LETTERS

To the Editor:

In his letter to the editor, Alec Nove contends that the statistics found in table 1 of my essay "The 'First Great Leap Forward' Reconsidered" cannot validly reflect his point of view because he totally rejects Soviet statistics valued in 1926/7 prices, relying instead on physical indexes.[1] This assertion is easily refuted. Table 1 contains both physical and value series. The physical production series for agriculture are taken directly from the seventh chapter of Nove's *An Economic History of the USSR* entitled "The Soviet Great Leap Forward."[2] The production series for producer, consumer, transportation and construction goods valued in constant 1926/7 prices are obtained from diverse official Soviet sources.[3] Nove does not report the two latter series in the eighth chapter of his book, which is devoted to a summary appraisal of the achievements of the First Five-Year Plan, but the official statistics he provides on producer and consumer goods growth are conspicuously valued in *1926/7 prices* under the subheading "Achievements of the First Five-Year Plan." Since alternative Western estimates are not considered, and no attempt is made to compute producer and consumer goods series independently, Nove is clearly mistaken when he implies that the statistics contained in my table 1 do not reflect the value and physical statistics he uses in his summary assessment of the First Five-Year Plan.[4]

Nove's rejection of production statistics valued in 1926/7 prices thus is not as absolute as he contends. A close reading of his *locus classicus* "'1926/7' And All That" reveals that he does not repudiate 1926/7 prices per se, or the physical data on which they rest, only sundry defects closely associated with the handling of new products.[5] It follows that if 1926/7 prices were purged of these defects, his reservations about their validity should be assuaged.[6]

1. Alec Nove, "Letter to the Editor," *Slavic Review,* 40, no. 2 (Winter 1981): 691–93.

2. Alec Nove, *An Economic History of the USSR* (Baltimore: Penguin Books, 1969), p. 186. The sources Nove relies on are *Sotsialisticheskoe stroitel'stvo* (1936), and Moshkov, *Zernovaia problema v godu sploshnoi kollektivizatsii* (Moscow, 1966).

3. The aggregate agricultural index in table 1, taken from *Narodnoe khoziaistvo SSSR v 1958 godu,* is also valued in 1926/7 prices. See *Narodnoe khoziaistvo SSSR v 1959 godu,* pp. 831–32. Nove does not object to valuing agriculture in 1926/7 prices: "However, since agricultural products are easy to define, and tend to have clear and relatively low 1926/7 prices none of the other distorting factors operate." Alec Nove, "'1926/7' And All That," *Soviet Studies,* 9, no. 2 (October 1957): 120.

4. Nove reproduces these statistics in chapter 9 and compares them with counterpart estimates for 1937 in assessing the achievements of the Second Five-Year Plan. See Nove, *Economic History of the USSR,* p. 225.

5. Nove argues that the Soviets used cost-inflated current prices for new equipment introduced after 1926/7 in their constant value series when early year analogue products could not be found. When analogues were available, even remote analogues, high prototype 1926/7 prices were employed with similar distortive effect. See note 26. Alexander Gerschenkron, "The Soviet Indices of Industrial Production," *Review of Economics and Statistics,* 29, no. 4 (November 1947): 217–26; Richard Moorsteen, *Prices and Production of Machinery in the Soviet Union 1928–1958* (Cambridge, Mass.: Harvard University Press, 1962), p. 119; Abram Bergson, *The Real National Income of Soviet Russia Since 1928* (Cambridge, Mass.: Harvard University Press, 1961), pp. 181–87. Nove denies that these distortions were deceitful. Compare Steven Rosefielde, "The First 'Great Leap Forward' Reconsidered," *Slavic Review,* 39, no. 4 (December 1980): 572, where it is suggested that Soviet statisticians deliberately misemployed 1926/7 prices to exaggerate the value of the Belomor Canal.

