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SOME SOCIAL OBSTACLES TO "CAPITAL FORMATION" IN "UNDERDEVELOPED AREAS"

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THIS PAPER will examine some of the obstacles in the general social structure to the "formation of capital" in "underdeveloped areas." I do not believe that all such obstacles have been eliminated in highly industrialized areas or that even those that have been eliminated may not rise again (e.g. in cases in which highly authoritarian governments hold sway or in which general or nearly general social chaos exists). This paper is concerned with the general framework within which allocations of goods and services take place rather than with the solutions to such problems, assuming rational action within a particular (and usually implicitly) assumed framework. It is concerned not with whether these phenomena are good, bad, or indifferent, but instead with the effect on "capital formation" of the views of the members in the types of systems discussed as to what is good, bad, or indifferent.

By the term "economic" I shall mean "having to do with the allocation of goods and services." Both empirical and nonempirical goods and services are included. The latter category may be one about which the scientist can only be agnostic, but the people he studies often believe in it, and their beliefs have definite effects on their empirical actions and decisions. The term "economic" as defined here refers to an aspect of action and not to concrete acts or phenomena. There is no concrete action that does not involve some allocation of goods and services, but that is never by any means all that such actions involve.

I am deeply indebted to several persons in connection with this paper. Most notably I owe a debt to Gardner Patterson, who over a period of years has discussed and patiently criticized my attempts to handle these problems. He has always offered interdisciplinary cooperation of the most meaningful sort. In this specific paper he has helped me in many ways that defy identification, having, as he does, a great deal of practical experience with, as well as a theoretical interest in, these problems. I am also the beneficiary of many discussions of these questions with William J. Baumol, Klaus Knorr, Wilbert Moore, and Jacob Viner. None of these men can be held responsible for any shortcomings of this paper. If I have failed to learn from them, the fault is mine.

The "formation of capital," whatever we may mean by that phrase in this context, is a concrete action, as is its utilization. Our problem may be stated as follows: Are there patterns of social action (or, synonymously, social structures) such that operation in terms of them by the members of the systems in which they are found inhibits the "formation of capital"? If so, what are they? And are there such patterns that in general seem to characterize the social systems in so-called "underdeveloped areas" and that seem to have been either eliminated or greatly reduced in their inhibitory effects in so-called "highly developed areas"?

Finally a word is in order about the choice of "capital formation" as a focus for this paper. The original invitation to submit this paper spoke of "the influence of enterprise and business organization on the level and character of investment" as well as "economic motivation insofar as this rests on communal value schemes, culture, familial and extrafamilial relations, and so forth." Phrased in this way, no less than a sizable volume on the social structure of relatively nonindustrialized societies could satisfy the invitation. I have tried to narrow the subject to manageable size by the following series of assumptions. "Capital formation" is a necessary, though by no means sufficient, condition for "economic growth." "Capital formation" is a function of social action and (save for purely idiosyncratic cases) the result of the operation of identifiable social patterns. Social patterns inhibiting "capital formation" will either partially or completely inhibit "economic growth." Therefore, focusing the study on obstacles to "capital formation" will at least assure that all the matters we discuss are relevant to our problem.

This paper is divided into three parts. The first is concerned with an extremely brief examination of the concept of "capital" and a statement of the form of that concept used here and the reasons for the use of that form. The second is concerned with the obstacles to be discussed. The findings on these obstacles have been reached in terms of a more general systematic (and highly tentative) analysis of social structure, but they are presented as a list taken out of that context for purposes of brevity and communication. In this section of the paper, examples will be given largely in terms of hypotheses about the facts in China and Japan, with occasional references to other societies. These two countries have been chosen because (1) both were latecomers to the kind of development under discussion at this conference, (2) one of them was conspicuously successful in many respects in the attempt to "develop," while the other was conspicuously unsuccessful, and (3) my research in this field has been largely concerned with these two areas. There is the additional factor that, to the casual observer, the differences between them when such attempts started seemed to be negligible in relevant respects or else favorable to success in China. Although these societies have several unique features not shared by many "underdeveloped areas," I shall attempt to show that the specific types of obstacles discussed apply rather generally to other "underdeveloped areas."

The third part of this paper will be devoted to a brief statement of the problem of gathering data on the type of theories presented in the second section, or, more properly, to the question of seeking anything like relative confirmation of or disagreement with such theories. It would be misleading not to emphasize that what appear as statements of facts in the second section are actually hypotheses about the facts, just as the inductions and deductions drawn from these "facts" are hypotheses about their implications for the problem at hand.

1. *The Concept of Capital*

It is perhaps impertinent in a paper presented to an audience composed largely of economists for a sociologist to state that he finds a concept so central to their thinking as that of "capital" in an extremely confused state. Not only are many different referents of the concept of capital used, frequently without a statement of the explicit meaning, but there are also instances in which the general concept is defined in one fashion and thereafter used in another.[1]

I have no intention of getting involved in the general problems

[1] See, for example, Paul Samuelson's textbook *Economics, An Introductory Analysis*, McGraw-Hill, 1948, pp. 42-45. Samuelson defines "capital," quite usefully for his purposes, or states as a hypothesis about "capital," that "it has a *net productivity* over and above all necessary 'depreciation' costs." In discussing two subsidiary forms of this "capital," fixed and circulating "capital," he uses many examples, including among others residential housing and raw cotton in a textile mill. Empirically speaking, both of these examples may refer to things that by no means have a "net productivity. . . ." I have not picked this example merely to quibble with an outstanding economic theorist in an incautious textbook moment. By and large, this minor inconsistency will have little effect on an analysis (save for possibly increasing the difficulty of understanding economic failures) as long as the analysis is carried out within the type of social structure assumed as a framework in that volume, but it could give rise to serious problems outside such a framework. If Samuelson's concepts were followed strictly in their present form in societies with quite different patterns, a whole new set of concepts would have to be created or many relevant factors would be completely missed.

posed by the current state of the "capital" concept. I prefer merely to pick out the definitions of that concept and some of its subcategories that I shall use. For the sake of brevity, I shall not go into the reasons for choosing these referents of the concept and some of its subcategories, in the hope that they will be fairly obvious from the uses made of them. In any case, however unsatisfactory, elementary, or trite these definitions may be, they should make clear what is being discussed.

The term *goods* will be used to refer to all physical items in existence at any given point in time and space. The term *capital* will be used to refer to all goods that are not free goods in the classical economic sense.[2] The term *productive capital* will be used to refer to all capital the use of which can result in an output of goods valued at more than the cost and maintenance of the capital involved. The term *effective productive capital* will be used to refer to all productive capital the use of which in fact realizes more than its cost and maintenance. The term *nonproductive capital* will be used as a residual category of productive capital, the term *noneffective productive capital* as a residual category of effective productive capital. The prefixes *fixed* and *circulating* as applied to the various forms of the capital concept will have their conventional meanings.

The concept *money* will be used to refer to any generalized medium of exchange. This in itself poses many important problems for this paper. The general form of these problems has to do with the extent to which money is a generalized medium of exchange. For the sake of clarity in conceptual development, any unit of exchange will be considered *generalized* if it can be directly exchanged for two or more different types of units. In fact, however, most of the empirical systems considered have exchange units considerably more

[2] The definition of the term *capital* given here has been focused on the concept of goods in order to preserve greater continuity with its ordinary uses by economists. The problem of whether technical services should be included in this concept arises, particularly with regard to areas such as those in question. This problem has quite a practical basis, for today many foreign contracts and loans for building abroad specifically include an item of considerable proportions for technical services. In this paper the matter of technical services has been handled in other ways, but the problem is one that must be faced sooner or later. Unfortunately, the exploration of this problem immediately raises the question of a rather thoroughgoing renovation of the classic economic factors of land, labor, capital, and profits (or management). The resolution of the overlaps involved in those concepts in their classic statements may have rather far-reaching implications for economic theory as well as social theory in general, if a new set of concepts can be found which is capable of handling the empirical materials treated by the old concepts but which lacks their confusions.

generalized than this. Moreover, most of these systems have a single general type of unit that is accepted by the members of the system as the "correct" generalized medium of exchange in the system concerned. This acceptance is usually decreed and maintained by the predominantly politically oriented structures of the system, and the medium is called here the *official* or *legal money* of the system.

The use of official or legal money raises two central problems: (1) the extent to which nonofficial money (or moneys) exists in the systems concerned, and (2) the extent to which the money (or moneys), whether official or nonofficial, is a generalized medium of exchange (i.e. what sorts of things other than money can be exchanged for it and in what quantities). The term *monetary capital* will be used to refer to any money that may be exchanged for two or more goods that are not free goods. This is, of course, virtually equivalent to saying that it is defined as any money, given the definitions of money and capital used here. This verbal exercise is undertaken to get at the general form of the concept. The specific forms of the concept of monetary capital which will be of primary interest in this paper are those of *monetary productive capital*, along with its various residual and subsidiary forms, e.g. *monetary nonproductive capital, monetary effective productive capital,* and *monetary noneffective productive capital.* The combinations of these definitions are fairly obvious, e.g. monetary productive capital is money that can be exchanged for two or more types of productive capital. Attention will be concentrated on the implications of social structure for the two problems listed above insofar as these problems have a bearing on capital formation. The classic interest in the concept of money capital has lain largely in the fact that money capital makes possible the coordination of large amounts of small-scale savings for the purposes of development (or other purposes) and even makes possible savings that might not be technically feasible in a barter situation. The attendant difficulties, in the form of the implications of inflation, deflation, credit expansion, and the flight of money capital, will be left largely to the realm of more technical and strict economic treatment.

The term *formation* will be taken here as an undefined predicate, or at least as a term sufficiently well understood in its ordinary usage not to cause confusion here. This paper will be primarily concerned not with *capital formation* in general, but with *effective productive capital formation* (using the terms as defined here), which, I take it, is what students have generally had in mind in discussing "obstacles to capital formation" in both "developed" and "underdeveloped areas." This preoccupation involves us in many nasty problems. I feel that I must state my position on these problems lest a considerable part of what comes after be reduced to obvious question-begging. I shall make no real effort to justify this position. It is in part a question of judgment and in part one of empirical analysis. To argue the former would involve a lengthy missionary effort; to argue the latter would involve a full-scale comparative analysis of "developed" versus "underdeveloped" countries. I state my position on this problem because such a position is always either implicit or explicit in these discussions, and the position, however taken, may involve one in either a series of statements that are not conceivably falsifiable, and hence of no scientific relevance, or a highly controversial series of statements. I prefer the latter involvement, because one may learn something from agreement or disagreement with such statements. The position that I take involves, in addition to other problems, one of empirical measurement for which I must confess I have no solution. This may reduce the whole matter to something closely akin to the not conceivably falsifiable alternative.

These nasty problems center around the use of the term *valued* in the definition of *productive capital.* I shall judge value from the point of view of the members of the system concerned in general. If one judges value from the point of view only of those individuals making decisions, the argument tends to become circular unless one assumes that the category of self-consciously understood irrational action is possible, desired, empirically frequent, and not a contradiction in terms. It is generally to be expected that, in some psychic sense at least, those using capital will estimate their use as "capable of resulting in an output of goods valued at more than the cost and maintenance of the capital involved." The position that I take falls back upon some of Pareto's distinctions. I would judge a use as "valued at more . . ." if that use increases the ophelimity for a collectivity (or the membership of the system concerned in our case), the utility for a collectivity, or the utility of a collectivity. Furthermore, in reckoning these I would make an increase in net productivity per capita and net distribution per capita[3] of empirical goods and serv-

[3] By the term *increase in net distribution per capita* I mean that there has been an increase in average distribution that has in fact been accomplished so that either no person is worse off than before and some (preferably a majority for these purposes) are better off than before with regard to the things being distributed, or if anyone is worse off that worsening has resulted in more persons' having had their lots improved in these respects than having had their lots worsened.

ices always relevant and, for present purposes, the determining factor. This position involves certain evaluations on my part. Most notably, under this position a use is not "valued at more . . ." unless that use results in an increase in actual net distribution per capita as that has been defined in footnote 3 above. Pareto himself pointed out the problems of evaluation in general in his distinctions. I am only concerned with pointing out that the general criterion for evaluation that I have taken is by no means necessarily in conformity with the value structure of all societies. It does happen to be quite characteristic of most modern, so-called highly industrialized societies, whose members by and large seem to feel that the system to which they belong is better in general, and certainly better economically, to the degree that it keeps the per capita production and consumption of goods and services increasing and keeps widening the range of actual distribution of the increases in production and consumption.

This position involves one in certain evaluative controversies, for there are many who feel that the materialistic preoccupation of modern Western societies, which such a position reflects, is a source of major evil, and that the worst thing that we can do is to encourage others in this direction or base policy on it. I have taken the position for several reasons. First, however much societies may differ in the extent to which they value these standards, it is possible, I believe, to show that the members of every known society of any long-run stability have always had some such interests[4] and no society could be stable without these interests.[5] Second, such a standard does hold out the possibility of relatively useful and pre-

[4] I.e. people in general in such societies have recognized what it means to be "better off" in terms of material goods and services, and to some extent they have desired to be "better off" in these terms. Great differences have been and are present in what the members know about this condition or are willing to do to bring it about. It is conceivable and empirically possible that the members of a society have an interest in increasing net productivity and in increasing the amounts of material goods distributed to the members in general and that they still do not achieve such goals. It is highly unlikely, if not impossible, that the members of a society are completely lacking in such an interest if the society is to be stable. If a society were to be stable in the absence of such an interest, there would have to be in the society a level of productivity and distribution adequate for all the requisites of the society plus the capability of motivating production and distribution up to this level without motivating any increases or decreases in the level. Empirically speaking, I can think of no case of such precisely poised motivation, and analytically speaking, I cannot imagine how it could be realized in terms of general social structure.

[5] I.e. systems radically or completely ascetic in the material sense cannot long endure without change or destruction.

cise measurement, because whatever the difficulties involved, it is much more feasible to measure numbers of individuals and quantities of material goods and services than to measure attitudes and individual subjective values with our present measuring instruments. Thus it should be easier to tell whether a policy undertaken for such a reason had misfired or not, and negative results may well tell us as much in these circumstances as positive ones. Third, and this may be even more controversial, I believe that whatever the differences between "underdeveloped areas" and "developed" ones with respect to the degree of preoccupation of their members with material factors, if the "underdeveloped areas" "develop" in the sense that current social engineers seek to have them "develop" the resultant societies are far more likely to change in the direction of the general social structure of modern Western societies than to maintain their distinctive traditional patterns or combine them with the patterns characteristic of the "developed" societies. I think this will be true whether the engineers concerned are "natives" or "foreigners," whether they wish it so or not, whether they concentrate on "industrialization" in the sense of manufactures in modern, power-driven plants or "merely" modernize and improve agricultural and public health techniques and conditions. If this is correct, they will also develop in corresponding degree, if they lacked it before, the kind of preoccupation with material goods and services that characterizes the systems from which they are borrowing other patterns of behavior. I believe that, whether it be considered good, bad, or indifferent, such an emphasis on the material goods and services of this world is an integral part of the social structure of such systems.[6]

A word about the inclusion above of the phrase *net distribution per capita* is in order. Here again a value judgment has been made. I feel that the most penetrating discussion policy-wise that I have read in this field is that contained in Viner's recent volume.[7] In his discussion of definitions of the concept of an "underdeveloped country," I have found helpful the one that he finds more useful, and it seems to imply the phrase in question here. As Viner points out, in his use of the term a country may be "underdeveloped whether it is densely or sparsely populated, whether it is a capital-rich or a

[6] It would be out of place here to go into full-dress arguments about the requisites of these modern Western systems here. I have tried to raise these questions briefly and hypothetically elsewhere. See, for example, *The Structure of Society*, Princeton University Press, 1952, and *The Family Revolution in Modern China*, Harvard University Press, 1949.

[7] Jacob Viner, *International Trade and Economic Development*, Free Press, 1952.

capital-poor country, whether it is a high-income per capita or low-income per capita country, or whether it is an industrialized or an agricultural country."[8] The policy question discussed here seems to be oriented to the capital-poor, low-income per capita, relatively nonindustrial country. Viner's general concept is no less rewarding for such countries and has the advantage that, when our pressing concern with such areas has somewhat abated, the work done may have its cumulative implications for the more general problem to which he directs his concept.

Finally, a word about the use of such terms as "industrialization" and "modernization." By *industrialized* I shall mean the use of inanimate devices to multiply the effects of human effort and the use of inanimate sources of power in this multiplication. I shall call a system *modernized* to the degree that it approaches the type of system existing in the modern Western societies, taking quite arbitrarily the United States as the extreme so far reached in this respect. Since I shall use the latter term largely in connection with the technologies of communications, manufacturing, farming, public health, and the like, this should not cause serious trouble. This use is stated explicitly lest it contain relevant problems I have ignored that would be the more irritating if left hidden in an implicit concept. The real problem that bothers me about these terms, however, is their general connotation in the field of economics. Perhaps under these circumstances it is perverse to use these terms with altered meanings and implications. The altered meanings cluster about "industrialization," which tends to be taken to refer to modern manufacturing industries specifically, along with large-scale communications services and mining. As the term is used here, management, farming, public health, entertainment, education (even), etc., are all highly industrialized in the United States. I have defined the term in this manner because many of the "strictly economic" problems hinge on such considerations, regardless of whether it is manufacturing in the narrow sense that is being considered. Moreover, I think that there is no question but that the general implications for social structure of these sorts of activity have more in common than otherwise. This latter consideration is no less true of the referents of the term modernization. However "economic" in the narrow sense the examples of either of these terms may be, it is a basic assumption of this paper that such phenomena cannot exist without a whole host of necessary conditions in the general social structure (e.g.

[8] *Ibid.*, p. 125.

that the types of employment criteria necessary for highly industrialized production are likely to be quite incompatible with certain types of family structures). It is the essence of such an approach that any monistic theory of economic determinism is either true but empty or full but false.

