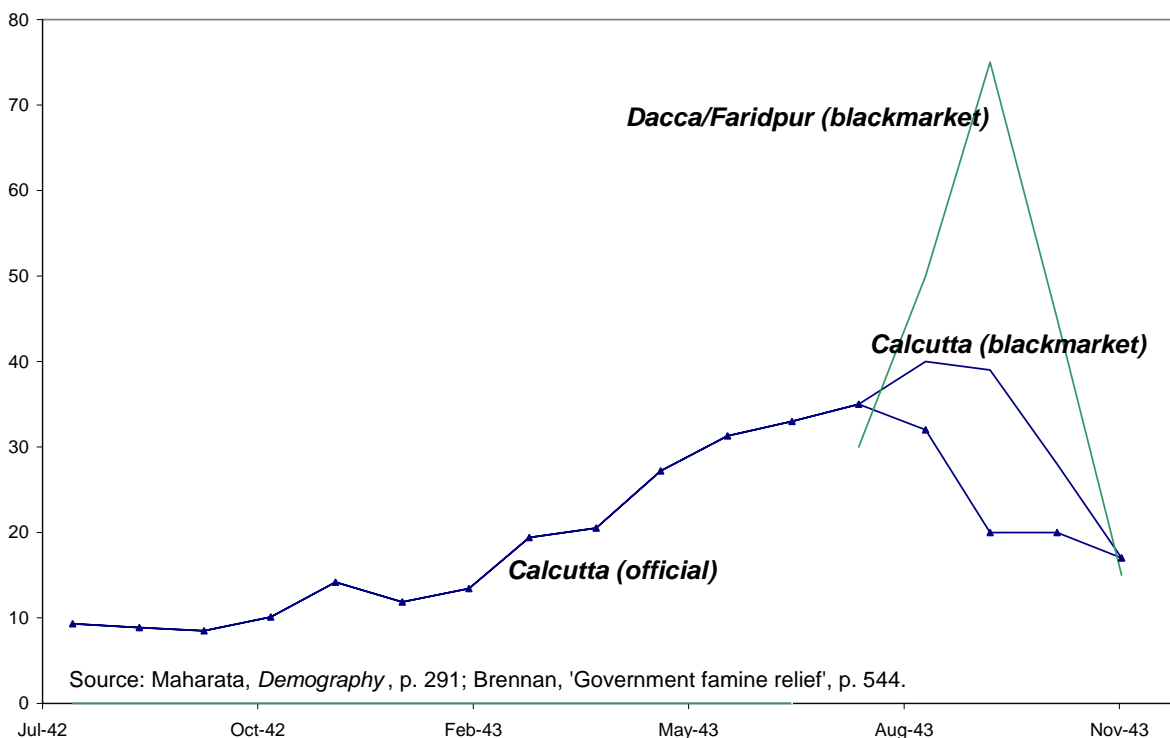
III.2. *'Outcast the Hoarder!'*⁷¹

In linking famine to speculative hoarding, Sen's interpretation echoes both the authorities in 1943 and the *Report on Bengal*. The hoarding hypothesis suited the authorities since it undermined demands to divert shipping and food supplies from the war effort. Local politicians were divided on the issue. Supporters of the Fazlul Huq coalition, which fell in March 1943, stressed the precarious food supply situation, but the more pro-British Muslim League-led administration which replaced it, and particularly its influential H.S. Suhrawardy, Minister for Civil Supplies, clung to the line that hoarding was the main problem. In the sectarian bear-pit of Bengali politics, the hoarding hypothesis suited the Muslim League, since major 'hoarders' were more likely to be members of the mainly Hindu landowning and merchant classes. The official case for hoarding was also vigorously supported by the Communist Party.⁷²

The nature of the hoarding matters. If it entailed prudential hoarding aimed at making a reduced harvest last longer, then it will have reduced privation and deaths, for a time at least. If, instead, it was based on an exaggerated view of the crisis, the release of a disproportionate amount of food later (including any carry-over stocks) in the season will have led to losses and even bankruptcies.⁷³

Some insight into the extent of hoarding may be gained from price movements in 1942-44. Between mid-1942 and mid-1943 the nominal price of rice trebled while the real price of rice doubled.⁷⁴ Thereafter it rose more rapidly, especially in east Bengal. Neither the rise nor the decline in the price of rice was precipitous. The quoted price fell from 30 Rs. per maund in late August 1943 to 20 Rs. a month later, but that fall was a 'mirage' caused by official price ceilings being reported as market rates (see Figure 5). In early September in Manikganj (Dacca district) price controls drove all rice out of the municipal market but it was fetching Rs. 40 on the black market; a month later it was costing Rs. 60 to Rs. 70, and by October 1943 80 Rs. per maund in Chittagong.⁷⁵ Market prices fell to ceiling levels only in December 1943, as growers reaped 'the largest paddy crop ever seen in the province'.

Figure 5. Rice Prices July 1942-Dec. 1943 (Rupees/Maund)



All of a sudden, the huge queues outside public rice stores disappeared.⁷⁶

However – and this is the important point – the *real* price during the first half of 1944 was still higher than *before* the crisis. The '*glut*' (emphasis in the original) warned of by a senior government official in April 1943, whereby the 'large imports from outside' in the presence of 'adequate internal stocks' would result in 'a steep fall in prices' for which hoarders would have only themselves to blame, just never materialized.⁷⁷ The trend in prices over the period is also hard to square with the presence of significant carry-over stocks from 1942. A plausible interpretation of price movements in 1943-44 is that, far

from hoarders holding back an unusually large proportion of the available supply, many producers were forced to reduce off-farm sales in order to satisfy their own needs.