6. "There is nothing 'wrong' in an index being computed in prices of 1926/7, but their continued use during a long period of drastic change in output and prices imparted a strong upward bias in the index of growth." Alec Nove, *The Soviet Economic System* (London: George Allen and Unwin, 1977), p. 356. Elsewhere, however, Nove rejects 1926/7 prices more strongly: "As a measure of growth it seems evident that the published data in these prices are useless." Nove, "'1926/7' And All That," p. 124. Gerschenkron reaches a similar conclusion, even though his dollar indexes do not

The magnitude of the distortion caused by improper new product pricing can be estimated by deflating the new producer good and consumer durable components of the values he cites with Moorsteen's machinery input cost index,[7] accepting his hypothesis that current year prices were incorrectly employed by Soviet statisticians as surrogates for 1926/7 new product prices.[8] This adjustment does not greatly affect the value aggregates he reports for 1932. Expressed in index form, producer goods output declines from 385 to 347 and consumer durable production from 164 to 163.[9] National income adjusted for these biases likewise falls from 186 to 173.[10] Clearly then, although 1926/7 prices do pose difficulties, the adjustments required to meet Nove's objections are not insuperable and do not justify his claim that the official statistics contained in my table 1 are inconsistent with his critique of 1926/7 prices. This judgment is strengthened, moreover, when it is recognized that the revised Soviet industrial producer and consumer goods values employed in table 1 are lower than Nove's adjusted statistics derived from *Sotsialisticheskoe stroitel'stvo* (1934): 274 versus 347, and 156 versus 163. If the adjustments made above for new product price distortion do not fully address Nove's criticisms of 1926/7 prices, then the officially revised statistics should significantly ameliorate this shortcoming.[11]

The fact that Nove's version of the official production series, appropriately adjusted, and the one employed in my table 1 are broadly alike would seem to indicate that he is wrong in asserting that the statistics in my table 1 distort his views.[12] Whether his version

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support the view that high machinery growth is explained by the use of current high prices instead of constant 1926/7 prices. See Alexander Gerschenkron, *Economic Backwardness in Historical Perspective* (Cambridge: Belknap Press, 1966), pp. 246 and 256. Compare Bergson, *Real National Income,* pp. 181–87, where Gerschenkron and Nove's arguments are rejected.

7. Moorsteen, *Prices and Production of Machinery,* p. 138. Moorsteen reports machinery input cost indexes during 1928–37 in 1928 and 1937 quantity weights. Since new products are at issue the latter series is employed. Input cost 'inflation' during 1926/7–32 is computed by compounding the rate during 1928–37, 9.3 percent, for five years.

8. Nove, "'1926/7' And All That," pp. 119–20. Compare Nove, *Economic History of the USSR,* p. 192. Also see note 5.

9. Assuming that ten percent of the machine types produced each year during 1926/7–32 had not existed previously, average input cost inflation for half the inventory would be $100[(1.093)^{2.5} - 1] = 25$ percent. The discounted producer goods index is $[.5(385) + .5(385/1.25)] = 347$. Consumer durables valued in 1928 prices constituted 2 percent of total industrial consumer goods production in 1932, and grew 3.46-fold from 1928 to 1932. Assuming that the rate of introduction of new consumer durables was similar to that of new machines generally, the discounted consumer goods index is $[.98(160.3) + .01(346/1.25) + .01(346)] = 163$. These findings are confirmed by Moorsteen's independent calculation. See Moorsteen, *Prices and Production of Machinery,* p. 120.

10. Assuming that the new product price bias in agriculture is proportional to that observed for industrial consumer durables, and that the biases in construction and transportation are proportional to those for industrial producer goods, national income bias can be estimated as:

$$x = [.314(385) + .686(164)] - [.314(347) + .686(163)] = 12.6$$

and adjusted national income can be set at $186 - 13 = 173$. The weights used above are taken from my table 1; the national income figure valued in 1926/7 prices are from the same table in which Nove reports his producer and consumer goods statistics.