2. *Obstacles to Capital Formation in Nonmodern, Relatively Nonindustrialized Underdeveloped Areas*

GENERAL OBSTACLES FOR LATECOMERS

It is a commonplace (but a very important one) of current discussion of issues such as this to point to the advantages enjoyed by latecomers to the process of modernization in general and industrialization specifically. The latecomers can take over the latest technologies without the costs of their development, though as many wise men have pointed out it is by no means always in their "best interests" to do so without careful discrimination. On the other hand, somewhat less has been said about the disadvantages of latecomers apart from their painfully obvious have-not status in these respects. I should like to consider here some of those disadvantages most obviously related to the question of the formation of effective productive capital.

The Problem of Conversion of Resources. In the first place, modern systems of production and consumption which developed more or less indigenously in countries such as England and the United States had one obvious advantage in converting their economic resources into new forms of effective productive capital. Here for a moment I would abstract from all the problems of the social patterns associated with such conversions and consider what might be called a more purely technological or engineering problem. In these terms those systems had a curve of development which was relatively smooth and continuous; that is to say, the technical problem of converting existing resources directly into new forms was not enormous and could be and was done. For example, the early machines could be built by currently available carpenters, wrights, etc., and with currently available goods in their existing forms. These workers and goods and subsequently the workers trained in the operation of the new machines and the goods produced by them produced still more modern ones, and so forth. There is serious question as to whether present levels could ever have been reached without some cases of this sort, if indeed such a statement is not banal. On the other hand, the latecomers (i.e. those in the nonmodern, relatively nonindustrialized areas) can do this little if at all in any such direct fashion, and frequently neither they nor others regard such a process as in their best interest. This view has a sound basis since many of the interstitial stages of development of these forms of capital would be markedly uneconomic in the sense that they would cost more than their use could add even to aggregate output. This is especially true when more modern economies have outstripped this stage in a given field.

"Traditional" Chinese workers using "traditionally" available materials cannot produce a modern milling machine. Even if they could produce one such machine, it would be a "believe it or not" feat rather than an activity which was practical economically. These latecomers are therefore forced into interdependence with, if not dependence on, modern areas if they wish to take advantage of the latest in technologies. This is true not only of know-how but also of many physical materials. The latecomers may follow many courses in this process. They may get unilateral or multilateral aid from abroad such as straight transfers of productive capital in the form of gifts, grants, loans, or investments. The United States has been a source of such transfers on an unprecedented scale in recent years. Such aid is likely to raise many questions concerning the interdependence and responsibility of governments and individuals in foreign nations as well as questions of how far in advance or how reliably planning can proceed on such a basis. If aid from abroad is not to be the basis of economic growth, foreign trade in those traditional products in which the area has a comparative advantage becomes much more important, even if the earning of goods from abroad takes the form of general or forced saving locally and export of accumulated reserves. Japan chose such a course in the nineteenth century, fearing that foreign domination was likely to accompany gifts or loans from abroad.[9] Under such a course obstacles with far-reaching implications may arise at many points. It may, for example, mean radical reorientation and reallocation of domestic production and consumption even where traditional or semimodern techniques have such a comparative advantage for international trade that their use can make still more effective forms of productive capital formation possible. There has been some tendency

[9] Such fears are present today in many areas; without arguing the wisdom of these fears, past and present, it should be noted that foreign domination may be (and in some cases was) benevolent in these respects.

in national and international aid programs, now being corrected wherever possible by the sophisticated, for the underdeveloped areas to assume that the ends sought even for purposes like those suggested here, were best served by the immediate introduction of the latest possible technologies rather than by the use of intervening ones.

The implications of latecomer status for quite understandable reasons tend to run into one another. For this first one let it suffice to say that the fact that the curve of development is at least in part radically discontinuous for the latecomers poses purely physical obstacles to certain types of necessary effective productive capital formations. It cannot be done directly with what is at hand. Since, of course, comparative social phenomena are far more likely to show relative than absolute differences, it would be more correct to say that to the degree that a system is a latecomer it is less apt to be able to form much of its necessary effective productive capital as directly as earlier-comers or those present at the start.

Shifts in Self-Sufficiency. One characteristic of many, if not most, nonmodern, relatively nonindustrialized underdeveloped areas which tends to be overlooked or underestimated by those who are accustomed to thinking of modern Western societies as "natural" or "normal" in social history is the extraordinary (by modern standards) degree to which self-sufficiency with regard to both consumption and production is approximated and/or simulated by many of the social subsystems of these areas. Moreover, this approximation of self-sufficiency seems to be highly regarded by the members of such systems. There is, of course, no known society, whether modern or not, in which there are *no* interdependencies of subsystems in terms of allocations of goods and services, and there are some nonmodern, relatively nonindustrialized societies that depart markedly from the above-mentioned self-sufficiency (e.g. some of the major trading systems). On the whole, however, the contrast in these respects between the nonmodern and the modern society is marked. One need not remark at any length on the degree to which the tendency toward interdependence has gone in the United States. Here even most forms of housework, usually a stronghold of family self-sufficiency, involve an amazing network of interrelationships with public utilities, major manufacturers, sophisticated communications systems, and all sorts of nonfamilial business concerns. It is interesting to note that we not only do not characteristically regard these relationships as terribly complicated or delicate but are far more likely to point to such a state of affairs as greatly simplifying our problems—and so they do, given our type of system, in which, internally at least, self-sufficiency has probably been reduced to its lowest point in social history.

One of the earliest terms used in descriptions of production that involve effective productive capital is "roundabout." Whatever else it may imply, the process can progress little beyond the example of the use of sticks to knock down fruit before the question of the interdependence of more or less specialized units begins to arise. In the areas we are concerned with here, this interdependence begins to increase on a twofold basis. First, there is the universal increase in specialization that has so far accompanied virtually all increases in effective productive capital. But for the latecomers there is an added increase because of the gaps to be bridged. This does not follow as a matter of logical deduction. The added increase might not arise in the same degree if some foreign nation would provide all the capital necessary as a pure gift, or if capital of a nonproductive or noneffective productive nature within the system could be turned over to the new purposes. In these cases, only the increase in specialization everywhere attendant on increased uses of effective productive capital would be involved. The ordinary case, however, is far more likely to require at least some effort on the part of the members of the system to take advantage of their comparative advantages—the more so because of the difficulties of latecomers in making direct internal conversions to the new technologies, etc. This seems likely to involve considerable departures from the previous degree of self-sufficiency. Even if the degree of internal trading was high prior to this time, there are likely to be notable shifts because the changing emphasis on international trade is likely to involve either the production of new products or differing ratios of the old ones. Even if the system previously engaged in much international trade, there are likely to be shifts. The new requirements may involve new products or at least internal shifts in the domestic application of the income from the previous trade.

For present purposes I am concerned only with the implications for the degree of interdependency of the units internal to the system. In material to follow, I shall raise the question of international interdependency, but the likely increase in international interdependency has its reflection in decreases in internal self-sufficiency. Similarly, I must jump ahead to one other latecomer problem to be taken up below—scale. Given the line of development of technology in recent history, the latecomers can only utilize certain types of effective productive capital on a very large scale. This scale is likely to be large not only relative to the scales early involved in those countries in which modern systems developed on an indigenous basis, but also relative to the levels of savings which are practical in the country concerned. These questions will be taken up again. For the present suffice it to say that they imply other questions of large-scale organization of planning and execution of programs—including the programs designed both to form the relevant capital and to use it. Such organization must be carried out in terms of concrete units of some sort. These will have to be either adaptations of old units or newly created ones. In either case the question of their relationships with previously existing units is raised. Their interdependence with the old not only adds a new factor, but inescapably involves readjustments in previous interrelationships as well.

These shifts quite obviously involve changes in the actual organization of workers, administration, governments, etc. They also raise problems far beyond those of drawing up a new table of organization in the narrow sense. In many, if not most, of the nonmodern, relatively nonindustrialized underdeveloped social systems the type and degree of self-sufficiency of the subsystems have been intimately related to the general problem of control over deviance in the system, the sources of motivation, the techniques of locating and rewarding talent, the distribution of income, etc. Shifts in such self-sufficiency do not merely raise problems of teaching people to produce new or different things in new or different ways and not to produce others. They also involve considerable increases in sophistication about exchange and budgeting in terms of a generalized medium of exchange instead of in terms of goods and services directly. There are no concrete systems that are purely economic systems (i.e. concerned only with the allocation of goods and services), and nonmodern, relatively nonindustrialized systems are characteristically far less likely to have predominantly economically oriented concrete structures than are highly modernized ones. Even among relatively modern systems there are marked contrasts in these respects, as a comparison of the role of business organizations in the total social structure of France and the United States will show. Given shifts in the degree and types of self-sufficiency of the units in the nonmodern, relatively nonindustrialized systems, the changes in the purely economic aspects of the situation are likely to be considerable and of a kind about which we at present have little sound knowledge. But when these changes are considered in the context of the minimal changes in other aspects of these units, the real magnitude of this problem of social engineering begins to emerge. It is folly of the worst sort to assume that such programs can be confined to economic aspects. That folly is compounded if consideration is not given to whether or not the implications of a given program for the noneconomic aspects of the system will in turn raise contradictions for the changes sought in the economic aspects.

Even apart from the noneconomic aspects of the situation, the problems are thorny. In "traditional" China much of the allocation of goods and services was a function of jack-of-all-trades employment of family members in slack seasons. Shifts of some family members to nonfamily employment in relatively modern plants may greatly increase the individual productivity of a segment of the population while lowering that of the members of the system as a whole, if only because nonfamily organizations which supply what was previously handled in slack seasons are not forthcoming. Many other problems may also arise. In China the breakup of family units poses a critical problem of facilities to care for the aged. Capital expenditures on this sort of thing again must jump a gap covered gradually in other systems, and in such situations problems not only of allocation but also of motivation and control arise.

The problem of the increased interdependency of these nonmodern, relatively nonindustrialized areas with more modern areas, which is necessary if the former are to form effective productive capital, has been touched upon above as a problem of latecomers which has considerable implications for the type and degree of self-sufficiency of internal units. It is a well-known maxim of international trade theory that such trade, if pursued along the lines of the doctrine of comparative advantage, tends to increase the income of all systems concerned on the average in the long run but also tends to make them more vulnerable to fluctuations over which they have no control. The theory of this need not be elaborated here in its economic aspects. In its noneconomic aspects the question is relatively unexplored. As pointed out above, the shifts in self-sufficiency of subsystems of these countries have far-reaching noneconomic aspects. These are likely to become the basis for fundamentalist resistance in any event, but in the case of hard times resulting from such increased interrelationships the pressure can become extreme. Even in the absence of such fundamentalist reactions, the problems posed may be great. Fèi Hsiao-T'ung tells of a Chinese village in which production for the international silk market brought boom times for a period, during which the role of women shifted markedly and the whole economy of the area was readjusted.[10] The 1929 crash then brought a readjustment far beyond the "traditional" Chinese readjustments to hard times. Such experiences may result in obstacles to the formation of effective productive capital from quite unexpected quarters.

There are other concomitants of the increased interdependency due to international trade. The underdeveloped areas concerned here not only become increasingly vulnerable to economic cycles abroad; they also become increasingly vulnerable to swings in foreign tastes. One or both of two problems may result. The units in terms of which production takes place in these areas are likely to be rather inflexible to change. This extends even to their types of products to a degree difficult for members of more modern systems to understand. If flexibility in production cannot be increased, they are vulnerable to shifts in allocation other than in the trade cycle narrowly considered. On the other hand, if this inflexibility is eliminated, quite striking changes in the social structure of the area must be brought about at the same time. While this argument may seem at first glance to contradict what has been said about necessary increases in specialization in circumstances like these, I believe that there is no contradiction here. Although modern technologies carry with them very high degrees of specialization, they tend over-all toward a specialization of operations rather than of products. There are tool and die machines and operators of many different types, but both can perform their operations in many different product contexts. The last war furnished hundreds of examples of this; for instance, typewriter plants converted to the production of machine guns with amazing rapidity and ease.

This sort of convertibility is interrelated with more than the specific character of our technology. It is almost certainly interrelated with many aspects of social life that seem to cry for reform from many points of view. In highly industrialized societies, social engineers are much concerned over the fact that workers today do not seem to have the same kind or degree of "ego investment" in their jobs as seems to have existed in the handicraft periods of the West. They feel that a man who tightens a single nut or fits a single type

[10] See his *Peasant Life in China*, Dutton, 1939, pp. 197-236 and 282.

of wheel all day, all week, all year, is bored with his work, has little creative feeling on the job, etc. They may well be correct, but they may also well be cautious before they try to "correct" this in any such obvious manner as having the worker identify himself with his specific output. The malintegration that this lack of positive identification with one's product may produce may be one of the major necessary prices paid for the minimal flexibility requirements of such systems. In any case, lack of flexibility may be a major obstacle to the formation of effective productive capital, and the creation of such flexibility inevitably raises questions of general social change.

The Problem of Scale for Latecomers. This problem has been alluded to above. The scale on which latecomers may have to operate in those respects in which they modernize is likely to be greater not only than those individual steps taken by the members of the areas in which these patterns of behavior developed indigenously, but also than the scale of current operations in the country carrying out the modernization. There are caveats on this score, of course. Centuries ago China carried out very large-scale projects—large-scale from almost any point of view. There was an inland canal over 1,000 miles in length and irrigation systems covering vast areas. But even so there were major differences from projects of today. The nature of the projects and the technologies involved were likely to be such that the crucial stage was that of planning; both execution and operation could be carried out on highly decentralized bases; and rates of obsolescence and depreciation were likely to be slow and gradual. This last feature was important because it meant that, if the levels of objectivity and ability necessary for original planning could not be easily maintained, the projects concerned would not suffer immediately and drastically. With most of the modern technologies, however, relatively slight deficiencies in maintenance can bring a major complex of activities to an effective halt.

Most of these large-scale efforts represented fairly direct conversions of relatively unskilled labor services into effective productive capital formation. Today the West probably does not have the ability to mobilize and operate efficiently large masses of relatively unskilled labor, while as recently as the last war one could see in China as many as 100,000 coolies mobilized to build roads and airfields two baskets of dirt at a time. As I have tried to point out above, however, much of the gap-jumping necessary for the nonmodern, relatively nonindustrialized underdeveloped areas cannot be made in this direct fashion, though maximum attention should be given to the development of whatever possibilities exist on this score.

The process involves either large-scale savings internally or large-scale gifts, investments, etc., from abroad. The problems about the latter need not detain us here. One of the troublesome problems about the former is that most of the areas with which we are as a practical matter most concerned are characterized by populations living on what is by standards of modernization the margin of subsistence (or well below it). The problem of increasing their savings therefore raises very difficult issues. This is further complicated by the public health issue. Whatever the implications may be for population increase, public health conditions in these areas must be improved if development of the sort sought is to take place. Here we are obviously involved in humanitarian considerations, but we are also involved in matters a great deal less sentimental. The question of motivation for various kinds of efforts is certainly connected with mortality and health conditions.

There is another question, however, that is more often overlooked. The kinds of interdependency created by the lines of development sought place a progressively increasing emphasis on interstitial adjustments between and among different activities. In highly industrialized areas these reach a fineness of adjustment often overlooked. These levels of adjustment cannot be maintained on anything like a practicable economic basis in the face of high rates of absenteeism and low rates of human operation. It is not a question of sentiment. A peasant farmer may take an hour or two out to shake with a malarial chill and make it up by toiling further into the night, but the absence of a worker from a modern assembly line for such a period cannot be tolerated. There must be provisions for his immediate replacement. These are, of course, relative matters; I have deliberately chosen extreme examples.

Perhaps more relevant than the mortality rates in these areas with which we are concerned are those of endemic and partially debilitating diseases. These make for high absentee rates in more modern forms of production, as well as for low rates of performance while on the job. Therefore, whatever reliance is to be placed on internal savings must be planned so that the savings will be accumulated in such a way as not to depress public health standards further, as might happen if food consumption were lowered.

The improvement of public health is related to the question of scale in another sense. If one admits that it is a necessity, for any or some combination of reasons of sentiment, motivation, and efficiency (let alone such reasons as public appeal, etc.), one must realize that these public health programs tend to be huge. Modern medical technologies have made attacks on many of these endemic diseases relatively cheap and effective, but they inevitably raise problems of the general ecology of the areas concerned. It may be necessary, for example, to clean out bromeliads in a whole area in order to stop the malaria problem. To get a reliably healthy pool of a thousand people, it may be necessary to improve the health of several hundred thousand, or even several millions, in some of the densely populated areas. These public health programs are likely to be large in other senses too. Most obviously they are concerned with sources of water supply, and it is a short step from the question of uncontaminated wells to that of dams and large reservoirs.[11]

Going back to the problems of scale in general and the attendant problems of saving, there are other questions no less thorny. Many if not most of these areas lack the kind of agencies necessary to coordinate and utilize such savings as are being or can easily be accumulated. The members of the population with large personal incomes are not accustomed to putting their incomes to use in the formation of effective productive capital; they are far more accustomed to hoarding them or to applying them to other forms of nonproductive or noneffective productive capital. Furthermore, attempts to change such habits are likely to run into resistance from the most powerfully mobilized quarters in the society. Japan, for reasons to be referred to later, was a notable exception, and her experience should be studied carefully, if only for this reason. The Japanese feudal lords accepted debentures for their landholdings without a murmur. Since they knew nothing of how to handle or manipulate debentures, their use came into the hands of the zaibatsu, who owned or controlled the banks. Quite peacefully, land reform was carried out, and the effective control of much of the financial resources of the society was turned over to people who did not own them but who could use them for the developmental purposes sought. This has not happened in most of the other areas with which we are concerned.

In order for the necessary saving to be effective, or in some cases to be done at all, entirely new social units must be created. If these are to operate effectively, they must be interrelated with

[11] These latter are likely to raise international complications, since hydraulic systems are notorious disregarders of national boundaries.

other social units in the area. For limited purposes, governments can resort to forced saving based on considerable physical coercion, but this is always an extreme and raises its own special problems. Most notably, perhaps, it raises the eternal political problem of "Who is to guard the guards themselves?" and thus it opens up the whole question of the general maintenance of stability in the system concerned.