The most telling direct evidence against the claim that speculators held back a disproportionate share of the 1942/3 harvest is the outcome of Suhrawardy's high-profile campaign against 'hidden' hoards in June-July 1943. This campaign, involving one hundred thousand committees and thirty thousand full-time workers at its peak, located only 100,000 tons of rice held in hoards of 400 maunds and over throughout Bengal, less than half of which was requisitioned.⁷⁸ Asok Mitra, then a young administrator in east Bengal, recalled how he scoured the countryside around Viknapur, sometimes alone in his pajamas and shirt, for hoarded rice, but 'the plain fact was that there was little rice anywhere'.⁷⁹ The drive against urban hoarders in Calcutta and Howrah produced similarly disappointing results: an editorial in the nationalist *Amrita Bazar Patrika* noted that had it produced more than the proverbial 'horse's egg', ministers would have shouted so from the rooftops.⁸⁰ Instead, they were forced to admit that in Calcutta 'there was no large-scale hoarding by consumers and that the stocks held by traders [were] in close accord with the figures they had declared'⁸¹. Across the province, the rice discovered in hoards represented only a small fraction of annual supply. The 'drive' was Suhrawardy's last throw of the dice: all he could offer thereafter was the warning that 'worse days [were] ahead'. The failure of the 'drive' left the poor with a sense of impending calamity, because the actual shortage was even worse than they had realized, or had been lulled into believing by propaganda.⁸²

In July 1943 Herbert confirmed that hoarding was a secondary concern, and that government-supplied food kitchens were being forced to close for lack of rice. He concluded:

...the essential fact remains that we cannot keep Bengal fed (certainly we cannot assume the responsibility of rationing in Calcutta and elsewhere) unless we get foodgrains into Bengal from outside.⁸³

Leonard Pinnell, Director of Civil Supplies in Bengal until April 1943, was a key witness to much of this. Although privy to reports in late 1942 and early 1943 that the *aman* harvest was poor⁸⁴, at first Pinnell supported – as ‘any officer with a sense of responsibility to India as well as to his Province in a common danger’⁸⁵ would do – the official line from Delhi and London that there was no deficit, and employed an ineffective combination of compulsion and moral suasion to keep prices down. Tensions between him and the Fazlul Huq coalition were high, with ministers accusing Pinnell of being more concerned with the war effort than the plight of the Bengali people.

By spring 1943, Pinnell realized that his anti-hoarding campaign was tilting at windmills and that the damage to the 1942 crop was significant.⁸⁶ His public stance remained as before, though. Ian Stephens, editor of the Calcutta *Statesman*, described Pinnell and a colleague as ‘two unhappy but not dishonest men working to a brief they didn’t believe’, whose inept performance convinced Stephens that a catastrophe was inevitable. The tension proved too much for Pinnell, who suffered a nervous

breakdown in April 1943 and resigned.⁸⁷ In material prepared for the Famine Inquiry Commission in the following year, however, he vehemently contested the charge that ‘Bengal itself is to blame for the trouble owing to the failure to deal with a ring of speculators and hoarders who conspired to hold the Province to ransom’.⁸⁸

III.3. *Winners and Losers*

Karl Marx once quipped that the Great Irish Famine ‘killed poor devils only’. The same holds for Bengal in 1943-44, but the ‘FAD’ and ‘entitlements’ approaches imply different categories of ‘poor devils’.⁸⁹ Who suffered most in Bengal? Some contemporaries saw the large scale migration of smallholders to urban areas in search of food as evidence that peasants were not hoarding food; others believed that hoarders – including landholders – were beneficiaries.⁹⁰ Given the short-run context of the famine, the two-sector specific-factors model of trade theory offers an appropriate framework.⁹¹ That model predicts that a relative increase in the price of food (P_F) – consistent with a pure ‘entitlements famine’ – will increase the nominal wage (w), though less than the rise in P_F . The relative increase in P_F will also prompt increases in the agricultural labour force and food output (Q_F). Landlords benefit from both the ensuing increase in the marginal physical product of land and the rise in P_F .

A ‘FAD famine’ is captured by a reduction in Q_F due to a downward shift in the production function, so that any combination of labour and land yields less food than before. This results in reductions in the agricultural labour force, and in w , w/P_F , and

rent. In other words, *both* 'entitlements' and 'FAD' famines hurt wage earners and net consumers of food. A key difference is that whereas rice producers should fare relatively well when only 'entitlements' shift, they also suffer during 'FAD' famines.

In seeking to identify winners and losers in Bengal, Sen and several others have exploited the pioneering statistical survey conducted in 1944-5 by the Indian Statistical Institute (ISI). Based on the economic condition of nearly sixteen thousand randomly selected households in 386 villages, the survey highlighted the precariousness of existence in Bengal on the eve of the famine. It found that average holding size was too small to provide the rice necessary for subsistence, and that those groups most affected by the famine were already under pressure beforehand. It also found that the famine's impact was regionally very uneven, and that subdivisions with proportionately more families on below-subsistence holdings were more vulnerable to the famine.⁹²

Consistent with the entitlements view, the survey confirmed that the landless suffered most in 1943-44. However, landholders were not immune either. One of the most interesting tables in the ISI survey – reproduced below, with minor alterations, as Table 5 – implies that the occupational status of 400,000 families dependent on 'agriculture' or 'agriculture and labour' (or about eight per cent of the total) deteriorated between January 1943 and May 1944, in the sense that they were forced to shift from their former occupation (e.g. farmer) to an inferior one (e.g. labourer). Such a hemorrhage of landholders is easiest to square with crisis on the land.⁹³

A second survey, this time of destitute migrants in Calcutta in September 1943, corroborates. It found that while day labourers accounted for the highest proportion of

destitutes, over one in five was a cultivating owner (11.7%), tenant (6.5%), or cultivator combining ownership and tenancy (3%). 'None of these units', according to the survey's author, 'worked as day labourers on a hire basis. All had enough land to maintain themselves throughout the year'.⁹⁴ A third survey, conducted in five villages in east Bengal, also found that agricultural labourers suffered most, but neither landholders nor petty traders escaped. During 1943 the proportion of families owning no land rose from 29.9 per cent to 36.7 per cent.⁹⁵

Hard evidence on rent movements is lacking, but that on land transfers during the famine is also of interest in this respect. The famine produced transfers 'on an alarming scale'. In 1940 Bengal contained 16.4 million landholders. In the wake of the famine, 2.7 million sales of whole or part-occupancy holdings were recorded, consisting mainly of peasant smallholdings, and disproportionately concentrated in east Bengal.⁹⁶ A micro-survey of land transfers in one village in Faridpur found that one family in three alienated part or all of their holdings in 1943. While some land was transferred in order to repay old debts or to buy land elsewhere, most transfers were prompted by 'scarcity and food purchase'.⁹⁷ In sum, the shift into agriculture and the buoyant land market predicted by a pure entitlements model did not occur; and the plight of agriculturalists and those combining agriculture and labour, as revealed by the ISI, Calcutta destitutes, and Mukerjee studies, seems more consistent with a 'FAD'.⁹⁸