11. Nove, "'1926/7' And All That," pp. 122–25. Compare Bergson, *Real National Income,* pp. 181–87.

12. Nove might object that his appraisal of Soviet economic performance during the First Five-Year Plan was determined primarily by miscellaneous physical indexes. This line of reasoning cannot be sustained, however, because the selective physical series published by the Soviets do not in their entirety diverge radically from the published value series. See, for example, G. Warren Nutter, *The Growth of Industrial Production in the Soviet Union* (Princeton, N.J.: Princeton University Press, 1962), table D–2, p. 524.

of the official series or those contained in my essay are utilized, producer goods including transportation and construction, consumer goods including agriculture, and total national income all rise on a per capita basis during 1928–37. Producer goods increase rapidly, consumer goods slowly, and national income at a double digit rate.[13] These trends, other things being equal, should unambiguously lead Nove to conclude that the First Five-Year Plan was a success. In the text accompanying his table, however, he suggests that the official industrial consumer goods series may be overstated for a reason not previously considered, because "there had been a tendency to understate the output of the artisans and omit the purely domestic production."[14] No attempt is made to quantitatively assess the importance of this conjecture, but Nove obviously (and erroneously)[15] believes that the effect is large, because in the next sentence he writes: "Only thus can one explain the paradox that is shown in the above table: output of consumers' goods was supposed to be rising rapidly at a time of acute privation."[16] In the pages that follow he alludes again to the low standard of living during the First Five-Year Plan, which of course could be explained by the agricultural calamity wrought by collectivization which he has already accounted for in his physical agricultural production series, and he conveys the impression that the Great Leap Forward had a grim effect on household consumption.

This characterization is surely correct for the peasants and other victims of Stalin's development strategy, but it cannot be extended to society as a whole without drastically discounting the industrial consumer goods series and the physical agricultural output series far beyond the standard adjustments made by other Western analysts and reported in my table 2. For this reason, in sorting out the diverse strands of Nove's quantitative and verbal arguments (which are elusive and invite multiple interpretations),[17] I concluded on grounds of logical consistency that he believed that a leap forward had been made in industrial production and that broad segments of the Soviet population suffered grievously from Stalin's policy, but that the increased production of consumer goods, especially durables,[18] implied that for society at large the consequences of the First Five-Year Plan were not especially grim.

In his reply, Nove does not disavow the first two subconclusions, but insists both that the Great Leap Forward was especially grim and that he has never written or implied anything to the contrary. He and I are in agreement about the real effect of Stalin's policies on the aggregate standard of living. However, it seems to me that although Nove is the best judge of his own intent, he is insensitive to the ambivalence of his position. The statistics he uses, appropriately adjusted, simply do not support the viewpoint he espouses in his reply, or allow him to calibrate just how grim the Great Leap Forward really was. He may insist that the decline in social welfare between 1928 and 1932, as he

13. The adjusted version of the national income statistics Nove cites implies a compound growth rate in 1928–32 of 15.3 percent.

14. Nove, *Economic History of the USSR,* p. 193. He also argues that rapid urbanization caused an increase in measurable output much greater than any real increase in consumer welfare. This would only be true if industrial products were being substituted for home processed goods due to a general rise in standard of living, a possibility Nove rejects. Ibid., pp. 193–94.

15. N.B. Nove does not say that *kustar* production is omitted, only understated. Presumably he believes that the official Soviet series includes artisan production for the year 1928 but that the figure is too low. If he is correct, then the consumer goods index for 1932 is overstated, but there is no reason to suppose that the distortion is very large. For a discussion of the possibility that *kustar* production is omitted entirely from some consumer goods subseries, see Norman Kaplan and Richard Moorsteen, *Indexes of Soviet Industrial Output,* Research Memorandum RM–2495 (Santa Monica: The Rand Corporation, May 13, 1960), pp. 8–13.

16. Nove, *Economic History of the USSR,* pp. 193–94.

17. See Leopold Labedz's commentary in Nove, *Economic Rationality and Soviet Politics, or Was Stalin Really Necessary?* (New York: Praeger, 1964), pp. 33–36.