One may ask about the ready convertibility of the indigenous entrepreneurs and financial investors in these societies. Japan is one of the few cases that offers any hope. In general, on a private basis these individuals are not only used to asking and expecting interest rates so high as to make impossible the necessary programs,[12] but they are also not trained or accustomed to look for the most relevant forms of investment for growth purposes. Most notably and most generally in these areas, they have turned to land as offering greatest returns, security, and general social prestige. This has had far-reaching social implications in terms of tenancy, etc., but it has not generally facilitated the formation of effective productive capital. It has tended to redivide rather than to increase the shares in production of the members of a system.

While the scale problem is difficult enough in individual productive enterprises and in the public health field for latecomers, it is probably even greater in the fields of public utilities, communications, and education. I have pointed out above that it is a great mistake to think of industrialization solely in terms of individual mechanized operations. As a minimum, one may hold that the requisites and necessary correlates of such operations are widespread special forms of social patterns. It is difficult to make isolated stabs at modernization except for demonstration purposes. It is possible to put a team of agricultural experts in a single Indian village, have them concentrate on improving yields by showing the farmers technically better procedures for utilizing the means at hand, and get encouraging results. It is not possible to do this on a scale that will have substantial effect on India as a whole without improving roads, setting up agricultural stations, improving both amounts and character of education available, etc.

Doing these things simultaneously on the scale necessary has in-

[12] One must be wary about interpreting the interest rates frequently quoted as high in a relative sense. When one takes account of the chronic inflation in some of these areas, the real interest rate may not be abnormally high, and the absolute rate charged may be necessary to get selection of effective productive investments.

triguing ramifications which there is only space to indicate here. Improved communications systems, for example, might be loosely called a generalized necessity for development in these areas. Furthermore, these are fields in which the interstitial stages of development are almost everywhere out of the question. In many of these areas it may make very good sense to set up some operations in terms of household industry and others in terms of modern manufacturing plants. It may, for example, be better to have fishing done by hand from dories rather than by fleets of modern trawlers. I doubt, however, that in any case it will make sense to set up a railroad system as in the nineteenth century or a road system that will handle animal-powered vehicles but not motor-driven ones.[13] This doubt has many bases, but one of them is the costliness of *expertise* and the extent to which inefficient communications can fritter away this commodity.

Public versus Private Development for Latecomers. As a teasing introduction to this question, one may say that it is extremely unlikely that the highly modernized systems of the world today could have developed indigenously on the basis of any systems other than ones that relied very heavily indeed on private individual operations, and that it is extremely unlikely that latecomers can carry out such development without relying very heavily on public operations. One may relate such a hypothesis to many different aspects of social structure, but for the present it may be related to the general problem of latecomers, and most especially perhaps to the particular problem of scale. The most obvious difficulty in this connection is the collection and utilization of large amounts of productive capital in such a way as to make it effective. Even given some huge private fortunes in these areas, many of the necessary projects require investment on a scale far beyond the private means of a single wealthy individual or groups of such individuals.[14] The problem is further

[13] This is not the equivalent, of course, of maintaining that a road system is not effective productive capital unless it is a four-lane superhighway. Effective productive capital may in fact be reduced if an area goes further in this direction than is necessary for other simultaneous lines of development, or if it goes to such lengths at the expense of other developments that would, in combination with less ambitious highways, add more to effective productive capital.

[14] On the other hand, it should be kept in mind that there are at least two general considerations that often favor smaller projects. In the first place, in the absence of certainty about the outcome of any investments, especially since other economies are not static, a series of small projects may have the effect of spreading risks. Second, a series of small projects privately financed may afford many

complicated by the fact that many of these private accumulations may take the form of either nonproductive capital or noneffective productive capital because of the habits and motivations of those who control them. In general, the mechanism for collecting and making available savings in small individual amounts from members of the population at large have not developed indigenously either. Here again the habits and motivations of the population at large may also interfere.

Such areas are likely to lack both the motivations and the mechanisms for gathering the amounts of productive capital necessary and for transferring control of it readily from one group to another in such a manner as to make it and keep it effective. These problems are present quite apart from the lack of such amounts and the problems of getting them from abroad or building them up at home. But even if these problems were absent, it would be difficult to utilize such productive capital as could be gathered. Here again the scale is relevant, because it is germane to the scale on which one must train experts to handle the programs that can make effective productive capital out of productive capital. In these areas private sources can hardly be expected to provide both the capital needed for specific purposes and that necessary to educate the individuals who will have to administer and use it.

Moreover, many of the uses to which capital must be put in these efforts at development cannot well be taken care of on a private basis, except on a private philanthropic basis. Private philanthropy can do no more than scratch the surface. Some of the largest-scale requirements are ones that cannot well be linked to any private earning system without creating at least as many problems as they are designed to eliminate. Here one might leave out communications as a possibly controversial case and stick to such things as public health and education. The income of the largest private philanthropic foundation in the world could not crack China's public health or education problems even if it devoted all of its income to that effort. In effective productive capital formation in nonmodern, relatively nonindustrialized underdeveloped areas, the difficulty is probably never one of setting up a single productive operation alone, if it ever is in any area. It is rather one of preparing the peoples of a whole area to operate in these new terms. In no highly developed, modern countries are these necessary background expenditures

fewer difficulties in terminating noneffective ventures before losses have become unduly great.

borne privately, and in the latecomer countries the problem of setting up, as well as maintaining, such facilities has to be faced. These background investments may pay off handsomely to the system as a whole, but they are unlikely to be linked to a form of financial reward that will enable them to be handled by private enterprise. This means that in some respects at least the mechanism of the market cannot be relied upon.

There are other reasons too. The question of scale raises in a radical form the problem of control. If the job could be done largely on a small-scale, private basis, the market situation might take care of small-scale individual failures, but the very large ones are crucial for the system. In these areas one has the difficult problem of coordinating different efforts, even if the members of the area concerned are agreed upon the goals they seek. Roads must be coordinated with agrarian as well as commercial and manufacturing developments. All of them must go with public health and education. Given the standards of living of these areas, the sums and materials involved in failures are likely to be seen in starkly tragic terms. These problems were not so acute in the Western systems, which developed gradually and were nowhere faced with jumping gaps comparable to those that confront the latecomers. Probably none of these areas will achieve the development sought unless a major part of the planning and operation of the process is carried out on a public basis.

Surprisingly, perhaps, the level of private operations will itself rest heavily on public planning. That is to say, there will have to be large and sophisticated public programs in most of these areas to get private operations under way. Private operations as they are understood in the West are often not understood in these areas at all. In addition, the necessary social patterns for the operation of such private efforts are largely lacking.[15] In "traditional" China, for example, one was adequately protected in private dealings if one had established either directly or through a carefully chosen go-between a personal bond with those with whom one dealt. Strangers, however, were fair game in a radically *caveat emptor* fashion that would horrify the most rapt laissez-faire idealists of the modern West. But in the new situations, if these enterprises are to operate

[15] The necessary social patterns for *public* efforts in these directions are also frequently lacking, but it is somewhat easier for a government, if it is strong and if it is so inclined, to create the necessary patterns than it would be for private individuals to do so.

successfully, the old, highly personalized basis for conducting affairs will have to be abandoned and be replaced by something more stable and predictable than "individualism by default."

This is not to argue, of course, that there is no role for private initiative in these areas; quite the contrary is the case. But initiative must be subject to some limits if matters are to proceed smoothly, and some developments cannot be handled on this private basis. One of the biggest problems in these areas is how the projects that must be carried out on a public basis can be best coordinated with the sphere left open to private initiative. For reasons too complicated to go into here, the Japanese seem to have had an unbelievably felicitous situation in these respects, for the public planners and the major figures in the sphere of private initiative either were the same or acted as one.

One could follow the problems of latecomers throughout the social structure in much greater detail than has been done here, but this discussion will serve to raise questions about some of the social implications of being a latecomer and either wanting to modernize or being forced in that direction. In addition to the fact that such systems need effective productive capital in amounts and types not needed before, they have special problems. There are obstacles to the formation and use of such capital that can be traced in considerable part to their desire to jump a gap. Here they and we are faced with a dilemma. These processes of development ordinarily treated in terms of their economic aspects alone have highly restricted but nonetheless requisite noneconomic aspects. The most highly modernized and highly industrialized systems, in which these patterns developed indigenously and gradually, seem to have these requisite patterns developed in very high degrees, but these are not necessarily the patterns that are prerequisites for the latecomers.

The first level of naïveté in these matters is to believe that one can take over the latest technology and leave what one wishes of its social setting behind—that one can combine the "best of East and West," to quote a popular nostrum of our times. The first level of sophistication is to understand that patterns of behavior go with those technologies and that those patterns are by no means restricted merely to the persons in direct physical contact with the technologies.[16] This first level of sophistication is likely to lead to attempts to import the whole thing in full flower at once or to pose

[16] This is by no means equivalent to saying that the technology is an independent variable and all these other factors dependent variables.

that as an ideal to be aimed at. The full extent of the problem has not been approached, however, until it is realized that these latecomers, who may want to change or are forced to change, face a problem of transition and that the requisites of a given state of affairs are by no means necessarily the same as the prerequisites of bringing that state of affairs about. In some cases the prerequisites and requisites may be identical, but whether they are and in what respects they are cannot be reckoned without taking into consideration the social basis from which the change takes place. It may be, for example, that the French Revolution, including the Terror, was a state of affairs which was a prerequisite of modern France, but many of the aspects of that situation are certainly not requisites of France as she is today and in fact would destroy her.

THE SOCIAL BASIS FROM WHICH CHANGE TAKES PLACE

The General Problem of Control. The foregoing discussion about the general problem of latecomers has laid the basis for a discussion of the problem of control from one particular point of view. Assuming that high degrees of control are necessary for latecomers, why should they be so difficult to achieve? Many of these latecomers have highly authoritarian societies with a great deal of centralized power and responsibility, and many others (or even the same ones) are systems in which the members have long been accustomed to agree on highly traditionalized forms of action in general and expression of disagreements in particular. There are many problems to be solved before this can be fully answered, but for present purposes some central considerations can be stated briefly. In the first place, even though the systems may have highly developed degrees of control, the types of control may be different from those necessary for the new ends. Even if the members of the system approve of the new ends in general, they may not approve of the specific requirements placed upon them. The fact, for example, that a system can control and coordinate large amounts of unskilled labor does not mean that it can control new allocations of capital either on a private or on a public basis.

Perhaps a more formidable problem on the whole is posed by our second consideration. How are systems of control affected by the new patterns that must be introduced if the new forms of productive capital are to be effective? In many of these areas the new forces undercut the old system of control. This is particularly apt to happen in those systems in which control is primarily a function of the continued stability of units in terms of which action is expected to be predominantly traditional rather than critically rational, in which membership is determined by who one is rather than what one can do, and in which the relations among members are vaguely rather than precisely defined and delimited.[17] The new patterns are likely to put great pressure on such units, and in some cases the effects may be startling even with only limited introduction of the new patterns.

"Traditional" Chinese society is an excellent example. Here one can make out an excellent case for the facts that the whole system of control in the society rested upon family stability, that the family in the "traditional" setting created many strains but was capable of containing them, and that the new patterns undercut that capability for containment. In Japan, on the other hand, we find a contrary case, but a very special one. In Tokugawa Japan there was a great dependency on the family but a clear recognition of overriding loyalties to the feudal hierarchy. There was also a clear tradition of concentration of this loyalty on a single individual, the emperor. This permitted a rather easy transfer of these loyalties back to the emperor and hence directly to the national state. Virtually without bloodshed and in extremely rapid and dramatic steps, the daimyo and the shogun, the top power- and property-holders of a genuinely feudal society, were shorn of their power and their property, and control over what was left to them was rather effectively placed in the hands of those who could put such resources to work for the formation of effective productive capital. On the basis of general social analysis I feel that there is reason to believe that China is more typical than Japan of the problems of control to be encountered. In any case, the world has seen only three cases of latecomers who have been highly successful in modernization (i.e. Japan, Germany, and Russia), and all of them have shown serious tendencies to get into trouble with their neighbors, even though they were highly successful in the process of modernization itself.[18]

[17] This whole question can be handled with much greater precision than is attempted here, but it is likely to involve jargon and analysis that would lead us astray for present purposes. A brief treatment of some of these questions is to be found in my paper "Some Sources of the Vulnerability of the Structures of Relatively Nonindustrialized Societies to Those of Highly Industrialized Societies," in *The Progress of Underdeveloped Areas*, Bert F. Hoselitz, editor, University of Chicago Press, 1952, pp. 113-125.

[18] I would suggest, as perhaps a far-fetched hypothesis, that the very factors that were relevant to their initial successes also played a part, in the world

It may be true in some sense that systems with a long-run prospect for stability accompanied by high rates of formation of effective productive capital (assuming that any of them can be stable) will have to have what we consider to be relatively democratic and permissive allocations of power and responsibility, but it certainly does not follow that such systems are the best bases from which to accomplish the transition swiftly and peaceably to such a stage. It also does not follow that any and all forms of authoritarianism and the like are equally more efficient bases. What does follow from this argument is that the formation of large amounts of effective productive capital, which will have to be done largely on the new bases, cannot be carried out without substantial alterations in the existing social structure of those systems. The very use, for these purposes, of their indigenous patterns of control may radically alter those patterns and other features of the society. It is, perhaps, not too much to say that all attempts to increase modern effective productive capital formation are subversive of the social structure of relatively nonmodern, nonindustrialized societies. At least it would be better to assume so than to be totally unprepared for the problems raised by such well-intentioned changes.

So far two types of questions have been raised, directly or indirectly, about the problem of control in a period of transition: they relate to (1) the importance of control and (2) the possibility that the old forms of control may be broken down with great rapidity while new ones may be created only very slowly. In the discussion, examples have been taken largely from the field of what is commonly considered production rather than consumption. This is largely a matter of conforming to conventions in these respects. It may be that some day we shall find that these two concepts fall into the category of concepts such as anabolism and catabolism, which apply to processes or aspects of processes that are classified under one or the other concept depending on the point in the more general process from which they are viewed. Conventional usage is a bit mixed on this score. At one and the same time, we speak of General Motors Corp. and United States Steel Corp. as producers in some absolute sense and then speak of the importance

context in which they found themselves, in the subsequent problems they posed for themselves and others. Here we are not concerned with that stage of aftermath but with the processes of modernization themselves. Nevertheless, we should probably keep in mind that the process of modernization on a smooth basis may well not be worth the effort if its price is to be a repetition of the history of the last four decades.

of the position of the former as a consumer of the products of the latter. Our mixed usage might be straightened out by abandoning the pretense of an absolute distinction in these respects and stating the point of view from which we speak in labeling a given aspect of action as production or consumption. Whether or not this is done, consumption in either sense poses no fewer problems of control than production. If development is to be planned and coordinated at all, there will have to be some basis of control over what individuals in the system are permitted to buy—certainly with respect to amounts and in many cases with respect to composition as well. If the members of the system are motivated without overt forms of control or via their own volition to demand commodities and services that do not block the formation of effective productive capital, so much the better, perhaps; if they cannot be, then either controls must be present or the programs will be ineffectual. The problem is magnified to the extent that the areas concerned are dependent upon international trade for the financing of their development.

Here again, the Japanese case is instructive. The Japanese not only demonstrated an ability to organize and coordinate effective productive capital formation; they also played on public tastes in such a way as to prevent certain of their comparative advantages from being wiped out or radically altered. Within the limits of changes necessary to improve public health and communications systems, the Japanese government was unbelievably skillful in getting its citizens to work in very modern ways and with very modern tools and to go home and live in the old or "true" Japanese way. They did not eliminate the effects of industrialization on the general social structure. Family patterns and many other patterns did change. But the Japanese seem to have directed and controlled many of the changes to a degree unequalled elsewhere. Furthermore, although elements of coercion were by no means lacking, the degree of voluntary cooperation must have been extremely high for the system to have operated as it did.

To summarize, these systems must either be able to generate considerable control over deviance or have such patterns of motivation that deviance is relatively unlikely to arise. They must do this with rather strict limits on the use of purely coercive forms of control. These limits are the stricter because the transitions call for the increased use of imagination and initiative either on a public or on a private basis, and many of these forms of imagination and initiative must contradict the traditional sense of fitness and propriety in the system. This delicate balance must be achieved, given the ends sought, where the process of development that is being sought is extremely likely to undermine the general allocation of power and responsibility. Moreover, in some cases these underminings are likely to be explosive in their rapidity. With our present knowledge of comparative social structure we have just begun to state the problem that we face, and no convincing solutions suited to our ends are available.

The Security of Investment. In these areas there are many specific problems of control that are strategic. One of the easiest to illustrate is the implications of the method of allocation of power and responsibility for the security of investment. Here the problem is somewhat different if we distinguish between private and public investment. In addition to the fact that these systems can hardly escape a large element of public investment, there is little doubt that the interests of transition would be well served if considerable room were left for private initiative. This has been true in most of these areas, primarily through private influence on public affairs, if in no other way. Moreover, it is likely to continue to be the case. This raises two types of problems. In the first place, in many if not most of these systems the relevant entrepreneurs have had, ideally speaking, a low social status. These people, generally called merchants, have frequently been extremely powerful in the same way that gangsters and political bosses have sometimes been the powers behind the thrones of individuals of high social prestige in our society. However much "protection" some merchants may have built up in these systems, the general power structure is likely to be capricious from any single individual's point of view. In the second place, the very process of development in these areas is likely to make the positions of power-holders unstable in such a way that the systems of power may well take on a capricious aspect with regard to public as well as private ventures. In recent history, for example, some of these leaders have—rather self-consciously, it would seem—attempted to rule by use of mobs. Mobs can be an extremely effective means of bringing pressure to bear on either public or private individuals, but in the nature of the case it is almost impossible to hold mobs responsible for their actions and hence to put a stop to what one has started.

These systems are also likely to be characterized by extreme differences in income, with a relatively small but very wealthy group widely separated from the population in general. Such a group is likely, however, to be large enough to provide a considerable market for luxury items produced by other systems. Expenditures of this type result in nonproductive capital formation or, what is more likely, in transformations of productive capital to nonproductive capital. The problem is more far-reaching when one considers that (1) the foreign exchange resources of these areas are likely to be small in relation to their requirements for development, (2) many of the forms of effective productive capital must be purchased abroad, and (3) many of the forms of nonproductive capital desired must also be purchased abroad.