TABLE 5. Change in Occupational Status in Bengal 1943-1944							
[1]	Number of families (100,000s)			Percentage of families experiencing change Jan '43-May '44			
	Jan '43	Change between Jan '43 and May '44					
	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Occup. Group		Better	Worse	Ambiguous	Better	Worse	Ambiguous
Agriculture	33.3	--	2.5	--	--	7.51	--
Agr and labour	17.1	0.4	1.5	--	2.34	8.77	--
Agr labour	17.3	0.7	0.6	--	4.05	3.47	--
Non-cultivating owner	6.2	--	0.2	0.1	--	3.23	1.61
Fishing	1.3	--	--	0.1	--	--	7.60
Craft	5.1	--	0.3	0.1	--	5.38	1.96
Husking paddy	1.7	0.7	--	--	4.12	--	--
Transport	0.7	--	0.1	--	--	14.29	--
Trade	6.9	--	1.6	0.2	--	23.19	2.90
Profession & service	6.8	0.1	0.1	0.1	1.47	1.47	1.47
Non-agr labour	1.0	--	0.1	--	--	10.00	--
Other productive occupations	2.2	0.1	--	--	4.55	--	--
Living on charity	2.8	0.4	--	--	14.29	--	--
Total	102.4	2.4	7.0	0.6	2.34	6.84	0.59
Source: Mahalanobis <i>et al.</i> , <i>Famine and Rehabilitation</i> , Table 4.5							

III.4. War and Famine

At the height of the famine the Calcutta *Statesman* pointed to the uncanny similarity between official reactions to incipient famine in Bihar and Orissa in 1866 and Bengal in 1943. In both cases the authorities denied that there was a genuine dearth, 'large stores being in the hands of dealers who are keeping back stocks out of greed'; in both they refused to recognize 'advancing calamity'; in both cases disaster followed.⁹⁹

The 1866 famine was prompted by 'an extensive crop failure for two successive years'.¹⁰⁰ In the case of Bengal, the lack of convincing evidence for significant speculative hoards and the socio-economic backgrounds of the 'losers' support the case for a dearth. A major difference between the two famines, however, is that in 1943 the authorities were engaged in a global war that they were in some danger of losing. When *The New Statesman & Nation* first raised the spectre of famine in India in January 1943, *The Economist* responded with a concise statement of British wartime priorities: 'The best way to end the famine is speedy victory and, however hard the decision, food ships must come second to victory ships'¹⁰¹.

Here again, once-confidential correspondence between officials and ministers in 1943-44 is telling.¹⁰² It reveals Linlithgow telling Chief Minister Fazlul Huq in early 1943 that 'he simply must produce more rice out of Bengal for Ceylon even if Bengal itself went short!' and hoping that he might 'screw a little out of them'.¹⁰³ It shows that by March 1943 Bengali officials were reporting a shortage of rice so serious that 'the available supply could somehow be spread over till the next crop, famine was to be expected in certain areas'.¹⁰⁴ Throughout the first half of 1943 neither Delhi nor London showed much sympathy for Bengal. By early August, Linlithgow's tune was very different, but that Churchill and the War Cabinet were still unsympathetic, with Amery reporting to Linlithgow that his 'earnest' representations to Cabinet on the food situation had produced 'not too good results'. Even then, London regarded Linlithgow's pleas as 'in the main an anti-hoarder bluff', and all the Cabinet would commit was a measly '100,000 tons of barley from Iraq and 50,000 tons of wheat to go to

Colombo to be used for Ceylon or India as the situation demanded'. Ministers hoped that on the strength of this modest offer, but 'without disclosing figures', Linlithgow would announce that supplies were on their way as required, although Amery conceded that he 'might be compelled by events to reopen the matter within a very few weeks'. As the crisis worsened by the week, Linlithgow, stung by mounting criticism within Bengal, declared that 'it will have to come back on His Majesty's Government'. Yet London continued to prioritize 'the difficulties of the shipping situation and also of the food situation nearer home',¹⁰⁵ with Amery confiding to Linlithgow that 'famine in Greece has been, I imagine, even worse than in Bengal and one of the most urgent needs of the immediate future will be the shipping of food into Greece to help the insurgents, of whom something like 50,000 are under arms today and playing a really important role in the whole war effort.'¹⁰⁶

In a letter to the incoming Viceroy, Lord Wavell, Amery recognized the 'natural and widespread feeling here that somehow or other the ultimate responsibility rests with us and that this country could or should have done more'. But he continued:

As to that, you know as well as I do the military preoccupations of the War Cabinet and the difficulty of diverting shipping from *the first duty of winning the war* (italics added). As you will remember, the last War Cabinet decision was that the matter should be reviewed at the end of the year. I am not sure that that is not leaving things too late and, if you can manage at an early date to visit Bengal yourself, or, even apart from that, feel that you should weigh in with a strong demand for earlier consideration, I hope you will do so.

In public, the official line was still to blame local politicians for failing to control 'profiteering and bad distribution'. Even as late as October 1943 London needed convincing that 'everything has been done within India to extract hoarded supplies and get them to the starving districts'.¹⁰⁷ So furious was Wavell, a conscientious and energetic administrator, at the reluctance to supply more grain in early 1944 that he warned that the famine was 'one of the greatest disasters that has befallen any people under British rule and [the] damage to our reputation both among Indians and foreigners in India is incalculable'.¹⁰⁸

Concerns about war morale also explain the reluctance of the Bengali authorities to operate the Famine Codes, even though classic famine symptoms were present, and why the full extent of the crisis remained largely hidden from the outside world for so long.¹⁰⁹ By the same token, the war accounts for the muted, kid-glove tone of the *Report on Bengal* and its refusal to criticize the authorities in London and Delhi for leaving Bengal short.¹¹⁰ War conditions also account for the two-pronged 'denial policy' described above, and the ensuing disruption of internal markets; the cutting off of Burmese imports; the support for accommodating local politicians who would not ask awkward questions; and the inevitable impact of the war on expectations about future supplies.

IV. Conclusion

For a century and more after the publication of the *Essay on the Principle of Population*, famines in both China and India would be widely accepted as the inevitable outcomes of processes described by Malthus, 'a tragic but inescapable fact of...life'.¹¹¹ Not so the Bengal and Great Leap famines, which tend to be blamed, not on economic backwardness or harvest deficits, but on human agency. Malthus believed that the problems of corruption and poor governance were largely endogenous, and was skeptical of the power of public policy to mitigate famine. Most accounts, however, blame the Bengal famine of 1943-44 on a combination of market failure and public inaction rather than harvest failure, while the conventional wisdom on China sees the harvest failures that produced the famine as endogenous to the follies of central planning.