18. These durables may have been allocated to State communal consumption.

has often characterized it, was grimmer than "not especially grim," but he cannot validly assert that the quantitative evidence he introduces to support this appraisal sustains his description.

Nove's proclivity to disregard the implications of the statistics he himself reports leads him into further difficulties. In the first section of his reply he criticizes me for understating his appraisal of the grimness of the Great Leap Forward. But in the last part he shifts his ground and implicitly condemns me for overstating the negative consequences of Stalin's industrialization drive during 1928–37. This reversal is accomplished by denigrating my contention that the official 1926/7 value series are gravely distorted by *tukhta,* implying thereby that the success of the first two Five-Year Plans can be assessed with appropriately adjusted production series valued in 1926/7 prices.[19]

This is an exceedingly curious counterargument. It implies that Nove believes that Stalin's industrialization policy was basically successful, judged from the standpoint of 1937 (excesses aside),[20] even though he vehemently objects to my suggestion that he shares Davies and Wheatcroft's view on this matter.[21] Statistics corroborating the position Nove implicitly embraces in the last two paragraphs of his rejoinder are readily found in chapter 9 of his *Economic History of the USSR* summarizing the results of the Second Five-Year Plan. They are the very same official 1926/7 value data he putatively disavows earlier in his reply. Adjusted for new product price distortion, they indicate that measured point to point national income, industrial producer goods, and consumer goods grew at 21.8, 11.8, and 14.9 percent per annum respectively during 1928–37.[22] These certainly are impressive statistics, and they appear to validate his barbed comments. However, the text accompanying these figures once again provides a contrary point of view. Nove contends that the standard of living in 1937 was below that prevailing at the start of the First Five-Year Plan,[23] and that real wages in 1937 were 58 to 85 percent of 1928,[24] judgments which together cannot be reconciled with the real growth of consumption and national income displayed by the adjusted official series.[25]

19. Nove does not seem to appreciate that this argument is inconsistent with his earlier contention: "I tried to demonstrate precisely that the situation in the years 1932–33 was 'especially grim.' If I may quote myself: '1933 was the culmination of the most precipitous peacetime decline in living standards known in recorded history.'" Nove, "Letter to the Editor," pp. 691–92. Nove's rebuttal is unconvincing. *Tukhta* in the physical series is more apt to take the form of unacknowledged substandard production and misclassification of goods from lower to higher quality categories than of overstated "weight."

20. Nove, *Economic Rationality and Soviet Politics,* pp. 24–28.

21. There is, of course, a great difference in their qualitative appraisals, Davies and Wheatcroft's being far more sanguine than Nove's.

22. Assuming as before that new products were introduced at a rate of ten percent per annum, all machinery is discounted for input cost inflation for the mean age. The adjusted industrial producer goods index for 1937 therefore is $920/(1.093)^5 = 589$, or 21.8 percent per annum. Consumer durables constituted 6.6 percent of industrial consumer goods in 1937, and grew 23.1-fold between 1928 and 1937. See Nutter, *Growth of Industrial Production,* p. 524. The adjusted consumer goods index thus is $[.934(.188) + .066(2310/1.093)^5] = 273$, or 11.8 percent per annum. The ratio of adjusted to reported industrial producer goods is .64. Applying this ratio to construction and combining it with the consumer goods ratio implies that national income should be reduced $.36(.107) + .36(0.90) + .16(.266) = .113$ where the bracketed terms are industrial producer goods, construction, and industrial consumer goods shares of NMP valued in 1926/7 prices. Adjusted official national income thus can be estimated at $.887(395) = 350$, or 14.9 percent per annum. See Nove, *Economic History of the USSR,* pp. 191 and 225. Also see note 9. Compare Gerschenkron, *Economic Backwardness,* p. 255.