The wealthy group furnishes a ready source of demand for such forms of nonproductive capital, but in a system in which the power-holders are likely to treat individual entrepreneurs capriciously (at least from the point of view of those entrepreneurs) the entrepreneurs may well have a very powerful motivation for what may here be called in a loose sense "commercialization" rather than industrialization. Speaking more accurately, these entrepreneurs may seek their incomes primarily through exchange that involves no increase in effective productive capital formation (or even a decrease) instead of through such formation.

Let us take automobiles as an example. The importation of automotive products can certainly increase effective productive capital in these areas, in which communication difficulties are likely to be great and transport costs to be high. Many of these areas need improved and expanded road networks if automobiles and trucks are to be used effectively, but few if any of these areas are so deficient as to make all uses of these products noneffective capital formation. But if the imports of such products consist largely of luxury models from the West for the purposes of heightening the enjoyment of private leisure, effective productive capital has been diminished by at least the amounts involved. The same would be true if plants were built for the production of such automobiles, although the loss would not be as great, because of the convertibility of such plants to other uses. Luxury automobiles themselves are not highly convertible, and even plants set up for such production may have extremely limited prospects if the comparative advantage situation of the area concerned puts these plants in the category of noneffective productive capital formation.

In such situations, profit from the furnishing of exchange services is much safer and surer than profit from production of goods plus the services of exchange. The entrepreneur who concentrates on the former runs the risk of having his inventory confiscated, but the one who concentrates on the latter runs the risk of having his inventory plus his plants confiscated. In addition, inventories are a great deal easier to hide than are plants plus inventories. To the extent that an emphasis is placed on "commercialization," the entrepreneur is likely to be forced to seek his greatest market in the luxury realm or in markets closely dependent thereon, for this realm is already in existence and does not have to wait to be keyed into a general program of development. Not only is the risk of loss less, but the turnover is likely to be much greater and to be effected in a much shorter period. Moreover, it is far easier to shift such investments with shifts in demand. It is not a matter of chance that at the height of many transportation shortages in China, the wealthy and those holding public office or related to officeholders had luxury automobiles that represented nonproductive capital, that consumed vitally needed foreign exchange, and that added to the problems thus created by siphoning off still further resources for the fuelling and care of such automobiles.

If this sort of motivation is to be kept to a minimum, the government must be stable and must not be capricious with regard to property rights. In those areas where control is great, there is likely to be a government that cannot easily be held responsible for capriciousness with respect to property rights. The role of foreign settlements in China and of colonial governments in general might well be re-examined from this point of view. Even though those inventions of foreigners for their own convenience became the symbol par excellence of the worst in the relations between the more and less modern areas, they probably did much to foster some forms of effective productive capital accumulation. Through their banks the foreign settlements often made monetary capital secure, and the colonial governments were less likely to confiscate property. In both cases there were prices to be paid. The base for luxury demands was widened, and much of the development that took place was in the hands of foreigners rather than of those who regarded themselves as the true members of these systems. This latter point has had several repercussions. The most obvious has been that the developments themselves have sometimes become the objects of the same sorts of hatreds as the colonial visitors. Thus in North Africa the local inhabitants destroyed something like a million trees (a vital factor in land reclamation) planted by direction of now-deposed foreign rulers. Social history is replete with such semisuicidal cases of babies throwing themselves out with their own dirty bath water. When public sentiments have been inflamed to rid the area of its foreigners, these forays are the more difficult to control. Hardly less obvious is the fact that such patterns of development have left the members of an area quite unprepared to take over management of developments made by colonial powers now departed. For all the criticism of Great Britain's behavior in India, much was accomplished by the British, though undoubtedly if a great deal more that was possible had been accomplished it would have served the needs of India even more.

The problem is perhaps subtler with regard to projects to be carried out publicly. The implications of the question of general stability are obvious enough. If the groups in power are likely to shift frequently, many projects will certainly be wiped out, many will be stopped while under way, etc. But capriciousness may still remain even when such stability problems do not arise. Many of these areas have governments by crony and by nepotism which are considered not only not evil but even virtuous. Under these circumstances a change in favorites may introduce elements of caprice, and even stability may lead to many expenditures on noneffective productive or nonproductive capital. When such governments use mobs for the attainment of their ends, they are gravely limited not only in what they can plan, but also in what they can preserve. Here the problem is further complicated by the fact that these limitations are extremely difficult if not impossible to predict in advance. Finally, the efforts of these governments to remain in power may also undercut economic development. In the Middle East, we now have an example of a potentate who wishes economic development with little or no increase in public education and the like. Within limits, based as his economy is on the production of oil for export, much development has taken place from his point of view, but certainly most of the income from that source has so far gone into relatively nonproductive capital formation.

Motivation for Effective Productive Capital Formation. One of the major obstacles to the formation of effective productive capital is the formation of capital of other sorts. The social structure of these areas has not generally been highly productive of motivation for effective productive capital formation. In the first place, in many if not most of these areas the entrepreneurial role has had low prestige. As will be suggested below, this can operate in more than one way, but ideally speaking such roles have frequently been roles to be gotten out of rather than the reverse. In the second place, such systems have placed heavy emphasis on the maintenance of the *status quo* with regard to social patterns, and the kind of capital formation relevant here can move forward hardly at all without being subversive of the *status quo*. In the third place, these societies have generally been characterized by populations which as a whole have been split up into units (such as family units) in which self-sufficiency of the units is highly prized. This means that a good part of the motivation for capital formation has been directed at supplying the directly and indirectly generated needs of the restricted wealthy groups, in which the family units are not self-sufficient. Such motivation has therefore been highly susceptible to the appeal of "commercialization" as contrasted with industrialization. In the fourth place, the radically ascetic orientations of these areas have tended to focus on other-worldly asceticism rather than radical mastery over the physical facts of the empirical world. In the fifth place, the concepts of the public good in these areas have been oriented to renovations of the *status quo* and not to revolutions of the social system; the concern of the ruling groups with such things as public education, public health, and the like, if present at all, has been primarily impelled by a desire to avoid trouble. This has meant that motivation for the general background formations of effective productive capital has not been great. There are undoubtedly many other factors of this order that a more systematic study of these questions would produce.

I would suggest as a hypothesis that in most of these areas the motivation for such capital formation as is assumed here to be most desired either has been negatively produced (i.e. that it is either an unintended but recognized function of the operation of these systems or an unintended and unrecognized function of their operation) or is a function of the operation of opportunism or "individualism by default" in the somewhat undefined context of the conditions of transition under the impact of contacts with more modern systems. This hypothesis is in no sense tested or proved. It is presented merely because its exploration may prove illuminating in some cases, even if its application is not as general as the hypothesis states. The implications of the differences between the two sources of such motivation seem interesting. The first sort offers the easier possibility of planned transition despite its negative source in the systems from which change takes place. The line of concentration of effort of the second sort is likely to be far more difficult to predict and is far more likely to reflect short-run private interests that are not coordinated with those of the system as a whole.

In the cases of China and Japan we have an illuminating comparative example of this sort. One of the social patterns associated with highly industrialized, modern systems is the so-called open-class type of stratification as opposed to a closed-class type. The former involves the possibility of social mobility of individuals and their families with regard to class position. The latter refers to a system in which, ideally and actually speaking, it is expected that an individual will remain in the class position which he is given at birth. Usually this position is the one occupied by his parents. The distinction between ideal and actual patterns has been brought into the discussion here because class systems that are, ideally speaking, open are frequently in actuality clogged to a high degree. That is to say, in actuality the possibilities of social mobility in an ideally open-class system may be very restricted. This is a case, however, in which an ideal pattern that is not in fact lived up to may nevertheless be of great importance as a feature of the social structure. It is reasonably safe to say that most of the areas with which we are concerned have either highly clogged open-class systems or closed-class systems. It might also be pointed out that societies with class systems that are, ideally speaking, closed may actually have social mobility. It may be suggested as a useful hypothesis that societies that have, ideally speaking, open-class systems are more likely to have a single ideal class type, whereas those with ideally closed-class systems are likely to have a specific ideal class type corresponding to each of the closed class distinctions.

There are marked examples of these distinctions. The caste system in India, insofar as it remains, is an extreme form of a closed-class system, and there are ideal expectations for each of its many distinctions. For those who believe in the caste system there and the system of religious orientations that goes along with it, the religious sanctions for these variegated ideal types are rather clear-cut. These people believe in reincarnation and that one's role in the next incarnation is a function of how well one has fulfilled the expectations of the previous roles. If an Indian is born a member of the Sudra caste, his chance for advancement is believed to be improved to the extent that he performs the Sudra role well. The Brahmin role has much higher prestige than the Sudra role, but for a member of the Sudra to act like a Brahmin, however virtuous he may be in all other respects, is to assure that his next incarnation will be lower in the scale rather than higher. For those who hold such beliefs, the effects on their actions are considerable. It is difficult if not impossible to understand or to analyze what they do without taking this into account. By no means all societies have such neatly "internalized" methods of maintaining such structures. In Tokugawa Japan a samurai had full authority to cut down with his sword a merchant or peasant who dared to act as though he were of higher status.

In "traditional" China there was both ideally and actually an open-class system, though actually the system got highly clogged especially toward the end of dynasties. In some cases elements of closure, ideally speaking, were also introduced, but they seem never to have caught on fully or to have been well maintained. Despite much careless recent writing, China has not been a feudal society for 2,000 years, unless one uses the term feudal in its purely invidious sense, meaning a society in which many people are poorly off and a few are very well off by our standards, and which is not "modern." For 2,000 years China certainly has not had the closed-class system so characteristic of those European systems that we are accustomed to call feudal. The path of social mobility was through the acquisition of a classical Chinese education and the attainment of public office through competition in the examination system or some subversion of that system. Officeholding, scholarly attainments, and income from either office or the absentee ownership of land (or both) were the requirements of gentry status. A man who acquired these raised his family in general to that level in Chinese eyes. In theory the examination system was open to all, and, though occasional bits of closure were introduced by barring some from these competitions (e.g. the sons of merchants or actors), these barriers were never well maintained. Those with money enough to educate their sons could usually ignore or get others to ignore these restrictions.

In this society, merchants had very low prestige, ideally speaking, and the wealthiest merchant was inferior to any member of the gentry, the peasantry, or the artisans, in that order. Actually, of course, the merchants were frequently very powerful and very much respected, just as gangsters and political bosses in our society sometimes circumvent ideal expectations. To put the matter briefly, this setting furnished powerful motivation to take both capital and talent out of entrepreneurial roles and put them into roles that were either simply not germane or even obstacles to the type of development in which we are interested. Able sons of merchants were to be educated in the classical Chinese manner as soon as the family could afford it. That education had many appealing features, but it was by no means suited to roles concerned with effective productive capital formation. Capital was absorbed in the education of these sons and in the purchase of land rather than in reinvestment in entrepreneurial roles. Ideally speaking, gentry were not supposed to be concerned directly with production but were expected to live as devoted scholars or as public functionaries. The test par excellence of success in entrepreneurial roles in "traditional" China was how long the pursuit of these roles had to be followed before the family could be transferred to gentry roles and types of investment. These types of investment tended to involve either nonproductive capital formation or noneffective productive capital formation. Although there were exceptions, this was the general pattern. There were also even further implications of this setting for the problem with which we are concerned here, but those given will have to suffice for present purposes.

In Japan, on the other hand, there was both ideally and actually a closed-class system with very few exceptions (and probably without any, ideally speaking). Here too the merchants, ideally speaking, had low social status, and persons of high social status were not expected to contaminate themselves with entrepreneurial roles. Landholding and certain types of education and habits irrelevant to or subversive of modernization were characteristic of the high status groups. Moreover, the merchants, though ideally of low status, became in fact very powerful. Unlike the Chinese, however, merchants in Japan could take neither talent nor capital out of merchant roles on any large scale. Much was spent on luxury consumer goods, but patterns of social abstemiousness in the society placed a brake on this sort of obstacle to effective productive capital formation. The merchants could not buy land in any substantial quantities, if at all. This was a feudal system in the ordinary historical sense, and landownership went with the positions in the feudal hierarchy.[19] The merchants had to be constantly on the lookout for new enterprises to absorb the talents of the next generation and the profits from their past operations. They were aided and abetted in the opening up of new avenues by a factor also present to some extent in China. In many ideal respects, to pay attention to the merchants

[19] Even the samurai did not "own" land but had certain rights to rice income from the lands of the daimyo to whom they were attached.

was so beneath the dignity of their superiors that the merchants' behavior was not regulated in the same detail by either law or custom as was the behavior of those holding more important roles in the society.

The analysis of the distinctions between China and Japan here is too brief for any save illustrative purposes. Suffice it to say that the merchants of Tokugawa Japan were themselves the leaders of their country's modernization, which went ahead with remarkable facility. Most of the zaibatsu of modern Japan became powerful members of the new government as well as the industrial, financial, and commercial leaders of the new state. From the start of the modern period the great family enterprises of Japan were highly diversified. The Mitsui and Mitsubishi were in everything from fishing through manufacturing to banking and insurance. This diversification shows some marked contrast to the family fortunes of the West, which originally seem to have been based largely on a single line of endeavor, such as railroads, steel, chemicals, or banking. Here again the Japanese reflect their background, for the same sort of diversification characterized the interests of the Tokugawa merchants. Early in the development of Japan the Tokugawa merchants, faced with limitations characteristic of a feudal economy, had been forced to seek many different ways of investing their incomes.

The contrast with the Chinese merchants of the "traditional" period is marked. With the introduction of the new forces in China the old merchants occupied the roles of middlemen or went in heavily for "commercialization," although they still continued to take their talents and their capital out of such roles as quickly as possible. The banks of China gravitated into the hands of such men and of large landholders, who quickly became one and the same. These banks made land loans to a much greater extent than those of Japan. The new businessmen of China seem really to have awaited a whole generation's training in schools abroad, and even those so trained were continually being drained off into administration of landholdings and into "commercialized" efforts from which large and quick profits could be made. Government office was exploited for private advantage, as it no doubt was in Japan. But in Japan private advantage was conceived to lie in the direction of the formation of effective productive capital, and this was not the case in China. One of the few convertible elements in the Chinese situation was, curiously enough, the high prestige of education for gentry status. With the wiping out of the examination system and, even before that, with demonstrations of the power of those with new ways, many of the merchants and many of the gentry explored the idea of Western educations as a path of prestige for their sons. These were the sons who tried to do what the Japanese did, but they ran into immediate problems. In the first place, they picked up many things in their new education that alarmed the older generation. These were new ideas about marriage and the family, etc., which shook the faith of their elders in their judgment. Furthermore, it was their elders, without such education, who had control of the capital assets of the area. Land was a rock of security, and the employment of relatives was a minimal manifestation of humanity. Finally, in the 1930's, when some headway was being made by the differently educated young, the Japanese dealt China what may in the long run prove to have been her most serious blow. The Japanese took over just those areas in which new plants and projects were struggling to operate in new ways. In so doing, they wiped out the basis for power of the young, progressive businessmen in the Kuomintang and left power in the hands of the most "traditionally minded" and correspondingly the most "land-oriented" men in China.

One other factor may be mentioned here to illustrate the rather strange way in which the transformation of social factors may have results different from those expected. China had a civil service system with methods of seeking out talent via the examination system. Japan did not. Both China and Japan were societies in which nepotism not only was not a sin but was in fact a virtue. In the Chinese bureaucracy no effort was made to teach the point of view that nepotism was evil; an effort was simply made to insulate people against it—to make it impossible for nepotism to operate. It may be taken as an assumption here that the operation of nepotism in either the public or the private sphere is likely to interfere with the formation of effective productive capital. In the Chinese case the fatal flaw was the type of civil service system. It was based on achievement in a type of education almost certain to be an obstacle to the new requirements. In Japan, however, the saving grace was a little-studied system of "civil service by adoption." Japanese family heads who lacked an able son to succeed them could and sometimes did deliberately seek out a young man who had already demonstrated considerable ability of the type sought and adopt him. Unlike the Chinese system, this meant that people were picked for criteria relevant to the tasks they would perform. What is perhaps even more important from the motivational point of view, this procedure united the family interests and the occupational-role interests of the person picked rather than leaving a possible conflict between them. It was a system not unlike that in this country of giving conspicuously able managerial personnel stock in the company to assure their undivided interest. The zaibatsu of Japan seem to have raised this practice of civil service by adoption to the point of explicit family policy.

Formation of Other Types of Capital. One of the most obvious obstacles to the formation of effective productive capital is the formation of other types of capital. This does not imply a sort of "wage-fund" doctrine of capital in any absolute sense, but it seems reasonable to maintain that the formation of nonproductive capital represents a diversion from the formation of effective productive capital. It is an obstacle in two other senses as well. In the first place, any nonproductive or noneffective productive capital requires some type of conversion if it is to become effective productive capital, and in some cases it may be impossible to make such conversions.[20] In the second place, the formation of these other types of capital may interfere positively with the formation of effective productive capital.

In our discussion we shall not be concerned with the formation of noneffective productive capital because of the idiosyncrasies of individual judgment. There are going to be such failures in all types of systems from the most to the least modern. Our interest lies in such capital when there is a good possibility that it is noneffective for reasons rather systematically related to social structure on a rather general level.[21] Our first concern here is with the formation of nonproductive capital, and in this connection it is well to keep in mind the evaluations built into the concepts used here.

As mentioned above, most of the areas that we have discussed are ones with a comparatively small number of very wealthy people and a vast majority with very low incomes and living on the bare margin of subsistence, neither in good health nor for long, by modern standards. With incomes of that type, the vast majority can do little to change this picture through their own efforts alone. We are not concerned here with whether any of these people at either extreme of the income scale are good or evil, but merely with

[20] Such capital might be called *absolutely nonproductive capital.*

[21] We simply tease ourselves if we believe that any science will accurately predict the idiosyncratic; the state of development of the social sciences as compared with the natural sciences is such that what appears to be idiosyncratic is encountered on a far more general level in the former than in the latter.

how they do or can behave and with some of the implications of their behavior. Cannot the income of the wealthy be taken over directly and turned to new purposes? Regardless of what one thinks about state interference in these matters, the problem is not simple. In the first place, the wealthy people usually have a great deal to say about their governments and are strategic to the system's traditional mode of operation. This means that steps taken in violation of their wishes must face the question of revolutionizing the social structure, as has been done to some extent in Turkey and Japan. In the second place, the wealthy have not customarily used their wealth in a manner relevant for the new purposes.