In this paper I have attempted to add to our understanding in two respects. Firstly, in the case of China, I have argued that more room should be made for the supply side factors stressed by Malthus. I have added more historical context by drawing attention to China's relative poverty and the overlap between high excess mortality regions and those previously vulnerable to famine. The famine remains an outlier, but to an extent fits a pattern established by the mid-nineteenth century.

Secondly, in the case of Bengal, I have argued that there was indeed a 'FAD' and that denying this has led to an undue historiographical focus on hoarding. True, the practice of blaming hoarders during famines is an age-old one: as long ago as 363AD the Roman emperor Julian accused the wealthy citizens of Antioch of creating an artificial famine in a city where 'everything is in plenty, everything is dear'. William Laud's

pithy judgment, referring to a near-famine in England in 1632, that 'this last yeares famin was made by man and not by God' targeted similar miscreants.¹¹² The same theme often informs literary allusions to famine. Hard historical evidence that famines stem from excessive hoarding remains elusive, however,¹¹³ and I would hold that the 1943-44 famine does not provide it either.

Not that this was just another example of 'FAD', however: in Bengal the God of War played a much bigger role than Malthus. As both Amartya Sen and Lance Brennan have noted, harvest failures in the years leading up to 1943-44 had not resulted in famine.¹¹⁴ Sen blames World War II for the chaos and uncertainty that gave rise to hoarding. Here I have argued instead that wartime priorities deprived the Bengali poor of the food they so badly needed; that they balkanized food markets, particularly in the second half of 1943; that they inhibited free speech; and that they delayed the public proclamation of famine conditions.¹¹⁵ All of which points to some symmetry between Bengal in 1943-44 and China during the Great Leap Forward: official denial was evident in both cases, each in the service of what was deemed a higher ideal (serving the Revolution or defeating fascism). As far as the two million and more who perished in Bengal are concerned, the conclusion seems inescapable. They were in the main unwitting, unwilling colonial casualties of a struggle not of their making, but a key struggle nonetheless, that against fascism.

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ENDNOTES

¹ I use inverted commas, because most famines are not, strictly speaking, positive checks in the Malthusian sense. A positive check would be a correction to a population that exceeds its equilibrium level and that causes a permanent reduction in it below that level. Few famines qualify by this definition. I am grateful to Karl-Gunnar Persson for insisting on this point.

² Greenough, *Prosperity and Misery*; Batabyal, *Communalism in Bengal*; Brennan, 'Government famine relief'. See too Gupta, 'Food situation', pp. 1817-2065.

³ Tawney, *Land and Labour*, p. 77; Mallory, *China: Land of Famine*.

⁴ The vulnerability of China to famine before, say, the mid-nineteenth century remains a moot point. Ashton *et al.* ('Famine in China', p. 643fn9) cite a source claiming that between 1810 and 1849 famine was responsible for 45 million lives; Lee and Wang (*One Quarter of Humanity*, p. 36) argue that what famines did occur 'appear to have been the product of political and organizational problems, not excess population per se'.

⁵ E.g. Lillian Li, 'Introduction', p. 687; Ashton *et al.*, 'Famine in China', p. 620.

⁶ I have used Pinyin transliteration throughout except when quoting from other sources.

⁷ Tawney, *Land and Labour*, p. 76; Davis, *Late Victorian Holocausts*, pp. 112-4.

⁸ Li, 'Life and death in a Chinese famine'; *Time Magazine*, October 26th 1942; March 22nd 1943; see too White and Jacoby, *Thunder out of China*. On the last point compare Chang, *Wild Swans*, p. 311. For more on famine symptoms see Ó Gráda, *Famine*, chs. 1-2.

⁹ A good source on Western reportage is M.S. Young, 'When your enemy hungers', Ch. 2. See also Asian People's Anti-Communist League, *Famine as Told by Letters*; Riskin, 'Seven questions'.

¹⁰ E.g. 'W.K.', 'Communist China's agricultural calamities'; Snow, *The Other Side of the River*; Perkins, *Agricultural Development in China 1368-1968*, pp. 166, 303, 303fn19.

¹¹ See e.g. Bernstein, 'Starving to death in China'.

¹² Becker, *Hungry Ghosts*, pp. 266-74, 293. Compare Ashton *et al.* 'Famine in China'.

¹³ The data are taken from Mitchell, *International Historical Statistics: Africa, Asia & Oceania*, pp. 71, 73. Morgan, 'Welfare consequences', echoing a scholarly consensus, accepts official Chinese data as 'the best we have', and claims that 'deliberate

falsification has rarely occurred’.

¹⁴ Ó Gráda, ‘Making famine history’. See too Houser, Sands, and Xiao, ‘Three parts natural’, Table 3.

¹⁵ E.g. Bernstein, ‘Mao Zedong’, p. 422; MacFarquhar, *Origins*, vol. 3, pp. 7-8.

¹⁶ Ashton *et al.*, ‘Famine in China’; Coale and Bannister, ‘Five decades of missing females in China’; Banister, *China’s Changing Population*, pp. 114-19; Luo, ‘Reconstruction of life tables’, 136-40; Riskin, ‘Seven questions’, pp. 113-14. Others rely (e.g. Lavelly *et al.*, ‘Chinese demography: the state of the field’; Peng, ‘Demographic consequences’; Yao, ‘A note on the causal factors’) rely on the Chinese data first released in the early 1980s, and marginally amended since. See also Bramall, ‘Last of the romantics?’, pp. 688-89.

¹⁷ Bernstein, ‘Stalinism, famine, and Chinese peasants’; Peng, ‘Demographic consequences of the Great Leap Forward’; Yang, *Calamity and Reform in China*; Chang and Wen, ‘Communal dining’; Yao, ‘A note on the causal factors of China’s famine’; Li and Yang, ‘The Great Leap Forward’; Li, *Fighting Famine in North China*, pp. 367-74.

¹⁸ See e.g. Drèze and Sen, *Hunger and Public Action*; Ravallion, ‘Famines and economics’, pp. 1226-36.

¹⁹ E.g. ‘China denies famine and bars aid offer’, *New York Times*, Feb. 17th 1961, p. 6.

²⁰ Ó Gráda, ‘Making famine history’.

²¹ Maddison’s data, which build on specialist estimates, are available at <http://www.ggdc.net/maddison/>. Though they are subject to the same caveats as all historical national accounts estimates, they are widely used by economists and economic historians. The Irish proverb *má’s peaca bheith buí tá na mílte damanta* (if it’s a sin to be yellow, thousands are damned) applies. Using Heston *et al.*, *Penn World Table Version 6.2* would make China in the 1950s seem relatively more backward. The Penn World Table estimates of real GDP per capita (in constant prices: chain series) are \$627 for Chad and \$2,543 for Guinea in 1980, and \$357 for China in 1955.

