Roger Ransom takes exception on three counts to my published study of the burden of the Navigation Acts, questioning (1) the counterfactual proposition I employed, (2) my estimate of the relative burden, and (3) the likelihood of differing regional impacts of the Acts. I shall briefly take up each of these in turn.

I

The purpose of my article was to present the first step of an empirical test of the economic interpretation of the American Revolution. The end result of the Revolution was to separate the Thirteen Colonies from the Empire. The counterfactual proposition that I employed was patterned after this fact. The Navigation Acts, as the foundation of the First British Empire, were designed ostensibly to make the Colonies of value to the Mother Country. But a quid pro quo was involved: While the Colonies owed Great Britain obedience, she in turn granted the colonists the rights of Englishmen, one major benefit of which was the protection of the Crown. This basic agreement governed the relations between the Crown and its colonies for over a century.

My first step was to determine whether the Colonies, from their point of view after 1763, were involved in a good or a bad bargain as a direct result of the Navigation Acts. Early in the study it appeared that the true net burden to the Colonies would be insignificant or even negative, but difficult to determine with any certainty. Therefore, selecting the hypothesis that membership in the British Empire, as spelled out by the Navigation Acts, did not impose a significant burden upon the Colonies, I attempted to bias all of my estimates against the hypothesis, overstating the burdens and understating the benefits. The results of this investigation suggested that from the colonists’ point of view, it was close to an even bargain. Allowing for the intentionally introduced biases of my estimates, it is perfectly conceivable that the Colonies as a whole enjoyed a net benefit from membership in the Empire when only the bargain of obedience to the Navigation Acts in return for protection is considered.

The economic historian of course has available to him any number of counterfactual propositions, the selection of the relevant one being determined by the nature of the question asked. Ransom grants that the counterfactual proposition employed for my purposes is the most plausi-

I would like to thank Douglass C. North and the several graduate students whose comments and arguments aided me in writing this reply. They, of course, do not bear the responsibility for the interpretation found below.

ble; however, he wants to ask another question of my findings. He is interested in determining the amount of leverage Parliament held by virtue of the Navigation Acts in case Parliament was interested in negotiating with the aroused colonists. It should be pointed out that for approaching this inquiry my findings have certain defects. Because my estimates of the burdens are purposely too high, there is reason to suspect that Ransom's estimates are overstated and not, as he suggests, understated. For example, Ransom's statement that exports might have expanded by as much as 50 percent depends upon my estimate that the supply elasticity of tobacco was unity. Recent investigations of the price elasticity of supply of the staple crop of the southern plantation economy suggest that indeed this is an upper estimate. Presumably exports would have increased—but by considerably less than 50 percent. The reader should note that reported figures for exports are official, and not current, values. Current values have been calculated for the years 1768-1772 by James F. Shepherd in his as yet unpublished Ph.D. dissertation.

II

The question of the approximate level of per capita income for the Colonies in 1770 remains moot. In current dollars it could have been between $75 and $85 as Ransom suggests; it could also have been as high as $135. Not knowing, I selected $100 as a guess-estimate. One salient feature to be borne in mind when using the recently published figures by Paul David is that these “conjectural” estimates were checked for consistency with the Gallman figures. The latter, however, exclude the value of household production, which clearly formed a larger percentage of per capita income in 1770 than in 1840. It is difficult from the published account to be certain if the David figures do measure only money income, but if they do, they are, even if reliable, clearly too low for our purposes.

Recently several persons have suggested that a better estimate of per capita income, or at least of the rate of growth of the colonial economy, could be obtained by combining foreign trade data with information on the change through time in colonial diets. When such work becomes

2 Ibid., p. 624.
7 Robert E. Gallman has reportedly been exploring this line of approach. Lawrence Harper has for several years been working along similar lines.
available it perhaps will allow us to narrow our guess about the level of per capita incomes. The fact that colonial economic historians are forced to rely upon such indirect measures suggests the difficulty of narrowing my guess-estimate.

III

I am in substantial agreement with Ransom's attempt, as far as it goes, to allocate the burden on a regional basis. In fact, by disaggregating, Ransom has anticipated the direction my own work is going. A small or even null aggregate burden goes far toward explaining why the entire colonial society did not unite in opposition to the Mother Country. It does not, however, discredit the economic interpretation of the American Revolution. It may be that such an insignificant or null aggregate burden could have had a major impact if it fell disproportionately upon particular groups of colonials. Such groups could well have constituted a passionate minority, in the terminology of Anthony Downs, which would have tended, under a theory of rational political economic organization, to promote opposition to imperial policies. Research in the direction of determining the specific incidence of the various imperial acts should produce meaningful and operationally testable hypotheses that would prove extremely illuminating.

