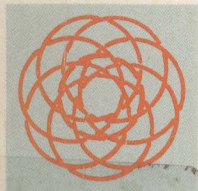


Agricultural Involution



THE PROCESSES OF
ECOLOGICAL CHANGE

IN INDONESIA



BY CLIFFORD GEERTZ

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Just as the progress of a disease shows
a doctor the secret life of a body, so
to the historian the progress of a great
calamity yields valuable information about
the nature of the society so stricken.

MARC BLOCH

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FOREWORD

Interdisciplinary research is always a gamble. All too often it results in a series of discrete articles or monographs with no very clear connecting theme. When the interdisciplinary research is applied to a political or geographic area such as Indonesia, the danger is that the spatial limits will be the only common feature of the products of the different disciplines. Accordingly, when the contributions from various disciplines to the study of a particular area produce genuine synthesis, the result is of unusual interest. Such a synthesis seems to have emerged from the work done on Indonesia under the auspices of the Massachusetts Institute of Technology Center for International Studies.

The Center's research on Indonesia fell into two broad categories: the work of the Indonesia Project, under my direction, which was one of the four major undertakings of the Economic and Political Development Program; and the Indonesia Field Team, under the direction of Rufus Hendon, of which Clifford Geertz, author of the present study, was a member. The field work of both projects was undertaken in the period 1952-1959, and was concentrated mainly in the first half of this period. During the writing-up phase, starting in the second half of this

period and only now nearing its end, there has been more or less continuous discussion between the two teams, and particularly between Dr. Geertz and myself.

The M. I. T. Indonesia project was in any case a loosely defined affair, the precise composition of which changed from year to year. It was more a "community of scholars" with a special interest in Indonesia than a tightly organized and centrally directed program of team research. Indeed, I was the only one to be continuously on the payroll throughout the five years of the project's official life. When, however, most of the people who had been associated with the project were gathered together for several days of discussion shortly before the official termination of the project, it became apparent that together we had arrived at an integrated view of Indonesia and its problems. As the various pieces of the picture were laid down, they fitted together like parts of a jig-saw puzzle. Each of us, using the methods of his own discipline—with some tendency in each case to stray over the borderlines of his field—had arrived at essentially the same broad analytical framework, and at the same general conception of the task that lies ahead of the Indonesian people if the high hopes of their revolution are to be realized.

The anthropologist's version of this common picture is set forth more clearly in the present volume than in Dr. Geertz's two earlier works on Indonesia, the first of which deals with religion in Java, whereas the other compares entrepreneurship in Bali with that in east-central Java. The first of these stays closer to the traditional scope and method of anthropology, although the underlying interest in entrepreneurship and economic development is already apparent. This interest is more explicit in the second volume. The present work, however, is nothing less than a social-economic history of Java, that goes far to explain the difficulties that independent Indonesia is experiencing in launching a takeoff into sustained economic growth, after three centuries of apparently static living levels under Dutch colonialism.

It may help the reader to put Dr. Geertz's latest volume on

Indonesia into its broader context if a brief outline of the common thesis—common to the economists, political scientists, historians, sociologists, anthropologists, and geographers associated with our Indonesian venture—is provided here by way of introduction. The language is my own, and I would not wish to commit any other member of the group to it; but I have tried to render as faithfully as possible the common viewpoint expressed on those occasions when we have met together.

In Indonesia a “big push” is needed, not only from the economic point of view, but from the sociological and political viewpoints as well. There seems to be in the history of each country an “optimal moment” for launching development, a short period of time when sociological, political, and economic factors coalesce to provide a climate unusually favorable for a take-off into economic growth. If such an optimal moment is missed, it may take several generations to reproduce a similar set of favorable conditions. In simplest form the thesis sounds a bit tautological: a take-off is most likely when the growth of an indigenous entrepreneurial class occurs simultaneously with the appearance of a political elite which has the power and the will to provide a policy framework favorable for the exercise of entrepreneurial talents—whether in the public or the private sector. Yet as a guide to historical analysis—and even for prognosis—the thesis seems to us a useful one.

The story of Java seems to be one of repeated nipping off of a budding entrepreneurial upsurge by a political elite essentially hostile to it. It may even be that Javanese trade was prevented from expanding by Portuguese enterprise. Certainly any hopes the Mataram Empire may have had of reuniting Indonesia—to the degree, say, that the country was united by the Madjapahit Empire two centuries earlier—were destroyed through use of main force by the Netherlands East India Company.