²² *UN Demographic Yearbook 1997: Historical Supplement* (available at <http://unstats.un.org/unsd/demographic/products/dyb/dybhists.htm>); Boyle and Ó Gráda, ‘Fertility trends’.

²³ On Chinese economic geography see Heilig, ‘Many Chinas?’

²⁴ The very uneven regional incidence of excess mortality (also highlighted in Riskin,

'Seven questions', pp. 117-21; Peng, 'Demographic consequences') reported in Table 3 may help explain the contrasting impressions gained from contemporary and subsequent accounts. For example, the evidence of travellers from southern Guangdong province to Hong Kong c. 1962 pointed to only a relatively minor crisis, while fieldwork in Jimo (Shandong province) reported 'no grain riots, no peasant rebellion, no grain hoarding for profits, no selling of children and wives, which would have been normal occurrence with a famine like that in Jimo and in China in general'. This was so unlike China in the past that, according to Han Dongping, 'even today many younger people still ask their parents why they did not storm public granaries left unguarded by military forces'. On the other hand, a document first published in the west by Thomas Bernstein revealed an apocalyptic picture of the situation in Liyuan in Anhui province. See North, 'Health trends in China'; Han, 'The Great Leap Famine, the Cultural Revolution and post-Mao rural reform'; Bernstein, 'Starving to death in China'; Bramall, 'Last of the romantics?'

²⁵ The *Guardian's* account of '[t]he famine in China: four millions of starving people' singled out northern Anhui as the epicentre of a crisis in 1907, whereas before 1949, Huai-Pei (Huaibei) in western Anhui, an ecologically fragile region, was notorious for endemic unrest and high levels of female infanticide. See *The Guardian*, January 1st 1907; *The Alliance Weekly: A Journal of Christian Life & Missions*, XXXIX(6), November 9th 1912, p. 88; Perry, *Rebels and Revolutionaries in North China*, p. 51. Tawney and his wife stayed with the Buck family in Nanking in 1931 (Terrill, *R.H. Tawney and his Times*, p. 71).

²⁶ Wright, 'Distant thunder', pp. 732-33.

²⁷ White, *In Quest of History*; also White and Jacoby, *Thunder out of China*. Even Becker (*Hungry Ghosts*, p. 124, 130) concedes that pre-revolutionary Henan was known as the 'land of the beggars' and that 'since Emperor Zhu was born there' Fengyang had been struck by famine 'nine years out of every ten'. Legend had it that no one would marry men from Fengyang villages because of their poverty (email communication from Stephen Morgan).

²⁸ Income per head in Anhui in 1955/7 was 117 *yuan*, compared to the national average of 161 *yuan*. In Henan it was 105 *yuan*, in Sichuan 100 *yuan*. Even today Anhui is very poor by Chinese standards. See Chen and Wu, *Will the Boat Sink the Water?*

²⁹ Jasper Becker claims that 'there were no unusual floods or droughts' in this period, while according to Jung Chang 'of all the people I have talked to from different parts of China, few knew of natural calamities in their region'. See Becker, *Hungry Ghosts*, p. 273; Chang, *Wild Swans*, p. 311; Chu, *Inside Story*, p. 57; Chi, 'Water conservancy', p. 47.

³⁰ Han, 'The Great Leap Famine, the Cultural Revolution and Post Mao Rural Reform';

MacFarquhar, *Origins*, vol. 2, p. 322; *Time Magazine*, reports posted on July 6th 1959, August 24th 1959, Dec 1st 1960, Dec 26th 1960, Jan 6th 1961, Jan 21st 1961, April 21st 1961, Oct 13th 1961, Oct 17th 1961; Dwyer, 'China's natural calamities'; Smith, 'Economic growth of Communist China', p. 26.

³¹ Prieler, 'Temperature and precipitation variability', Annex 3. Suspicious of official weather data, Li and Yang ('Great Leap Forward') constructed their own index of weather conditions on the basis of retrospective interviews. Their econometric results are quite sensitive to this index: using official Chinese weather proxies instead reduces the impact of their policy variables to insignificance. Against Li and Yang's claim that official data may have been tampered with in order to maximize the role of exogenous factors, there is Kueh's verdict (*Agricultural Instability*, p. 290) that Chinese data are not subject to bias. Why, moreover, should Chinese demographic and agricultural statistics be deemed acceptable, but not meteorological data?

³² Kueh, 'A weather index', pp. 80-81; see too Kueh, *Agricultural Instability*; Zhang *et al.*, 'The analysis and assessment'.

³³ Mokyr, *Why Ireland Starved*; Maharatna, *Demography of Famines*.

³⁴ Yang, *Calamity and Reform*, pp. 56-62.

³⁵ Using the data in Ash, 'Squeezing the peasants', p. 979.

³⁶ Yao, 'A note on the causal factors'; see also Peng, 'Demographic consequences'.

³⁷ Compare Maharatna, *Demography*, pp. 168-9; Macintyre, 'Famine and the female mortality advantage'. Coale and Bannister (1994: 473) identify a rise in the number of 'missing' females in 1957-61, which they attribute to 'excess mortality' during the famine. The outcome revealed by the official Chinese data is more plausible, however.

³⁸ The calculations reported here use the province-level data given in National Bureau of Statistics, *Comprehensive Statistical Data*. Peng, 'Demographic consequences', makes the case for employing such data.

³⁹ Indeed, an account of the 1959-61 famine in Fen Yang in northeastern Anhui noted that 'more than half died of starvation...or fled (my emphasis) the area' (Bernstein, 'Starving to death', p. 37).

⁴⁰ Compare Ó Gráda and O'Rourke, 'Mass migration as disaster relief'.

⁴¹ Maharatna, *Demography*, *passim*; Mokyr and Ó Gráda, 'What do people die of?'

⁴² Or, for that matter, in North Korea in the 1990s.

⁴³ *Xinhua*, Dec 10, 2000, cited in Wolf *et al.*, *Fault Lines in China's Economic Terrain*, Ch. 4.

⁴⁴ Notestein, 'A demographic study'.

⁴⁵ According to Liu *et al.*, 'Malaria control', p. 112, there were over ten million reported cases of malaria in Henan in 1970.