Much of the income of the wealthy has gone into nonproductive capital or into capital that is productive only indirectly and hence is a form of noneffective productive capital. Nonproductive capital takes many forms, which can be classified in part under Veblen's rubric of conspicuous consumption. Many of the wealthy maintain extremely elaborate households. While they have performed a service in preserving much of the art of the various areas, such capital is not convertible on the whole into productive forms. They have also employed much of their wealth to reallocate the various resources of the community, primarily by investing in land. This has had profound effects on the social structure by increasing tenancy and the like, but these reallocations have had little if anything to do with improving the productivity of the resources. In some cases, however, such concentration of control over resources may be useful for purposes of conversion, because it may make possible use of large units of resources for modernization. In some types of agrarian production, this may be crucial, since the alternative usually consists of small, highly cut-up landholdings on which economies of largescale production are difficult to achieve. While it has been hard to dispossess large landholders it has been even harder to dispossess small ones.

The expenditures of the wealthy on conspicuous consumption are for the most part down the drain as far as present purposes are concerned. The far-reaching effects of this are more obvious if one realizes that most of the production of the artisans in these areas goes to satisfy the demands of the wealthy and their retainers. The basic support of these economies rests largely on agrarian production in highly self-sufficient units to which the artisans have contributed little. The convertibility of these artisans to other occupations may be extremely difficult, especially to the extent to which these occupations are highly traditionalized, as they generally are.

In addition, in many if not most of these areas there has been a complex of motives leading to the amassment of "hard goods" such as jewels and precious metals. To some extent, this has been motivated by their display value, but there is probably no small element of concern over security involved. Resources in this form do not produce an income, but in societies in which the governments can be capricious from the point of view of the individual (whether because of authoritarianism or instability matters little here), these forms of wealth are difficult to destroy and relatively easy to hide and transport. Furthermore, in most cases their value has been surprisingly stable throughout history. (Aluminum, once regarded as a precious metal, has been an exception.) While hoarded, these forms of capital remain unproductive, but the savings they represent are at least productive at the second remove as long as the general world demand for such items holds up. Japan is a case in point. In her development, hoards of specie were systematically used to get effective productive capital from abroad.

It is comparatively simple to say that for modernization to take place one must inhibit these nonproductive capital formations, confiscate hoards, exchange them for effective productive capital, etc. But like so many things simply said, this is not simply done. The nonproductive capital frequently is involved in the income of large groups such as the artisans. Furthermore, one cannot stop these modes of expenditures without having some plan for handling the consequent dislocations—or without facing the results thereof. When one turns from the wealthy to the populace at large, the problem turns into the whole problem of modernization. Even the little the populace has may be expended in relatively nonproductive forms; correction of this involves nothing less than a revolution in social structure. The economic allocation of an area is not a concretely separable set of factors. It is only one way of looking at the system in general.

The bases for noneffective productive capital formation promise to cause even greater difficulties. If the motivation to abandon the old is strong enough, many of the problems of nonproductive capital formation may be rather easy to handle, although many of them are functions of the desire to change itself. One of the most notable of these is what has already been dubbed "conspicuous industrialization." Some of the most progressive reformers in "backward" areas are sometimes the most difficult to handle. The modernization involved in setting up agrarian cooperatives lacks the obvious features of a modern steel mill, a cellophane plant, or an assembly depot for automobiles, but these latter may be more than a simple waste of short resources. In areas lacking a comparative advantage for such production and unable to utilize the output of such plants, their running costs in terms of scarce foreign exchange may be a more significant obstacle to the formation of effective productive capital than their initial cost or their maintenance in idleness. There is more than naïve emulation involved here. There is the relevance of heavy production facilities to the maintenance of armies and fleets, a matter to be discussed briefly below. There is also the problem of modern nationalism, which seems to go along with these transformations. Under these conditions, counsel from abroad to the effect that the most modern plants are by no means those most suited to modernize an area in all respects may be and is often regarded as a form of imperialism.

"Conspicuous industrialization" is a function of pride, folly, and uncritical hope on the part of local inhabitants and foreigners alike. There are other problems that are less obviously a function of human fallibility. These areas in general lack experts, and foreign areas have not supplied them as easily as some assumed would be the case. Only education and development of a sort that is costly and not easily motivated on a private basis can correct this lack. Here one is faced with questions of the type of *expertise* needed, the ability of the experts to communicate and get along with the nonexperts, a stable continuity of experts if they must come from abroad, etc. The social systems in these areas have not generally provided the kind of education necessary for the development of such experts. There is even a further difficulty in that neither we nor they have the experts needed to train such experts.

Another feature related to the new nationalism is suspicion of foreigners in general and of those of the modern West in particular. One need not review the basis for this. There are sins on both sides, if one must pass judgment; the record of the West has by no means always shown a high concern for the prosperity and human dignity of the inhabitants of these areas. In addition, the new leaders have in many cases deliberately played on these feelings of resentment as a method of gaining or holding power. This has in some cases resulted in keeping major elements of productive capital noneffective. Although one may not wish to assess blame in the recent historical developments in Iran, there is no doubt that it exemplifies the immediate transfer of a major resource into a noneffective state. Rational arguments in purely economic terms are relatively ineffective in solving problems of this order.

The use of capital for armies, fleets, and air forces raises another problem. Whatever such items may mean in terms of sovereignty and international prestige, they are a waste from the point of view of effective productive capital unless it can be shown that the multiplier effects of such expenditures more than offset the expenditures themselves. Even this would raise the question of whether or not other sources of stimulus could not be found which would themselves be effectively productive. Japan, Germany, and Russia all carried out their transformations despite such formations of capital, and it would be useless to raise the question here as to how many of their international problems were a function of such expenditures. However, it is not fruitless to ask what would have happened if capital expenditures had been consumed in other directions. This, unfortunately, raises the whole question of the relevance of world peace and security to the formation of effective productive capital. Solutions to such questions are probably utopian.

Expenditures of capital in the name of nationalism either directly or indirectly do not often result in effective productive capital formation. It is important to note this, but lest this observation seem to support the notion of crusades against nationalism in the "backward areas" (and such crusades are likely to be ineffective) a word should be said on the other side. Whatever its shortcomings, intense nationalism is a general sort of faith in terms of which individuals may be motivated in many diverse ways. I have tried to show in other connections above that, because of the impact of the new forces, the traditional patterns in these areas are likely to be under heavy and effective assault—and this through no one's malevolence or plotting. Intense nationalistic sentiment, growing either with or without explicit encouragement, may well be the major new and unspecified general form of faith in terms of which the new values may be integrated into the life of the members of the traditional society. There is always some pride and faith in the identity of the traditional system to serve as a basis for nationalistic identification. In the future we may look back and see that nationalism, for all its costs to men in terms of lives, treasures, and accomplishments lost, has played a necessary role in these developments.[22]

[22] In addition to the factors mentioned above, nationalism may play a vital role in stimulating internal investment.

There is one highly general reason for believing this. The conversions seem to require that considerations of personal identification such as one's family, village, class, school, and circle of friends be progressively ignored in one's selection for different sorts of treatment. These "particularistic criteria" (in the jargon of sociology) are utilized in all societies for some purposes, but their role is sharply limited in highly modernized societies by contrast with relatively nonmodernized ones for reasons that need not detain us here. These modernized societies place heavy emphasis, especially in the roles most vital to the operation of the new technologies, on generalized qualities and performances (i.e. "universalistic criteria," in sociological jargon). At the same time, although we know relatively little in any precise sense about motivation in general, it would seem that personal identification with a cause is of great importance in creating and maintaining such motivation as is necessary for the sort of effort involved in the developments sought here. The traditional bases of such identifications may well interfere with effective productive capital formation by raising such problems as that of nepotism. Nationalism is also an identification of the particularistic sort that can and does interfere with the process of effective productive capital formation; but it bases its personal identification on a sufficiently large group so that within the group an exceedingly broad basis remains for the selection of individuals in terms of what they can do rather than who they are.

The problem of nationalism as both an aid and an obstacle in this process points up one other extremely general consideration. It is not difficult to persuade researchers and even the general public that some of the features of the traditional basis are obstacles to change, that some may aid it, and that some may act in both ways. It is, however, no less necessary to realize that some of the factors that may be prerequisites for the process or even requisites of the maintenance of the desired goals may also in part inhibit the attainment of those goals. One of the major policy problems posed in these areas is that of neutralizing the inhibitory effects of patterns that are unavoidable if the changes sought are to be achieved. This is another of the fundamentals in the naïveté of the assumption that clever social engineering will be able to achieve a combination of the "best of the East and the West."

The Demographic Problem. The demographic problem has received so much attention from thoroughly qualified experts that I intend here merely to point up some of its implications for the present discussion. The elements of the problem are well known. Most of the so-called underdeveloped areas are characterized by very high and steady birth rates and high but fluctuating death rates. The net rate of increase is thus usually small. The absolute size of these populations relative to their present incomes is such that considerable portions of the populations involved live close to or well below the margin of subsistence by Western standards. The death rates in these areas, as well as the rates of debilitating diseases, arise from sources such that modern medical technology can with comparative ease greatly reduce them and make them relatively stable at lower points. It would be extremely expensive to cut them to the rates considered endurable in the most modern societies, but comparatively cheap and easy cuts would still have dramatic effects for the nonmodern, relatively nonindustrialized underdeveloped areas. In addition, because of the size of populations and the traditional modes of occupation, the introduction of modern forms of capital will encounter no shortage of manpower in general, though there will probably be acute shortages of properly trained and educated persons. Under such circumstances the pressures to take advantage of medical technologies available are likely to be great; if for no other reason than the problem of absenteeism, reductions in the death rate and the rates of endemic diseases are likely to be requirements for the changes sought. Heretofore, efforts to reduce the birth rate rapidly have not been successful. Some Westerners believe such efforts to be ethically bad, and the vast majority of those in the areas concerned are for one reason or another much preoccupied with keeping it high. We know, however, that in the past those societies that have industrialized have, whether they wished to or not, been characterized by falling birth rates for a whole series of reasons (about which our knowledge is by no means certain). But these birth rates have not fallen without very considerable population increases taking place in the interval. In the course of the process in the West, most of the areas concerned had considerable untapped resources in the form of land, etc., available. That is not the case with the areas concerned here, pending rather radical developments that seem to be nowhere in the making. With a 1 per cent net increase in population per year an area's population will double in 69.7 years, with a net increase of 2 per cent it will require 35 years, and with a net increase of 3 per cent 23.4 years will do the trick. Given the height of birth rates, the type of death rates, and the available medical technology, net rates of increase of

1 per cent on a temporary basis should be simply achieved, and ones of 2 or 3 per cent are by no means out of the question. I say "on a temporary basis" because, barring quite radical rates of development, the death rates would soon rise again from starvation, and the attendant social unrest (nowhere do even the most backward peoples cherish high death rates from such sources) would surely not be conducive to high rates of development.

All this means that for capital formation to be effective and productive, the rate of increased productivity that it brings must be geared to the increases in the net rate of growth of population that seem certain to accompany it. Moreover, the distributive system must get these increases to the population on a corresponding basis. If the net rate increases 1 per cent per year, the increase in capital formation must be such as to allow increased production of 1 per cent per year at a minimum. When one considers that some of these areas have base populations today in the neighborhood of 400 million and that several tens of millions is by no means uncommon, the implications of the demographic problem for that of the scale of the programs mentioned above are not difficult to visualize. Furthermore, the relationship will probably have to be more than a one-to-one correspondence to be effective, because some of the increases in production will of necessity be such that their distributive implications will not be immediate. The comparative advantage situation of the particular area will be important for this problem, and such things as "conspicuous industrialization" will have large effects.

Thus there can be little doubt that a major problem in social engineering is to bring about unprecedented drops in the birth rate. Study may show us what factors in industrialization are most important, and such knowledge may make it possible to attempt to maximize these effects. Currently, however, we have no major source of assurance that this is possible, much less that it is practicable. The implications of what we seem to know are stark. If declines in the birth rate can be achieved, there is little doubt that their implications will be revolutionary for the social structure. They will certainly require radical alterations in family structure, and in many areas they are sure to raise large-scale problems about the care of the aged. In those societies in which the major sources of control are highly dependent upon family patterns, the whole problem of a new basis for control will be opened up. One could go on. The problem in terms of goods and gold may be large enough, but its solution cannot even be begun solely in those terms. Radical increases in the net rate of population growth could make current rates of capital formation noneffective in any area, and in the non-modern, relatively nonindustrialized areas it is difficult to see how this is to be avoided.

One of the knottiest problems in connection with this grim demographic picture is its implications for the general state of motivation in the areas concerned. We know little enough about motivation, but in a common-sense way we feel (and such scientific findings as we have do not seem to contradict this feeling) that in all of these areas there is an interest in the material improvement of the way of life in terms of better health, more food, better housing, and a larger per capita income of goods and services. This is enough to make certain aspects of the new forces from the West appealing for one reason or another to one group or another in these areas. However, the introduction of these new ways has implications not appealing to these peoples. In some cases it is realized in advance that many undesired patterns and conditions will accompany the desired changes; in most cases, however, this is not fully realized. These peoples always seem to want to maintain many of their traditional patterns and many that inhibit the formation of effective productive capital. As suggested above, nationalistic sentiments are important in this connection. Furthermore, the expectations of accomplishment via the new ways are likely to be grandiose. Expectations of precipitate results are the order of the day. These expectations are fostered by the attitude of many of the experts from the West. These experts come from societies which could not have the systems they have without this element of confidence in the ability of their ways to conquer such obstacles quickly and easily. Almost everywhere in the areas to be developed, the increased survival of children, dramatic improvements in public health, and increased life expectancy are publicly viewed as blessings. The implications of these blessings are not likely to be immediately grasped as flowing from the same source. The sense of sacrifice of traditional ways is likely to be acute. The failure of productive capital to be effective because of these factors is likely to result in serious undermining of hope and motivation. Initial successes are more apt to be complicated by subsequent disillusionment. The most difficult problem of all, however, is that the motivation (such as that in terms of nationalism) which permits certain unpopular features to be put into effect is likely to turn into substantial motivation for their elimination, despite the fact that many of the features so attacked are likely to be requisites for any long-run success of the program. Productive capital may, of course, be rendered noneffective by irrational action economically oriented. It may also be rendered noneffective by quite rational action or irrational action oriented to the maintenance of traditional patterns. The motivation of the latter is the more likely in cases of disillusionment flowing from the demographic problem of these areas.

The problems connected with the demographic situation will require large-scale planning and coordination, which in turn are likely to require the participation of some major public body in addition to or apart from private initiative. Public control is also necessary if the private interests and the public controlling bodies in the area are not identically composed or do not see eye to eye. If the demographic problem is not to hinder the formation of effective productive capital, such formation must take into consideration the demographic problem as well as more orthodox questions of the marginal productivity of capital. For example, it may "pay" in this sense to try deliberately to urbanize and industrialize certain areas, because shifts from rural to modern urban settings and shifts from traditional to modern occupational roles have quite frequently been associated with the breakup of traditional families and with falling birth rates. It may also pay early in the game to seek to increase the production of, and the ability to purchase, heavy consumer goods, because the availability of such goods, along with birth-control techniques, may be accompanied by an attitude of choosing between more children and more such goods. Such considerations cannot, of course, be admitted to the exclusion of more orthodox questions of the productivity of alternative employments of capital, but neither can they be ignored in areas in which the demographic problems are so different from those now generally faced by the more highly modernized and industrialized areas. The fact that many of our demographers are also highly trained economists should be an asset in this problem of social engineering.

Foreign and Domestic Action Not Oriented to Internal Balance. In this field there has been a great deal of discussion of the role of imperialism in area developments. Like many highly charged controversies, this problem will probably turn out to have been characterized by more heat than light and by more failures to communicate than actual differences over points raised. As indicated above, foreign "interference," even when narrowly motivated by self-interest, has by no means been devoid of positive significance in the formation of effective productive capital. There are still, no doubt, groups in the world who, consciously or unconsciously, would prefer to see developments in the nonmodern, relatively nonindustrialized areas serve to increase effective productive capital in their own countries or in any conflict of interests prefer to serve themselves rather than others. The implications of this, whether termed exploitation or not, for the formation of noneffective productive capital are fairly obvious. This problem may always be with us, but in the current world situation I think that it is not the main source of difficulty with regard to foreign participation in the areas discussed here. It is certainly not in any *overt*, announced sense the motivation of the major powers on either side of the iron curtain, and both sides have reason to stand in much fear of giving world opinion grounds for such an accusation.

On the domestic side there is likely to be more ground for such fear. Individual initiative is likely to be very important for the development of effective productive capital in all of these areas, but such initiative raises difficult questions of control. The tendency of individual initiative to use capital-forming as a way station in escaping from lesser roles into more traditionally evaluated ones, the motivation for "commercialization" rather than the formation of effective productive capital, and the problem of "individualism by default" have all been mentioned above. The last of these three may be particularly troublesome. The other two are, after all, functions of highly structured social situations, and to that extent the possibility of operating in terms of those structures to negate their effects is opened up. The third, however, is more likely to be a function of the breakdown of social structures and the absence of new ones which would place limits on opportunism without physical coercion. This may have nothing whatever to do with the problem of the "evils of human nature." It may be a function of the fact, for example, that persons used to making decisions in terms of the implications of their actions for their families now no longer have such families or cannot calculate effects in these terms.

In the West, where the virtues of individualism are so much appreciated by the general public, we have lost sight of what a highly stylized individualism it is. One has only to look at some of the nineteenth and eighteenth century arguments against publicly supported education, post offices, etc., to see how much this situation has changed. Moreover, the most conservative of our organizations representing private business would hardly now advocate permitting the kind of financial manipulations and deals that characterized the extremely rapid development in the United States in the late nineteenth and early twentieth centuries. This is not the place to go into the structural ramifications of "individualism by default." Suffice it to say that any substantial amount of such individualism would greatly complicate the problem of planning and coordination necessary for the formation of effective productive capital in these underdeveloped areas.