About 1850, under the impetus of the Culture System and the first wave of Dutch settlement and plantation enterprise, another incipient “take-off” emerged. The Dutch settlement also launched

a population explosion; but there is reason to believe that, had the new class of Javanese entrepreneurs been given their head, they would have brought increases in productivity and changes in social structure and attitudes that would have permitted a continued rise in the per-capita income nonetheless. Unfortunately, the Dutch colonial administrators were the effective political elite at the time, and Dutch colonial policy was not directed toward the encouragement of any such form of development. There is some evidence—not too clear—that the great depression of the 1930's, by bringing Dutch enterprise to a standstill, provided a last injection of encouragement to Javanese industry and rubber exporters. On the other hand, the depression killed off whatever remained of Javanese enterprise in sugar. Such potential as Javanese society still had for generating the conjuncture of economic and political leadership needed for a take-off was subsequently destroyed by the war, the Japanese occupation, the revolution, and the subsequent political chaos.

Meanwhile—for all their “hands-off” policy—the intensity of Dutch economic activity in Java detraditionalized Javanese society. When Javanese aristocrats, thwarted in their efforts to extend their leadership into the economic field, retreated into Javanese tradition—except for a handful with Western training who sought the political sphere as an outlet for their talents and ambitions—they were pursuing a shibboleth. Traditional Javanese society no longer existed. It is for this reason that the only leadership capable of arousing a *mass* following in Java in recent years have been of persuasions—Communist or extreme nationalist—having little or nothing to do with Javanese tradition. But while Communists and nationalists provide political leadership, they do not at this stage provide economic leadership or entrepreneurship—if anything, their actions and attitudes are such as to discourage the growth of entrepreneurial activity.

In the rest of Indonesia the impact of the Dutch came much later, was limited to a few decades, and was neither so wide nor so deep in its effects as it was in Java. The societies of North

Sumatra (Batak), Central Sumatra (Minangkebau), Bali, Sulawesi, and Kalimantan (Dajak) were much less detraditionalized by contact with the Dutch. Consequently, they now have a chance to evolve in terms of their own cultural dynamics, stimulated by the liberating effect of the revolution. Each of these societies has developed a group of indigenous entrepreneurs, some of whom—especially Batak and Minangkebau—are providing economic leadership to Java as well as to their own regions. Moreover, these societies—again, especially Batak and Minangkebau—are providing political leadership far out of proportion to their numbers, on the national scene as well as at home. In the Outer Islands there is still reason to hope for the kind of interaction of entrepreneur and elite that could give rise to sustained economic growth. It is not just that the Outer Islands have a much more favorable resource-population pattern than Java, although that is also true; it is the Outer Islands that constitute the “growing points and leading sectors” in sociological terms as well. Here is part of the explanation of the “dualism” so often noted in the Indonesian economy.

This “dualism” resulted in large measure from the special form of industrialization by foreign enterprise after the Napoleonic wars. Until about 1820 the entire country was given over to small holders’ and peasant agriculture, with no marked difference in technique from one sector or region to another. The population of Indonesia was small—less than 10 percent of its present level, with less than 5 million people on Java and perhaps 3 million in the Outer Islands. Land was therefore relatively abundant. There was no serious population pressure anywhere in the country and, while standards of living were not high, there was little real hardship. The Dutch were for the most part content to trade with the Indonesians (to a large extent through Chinese middlemen) and later to obtain forced deliveries of export products, without themselves settling in the country.

After the brief interlude of British rule during the Napoleonic wars, the Dutch colonial administration in Indonesia gradually

shifted to plantation agriculture. Some decades later the development of the mining, petroleum, and processing industries began. This industrialization seems to have brought an initial increase in *per capita* incomes of Indonesians. However, instead of leading to permanent improvement in Indonesian living standards, this initial increase in incomes was rapidly offset by accelerated population growth. The higher incomes afforded subsistence for greater numbers. Moreover, the shift in policy brought Indonesians in closer contact with Western civilization: industrialization meant settlement by Europeans. Efforts were made to raise levels of health and to maintain peace and order among the Indonesians who were previously rather given to fighting each other. Death rates dropped. It may also be—although this is less clear—that improved health and nutrition raised fertility rates. The form of development, centered on plantations, mines, and oil fields, all of which produced raw materials for export, brought more *industrialization* than *urbanization*; the checks on family size brought by urban industrialization of Europe and the New World were therefore less effective in Indonesia. The net effect was that the total population increased more than fourfold in three generations.