⁴⁶ Per capita output in 1955 was only 104 yuan.

⁴⁷ Becker (*Hungry Ghosts*, pp. 198) attributes this to the stringent enforcement of public health regulations, even at the height of the crisis. Thomas Bernstein notes the repeated use of the term '*e si*' (death by starvation) in an account from Fenyang in Anhui province, while Jung Chang's account of famine in Sichuan contains several references to 'edema' but does not mention infectious diseases. Chu's evocative account relies mainly on second- or third-hand accounts from refugees; it implies that dropsy and edema took a heavy toll, but most of the epidemics mentioned are not classic famine-related epidemics. See Bernstein, 'Starving to death'; Chang, *Wild Swans*, pp. 306, 308, 313; Chu, *Inside Story*, pp. 73-76; Asian People's Anti-Communist League, *Famine as Told by Letters*, pp. 60, 63, 66, 93 (for more references to dropsy and hepatitis).

⁴⁸ In this respect the Soviet famine of 1931-33 seems to have marked a transition: proportionately far fewer victims died of infectious diseases than in 1917-22. While the number of deaths attributable to infectious diseases in the Soviet Union rose in 1933 (the first year for which data are available), their share of total deaths did not increase much, and the incidence of typhus and typhoid fever was much lower than in 1921-2. See Adamets, 'Famine', pp. 171-3; Wheatcroft, 'Russian and Soviet living standards'.

⁴⁹ Riskin ('Seven questions', p. 114) notes that 'virtually nothing' is known about what people died of in China in 1959-61.

⁵⁰ Blunt, *The I.C.S.*, p. 184.

⁵¹ The reduction in mortality peaks in Bengal between the 1900s and the early 1940s had not been due to rising incomes – real wages hardly grew between 1900 and 1940 – but to a combination of fewer adverse weather shocks, better access to foreign supplies, and more effective social safety nets. See Roy, 'Agricultural labour and economic transition in colonial India'; Ortega Osona 'The attenuation of mortality fluctuations'.

For accessible accounts of the Bengal famine, see Sen, *Poverty and Famines*, chs. 6; Dyson, 'Demography', Maharatna, *Demography of Famines*, chs. 4-5; Bhatia, *Famines in*

India, pp. 309-339; Greenough, *Prosperity and Misery in Modern Bengal*, passim; Bayly and Harper, *Forgotten Armies*, pp. 281-91.

⁵² Dyson and Maharatna, 'Excess mortality during the Bengal famine'; Dyson, 'On the demography of south Asian famines'.

⁵³ Sen, *Poverty and Famines*, p. 76.

⁵⁴ See e.g. Bowbrick, 'The causes of famines'; Goswami, 'The Bengal famine'; Islam, 'The Great Bengal famine'; Weigold, 'Famine management'; Law-Smith, 'Response and responsibility'; Alamgir, *Famine in South Asia*, pp. 82-3; Tauger, 'Entitlement, shortage, and the 1943 Bengal famine'.

⁵⁵ On the calorific content on Irish potato consumption see Ó Gráda, *Ireland*, pp. 85-87. See too Das, *Bengal Famine*, pp. 102-3; Aykroyd, *Conquest of Famine*, p.73.

⁵⁶ Bose, 'Starvation amidst plenty', p. 705; *id.*, *New Cambridge History*, Ch. 3.

⁵⁷ *Hansard*, Vol. 390, col. 1774, 1st July 1943; *Hansard*, Vol. 391, col. 216, 14th July 1943. His public position had not changed since January 1943 when he relayed a statement from the Indian government that 'if hoarded stocks can be got on the market and fairly distributed there is little danger of the people having to go seriously without. There is no famine and no widespread prevalence of acute shortage, though a large part of the urban population is doubtless affected' (*Hansard*, Col. 597, 28th January 1943). On 23rd September, Reginald Sorensen M.P. accused Amery in the Commons of having given the impression that 'the shortage in India was not so severe as has obviously been the case and it was largely, if not entirely, due to hoarding'. Amery's reply that 'the problem is undoubtedly, in the main, one of distribution' led Labour M.P. Manny Shinwell to ask, 'could there be anything worse than disclaiming responsibility?' (*Hansard*, Vol. 392, cols. 396-399). In private, of course, Amery believed the supply situation was critical.

⁵⁸ S.P. Mookerjee, as cited in Batabyal, *Communalism*, p. 108. A few months later, Mookerjee accused the ministry of doing the greatest 'disservice to the people of Bengal by emphasizing that there was no shortage of foodstuffs in Bengal' (Das, *Biography*, p. 65). In *Leaves from a Diary* (pp. 89-91) Mookerjee highlights the contrasting attitudes of the Huq and Nazimudin administration to the supply situation. See too 'Evidence of Krishak Praja Muslim leaders', as reprinted in Gupta, 'Food situation', p. 2020.

⁵⁹ Mss. Eur. Pinnell 911/9.

⁶⁰ *Capital* (Calcutta financial weekly), 25th February, 4th March 1943.

⁶¹ FIC, *Report on Bengal*, p. 212; Sen, *Poverty and Famines*, pp. 57-63; Greenough, *Prosperity and Misery*, pp. 286-98; Arrow, 'Why people go hungry'; and Brennan, 'Government famine relief in Bengal', p. 542.

⁶² Sen was supported by Greenough, *Prosperity and Misery in Modern Bengal*; Sugata Bose, 'Starvation amidst plenty'; and many others. For a recent review of the entitlements approach see Devereux, 'Sen's entitlement approach'.

⁶³ Woodhead, comment in Mahalanobis, 'The Bengal famine'; BL/EIL, D714/67, 'letter from Woodhead to Sir David Monteth, Assistant Director, India Office, Whitehall, 10/7/1945; Aykroyd, *Conquest of Famine*, p. 70-1, 74.

⁶⁴ Mahalanobis, 'Recent experiments'; Bowbrick, 'The Causes of famines'; Tauger, 'Entitlement, shortage, and the 1943 Bengal famine', pp. 60-63; Islam, 'Great Bengal Famine'. Mahalanobis (p. 333) cryptically noted: 'Although by [1942], owing to Japan's entry into the war, the food situation in Bengal had already become difficult, I failed completely to persuade the government to extend the sample survey to cover the paddy crop in Bengal. The Bengal famine occurred in 1943'. Early in 1944 Lord Wavell warned in private against attempts at proving 'on the basis of admittedly defective statistics' that no help was needed, and that experience on the ground gave the lie to a 'rigid statistical approach' (Moon, *Wavell*, p. 55, entry for 9 February 1944). Others, both at the time and later, acknowledged the supply problem. Pinnell, a key figure, noted the failure of the *aman* crop and 'reports of widespread disease in the incoming crop', although 'one was inclined to suspect that the reports might be exaggerated by speculators', and Binjay Ranjan Sen, the official responsible for emergency relief in Bengal at the time and later head of the FAO, would refer in his memoir to 'the total failure of a ripening rice crop' and 'the *aman* crop failure'. See Pinnell, *With the Sanction of Government*, pp. 94, 97; Sen, *Towards a Newer World*, pp. 47, 49; Greenough, *Prosperity and Misery*, p. 160.