It is, perhaps, going much too far if one maintains that the "it's a plot" theory of social problems in either international or domestic affairs is never tenable, but over the centuries efforts to analyze social problems predominantly in such terms have had such modest success that it might be desirable for the present to regard such an approach with skepticism. Whatever the history of the past may have been, the great present danger in the nonmodern, underdeveloped areas, without considering the iron curtain countries for the moment, is not that one nation or group of nations will urge another to develop for its own betterment without any genuine interest in the betterment of the nation being developed. Even if one or more nations should do so, our problem would not be one of obstacles to the formation of effective productive capital in the "backward areas" but would be one of the formation of effective productive capital in the relatively modern and highly industrialized areas. The effectiveness and productivity of the capital for the more "advanced areas" in this case would be predicated on the use of resources of all sorts in the less "advanced areas" with no concern for the formation of effective productive capital there save as it may serve foreign interests. Even if one assumes the best intentions on the part of the foreign powers, however, there will still be enough factors that will impede the process.

Our ignorance is likely to be a greater enemy than any evil machinations. In both foreign and domestic cases we are likely not to have any real basis for knowing what the direct and indirect effects of given attempts to increase the formation of effective productive capital will be. In addition to the fact that some of the factors themselves vital to this end will have inhibitory effects, many factors not vital to such an end will also be introduced and may have inhibitory effects. We are by no means clear about how the parts of these modern, highly industrialized areas interrelate; we are no more clear about the relatively nonmodern, nonindustrialized underdeveloped areas; and we are correspondingly unclear about what must be done to develop the latter and what the effects of such actions may be. It is not going too far to say that one of the major difficulties in the formation of such capital is this ignorance. Few of our current experts are of much help to those responsible for policy decisions in these fields. We need a great deal of research on these problems, but at all times we are likely to have to operate with less knowledge than would be desirable. This is not a counsel of despair, but it indicates that those concerned with such programs must have an ability to recognize failures and a willingness to write them off without throwing further "good" capital after "bad."

The question of handling Machiavellian intents domestically is part of the general problem of control touched on above; that of handling international Machiavellianism is still, alas, a problem of balances of power, with some assistance toward a solution coming from the United Nations Organization.

Conservation of Resources. One of the most persistent notes of explicit warning on the modern scene is that struck by the conservationists, who have pointed with alarm to the manner in which natural resources such as timber, land, minerals, etc., have been exploited in the most modern, highly industrialized areas as well as in the more "backward areas." I do not intend to deny those arguments; I merely want to raise questions about them in connection with the problem posed here.[23] There is little reason to question the fact that, by some standards, we have been prodigal in our use of these resources, and perhaps there is nothing but good to be gained from trying to prevent a repetition of such experiences. The same solicitude is no less germane to the question of capital in general.[24] The cutting of forests without plans or investment in reforestation has its analogue in the use of machinery by labor skilled enough to operate it but not to maintain it in such a way as to prevent rapid depreciation, etc. The problem raised here is whether the conservationists' position does or does not involve an absolute (and usually implicit) standard of waste. It may well be that certain "ruthless" exploitations of resources, quite uneconomic at other times and by other standards, are quite necessary for these developments. If these resources are directly absorbed in uses that do not have impli-

[23] Much of the material presented on this point is based on discussions of this matter with Jacob Viner. He cannot, of course, be held responsible for the shortcomings of its use here.

[24] However, it may even pay in some cases to engage in what may be shoddy investment by modern Western standards, especially if this permits an area to get some benefits more quickly and at the same time spread risks.

cations for maintaining or raising current rates of productivity, the conservationists are on extremely sound ground, and failure to heed their warnings will certainly impede the formation of effective productive capital or dissipate at a greater rate than otherwise that which is already in existence. In the nature of the case the argument of the conservationists envisages the future. The question that must be raised in this connection is that of the productivity of the employment of these resources. Has, in effect, the compound interest on the barns and houses built in the deforestation of the United States amounted to more than those forests would be worth had they been left standing? One may add to this the question of the income from the land thus cleared. This is not to say that the conservationists are wrong; but in any particular case one must estimate whether they have made the necessary allowances mentioned above as well as allowances for risks to the capital left better preserved but less used, for obsolescence of such capital, for changing evaluations of it, etc.

What may in some respects be very wasteful employments of capital, by current standards, may in some of the underdeveloped areas concerned provide a sort of bunched stimulus to development of effective productive capital that may far outweigh its waste by these other standards. The demographic problem is relevant to these considerations. If such prodigal uses of resources can quickly reduce birth rates, they might be well worth the future problems they would pose.

The solution to this question may vary widely depending on the resources of the area concerned. In some areas forest may simply be burned off to get arable land, and in others forests may have to be planted. But all underdeveloped areas are likely to face this problem in some form because it is an inescapable aspect of the problem of alternative possible employments for scarce resources. Certainly all these areas face it with regard to the employment of machinery, for all of them have a general dearth of skilled labor to combine with machinery. One can always defer the use of machinery until a higher level of training has been reached. But overconservation of various forms of capital may well be a major obstacle to the formation of effective productive capital in some places. This possibility is increased by the fact that outsiders in trying to help these areas and local inhabitants in trying to improve their situations are likely to be much concerned with avoiding the mistakes made before. Even if they have correctly calculated the extent of the wastes in the more "advanced areas," counsel against such practices in South America, for example, may not be warranted. Here one is faced not only with the usual problem of lack of necessary information, but also with the problem of the potential nontransferability of information that may be quite adequate in some contexts.

Separation of Ownership and Control. The pattern of separation of ownership and control through such modern devices as stock companies and debentures of all sorts has become a commonplace in the West, but it is not familiar in all areas, especially in the relatively nonmodern, nonindustrialized areas, for a number of reasons. One of these may well be the much more limited extent to which money is a generalized medium of exchange. A second is the question of security of investment in general. A third, closely related in some senses to the second, may be the fact that in most of these areas individuals must either handle their own affairs directly or have them handled by someone with whom they have a strong personal bond. A fourth factor may be that in most of these areas productive enterprises are generally expected to be handled in terms of some specifically traditionalized unit such as the family or the village. A fifth may be the frequent emphasis on a high degree of self-sufficiency of the productive units. There are, no doubt, many other considerations that could be added to this list. Those given here should serve to open up the question and consist of observations that can probably be quite widely documented.

The limitations suggested above on the separation of ownership and control by the technique conventional in the West for accomplishing this on a private enterprise basis handicap the extent to which private initiative can operate in these areas. They raise serious problems of amassing capital for the enterprising person who is not at the time in command of a private fortune. To some extent this will cut down on the range of enterprise and initiative available to the system. This will be the more serious if one does not know in advance exactly what forms of initiative are most likely to pay off, and of course there is never such perfect prescience.

The limitations on separation of ownership and control on a private basis have other implications as well. They are likely to mean that much of the saving necessary for economic development will have to be carried out on a forced basis. Savings thus made can, according to the system, be used for different types of capital formation by either private or public agencies. In any case forced saving as compared with voluntary saving is likely to have social repercussions in the form of various types of discontent. Systems in which these savings are utilized by private individuals may make them a focus of aggression, and those in which they are used by public agencies may have the same effect with regard to public sources of control.

The separation of ownership and control by virtue of general public control of ventures, even when they are nominally owned by the government, also raises problems. Here there is little if any possibility of accumulating the capital necessary except via forced savings, taxes, etc. This is more likely if the general public is not accustomed to the depersonalized separation of ownership and control. Even in the most modern Western countries, government bond issues in which participation has been based on purely private initiative seem to have been successful on a large scale only under quite dramatic circumstances in which general sentiments of loyalty and the like as well as economic interest in the narrow sense have been appealed to. It may well be that people in the nonmodern, relatively nonindustrialized underdeveloped areas will calmly become habituated to such operations only if the public agencies take on general responsibility for the economic aspects of the life of the areas. This will, of course, pose all of the usual problems of a planned economy plus those of general development.

One other problem is worth pointing up in this connection.[25] This problem has to do with what has come to be referred to as the "circulation of the elites" in common-sense language. This is the problem of the role of experts and the difficulty of making them available and using them. The separation of ownership and control, especially when it carries with it depersonalized, relatively objective administration, may greatly stimulate the circulation of relevant experts in the system. This is true of at least two types of experts. In the first place, it is true of what one might call "business experts," those innovators especially skilled at detecting new avenues for effective productive capital formation, who may operate in terms of far vaster resources than they can command as individuals. This, of course, poses a corresponding problem of their individual mistakes in judgment. In this connection, motivations in the direction of "commercialization" would have to be carefully watched. In the second place, such separation should increase the sphere and ease

[25] I am indebted in considerable part to Klaus Knorr for private discussion of this question. He is in no way to be held responsible for any inadequacies of the discussion here.

of operation of what might be called "staff experts," those experts with a generalized command over technical know-how. The larger amassments of capital and the greater fluidity with regard to alternative employments of capital made possible by such separation are likely to provide new fields for such experts. These are fields that would not in general be uncovered by the mass of individual savers, who might lack either the imagination to see such opportunities[26] or the ability to save enough to put such imagination and initiative to work. This is the more likely if such separation also serves as an important step in freeing control of such enterprises from the highly personalized basis so common in these areas. In China, for example, where family obligations are so strong in "traditionally" oriented individuals that it is very difficult to resist the pressures of nepotism, such separation may be an important technique for avoiding these problems. It will never suffice alone as a technique for negating such pressures. But it is the essence of all of the problems on this score that no single technique by itself has any real probability of success.

SUMMARY

In what has been said above a division has been maintained between the special problems posed by the position of latecomers in this process of modernization and the general problems inherent in the basis from which change takes place in these underdeveloped areas. The former are problems that are in some sense common to all these areas; the latter are problems that will vary considerably with the special features of the areas concerned. Nevertheless, in the latter an attempt has been made here to focus attention on a series of difficulties that are likely to be rather widely distributed, with occasional digressions to point out major lines of differentiation.

As stated early in this paper, what has been presented here should be regarded as a set of tentative hypotheses rather than as scientifically established results. In my own work these hypotheses have been generated by analysis on a considerably more systematic, technical, and general basis than would be practicable here, but that work is also at a relatively untested stage of development. The intention throughout this paper has been to open up problems relevant to the framework in terms of which the allocation of goods

[26] Such imagination is not likely to be generalized throughout the population, and the general traditional orientations of the public in these areas are likely to inhibit it.

and services takes place. The generalized interest in the theory of allocation that has been a feature of the more strictly defined field of economics has, as is well known, operated in terms of a fairly constant (for the areas concerned in that theoretical development) set of assumptions (often implicit) about the framework in terms of which this allocation takes place. While there have been notable differences in the areas of primary concern in the theoretical development (e.g. the forms of business in France as contrasted with the United States), it has to a considerable degree been practicable to proceed in this fashion, since a large number of theorists have been willing and able to avoid the fallacies of overgeneralization and of reification. In the relatively nonmodern and relatively nonindustrialized underdeveloped areas even this degree of practicability is strictly limited. The different social patterns in these areas set different limits within which allocation takes place, and the changes in allocations occasioned by the shifts in the new directions result in more than reallocations of goods and services. In other words, these changes in allocations cannot be made except as parts of general structural changes in the social systems themselves. This is not some form of economic determinism. All of the new allocations involve allocations of roles, power and responsibility, integration and expression, solidarities, and the like, as well as allocations of goods and services. Only the fact that we have been able to take these factors more or less as constants in the modern Western countries has obscured their relevance. The noneconomic aspects of the social systems in underdeveloped areas do not always support, and often contradict, the patterns necessary if allocations of goods and services are to be brought more into conformity with those of more modern areas. The higher material productivity of the more modern areas will not be available to other areas unless such changes take place.

On the other hand, this does not make the general body of economic theory a matter of no concern to the people interested in relatively nonmodern, relatively nonindustrialized underdeveloped areas. Many of the existing theories will hold, although within a different setting than generally exists in the West, and many others will serve to set limits on what can be accomplished by certain types of internal social changes. The doctrine of comparative advantage will, for example, continue to point up the folly, from the point of view taken here, of internal pressures in the direction of "conspicuous industrialization." The question that must be faced in these areas is not that of abandoning one form of analysis and substituting another. It is rather a question of using the two or more forms together. In the course of this type of analysis, the perspective gained may sharpen the tools for purposes for which they have hitherto proved themselves highly useful but by no means fully adequate.

3. *Problems about Data*

Here again one is faced by a question in regard to which it will serve no one to ignore a parlous state of affairs. The kind of questions opened up in this paper have not been adequately explored in general and have been pursued in few if any cases in specific areas in the detail necessary. Even on questions that can be answered by data conventional for economists, such as prices, incomes, outputs, and the like, we have few figures for these underdeveloped areas, and not all of those we have are reliable or adequate for present purposes. Even the demographic data is chaotic; in the case of China, for example, it is easy to get into an argument about where, within 50 million one side or the other of 400 million, the population of China lies. Estimates of birth and death rates pose no fewer difficulties. Need for these conventional forms of data is obvious enough, but it must be borne in mind that their collection may involve very substantial outlays of capital with no very obvious and immediate return in terms of increased productivity. Some efforts are, however, being made in these directions.

But what of the more general questions such as the readier convertibility of certain types of class structures as compared with others? Data on these can, perhaps, be gathered by attitude questionnaires, but here one is faced with two problems. In the first place, even in their most expert applications these techniques are primarily in the stage of instruments being tested. In all of the areas concerned here, however, there exist these problems plus very substantial additional ones of communication posed by differences in language, values, etc. The problem is further complicated by the time factor. Policy decisions in these areas are not likely to await the completion of detailed, statistically precise studies by social scientists.

Moreover, the availability of records in these areas varies widely. While the historical records of the "traditional" period in China are voluminous, there are fewer records for the modern period. And our knowledge of the pitfalls of the data for the modern period is a great deal less reliable than that of the sinologists relative to the more classical materials. In addition, in some areas very few records of either sort exist. Most of these areas have not been studied on the scale or in the manner essential to produce the needed materials. Many of the available studies are on discrete questions and contain little general information about the social structure of these areas. We are likely to know a great deal about a particular village in India, for example, and have little knowledge of how far these results can be generalized for the area as a whole.

In studying these problems, there is no alternative to "sinning bravely" unless we decide not to attempt it at all and to learn what we can, if we can, from *ad hoc* experiences. This latter procedure has not been very fruitful in the past. I would propose three general lines of procedure in these respects. All are unsatisfactory in terms of an ideal of scientific thoroughness and reliability of findings. All three are, I believe, better than nothing, if one is careful to keep in mind their shortcomings and is prepared to use failures to increase the prospects of future successes.

The first of these is to concentrate on the gathering of types of data with which scholars have had the most experience and which seem to offer minimum problems of collection because of such difficulties as language differences. Demographic data and conventional economic data are good examples of this type. Although there are enough problems in gathering this sort of data, it is easier to obtain interobserver reliability in the reporting of the number of deaths and births and marriages or the value of foreign trade in different commodities or of bank deposits (if these exist) than it is to find out with precision whether individuals are more oriented to their families than to the state. These data will serve a dual purpose. Even if they are not relevant for many of the types of questions raised here, they will fulfill the purposes for which they are ordinarily designed. At the same time it should be possible to attain some confirmation of some of the kinds of hypotheses presented here via a double process of hypothesis formation. One may raise questions of the following sort: If it is true that the introduction of certain new bases of employment into a system like that of China (in which, according to our hypothesis, general control over deviance is maintained through the family and family solidarity) tends to undermine the family structure, can implications of this for the birth rate (or perhaps for family size) be deduced? One may then check the deductions by data on the birth rate (or on family size), and the confirmation or disproof of the deductions by these data will throw light on the hypotheses from which the deductions were made, if the process of deduction has not been faulty. In other words, a systematic effort can be made to link quite involved hypotheses to the data which are simplest to collect and with which we are most experienced. This is by no means visionary or without precedent. Irene Taeuber in her work on Japan for the Office of Population Research at Princeton has for some time been making extensive attempts of this sort. This may not be as good a procedure as more direct tests of many of these propositions would be. It obviously involves an extra step of deduction, and perhaps one of induction as well. Errors may crop up in these extra steps. But with our present linguistic training, the present state of our methodologies for confirming these hypotheses more directly, and the urgent need for increased knowledge about these areas, it is by no means a stratagem that we can afford to overlook. Already, responsible spokesmen both within and without these areas have helped us by advocating increased collection of such data. Furthermore, from our extensive experience with such data we are likely to be good judges of the respects in which they are unreliable. In the absence of highly reliable data, we shall still be the better off for knowing in what specific respects our data are unreliable. Finally, the process of double hypothesizing may well lead to new and fruitful suggestions for data-gathering within the more orthodox procedures now known.

The second line of procedure places the researcher on even thinner ice. In China, for the present, as far as members of the non-Communist world are concerned, the gathering of any kind of reliable data on the current state of affairs is virtually impossible, and this may be equally true in other areas for different reasons. Lacking something better, our hypotheses about the Chinese situation may be used in conjunction with our hypotheses or theorems about social phenomena in general to predict likely developments. To the extent that these predictions can be verified or disproved, our hypotheses about the facts and our more general theorems receive some form of test. Without going into the details of the analysis, on this basis one can predict that without quite radical changes from what seem to be the present preoccupations of the Communist regime, that regime cannot long remain stable, for many but by no means all of the reasons that brought disaster to its predecessors. On this score one can make even more specific predictions of where and why discontent and difficulties are likely to crop up. These can to some extent be confirmed by news releases from the Communist regime itself.