In most existing explanations of the causes of the American Revolution economic events avowedly play a significant role. The Navigation Acts, for example, are often singled out by historians as a source of discontent. A search of R. B. Morris' *Encyclopedia of American History* for the significant events during the era of the American Revolution suggests that this impression has some validity. The Revenue Acts, the Currency Act, the Quartering Act, the Stamp Act, the Townsend Duties, the Proclamation of 1763 and the related Quebec Act, and of course the colonists' reaction to these acts which included the nonimportation agreements, comprise most of the major recorded events preceding the outbreak of revolution.

Historians have tended to view the colonists' violent reaction to Parliament's attempt to change the nature of the agreement between the Mother Country and her colonies after the Seven Years' War as the product of many forces. In their view identifiable economic, political, psychological, and religious causes fomented the Revolution. Such a pluralistic view has obvious defects from the point of view of scientific explanation. It is difficult to weight the various causes as to importance and even more difficult to disprove any single explanation in which so many factors join together to produce a result.

Because of the importance given to economic events, a step in the right

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direction is to test an economic interpretation alone for consistency with the available evidence. Several persons are investigating the aggregate burden placed upon the Colonies by the various tax measures and regulations mentioned above, finding the standard tools of economic theory adequate for this task. The preliminary results of these efforts suggest that (as in the case of the Navigation Acts) the sum total of the costs imposed by these acts was a small proportion of any reasonable estimate of colonial per capita income. Of course the measurement problem remains of what constitutes a "significant burden" or how small is a "small loss."

These findings if confirmed might suggest that real economic causes were not very important in stimulating the final break with the Mother Country. This interpretation, however, would ignore the fact implied in Ransom's discovery that the major burden of Navigation Acts fell upon the South—namely that the burdens and benefits of the changing British imperial policy did not fall evenly upon every person in the Colonies. It is known that the avid rebels were a minority of the population, as were the professed loyalists. Probably a majority of the population of the Colonies attempted to steer a middle road.

If a small aggregate burden fell disproportionately upon a few identifiable groups it could do them considerable harm, and if the benefits accrued to a different minority group it would stimulate their loyalty, whereas a majority of the populace probably neither gained nor lost enough to justify taking large risks. In this event dissent would be fully consistent with maximizing behavior on the part of a passionate minority and quite to be expected in light of the new theory of political action presently being developed. The observed results would have followed, of course, only if the dissenters were also losers and the Tories gainers as a consequence of the new laws of Parliament.

A casual examination of the laws enacted by Parliament after 1763 reveals that they were definitely differential in their effects upon the colonial population. The Currency Act and the Stamp Act, designed to regulate or tax the money economy of the Colonies, naturally aroused general disapproval by the populace. The Quartering Act affected most directly the colonies of New York, Pennsylvania, Connecticut, and South Carolina—the legislature of each colony being responsible for providing provisions and billets for the garrisons stationed there. The Revenue, or Sugar, Act and the Townsend Acts taxed specific trades; the Proclamation of 1763 and the succeeding Quebec Act hit at land speculators; the burden of the Navigation Acts, as Ransom points out, fell most heavily upon the southern planters.


11 This is a problem that has plagued the new economic history. See Robert Paul Thomas and Douglas D. Shetler "Railroad Social Saving: Comment," American Economic Review LVIII (Mar. 1968), pp. 186-89.
Therefore the actual burdens fell disproportionately upon certain groups in the society. The same in reverse is true for specific benefits obtained from Great Britain. The bounties directly benefited producers of indigo, lumber, and naval stores. The preferential duties also favored specific groups, and in each colony a small group owed their positions directly to the Crown. A large group of colonists primarily engaged in agriculture probably, in economic terms, felt relatively indifferent to the effects of the new imperial regulations if they even heard about them. Thus there were minorities with direct material interest in the pre-Revolutionary conflict with the Mother Country, at least partially offset by a large unconcerned group.

To make an actual test of whether the economic interpretation is consistent with the evidence, it is necessary to examine statistically the particular groups most affected by the actions of Parliament to determine whether the members whose interests were damaged tended to be rebels (or as some call them—patriots), and whether the benefited groups tended to be loyalists. The groups, of course, are not mutually exclusive, since any individual might have had overlapping interests. Thus a random sample of the members of each group, or at least a sample whose bias is known, must be collected and statistically tested to determine whether the members tended to align themselves according to their economic interests. Should the burden-bearers prove to be rebels, the gainers loyalists, and the marginally affected persons middle-roaders, then the economic interpretation would prove consistent with historical evidence.

Should this result not be verified, then the economic interpretation must be rejected and historians must search elsewhere for the major cause of the American Revolution. If, however, statistically significant results suggest that the economic causes are consistent with the evidence, this explanation should be accepted, since it is considerably simpler than the current pluralistic views. Either way our knowledge of the causes of the American Revolution will be advanced.

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