The sector of the economy in which new investments were being made was totally incapable of absorbing the increase in population which it generated, because the plantation, industry, oil and mining operations were land- and capital-intensive; technical coefficients either were, or were assumed to be, relatively fixed. The increased numbers inevitably led to a return flow into peasant agriculture and small cottage industries, where technical coefficients were relatively variable and opportunities for obtaining a living still existed within the village structure. With abundant labor and scarce capital—and in Java scarce land as well—production methods in this sector became highly labor-intensive. (Even in the Outer Islands, there is now no obvious superabundance of fertile, easily cleared, readily cultivatable land. And in recent decades population growth in the Outer Islands has been

nearly as rapid as it was in Java during the late nineteenth century.) Eventually labor became redundant in this sector (marginal productivity fell to zero) and the growing population led merely to work spreading, underemployment and unemployment. *Per capita* incomes in this sector returned to the subsistence level.

Technological progress was confined largely to the capital-intensive sector. In the labor-intensive sector, meanwhile, the rate of population growth far exceeded capital accumulation. More recently, trade union activity and government policy have established industrial wage levels which, low as they are, are sometimes high in relation to the marginal productivity of labor. This situation further aggravates the tendency to use labor-saving devices wherever possible in the industrial sector. On the other hand, there is no incentive for groups of individual farmers or small enterprises to introduce labor-saving but capital-absorbing innovations in the rural sector. A technology that will raise man-hour productivity without net investment has yet to be discovered. Nor is there any incentive for labor *as a group* to increase its efforts, since the labor supply is already redundant. Thus methods remain labor-intensive, and levels of technique, man-hour productivity, and economic and social welfare remain low in the peasant-agriculture and small-industry sector.

Both the economic and the political aspects of this problem are made more difficult of solution by the fact that the two sectors conform roughly to two regions: Java and the Outer Islands. The main development of plantations, mines, and oil fields took place on the Outer Islands, especially Sumatra, Kalimantan, and Sulawesi. The big growth of population, however, took place where the soil was most fertile and best suited for growing foodstuffs, and where most of the people already were—Java. Employment in cottage and small industry is also highest in Java.

Here then is a country in which two-thirds of the population are crowded on one relatively small island, engaged mainly in the production of foodstuffs or simple handicrafts and small-scale

manufacturing for home consumption, and dependent on imports for textiles and other essential items of consumption; while the other third of the population is scattered through an enormous area, in which there are some highly efficient large-scale industries producing mainly for export. With such a discrepancy in current economic conditions, as well as in capacity for generating leadership for economic growth, it is small wonder that there are stresses and strains between Java and the Outer Islands.

The implications of this analysis are far-reaching indeed. For one thing, it means that President Sukarno was responding to a very real problem in demanding constitutional reform in the direction of "democracy with leadership." At this stage ordinary parliamentary democracy must mean essentially rule by Java, since Java has two-thirds of the electorate. The only way in which Java could now provide the required coalescence of entrepreneurs and elite would be through growth of the Communist party and the establishment of a Communist regime. Yet the leaders of the Revolutionary Government (P.R.R.I.) were also right; maximizing the growth potential of the Indonesian economy means not only allocating more of the development budget to public or private projects in the Outer Islands, it also means allocating much more responsibility for financing and executing development to the regions.

The current Eight Year Plan falls short of requirements cast in such terms. It seeks to crystallize the conception of Indonesian democracy and to define the sort of society the plan is expected to produce. The spirit of the plan is well indicated by its division into 8 volumes, 17 parts, and 1,945 paragraphs, to symbolize the Proclamation of Independence on August 17, 1945. The Indonesian national identity, the plan states, is to be sought in the traditional culture—the songs, the dance, the *wayang*, the literature. The goal must be "a just and prosperous society based on the Pantja Sila," the five pillars of Indonesian social and political philosophy—nationalism, humanitarianism, democracy, social justice, and belief in God. It must also be a "family-like society,"

reproducing at the national level the spirit of village organization.