⁶⁵ Goswami, 'The Bengal famine of 1943: re-examining the data', makes the case that, even accepting the official figures, there was still a FAD. An unpublished document prepared for the FIC reports the *aman* crops in 1941/2, 1942/3, and 1943/4 as 73.97, 50.2 and 85.3 *lakhs* of tons, also implying a 32 per cent reduction between 1941/2 and 1942/3. See Pinnell Papers, 'Note on the acreage and yield of *aus* rice in Bengal in 1943', IOL, Mss. Eur, D911/8.

⁶⁶ Tauger, 'Entitlement, shortage, and the 1943 Bengal famine'; Santhanam, *Cry of Distress*, p. 182; Mahalanobis, Mukherjea, and Ghose, *Famine and Rehabilitation*, pp. 13a-19a. Carefoot and Sprott, *Famine on the Wind*, p. 179, describe 'the brown spot disease' as 'the major factor in the devastating Bengal famine of 1942-43 that killed a million

people’.

The biggest declines in the *aman* crop were registered in the divisions of Burdwan (-65.2 per cent), Bankura (-59.7), and Rajshahi (-56.9). At the other end of the scale were Tippera (+19.5) and Faridpur (-1.3) in the east, and Nadia (-9.5) in the centre. Tauger cites evidence from two research stations in Chinsura and Bankura in west Bengal. The reductions in the *aman* harvest in those divisions were 36.8 and 59.7 per cent, respectively.

⁶⁷ Take, for example, the warning by Bengal’s representative at the Delhi food conference of February 1943 that market supplies were one-fifth below normal; or the subsequent memorandum submitted to Cabinet on 5th March 1943 was that Bengal ‘as a whole’ was suffering from a ‘serious shortage’, and that ‘unless the available supply could somehow be spread over till the next crop, famine was to be expected in certain areas’ (IOL, Mss. Eur. D911/8DCS, Bengal: ‘Method of obtaining and compiling statistics of crop production’).

⁶⁸ Auriol Law-Smith, ‘Response and responsibility’, p. 60 (citing H. Braund). See too Mitra, ‘Famine of 1943’, pp. 258-59.

⁶⁹ As cited in Law-Smith, ‘Response and responsibility’ p. 61.

⁷⁰ Sir John Herbert to Lord Linlithgow, cited in Batabyal, *Communalism*, pp. 90, 93. Linlithgow, anxious that the Famine Inquiry Commission would judge his performance during the famine harshly, got a senior India Office official to make representations on his behalf to Woodhead. He need not have worried, since the *Report on Bengal* failed to point the finger at any representative of H.M. Government (D714/67: draft of letter from Sir David Monteath to Sir John Woodhead, 10th August 1944; Linlithgow to Monteath, 12th August 1944). See too Bhatia, *Famines in India*, p. 339.

⁷¹ A slogan used in propaganda in Bengal in 1943.

⁷² Greenough, *Prosperity and Misery*, pp. 124-5; Batabyal, *Communalism*, pp. 106-7, 121-37; compare http://www.globalwebpost.com/farooqm/study_res/suhrawardy/famine.html (downloaded 15th Dec. 2006). The Communists saw S.P. Mookerjee and his followers as representing the interests of Hindu traders and hoarders: ‘Dr. Shyamaprosad [Mookerjee] gives the lead, the Hindu hoarders pay the cash and call the tune, the Fifth Column gives the cadres’ (*People’s War*, November 14th 1943). However, Asok Mitra (‘Famine of 1943’, p. 258) accused the Communists of ignoring what they must have known, given their access to information, i.e. that hoarding was ‘a mere fleabite’ relative to official culpability.

⁷³ Malthus (*An Investigation of the Cause*) made the point as long ago as 1800. Compare

Arrow, 'Why people go hungry'; Bowbrick, 'The causes of famines'.

⁷⁴ 'Real' is derived by dividing the nominal price by a working-class cost of living index for Kanpur as given in Knight, *Food Administration in India*, p. 307. The increase was rather modest compared to rises in the price of foodgrains during major famines elsewhere. In Ireland potatoes cost four times as much in mid-1847 as they had in mid-1845. In Bengal in 1770, in Delhi in 1783, and in Pune in 1804 wheat prices were five times or more their non-crisis levels. See Ó Gráda, *Ireland's Great Famine*, ch. 6; Studer, 'India and the Great Divergence'.

⁷⁵ *People's War*, 21 November 1943, pp. 4-5. I owe this reference to Lance Brennan. Figure 5 follows Brennan, 'Government famine relief', p. 544.

⁷⁶ *Ammit Bazaar Patrika (ABP)*, 5 September 1943, 9 October 1943, 17 October 1943; Pinnell Papers, cited in Greenough, *Prosperity and Misery*, p. 115; Bhatia, *Famines in India*, p. 323; Greenough, *Prosperity and Misery*, p. 140; Brennan, 'Government famine relief in Bengal', p. 544; *People's War*, 5 December 1943, p. 4.

⁷⁷ Law-Smith, 'Response and responsibility', p. 61; Gupta, 'Food situation', p. 1838 (Maj. Gen. E. Wood to L.G. Pinnell, April 23rd 1943).

⁷⁸ Grajdanzev, 'Food crisis in India', p. 5; Greenough, *Prosperity*, p. 126; Bhatia, *Famines*, p. 331. See too *ABP*, 6 June 1943, p. 5, reporting searches of the homes of a 'number of prominent citizens' of Rangpur, which discovered no illegal hoarding.

⁷⁹ Mitra, 'Famine of 1943', pp. 258-59.

⁸⁰ *ABP*, 20 August 1943; Greenough, *Prosperity and Misery*, p. 126.

⁸¹ FIC, *Report on Bengal*, p. 58.

⁸² *ABP*, 20 August 1943; Mukerji, *Agriculture, Famine, and Rehabilitation*, p. 49.