23. Nove, *Economic History of the USSR,* p. 225.

24. Ibid., p. 250.

25. This does not imply, however, that the standard of living of the peasants who shifted from agrarian to industrial occupations outside Gulag declined. See Janet Chapman, *Real Wages in Russia*

Which of these antithetic positions does Nove really hold? If it is the first, he can contest my assault on the sanctity of Soviet production statistics, but cannot dispute my suggestion that he inclines to the "all's well that ends well" school of thought on Soviet industrialization. If it is the second, he must concede my case that the real state of the Soviet economy in 1937 cannot be reconciled with official production statistics.

Nove will have to clarify which of these alternatives he favors. For my part, I believe that 1926/7 prices may well have been tainted before the industrialization drive and should not be used to appraise Soviet growth.[26] I accept the phenomenon of index number relativity and Bergson's GNP growth estimate 1928–37 valued in 1937 prices, 5.4 percent per annum, subject to some as yet uncalculated downward adjustment for *tukhta* in the physical output series.[27] This means I acknowledge that the Soviet Union successfully industrialized, albeit at a rate within the range of prior Russian experience,[28] but infer that the cost of industrialization measured in terms of reduced material and social welfare was extraordinarily high.[29]

This characterization is harsher than Nove's and is consistent with the position adopted in my essay that Stalin's development strategy was grossly inefficient and quite unnecessary.

Since 1928 (Cambridge, Mass.: Harvard University Press, 1963), pp. 166–69. Compare Nove, *Economic History of the USSR,* p. 250.

26. Steven Rosefielde, "Knowledge and Socialism," in Rosefielde, ed., *Economic Welfare and the Economics of Soviet Socialism* (New York: Cambridge University Press, 1981), p. 19. The issue of 1926/7 prices is extremely tangled. Nove, Gerschenkron and Bergson fault the Soviet production index valued in 1926/7 prices because new goods are weighted with current prices. On this basis Nove and Gerschenkron sometimes reject the official index. This rejection is odd in Gerschenkron's case because his own dollar index of machinery confirms the official series. Bergson takes the opposite position, concluding with Maurice Dobb that new product pricing is of minor significance and that 1926/7 prices are not unacceptably flawed. Bergson relies on Moorsteen's machinery indexes in reaching this judgment. As a consequence, Bergson, who is best known for his estimates in 1937 prices, considers growth indexes computed in 1926/7 prices to be valid and useful, while others dismiss them. See notes 5 and 6. I concur with Bergson that new product pricing does not greatly distort the official industrial producer goods series, but I depart from his appraisal of the industrial consumer goods index and the underlying integrity of the physical series. Nutter's industrial consumer goods indexes are extraordinarily sensitive to index number relativity. Consumer goods grew at approximately one third the official rate valued in 1955 prices, suggesting that something may be seriously wrong with the official 1926/7 prices. See Rosefielde, "The First 'Great Leap Forward' Reconsidered," tables 1 and 2, pp. 563 and 566. As explained in ibid., pp. 567–69, I also believe the physical series are distorted by *tukhta.* For these reasons, and for those provided in "Knowledge and Socialism," p. 19, I reject the official series in 1926/7 prices outright.

27. While I accept the principle of index number relativity, I doubt that the rate of growth 1928–37 valued in unbiased 1926/7 prices would exceed Bergson's estimate of 5.4 by more than one or two percent. Valued alternatively in 1887 and 1900 prices, Russian industry grew only .6 percent faster in early year prices during 1890–99: 7.9 as against 7.3 percent per annum. See Raymond Goldsmith, "The Economic Growth in Tsarist Russia, 1860–1913," *Economic Development and Cultural Change,* 9, no. 3 (April 1961): 462–63.

28. From 1890 to 1899 industrial production grew 8.3 percent per annum (Kondratieff) compared to the 9.2 percent rate, undiscounted for *tukhta,* computed by Raymond Powell (valued in 1950 prices). See Alexander Gerschenkron, "The Rate of Growth in Russia Since 1885," *Journal of Economic History* (supplement), 7 (1947): 146. Raymond Goldsmith, "Economic Growth in Tsarist Russia," pp. 462–63; Raymond Powell, "Industrial Statistics," in Bergson and Kuznets, *Economic Trends in the Soviet Union* (Cambridge, Mass.: Harvard University Press, 1963), p. 155. I acknowledge, however, that the Soviets placed extraordinary emphasis on heavy industry.