The definition of "socialism à la Indonesia" is useful; but the plan does not really tackle the basic economic problem. It does *not* impose any "minimum effort" on the government. The plan for the central government—and there is no authorized and detailed plan for the regional and local governments or for private enterprise—is essentially a projection of programs already under way in the various departments. The plan does not require of the government anything essentially *new*, let alone bold or imaginative, in the way of developmental effort. It does not really bind the government to actions constituting a clean break from what they have been doing in the past. Consequently, it does not enforce on the government any of the basic decisions on economic policy that must be made before development can proceed. On the contrary, it permits the government to go on postponing really serious consideration of the development problem, while stating to themselves and to the people that they are "carrying out a development plan."

Indonesian development will be expensive. Yet the events of 1957 and 1958, together with stagnation of real income and mounting inflation, make it abundantly clear that if Indonesia is to become a genuinely unified and prosperous nation, a take-off into visible economic growth cannot be delayed much longer.

The more purely economic aspect of Indonesia's history and current problems will be analyzed in the final volume of the M. I. T. project. Dr. Geertz's present study provides the socio-cultural setting and makes the economist's task much easier.

BENJAMIN HIGGINS

Berkeley, California, May, 1963

ACKNOWLEDGMENTS

This monograph is an expansion and comprehensive revision of the first section of my earlier programmatic essay, "The Development of the Javanese Economy: A Socio-Cultural Approach," issued in dittoed form by the Center for International Studies of the Massachusetts Institute of Technology in 1956 as document C/56-1 in their Economic Development Program series. I am most grateful to the Center and to its director, Max Millikan, for supporting both the writing of that original report and the anthropological fieldwork I carried out in Java, as part of the "Modjokuto Project," in 1952-1954, in the course of which most of the ideas and interpretations here worked out in historical terms were originally developed.

The writing of the present study has been made possible by the Committee for the Comparative Study of New Nations of the University of Chicago, and I am grateful to the Committee as a whole, to its chairman, Edward Shils, and to its individual members for providing this opportunity. Among those who have read and criticized various drafts of this work are: Robert M. Adams, Harold Conklin, Lloyd A. Fallers, Hildred Geertz, Benjamin Higgins, Robert Jay, Morris Janowitz, Kampto Utomo,

W. F. Wertheim, and Aram Yengoyan, and I wish to express my appreciation for their assistance. Messrs. Conklin, Higgins, Kampto Utomo, and Yengoyan, in particular, provided extensive and detailed comments and criticism, most of which I have in some way incorporated into the work, though they are, of course, not to be held responsible for my interpretations of their arguments. I am indebted to Donald McVicker for rendering the charts and maps.

In most general terms, this book is an attempt to apply to the interpretation of—in this case, economic—history some concepts and findings of social anthropology, to utilize the insights derived from microsociological analysis for understanding macro-sociological problems, and to establish a fruitful interaction between the biological, social, and historical sciences. However well or poorly this particular work effects such an integration of different scholarly perspectives, I am convinced that an adequate understanding of the new countries of the “third world” demands that one pursue scientific quarry across any fenced-off academic fields into which it may happen to wander. And whatever substantive merits my analysis may have, I hope that my effort will at least suggest the profits to be gained in such poaching expeditions.

C. G.

Chicago, January, 1963.

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PART I

Starting Points, Theoretical and Factual

1. THE ECOLOGICAL APPROACH IN ANTHROPOLOGY

The recent burst of efforts to adapt the biological discipline of ecology—the science which deals with the functional relationships between organisms and their environment—to the study of man is not simply one more expression of the common ambition of social scientists to disguise themselves as “real scientists,” nor is it a mere fad. The necessity of seeing man against the well-outlined background of his habitat is an old, ineradicable theme in anthropology, a fundamental premise. But until recently this premise worked out in practice in one of two unsatisfying forms, “anthropogeography” or “possibilism”; and the turn to ecology represents a search for a more penetrating frame of analysis within which to study the interaction of man with the rest of nature than either of these provides.

The Limitations of Traditional Approaches

In the anthropogeographic approach, of which the climatological theories of Elsworth Huntington are the most famous, if hardly the most sophisticated, example, the problem was phrased in terms of an investigation of the degree and manner in which human culture was shaped by environmental condi-