were also characteristics of Germany and Italy. The peasantry, however, served as the labour pool which made possible the high rate of growth. In other words, the same factors which had once made for stagnation became conditions for growth in the 1950's. The shift in the role of agriculture in this economic growth is a noteworthy factor. Was it merely a change received passively by agriculture as the result of a difference in growth potential of industry between the 1950's and the prewar period? As Maddison points out, the growth of productivity of agriculture during the 1950's actually surpassed that of industry. Is it not possible that this phenomenal advance in agricultural production potential was the fundamental factor making possible the destruction of a stagnant structure? A historical, structural analysis of these matters must not content itself merely with a comparative analysis breaking down the national economy into various economic indices. In the final analysis, it must be an attempt to grasp the economy as an organic unity and to understand the totality from the standpoint of reproduction. In such a case, the position of agriculture may be a low one in the total picture, and manufacturing industry may be at the centre of development. Nevertheless, is it not possible that an advance in agricultural productivity may serve as an impetus leading to growth of the entire economy?

There are still many aspects of the "economic miracles" of the 1950's which must be analysed. Although the U.S.A. and the United Kingdom were relatively stagnant during the 1950's, they still had high growth rates in comparison with their previous growth rates. The decade of the 1950's may be called a period of growth for capitalism as a whole. The capitalism of the 1950's had a number of new features which were not present in prewar capitalism. Does this signify a change in the reproductive structure of capitalism? These are also important questions for us Japanese. If the "Japanese miracle" has finished, just as the "miracles" of Europe, what prospects are there for future growth? At any rate, the study of the "miracles" of the 1950's is still a task awaiting us in the future. Although this work was unable to provide complete answers for our questions, it nevertheless will be able to serve as an adequate point of departure for future research. (*Keizō Mochida*)

P. N. ROSENSTEIN-RODAN ed., *Capital Formation and Economic Development*, George Allen & Unwin, 1964, 164 p.

This book contains 10 valuable studies of planning made by the Indian team of the Center of International Studies of the Massachusetts Institute of Technology, edited by Professor P. N. Rosenstein-Rodan. The contributors are Professors S. Chakravarty, P. N. Rosenstein-Rodan, R. S. Eckaus, and Louis Lefeber. Although these studies seem to be written independently, they tackle the problems of planning from several sides and make many suggestions which will be of great use, not only for India, but for all nations, and especially the underdeveloped countries.

In order to examine the whole content of these contributions to planning, it may be convenient to consider the book in three parts. The first part (Chap. 1–2) deals with the Indian Third Five-Year Plan directly, and includes the mathematical model setting of the Third Five-Year Plan and an examination of the attainability of the Plan. Here Professor Chakravarty's model based explanation of the Third Plan includes a set of thirteen equations, which make an interesting contrast with Professor Mahalanobis, model of the Second Five-Year Plan. Chakravarty model, for example, differs from Mahalanobis, in that he uses an agricultural and non-agricultural rather than a capital goods and consumer goods sector division. Chakravarty also introduces explicit financing equations. Even though it is difficult to decide which is the more theoretically compatible or more elegant of these two models, these variations are of interest since they result from the performance of the First and Second Five-Year Plans. Using his 'decision model,' which has two degrees of freedom, Professor Chakravarty makes numerical illustrations in order to emphasize the economic import of (i) the Pant-Little model structure and its parameter values, (ii) the modified Pant-Little case with a capital coefficient equal to 3, and (iii) the same case as (ii) but with an increased amount of foreign aid. As the shortcomings of the Third Five-Year Plan, he mentions, on the other hand, the necessity of still more disaggregated forms, of the analysis of the employment side and of the combining of the trade aspects with the other aspects of the economy.

Professor Rosenstein-Rodan tests the reliabilitv of the Third Five-Year Plan of India in changing the capital-output ratio from 2.2 : 1 to 3 : 1 and considers ways of financing Indian development in the case of a marginal saving ratio, not of 27% as implicitly assumed in the Pant and Little memoranda, but at the considerably lower 23%. After examining some cases of combinations of these parameters using basic data of 12,500 crores of National Income (1960–1961), 10,000 crores of Total Investment (five-year period) and 15,700 crores of Total Government Expenditure (6,700 crores of which is Public Investment), he concludes that the case, "based on the three assumptions of a capital-output ratio of 3 : 1, of the marginal rate of savings of 23%, and of an amount of foreign aid of 3,000 crores (out of which 2,500 available for net investment), is more realistic than the others" (p. 32).