Closely related to the second line of procedure is the third and perhaps the most risky. This is essentially a line of procedure that has often been used more or less self-consciously by anthropologists, sociologists, and many amateur observers in the past. Many past observations on many different social systems, although not assembled in any highly precise form, give us a fairly good sense of adequacy. Such senses are always to be viewed by scientists with suspicion lest one lose sight of the very real possibility of error involved in any procedure as tenuous as this and as dependent upon one's estimate of the reliability of the person who did the research. With this sort of caveat well in mind, however, research like that of Malinowski on the Trobriand Islanders should by no means be ignored because of lack of replication or because it is not in such a form that degrees of variance and the like can be computed from it. I think that the feeling of adequacy that skilled critics frequently have in the presence of such studies arises from the fact that many of the generalizations in these studies tend to reinforce one another. To put the matter another way, many of the generalizations drawn about such systems in this way and from many different starting points (i.e. many different inductions) converge, as it were, in their implications. As stated above, this is a risky business, but we have one general sort of test for reliability here. If such convergence can be shown to be purely tautological, we are faced with a case of logical exercise based usually on implicit assumptions and concepts which, if made explicit, quickly reduce our converging hypotheses either to statements that are not conceivably falsifiable or to statements that are true but empty. If this cannot be done, one may take comfort in the position that such convergence on the basis of pure chance is highly unlikely. If anything like reliability can be claimed for some of the hypotheses, the confirmation of the analysis is improved to that degree.

At the very least, these three lines of procedure furnish alternatives to inaction on these problems of research and can be used to bring to bear what social scientists have learned in the past in other connections. They will have two other effects as well. They will result in the more explicit statement of our reasoning about these problems so that we shall be better able to seek out errors when results indicate that our analyses have been faulty. They will also provide a systematic set of hypotheses in terms of which we can gather better data when that becomes possible. They will simultaneously provide a systematic set of hypotheses to be checked by the gathering of these data. While the disproof by these data of many of these hypotheses may be hard on the sensitivities of individual researchers, disproof no less than verification will add to our general knowledge.

COMMENT

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In his very challenging essay Aubrey examines the "economic, organizational, and institutional determinants of investment decisions in underdeveloped countries." For present purposes he prefers to divorce these considerations, as much as he can, from related social and cultural variables. ". . . it will not be possible," he warns us at the outset, "to maintain this distinction." On the whole, however, he keeps very steadily to the main question: Are there economic determinants which can account for the apparently uneconomic behavior with which entrepreneurs in underdeveloped countries are commonly credited?

Throughout his discussion Aubrey draws a sharp line between the kind of behavior that may be expected, or sought, by outside observers on the basis of what are thought to be desirable social policies for rapid, or balanced, economic growth; and the kind of investment decisions made by entrepreneurs acting out of a decent regard for their own self-interest, prudently weighing the safety of their capital and the possibilities of profit before they commit their resources. From the vantage point of this distinction, he shows how (considering the conditions under which they operate) their preferences are sensible and, by their standards, quite sound. Such opprobrious terms as "unproductive," "sterile," or "speculative" when applied to investment decisions turn out to be little more than invidious epithets evoked from those who do not understand or approve of the manner in which such entrepreneurs register their preferences.

Aubrey then proceeds to sift a great mass of reports describing, and attempting to explain, entrepreneurial behavior in industrial investments in underdeveloped countries. At this point, incidentally, he renders students in this field a great service. He has thoroughly ransacked the literature, and his verdict on its unsatisfactory character is conclusive. He trenchantly argues that entrepreneurs in these countries have ample reason to regard industrial investments as especially hazardous and unrewarding as compared with other alternatives which are open to them. In most cases, and except under greatly favoring conditions, the discrepancy between what is regarded as socially desirable and what is individually prudent is too great to expect that businessmen will freely invest their capital in the former.

This point is so persuasively argued, in so many different and relevant contexts, that it sometimes becomes difficult to visualize just how entrepreneurship ever breaks through the careful and cautious hesitation of these businessmen. Several observations are offered to suggest how this takes place.

Aubrey remarks that the promoter may be an important agent in fostering industrial investment. The "successful" entrepreneur in a less advanced economy, he points out, may well be the one who makes a practice of starting new industrial enterprises and getting rid of them quickly. The chief function of such a promoter is to scent opportunity and to dramatize its possibilities for fellow businessmen who lack his insight and initiative. He defines the product, gauges its possible market, investigates the availability of labor, raw materials, and the like, "packages" the project; and then ducks out to sponsor a new promotion. His efforts are rewarded by payments for promotional services and by such incidental profits as he can pick up along the way.

Such promotional pacemakers, no doubt, are to be found frequently in underdeveloped countries. Their very success, however, raises more questions than it helps to answer. Such promoters surely depend on an audience of investors who will take industrial enterprises off their hands once they are established. Where does this group of investors come from? Aubrey often and amply demonstrates that industrial investments, by their very nature, are unattractive to the typical entrepreneur in an underdeveloped country. Such investments threaten illiquidity, are troublesome to manage, often demand knowledge and techniques which are unfamiliar and relatively difficult to muster. All these features are repeatedly shown to be distasteful to entrepreneurs in underdeveloped countries.

This suggestion is nonetheless one which may be greatly improved by future research. What kinds of enterprises and what kinds of appeals are effectively used by such promoters? Why can entrepreneurs in underdeveloped countries be induced to accept "enterprise" at one remove? And what kinds of obstacles do they feel have been overcome by the promoter in establishing the firm? The continuing success of promoters of this kind depends on disposing of viable enterprises. There is probably as much chicane associated with the launching of new businesses in underdeveloped countries as there has been elsewhere; but, at all events, such promoters cannot go on indefinitely disposing of "gold bricks." How do they choose the projects they sponsor?

Similar queries are raised by another of Aubrey's comments, which at first sight appears cryptic. Aubrey argues, very convincingly, that there is a significant relation between the willingness to invest in industrial enterprises and a stock of previous experience on the basis of which the entrepreneur can base judgments of risk and potential profit. Typically, he says, the background of relevant experience is shallow in underdeveloped countries. He then goes on to point out that such experience may be built up gradually, and that once accumulated it "may also help explain the emergence of native entrepreneurship within relatively short periods of time in countries where it had been conspicuously scarce for long periods of the past" (page 399). In support of this contention he cites Mexico's experience during the last quarter century. As before, it would be interesting to know by what means such headway is made.

Throughout the paper several tantalizing hints are thrown out in reply. All of them raise questions to which further research may be addressed:

1. Must there first be, for instance, a group of "pioneers" who attempt industrial enterprises before they have enough know-how and who fail, and on the basis of whose failures secure knowledge of what is feasible and profitable is built up? What induces such pioneers to make their attempts in the first place, if in fact they do so?

2. Or, as is suggested elsewhere (page 405), does a spectacularly successful venture breed a host of imitators to follow in its wake?

3. Is a principle of analogy followed by investing entrepreneurs? Is there a spread of entrepreneurship between roughly similar kinds of undertakings, businessmen going forward on the assumption that what made for success in one line will do so in another which resembles it somewhat? (See the examples drawn from the Indian experience in cotton and jute, page 411.)

4. Or, as remarked in another place (page 415), is there a drift from trading ventures and commercial business of one kind or another to industrial enterprise?

We have reason to be very grateful to Aubrey for sorting out the rather confusing evidence so far collected on these points. The questions raised above are addressed, in effect, to all past and future students of entrepreneurial behavior in underdeveloped countries. What Aubrey has shown is that past work has often been based on a confusion of the standards used in evaluating the ways in which available capital is disposed of in these countries. As a polemic against naïve and unreflective observation of such behavior, his paper is effective and conclusive beyond any qualification. He shows, incontrovertibly, that many of the diagnoses which have been made and many of the policies which have been offered in remedy proceed from incomplete or wrong assumptions. Having made this point so effectively, Aubrey does not, however, venture to draw what seem to me to be some rather obvious conclusions suggested by the evidence he has collected.

For one thing, he has shown beyond cavil that there is urgent need for some sort of typology of entrepreneurs in underdeveloped countries even if only one that is tentatively stated. Following the available literature, Aubrey tends to speak of "entrepreneurs" and "entrepreneurial behavior" as if these were roughly homogeneous in these countries. He is, of course, aware that this is not the case; and he richly documents the variation that exists in the many different examples cited throughout his discussion. Since we are all interested in economic change and how such change affects economic growth, it may be that in working out a classification of entrepreneurial types we shall be able better to locate groups which are more receptive of, or vulnerable to, change and innovation than it has been possible to do in the past.

Aubrey himself makes a notable contribution in this direction by stressing the importance of experience and special knowledge in fostering economic development. In one place (pages 416-418) he considers the entrepreneurial significance of foreign immigrants, who, in so many places, have shown much more initiative and enterprise than the natives of the countries to which they have come. The nature of the entrepreneurial impulse in these groups has for long appeared to be a vexing paradox to students in the field. Time after time it has been discussed in terms of differences in national character or by means of an unrevealing and unprovable set of psychological determinants which have done little more than compound the original paradox. Aubrey suggests that such immigrants may well have had superior knowledge and past experience and, by reason of their social marginality, may have been in a better position to detect and capitalize on opportunities which seemed unappealing to less experienced, more socially integrated native entrepreneurs. This is an extremely suggestive insight and, potentially, very fruitful, because it can be improved and tested by empirical study.

A further profitable inference is suggested by the relatively bland outcome of Aubrey's exhaustive inquiries. Considered in the light of past investigations, his study of entrepreneurial behavior in underdeveloped countries seems to have drawn only some rather feeble conclusions. We know little, as Aubrey shows, of the process by which changes in entrepreneurial attitudes and behavior take place. As was mentioned earlier in discussing some of the questions raised, the key problem for scholars in this field is to discover how industrial investment decisions change over time. At any given moment a clear-headed and unbiased observer can produce justifications for prevailing practices. How, in the course of time, can an entrepreneurial environment be created which will overcome what presently seem to be insuperable obstacles to native entrepreneurs in underdeveloped countries? Are there necessary preconditions which must be fulfilled before private venturesomeness can be counted on for significant industrial investments? These questions still await answers. It is much to Aubrey's credit that he has surveyed a field in which ambiguities abound and has managed to suggest, openly and by implication, the directions for promising research in the future.

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Before I consider certain specific points made in these two very interesting papers, I should like to raise a question of the sort Edwin Cannan raised many years ago when he pleaded for a simpler economics. Do we not need a simpler economics of development? Are not some of the concepts and the models that are being proposed for the analysis of problems of underdevelopment too complicated? Is it not the part of wisdom to concentrate attention only upon the dominant components of those factors which are deemed of major importance in accounting for underdevelopment?

Is not this approach admirably suited both to ease the task of analysis and to simplify the formulation of a strategy and a set of tactics adapted to getting development underway?

I believe that Aubrey's analysis bears out what has just been said. He reports that Faustian character, the Schumpeterian entrepreneur, to be conspicuous by his absence from underdeveloped economies. Should we not, therefore, give up discussion of entrepreneurship in terms of this not very well-defined concept? Should we not instead identify the characteristics of entrepreneurs found in underdeveloped countries, specify the additional (if any) characteristics likely to be acquired by these entrepreneurs under probable circumstances, discover the modes of interaction connecting the entrepreneur with his relevant environment in underdeveloped countries, etc.? Given such information, entrepreneurs might be classified in ways that would facilitate statistical analysis of entrepreneurial behavior, or at least we would have a suggestion as to which of the characteristics associated with this behavior are important.

Aubrey's attempt to apply the theory of uncertainty as it has been developed with respect to advanced economies indicates, as he himself discloses, the limited applicability of this concept for the analysis of entrepreneurial behavior in underdeveloped countries. He is arguing, if I read him correctly, that *objective* (or actually existing) uncertainty tends to be greater in underdeveloped than in developed countries; that, in consequence, *subjective* uncertainty (i.e. uncertainty as it exists in the mind of the decision-maker) is greater; and that, because the disposition of entrepreneurs to initiate and/or develop enterprise is inversely associated with subjective uncertainty, such uncertainty constitutes more of a block to the expansion of enterprise and economic activities in underdeveloped than in developed countries. Now this may be the case; but we do not actually know that it is. We must first ascertain the relationship that actually obtains between objective and subjective uncertainty in various cultures through study of entrepreneurial and managerial behavior and through analysis of the influence of occupational backgrounds upon the response of entrepreneurs to variations in objective and subjective uncertainty. At present, therefore, it is information much more than recondite models that is needed, and it is this need that Aubrey is attempting to satisfy.

(*1*) It would seem advisable to determine the influence of balance in growth upon profit expectations as these are viewed by entrepreneurs producing for a domestic as distinguished from a foreign market. If a number of complementary activities are developing simultaneously, each expanding entrepreneur is helping to provide a market for increments in output that other expanding entrepreneurs are bringing into being, with the result that a situation of the sort contemplated in Say's law is approximated. When, on the contrary, one or a few but not most of the complementary entrepreneurs are expanding, it is much less likely that the expanding entrepreneurs can satisfactorily dispose of their increments in output. Accordingly, balanced growth operates to reduce objective and subjective risk and uncertainty; lack of balance has a contrary effect.

It is regrettable that only average profit rates appear to be available. When these averages are low it is likely, of course, that the influx of capital from advanced countries will be deterred and that, if as a result aggregate profit is relatively small, capital formation will not be greatly augmented by the reinvestment of earnings. It were better if we had marginal profit rates and if we could estimate with some degree of confidence how they were likely to vary, by industry and by capital use, as more and more capital was invested in particular industries under varying conditions. It is often said that nonindustrial employments of capital unduly divert capital from industrial employments; yet there are not at hand data to determine whether such diversion, if it takes place, is economically unwarranted. (We should be even more handicapped if there were grounds for supposing that the marginal social benefit of investment exceeded its marginal private benefit.) Concerning the employment of capital in general, it may be said that when nonvoluntary means are employed to augment the rate of capital formation, similar means are likely to be employed to absorb this capital and thereby prevent manifestations of the sort consequential upon *ex ante* oversaving.

One's appetite is whetted for more information concerning the origins of entrepreneurs in underdeveloped countries than Aubrey and Levy give us, even with respect to the entrepreneurial role of immigrants possessing certain skills. One gets a general impression that industrial entrepreneurs originate in trading and mercantile backgrounds, but insufficient information is provided concerning the evolution of this process. Levy's account suggests (as did Hoselitz's) that a merchant class is likely to generate an industrial entrepreneurial class if the former, though reasonably secure in its property holdings, is denied access to class memberships that remove merchants and members of their families from the pursuit of commerce and/or industry; for under these circumstances merchant families cannot easily give up business, and some of the accumulating capital and offspring are likely to seek opportunity outside commerce and in industry if falling returns in commerce threaten. Even so, we need much more information concerning what becomes of the sons of merchants in various societies, and how the movements of these sons affect the movements of family capital and the reinvestment of earnings.

Aubrey implies that restriction upon freedom of entry into an industry may initially stimulate investment by reducing uncertainty, whilst recognizing that such restriction may in the end restrict investment. It may well be, however, that even in the short run such restriction, by excluding various entrepreneurs who have some capital they would risk, serves to restrict rather than to promote investment. In general, it would appear to be difficult to make out a case for a policy of restriction of freedom of entry even in the short run, given its probable consequences.

Presumably, the increasing pressure of the masses for additional income and consumption (noted by Levy and others) is more likely to reduce the supply of capital available for private investment (such as Aubrey is concerned with) than for investment in social overhead (urban improvements, housing, education, and the like), transport, communications, public utilities, etc. The latter kinds of investment must normally be underwritten or subsidized in large part by the state in underdeveloped countries, since the marginal private return on such investment falls short of its marginal social benefit and private entrepreneurs usually cannot afford to undertake such investment without subsidy. (This was the case in the nineteenth century in the United States, for example.) Therefore, investment of this sort needs to be viewed as public or quasi-public investment and susceptible of increasing support by the state. Even so, if there were too little capital formed voluntarily to meet the direct needs of industrial and commercial entrepreneurs, and this appears to be the case in prospect in many countries, the shortage could be made up out of governmentally enforced saving, accomplished through taxation, wage controls, and a slowly rising price level.

Respecting prices and costs, it is preferable to speak of a country's price and cost structure, since some prices and costs are relatively high whereas others are relatively low. Concerning the investmentretarding influence of labor bottlenecks, more information than is now available is needed regarding how long it takes workers to learn new skills in an underdeveloped country and how much (if any) overpricing of labor is produced by contemporary trade-unionism.

It would appear that, given the market imperfections and the probable lowness of demand elasticity in underdeveloped countries, the maximization of short-run profits calls for high percentage profit margins; and that percentage profit margins will tend to be higher in small than in large cities and in interior than in coastal towns. Changes in income, production costs, and marketing techniques, however, may increase demand elasticity or extend entrepreneurial time horizons and thereby reduce profit margins.

It is commonly suggested that overinvestment in land and real estate diverts capital from industrial employments and retards economic development. This argument, though conceivably valid, needs much more amplification than it has had. For overinvestment in lands tends to produce reactions in the factor-price structure that partially counterbalance the initial output-reducing effect. (a) If too many entrepreneurs, or too many other agents of production, are combined with land, the spread between the rates of return on these various agents and those on land will increase, and land will become relatively less attractive to investors. This spread may become so great that land loses much of its appeal as a source of investment. (Insofar as the desire to invest in land occasions saving that otherwise would not take place, the adverse effect of overinvestment in land is offset by the resulting greater amount of saving.) (b) If overinvestment in land means that land is upgraded in the hierarchy of assets held by men, it must be accompanied by a compensatory redistribution of nonlanded assets, some of which were initially surrendered to land-sellers by land-buyers. What becomes of these nonlanded assets? If they are consumed or wasted, they are not added to the nation's stock of capital, with the process of consumption or waste rather than overinvestment in land responsible. If, on the contrary, the nonlanded assets are added to the nation's capital stock and set to work, the nation's gross national product is increased and much of the adverse effect of overinvestment in land is offset. (A presumptive rationale of landed investment might be established in terms of asset theory.)

(2) The burden of Levy's paper appears to be that, because the disparity between backward and advanced countries is so much

greater today than a century or so ago, a backward country, wanting to catch up, is more dependent upon foreign sources for certain skills, materials, etc., than once was the case; and that the task of catching up is made even harder by the relative lack of entrepreneurs and capital, by difficulties of integrating private and public enterprise, and by the great disparity existing between the localized self-sufficiency of underdeveloped economies and the generalized interdependency characteristic of advanced economies. Because of the nature of the problem, the interventionist role of the state must at first be very great if an underdeveloped economy is to be transformed. Moreover, the role of the state cannot be relaxed until after a built-in developmental process has been set going.