29. Chapman concludes that urban per capita houshold purchases of goods declined 6 percent during 1928–37 and that rural per capita purchases fell much more sharply calculated in 1937 prices. See Chapman, *Real Wages in Russia,* pp. 169–70. Allowance for *tukhta* would aggravate this deterioriation in the Soviet standard of living, and it must be remembered that the crop in 1937 was the best of the decade. D. Gale Johnson, "Agricultural Production," in Bergson and Kuznets, *Economic Trends in the Soviet Union,* p. 208.

It therefore follows, contrary to Nove's implicit assertion at the end of his reply, that my analysis can be sustained beyond 1932. Judged by the norms of the past, Stalin could have achieved a similar degree of industrialization by employing a wide variety of alternative strategies at a fraction of the cost in material and human suffering.[30]

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PROFESSOR NOVE REPLIES:

Steven Rosefielde is an obstinate man, who sticks to his guns even if there is no ammunition.

He finds inconsistencies in my position because I include the officially claimed growth rates, in 1926/7 prices, in my *Economic History of the USSR.* It should be clear that a history of the period cannot omit official claims, but in each instance I immediately remind the readers that these figures are exaggerated, that I do not accept them, nor should they. I warn, in precisely this connection, of "statistical inflation" (p. 192), of "fulfilment figures highly suspect" (p. 226). I speak of the "incredible official index" on p. 387, and in many other publications. I *do* cite alternative Western estimates: Bergson's on page 382, Nutter's and Seton's in pages 386–87, giving some reasons why I do not simply "accept" them. Rosefielde correctly notes that I did not "independently compute producer and consumer goods series," or indeed any series. But then I cannot be condemned (or praised) for arriving at the wrong answer; nonexistent computations cannot be cited or criticized! I do not "rely instead on physical indexes," but I do of course cite physical output figures, which are almost always well below plan targets —one of my reasons for regarding the official aggregate growth indexes as exaggerated.

Rosefielde still seems to believe that acceptance of the physical output data implies acceptance of the official growth indexes. Here we differ. He is not entitled to attribute to me the conclusions which would follow from *his* interpretation. Thus he considers that I ought to think (though I have nowhere said so) that "the success of the first two Five-Year Plans can be assessed with appropriately adjusted production series valued in 1926/7 prices," and proceeds to make what *he* regards as an appropriate adjustment; he then attributes his conclusion to me by implication, and says that this would be inconsistent with my other views, which indeed it would be! This is all totally improper, since we do not agree about 1926/7 prices, nor indeed, judging from other correspondence, about the volume and price indexes of more recent years. A few words of elucidation may be in order here.

30. Nove's political-economic theories concerning the causes of industrialization and the objective necessity of Stalinism depend on both the validity of the mechanisms he specifies and the assessment of their outcomes. In my essay I reject his hypotheses by demonstrating first that industrialization was accomplished by transferring efficient peasants from agrarian to industrial pursuits in cities and concentration camps rather than by securing an agrarian surplus (which, it seems to me, Nove strongly implies was a precondition for rapid economic development), and second by establishing that per capita GNP fell during 1928-32. In extending my analysis to 1937, I have had to substitute a weak immiseration criterion, the decline in per capita consumption during 1928–37, for the stronger GNP test, but the critique of Nove's causal specification remains unimpaired. See Nove, *Economic Rationality and Soviet Politics,* pp. 21–29, and Rosefielde, "First 'Great Leap Forward' Reconsidered," pp. 580–87. Also compare Gerschenkron, *Economic Backwardness,* p. 169, where, in the manner of Nove, having rejected 1926/7 prices he then uses the official series to conclude that "the rate of industrial progress in the Russia of the thirties may well have been nearly double the rate of growth of the nineties."