⁸³ As cited in Batabyal, *Communalism*, p. 93.

⁸⁴ IOL, Mss. Eur D911/8, chronological table appended to 'Memorandum on the Famine of 1943 and the Measures taken in relation thereto'.

⁸⁵ IOL, Eur. Mss. D911/8, 'Memorandum on the economic condition of Bengal prior to the famine of 1943'.

⁸⁶ Amery, *Empire at Bay*, p. 954.

⁸⁷ Stephens, *Monsoon Morning*, p. 176; Pinnell, *With the Sanction of Government*. Pinnell's memoir does not refer to his breakdown, but it is mentioned in Mukerjee, *Leaves from a Diary*, p. 89, and in Weigold 'Famine management', p. 69fn26 (citing an official source).

⁸⁸ British Library, India Office Records, Mss. Eur. D911/8, Memo by Mr. Pinnell on Speculation, Hoarding, Competitive Purchase, etc.

⁸⁹ Sen, *Poverty and Famines*, pp. 70-85.

⁹⁰ According to Mrs. Vijaya Lakshmi Pandit (in Santhanam, *Cry of Distress*, p. 102), their migration to urban areas in search of food gave the lie to accusations that peasants were responsible for hoarding food. Note too Pandit Kunzru's impressions (in Santhanam, *Cry of Distress*, p. 106): 'The sight of people uprooted from their homes and without any resources migrating to the towns in search of food...seems to be to disprove effectively the charge of hoarding which has often been brought against the cultivator. It is cruel to charge starving villagers with deliberately hoarding rice from the markets.'

⁹¹ The classic source is Jones, 'A three-factor model'.

⁹² Mahalanobis *et al.*, *Famine and Rehabilitation*, pp. 16a-19a, 55a, 58a; Mahalanobis, 'Recent experiments'; Sen, *Poverty and Famines*, pp. 70-5; Ghose, 'Food supply and starvation', pp. 381-3.

⁹³ The worst hit groups in relative terms were traders and non-agricultural labourers. That agricultural labourers fared better than non-agricultural is also of interest. Mahalanobis *et al.* attribute the mixed outcome for the former to the buoyant demand for 'able-bodied agricultural labour', while they attribute the impact on traders to governmental controls, hoarding, and the black market (*Famine and Rehabilitation*, p. 34a).

⁹⁴ Chakraborty, *Rural Indebtedness*, p. 24; Das, *Bengal Famine*, pp. 67-72. The migrants were mostly from west Bengal.

⁹⁵ Mukerji, Agriculture, *Famine and Rehabilitation*, p. 178 (Tables 63 and 64).

⁹⁶ Bose, *Agrarian Bengal*, pp. 151-52. The data refer to 1943-44 and 1944-45. Sales had averaged about 0.6 million per annum in 1939-42. It is likely that they underestimate the true extent of transfers, since some are likely to have occurred on the basis of oral contracts, or written contracts not registered (Mukerjee, 'The famine of 1943', p. 8).

⁹⁷ Mukerjee, 'The famine of 1943', p. 8.

⁹⁸ Although the harvest shortfall was severest in the west, the famine was worst in the east, a rice deficit region where living standards were lowest to begin with, where the cessation of imports from neighbouring Burma had the greatest impact, and where the proximity of the Arakan front and the disruption to communications due to the 'denial' policy exacerbated the crisis. Much of the importation from Burma before the famine went unrecorded. Bose, *Peasant Labour*, p. 133, following Mahalanobis *et al.*; Bayly and Harper, *Forgotten Armies*, p. 284.

⁹⁹ *Statesman*, 23rd Sept 1943.

¹⁰⁰ Chakrabarti, *The Famine of 1896-1897*, p. 203.

¹⁰¹ 28 January 1943.

¹⁰² E.g. Mansergh, *Transfer of Power*.

¹⁰³ Linlithgow to Amery, 26th Jan 1943.

¹⁰⁴ 'Method of obtaining and compiling statistics of crop production', IOL, Mss Eur D911/8.

¹⁰⁵ Amery had requested 500,000 tons, but was 'fobbed off' with the Iraqi barley and Australian wheat (Amery, *Empire at Bay*, entry for 4 August 1943, p. 933). When another rice shortage threatened at the end of 1946 Sir Frederick Burrows, last Governor of Bengal, announced on radio that 'there was no reason to panic at all: in fact, two shiploads of rice were being diverted to Calcutta. I knew this was not what the Government at home had planned, but I knew too that Atlee could not let me down, and the ships duly came'. Pinnell (*With the Sanction of Government*, p. 101) would later console himself with Burrows' admission that conditions were very different in 1943.

¹⁰⁶ Amery to Linlithgow, 5th August 1943. The famine in Greece, though serious, was hardly in the same class as that in Bengal: compare Hionidou, *Famine and Death in Occupied Greece*.

¹⁰⁷ *New York Times*, September 19th 1943, 'Famine grips Bengal: British threaten to intervene unless prompt relief is given'; Amery to Wavell, 21st October 1943.

¹⁰⁸ Moon, *Wavell*, p. 54.

¹⁰⁹ On the origin of the codes and failure to operate them in 1943 see Brennan, 'Development of the Indian famine code'; *id.*, 'Government famine relief'. According to

Mookerjee (*Leaves from a Diary*, p. xvi, 91) official censorship under the Defense of India Act kept much of what was happening in Bengal hidden from the rest of India during 1942-3.

¹¹⁰ W.R. Aykroyd, a member of the Commission, was much more critical of the British Government and of Amery and Linlithgow, in particular, in *Conquest of Famine* (pp. 77-8) than the *Report* had been. It would be naïve to suppose that the wartime context did not influence the composition of the Famine Inquiry Commission and its *Report on Bengal*.

¹¹¹ Felix Greene, *Curtain of Ignorance*, p. 93.

¹¹² Cited in Walter and Wrightson, 'Dearth and the social order', p. 31.

¹¹³ Ó Gráda, 'Market and famine'. Ravallion, *Markets and Famines*, describing Bangladesh in 1974, offers the most convincing evidence.

¹¹⁴ Sen, *Poverty and Famines*, p. 57-58; Brennan, 'Government famine relief'.

¹¹⁵ Michael Ellman (in 'Soviet repression statistics') notes in the context of an analysis of the Soviet famine of 1932-33 that there was nothing unique in the focus on targets other than famine relief: in 1943 the British government in India 'was more interested in the war effort than in saving the life of Bengalis'.