The second part of this book (Chap. 3–4) outlines a method of programme evaluation. Professor Chakravarty presents an algebraic model for this purpose. He emphasizes the difference of his model from those which are usually found in discussions of the so-called 'investment criteria,' especially in the sense that "it deals with a whole constellation of interrelated projects rather than a marginal project" (p. 33). He includes such technical relations as intersectoral capital-output ratios, Leontief coefficients of intersectoral dependence, gestation lags, depreciation rates, etc. Moreover, the peculiarity lies in his attempt to consider the changes of those coefficients and to include external economies in his model, in order to adjust them to the reality of underdeveloped countries. In this part is also stressed the technique of using shadow prices as a useful computational shorthand in devising a relatively efficient system of programme evaluation. It is the shadow rate of foreign exchange and shadow rate of interest which are analysed in the special economic organizations of underdeveloped economies.

The last part (Chap. 5–10) is concerned with showing the methods of planning of an intertemporal and multi-sectoral character. Thus the different aims and meanings of the 'consistency model' and 'optimizing model' are explained. The interrelation among choice elements of intertemporal planning is also given in the mathematical and diagrammatical ways. These choice elements are the initial level of consumption, the planning horizon, the growth of consumption during the plan period and the terminal conditions. So this part deals with some rather methodological and abstractive discussions. This part concludes with a critical analysis of Professor Chakravarty on the utility functions as developed by Professors J. Tinbergen and F. P. Ramsey. As for these functions he infers that "the various optimal infinite programmes that have been discussed in the literature suffer from either an improper formulation which may render the solutions economically irrelevant, or from the restrictiveness that arises from the crucial dependences on certain arbitrary assumptions" (p. 161).

In this way this book endeavours to make a contribution to methods of planning in India or any other developing country by means of the very advanced tools of mathematical analysis. As is well-known, underdeveloped countries are confronted in their process of development with many complicated problems having a nature quite different from those facing the developed countries. While developed countries 'grow' on the basis of more or less definitely shaped socio-economic structures, developing countries strive to 'develop' and at the same time their structures are being transformed. So the basic problems must of course be found in this sphere when the tools of modern economic analysis, fitted to deal with the developed countries, are applied to the problems of planning in underdeveloped economies.

The problems arising from this peculiar characteristic of the developing countries are, for example, met with in the forming of the basic formulation itself which is used in these articles except for the first part of the book. The formulation can be expressed in matrix form as follows:

$$X(t)=AX(t)+I(t)+C(t)$$

or $$X(t)=AX(t)+B\dot{X}(t)+C(t)$$

Here A stands for input-output coefficients and B for capital-output ratios. These equations mean that the output $X(t)$ is decided by the demand composites: intermediate demand $AX(t)$, investment $I(t)$, and consumption $C(t)$. Thus the system may be said to be 'demand-decided' as a special case of the Keynesian type. The positive aspect of production or the cost side of production is not included in this system. But from this accusation we may escape in the case of this kind of planning model on the ground that the aim of planning of production lies in the adjustment of production to the demand while considering price movements.

In the second place problems arise related to the coefficients *A* and *B*, for they cannot be considered to be constant in the versatile socio-economic structures of developing countries. There they may even be said to change with every process of production.

The authors of this book, of course, are aware of these problems, and endeavour to solve them or to improve such basic equations as much as possible without losing their operationability. Thus such efforts can be found, for example, in the method of disaggregation, the treatment of changes of capital coefficients or other technical coefficients, the treatment of shadow prices, and so on. However simple or undecisive those methods may still be, these efforts must be most highly appreciated among the many contributions made to this book. (*Nagatoshi Suzuki*)

MANFRED HALPERN, *The Politics of Social Changes in the Middle East and North Africa*, Princeton, Princeton University Press, 1963, xxv+431 p.

In this book Professor Halpern tries to give "a perspective which policy-makers have often neglected at great cost" of the development of social change in the Middle East, including North Africa. The complex problems of this region are treated within the wide scope of political modernization, and he aims at constructing the theory of *new middle class* movements in general form. His attention has been concentrated on the political role of a military élite in the social transformation of the Middle East. Previously his study of Middle Eastern armies in *The Role of the Military in Underdeveloped Countries*, edited by John J. Johnson, had aroused the interest of Japanese readers as an interesting case study well fitted for the comprehensive discussion of comparative politics. Professor Halpern has arrived at the concept of *a new middle class* from his analysis of military elements in the whole sphere of social movements. The book being reviewed here may be regarded as the first-fruits of his labours in this field.

He takes the standpoint that a decisive social change in the Middle East must be acknowledged as a historical inevitability and that the stabilizing force in the chaos of a changing society will be provided by the new middle class, the principal revolutionary. The *traditional élite* of kings, landowners and bourgeoisie, or the *status quo élite* is on the wane, whilst the tides of social change leave the masses of poor peasants and urban workers unmoved. In the circumstances, the growing new middle class and "would-be" salaried middle class in general take the initiative through the leadership of nationalists, most of whom are moderates. These are the forces of change as described in this book (Part II).

Professor Halpern's conception of *a new middle class*, despite the all encom-