Levy's analysis calls attention to a number of problems associated with economic development that economists tend to overlook: how to maintain sufficient social control in a society while the initiation of development is dissolving the older, hitherto effective modes of social control; how to convert a low-status, proto-entrepreneurial class into a high-status, expanding entrepreneurial class; how to make the motivational structure foster capital formation; how the rise of nationalism may be made to stimulate the transformation of particularistic into more universalistic social criteria; how to render sociological circumstances favorable to the separation of ownership and management; how to optimize resource conservation; how to make systems of family organization favorable to economic expansion; etc.

Among the matters I found open to objection in Levy's paper are these: his use of a much more cumbersome set of notions pertaining to capital than is required; his failure to indicate whether the age of cultures affects in any way their susceptibility to change; and his failure to describe in greater detail the sociological nexus between output of effort and its remuneration, between remuneration and proportion of income saved, between the profitability of technological improvements and their adoption, and so on.

Among the checks to natality proposed by Levy are the stimulation of urbanization and the introduction of patterns of consumption unfavorable to natality. He does not, however, discuss a thesis stated in very primitive form by J. S. Mill and developed recently by Harvey Leibenstein and others. According to this view, demographic and related obstacles to economic development can be surmounted most effectively if an economy forms capital at a very high annual rate (say, one increasing the capital stock 4.5 to 6.5

per cent per year) over a short period (say, 10 to 15 years). For so high a rate of capital formation (a growth rate of 4.5 per cent) in about 11 years might transform the aspirations of men and lead them to regulate their numbers effectively enough to permit per capita income to rise continuously. Can a sufficiently high rate of saving be maintained? (E.g. if population grows 1 per cent per year, a 4.5 per cent rate of growth in per capita output probably would entail the saving of something like one-fifth of a nation's income.) Supposing that it can be maintained, will the sustaining of such a growth rate undermine many of the circumstances presently responsible for the continuance of Malthusian situations? If the answer is in the affirmative, a quite different sort of domestic and foreign investment policy is called for in many underdeveloped countries than is now being pursued.

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Although Aubrey and Levy start from different theoretical concerns, there is a remarkable consistency in their analysis of economic behavior in underdeveloped countries.

Several general virtues of these papers should be noted. First, both authors avoid a naïve distinction between "economic" and "noneconomic" elements in a social system, and deal with the production and distribution of goods and services and the decisions relating to the factors of production within an institutional framework. Neither author neglects "culture," and neither exaggerates its importance. Second, both authors indicate the relevance of formal economic analysis to underdeveloped areas, a point of view that I believe some economists have abandoned too readily.

On this latter point a word of caution may be appropriate. The standard assumptions and categories of economic theory apply most readily to that sector of any underdeveloped area where market mechanisms or some reasonable facsimile operate. Such a sector exists in all contemporary societies, however limited it may be. Failure to recognize the existence of partial modernization probably accounts in part for the dispute over both the applicability of economic theory in non-Western economies and the importance of the obstacles to growth implied by the premodern social structures of primitive and agrarian economies. However, there are genuine differences in social systems, including the degree to which archaic forms of organization and conduct have been shattered. To speak meaningfully of investment decisions within the framework of Aubrey's analysis, for example, requires at a minimum that the social structure has been sufficiently loosened to permit us to think of the person with capital as having a genuine choice. A system of entailed property rights managed and transferred within the family structure would make standard economic analysis formal to the point of pure exercise.

How, then, are "institutional" factors relevant to the analysis of underdeveloped economies? In principle, in the same ways that they are relevant everywhere—namely, in forms of organization and patterns of behavior, and in variations in norms and motives. One or two illustrations of each of these relevant points may suffice.

Every society has some form of family and kinship system, but these vary markedly along a number of dimensions. The variations affect the production and consumption of goods and services in a number of ways. One form of relationship of considerable importance for the possibilities of economic growth is the incompatibility between an extended family and kinship structure, on the one hand, and a mobile, merit-placed work force, on the other. This functional incompatibility is noted by Levy in his paper and elsewhere. To the degree that industrialization in a broad sense does take place, preservation of the "best" features of the traditional order is likely to be pious nonsense. To the extent that the traditional structure is deliberately or indirectly shored up, new enterprise is likely to be isolated, limited in growth potential, or actually stillborn.

The organization of productive units is also of considerable importance. Quite apart from such questions as the economic advantages and costs of scale, which seem to me to be too little studied, there are several speculative points of considerable interest with regard to economic growth. One of these points is the possibility that large units gain greater immunity from traditional pressures and restraints than do small "family" enterprises, both in investment decisions and in personnel policies. Another and related hypothesis is that contrary to common-sense notions about inflexible bureaucracies, the possibilities of adapting to existing supplies of skills and developing new skills and increased supplies through training may be greater in large organizations than in small ones. Aubrey's work on small units and the summary in his paper are indeed valuable. I believe, however, that the issues are still complex and that their solution will require, sooner or later, modification of the individual entrepreneur as the model for analysis of economic decisions and practices.

On the relevance of norms and motives—a subject provocative of many senseless debates between economists and other social scientists—one or two illustrations of significant differences may be noted. The evidence seems to me to be quite overwhelming that aspirations differ in different times and places, and that the notion that the "cake of custom" serves only to hold in check universal aspirations represents a hopelessly distorted view of human motivation and its predominant source in social learning. Concretely, there are differences in the value placed upon change, whether of individual position through mobility or of processes and products. Emphasis on the innovating role of the entrepreneur tends to blind us to the very considerable and deliberate organization and institutionalization of change in industrial societies, in marked contrast to what must be regarded as the more "normal" set of social values and individual goals. That modern forms of economic enterprise have had some degree of successful penetration into all sorts of traditional systems does not demonstrate that they have done so by releasing previously frustrated passions.

Finally, there are one or two notes of a somewhat different sort that may be added to Levy's discussion of the population problem in underdeveloped areas. Not only is the problem of the relation between total economic and demographic growth troublesome, but the age structure of a population with high fertility and high mortality implies a very heavy "dependency burden" of the young—many of whom will not live to become producers. This youthful dependency makes educational improvements especially difficult precisely where they are most needed. Moreover, mortality reduction is initially likely to have the greatest impact on infant and child mortality, so that for a transitional period the dependency burden is likely to increase in the process of modernization.

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These comments apply principally to the numerous references made by Levy to Japanese economic and social history. The composite picture of Japanese economic development that emerges from Levy's references appears quite different from the picture I have formed from studying the history of Japanese development. Since I am not a specialist in Japanese history, my interpretation may be somewhat inconsistent with the most recent results of the intensive historical research now going on in Japan.

On page 459 Levy states that the wealthy members of underdeveloped countries are not likely to invest in the "formation of effective productive capital" and that "attempts to change such habits are likely to run into resistance. . . ." He then points out that Japan "was a notable exception. . . ." "The Japanese feudal lords accepted debentures for their landholdings without a murmur. Since they knew nothing of how to handle or manipulate debentures, their use came into the hands of the zaibatsu, who owned or controlled the banks. Quite peacefully, land reform was carried out, and the effective control of much of the financial resources of the society was turned over to people who did not own them but who could use them for the developmental purposes sought."

These statements raise several points at issue. First of all, the debentures given to the feudal lords in 1876 were in exchange not for landholdings but for the right to collect taxes from the peasants. Before this the cultivators were required to turn over a certain proportion of their crops as taxes to the feudal lords, who in turn distributed part of this to their retainers, the samurai. With the coming of the new regime, i.e. from 1873 on, land taxes were paid to the Meiji government instead of to the feudal lords and samurai. In recognition of the former feudal prerogative, the Meiji government offered to capitalize the annual tax in the form of debentures to the lords and samurai. The land reform alluded to by Levy is generally referred to as the land tax reform of 1873; that is, with the acquisition of the right to tax the peasants, the new regime realized from the outset that a modern land tax system required each piece of land to have a clearly recognizable legal owner upon whom the taxes could be levied. Since the feudal concept of holdings and tenure did not meet this requirement, each cultivator was given a certificate of ownership to the land that he and his families had tilled and held from time immemorial. This distribution of certificates of legal recognition to landownership should not be confused with land distribution.

Second, if the feudal lords accepted these debentures "without a murmur," it is because some of them knew that it was utterly futile to resist the armed strength of the new government, which made it sufficiently clear what the consequences of such action would be. To be precise, however, it should be noted that the debentures distributed to each individual differed in amount: those who received large amounts probably accepted without a murmur; but most of the recipients got relatively small amounts. The resentment of the latter was one of the causes of the numerous samurai uprisings in various localities throughout Japan which finally culminated in the great Satsuma Rebellion of 1877. Also the distribution of certificates of landownership conferring legal recognition to the holders of land was accompanied by demonstrations and riots over various claims and counterclaims.[1]

On the subject of the "ready convertibility of the indigenous entrepreneurs and financial investors" into accumulators of effective productive capital, Levy observes on page 460 that "Japan is one of the few cases that offers any hope." In most underdeveloped countries local merchants demand exorbitantly high interest rates and tend to invest their funds in the purchase of land and other nonproductive sources. This passage, together with similar references to feudal lords as entrepreneurs cited in the first quotation, appears erroneous.

First, while a small portion of the debentures were invested in railroads and banks, most of them were used for the purchase of land, for loans at usury rates, and for trading.[2] Moreover, the indigenous entrepreneurs and financial investors in general also preferred investments in land and loans to peasants at usury rates during the formative years of Japanese development, namely, the first few decades of the Meiji era. While no doubt there were some cases of "ready convertibility," these were the exception, and in general the "indigenous entrepreneurs" preferred the extremely high rent (50 per cent or more of the crop) obtainable from land purchases and the high interest rates from usury loans to very risky investment in modern plant and equipment with low returns. It was because of the reluctance of both small and large investors that the Meiji regime found it necessary to embark on a vast program for the construction of government factories, mines, railways, shipyards, etc.

In the coordination of developmental projects carried out on a

[1] See E. Herbert Norman, *Japan's Emergence as a Modern State*, International Secretariat, Institute of Pacific Relations, 1940, p. 139 and other parts of this book, for various points covered in the above discussion. See also Takao Tsuchiya and S. Okazaki, *Nihon Shihonshugi Hattatsuchi Gaisetsu* (*Outline of the Development of Japanese Capitalism*), pp. 26-53 and 77-78, and W. W. McLaren, *A Political History of Japan during the Meiji Era, 1867-1912*, Scribner, 1916, pp. 82-90.

[2] See H. Ouchi, *Nihon Zaisei Ron, Kosai Hen* (*Treatise on Japanese Public Finance, Volume on the Public Debt*), pp. 35-38; Norman, *op. cit.*, pp. 110-114; and Tsuchiya and Okazaki, *op. cit.*, pp. 26-46.

public and private base, Levy feels that "For reasons too complicated to go into here, the Japanese seem to have had an unbelievably felicitous situation in these respects, for the public planners and the major figures in the sphere of private initiative either were the same or acted as one" (page 464). It is not clear precisely what situation is referred to here. Read in the context of this section, it seems to relate to the government practice of building modern factories, mines, shipyards, vessels, etc., and turning them over to private groups at extremely low prices or without compensation.[3] This may have been felicitous for the recipients of these properties, but hardly for the economy as a whole. Since the recipients were usually the few large financial houses (the zaibatsu), this policy was in part responsible for the concentration of production in Japanese industry in a small number of firms.

Levy's description (pages 476-479) of the role of the merchant near the end of the Tokugawa period and in the early Meiji period seems unsatisfactory at many points. Since a point-by-point refutation of the description will take up too much space, it may suffice to say that the picture one gets from his discussion differs from that presented by recent historical research. My basic disagreement is with Levy's assumption that in the formative years of the Meiji period the merchant class was responsible for "effective productive" capital formation. (And because of this assumption he goes into a description of the social habits of this group both before and after the Restoration.) My views are more in accord with the statement by E. H. Norman that "big private capital preferred to remain in trade, banking and credit operations, particularly in the safe and lucrative field of government loans, while small capital had no inducement to leave the countryside where trade, usury and, above all, high rent—averaging almost sixty per cent of the tenant's crop—prevented capital invested in agriculture from flowing into industrial channels."[4]

[3] Only rarely were industrial plant and equipment sold by auction, as in the case of the silk factory in Tomioka. T. Fujita, *Nihon Shihonshugi to Zaisei* (*Japanese Capitalism and Public Finance*), pp. 166-169.

[4] Norman, *op. cit.*, p. 111. It might be added that the problem of entrepreneurship in the late Tokugawa period has been the subject of a lively controversy and intensive research among economic historians in Japan during recent years. One school of thought holds that a nonfeudalistic type of entrepreneurship (the putting-out system and large-shop production) had developed on a considerable scale, while another group denies its widespread existence. A third group argues that while there was a fairly extensive development of the putting-out system and large-shop production, these were essentially feudalistic in character.

Japan is again singled out as "very special" in the discussion of the ability of nations to maintain systems of control in the new system. "There was also a clear tradition of concentration of this loyalty on a single individual, the emperor. This permitted a rather easy transfer of these loyalties back to the emperor and hence directly to the national state. Virtually without bloodshed and in extremely rapid and dramatic steps, the daimyo and the shogun, the top power- and property-holders of a genuinely feudal society, were shorn of their power and their property . . ." (page 466).

While there is some truth in the first part of the quotation, it is well to keep in mind the following problem: If the Meiji Restoration had brought about as thoroughgoing a change as the French Revolution, would the tradition of loyalty to the emperor have survived? The change to the Meiji era from the shogunate system was limited and, as Honjô points out repeatedly, "Power simply passed from the upper grade to the lower grade samurai."[5] In this situation, as far as the large majority of the population was concerned, the new forces which might have strained the tradition of loyalty were kept in check.

On the other hand, it is misleading to describe the Meiji Restoration as taking place "virtually without bloodshed." Even if one takes into account military battles alone, the shift of power from one group of samurai to another involved intermittent fighting from 1844 to 1869.[6] And if a larger perspective is taken, one must surely include the hundreds of peasant revolts which, though abortive in most cases, sapped the inner strength of the Tokugawa shogunate.[7]

There are other references to which we are inclined to take exception. But the foregoing remarks are sufficient to indicate that, though Japanese development is one of the most fascinating in the world, it is not quite as exceptional as Levy would have it. No doubt, when compared with development in other countries, there are many interesting contrasts in the behavior of Japanese entrepreneurs, landlords, peasants, and workers in the developmental

[5] Eijirô Honjô, *Social and Economic History of Japan*, Kyoto, Institute for Research in Economic History of Japan, 1935, p. 141. Also see Norman, *op. cit.*

[6] See James Murdoch, *A History of Japan*, Yokohama, Kelley and Walsh, 1903, Vol. 3, last two chapters, and S. Toyama, *Meiji Ishin (Meiji Restoration)*, Tokyo, 1951.

[7] See Hugh Borton, *Peasant Uprisings in Japan of the Tokugawa Period*, Tokyo, Asiatic Society of Japan, 1938, and Takao Tsuchiya, *An Economic History of Japan*, Tokyo, Asiatic Society of Japan, 1937, p. 165.

process as it unfolded in the total milieu of the early Meiji era, but there are also equally interesting similarities.

Last, it is difficult to say to what extent the comments above, if correct, would modify or invalidate the various hypotheses and policies advanced by the author in the paper. Some of them would probably be affected, because the author states that "examples will be given largely in terms of hypotheses about the facts in China and Japan . . ." (page 442). But it is difficult to be precise about this, since the author may have had other nations in mind even though no explicit references are made to them in framing the hypotheses.

Reply by Henry G. Aubrey

Since I have no quarrel with the comments made by the discussants, no rejoinder is needed. I propose, therefore, to use some of the comments and others I received from nonparticipants[1] in order to sharpen the focus on some issues which perhaps were not made sufficiently explicit in my paper.

It appears desirable to make a distinction between "objective" obstacles and "subjective" uncertainty, a point made very properly by Spengler. It is, of course, true that uncertainty is essentially a subjective criterion, and, from this angle, it would not seem to matter whether the objective data fully justify the doubt which manifests itself in a feeling of uncertainty. What matters for our purpose is the observed frequency or the inferred likelihood of certain data's evoking such an uncertainty response in a number of individuals who may be deemed willing to consider a concrete possibility of industrial investment in underdeveloped countries. In this respect the most useful distinction may be that between "objective" difficulties rooted in the economic institutional and political framework of underdeveloped countries, and the "subjective" difficulty of assimilating such data into a framework of experience.

Objective difficulties include, among other things, instability of the economic system due to the overwhelming strength of external factors in an export economy. Political instability belongs in the same category, and both factors are responsible for a foreshortened economic horizon which makes long-term, illiquid investments appear hazardous. Another objective factor is the difficulty and the cost of raising sufficient capital and the resulting danger of under-

[1] I am greatly indebted to L. M. Dominguez and H. W. Singer for their lucid and probing criticisms.

capitalization. Yet another is the difficulty of proper cost calculation in new ventures.

The enumeration and discussion of a fairly long list of such factors in my paper may have created the impression of a cumulation of nearly insuperable difficulties, which makes it appear a near-miracle that investment in underdeveloped countries does, after all, take place. Such was not my intention. I should perhaps state unequivocally that some investments in such countries can be decided on positively or negatively with as great assurance as in developed areas. My analysis was largely directed toward the area of indeterminacy which exists between the least controversial extremes of "good or bad risks." I had not planned to venture a distinction between developed and underdeveloped countries in this respect; but if the data I submitted suggest any differentiation, it lies in the greater area of "indeterminacy," and this term would perhaps be the best substitute for the self-contradictory concept of "objective uncertainty."

I only regret Spengler's lack of interest in my attempted application of expectational theory because the subjective factors tend thereby to be underrated. I discounted the expectational approach merely with regard to the use of actuarial probability. I feel quite strongly, however, that the concept of uncertainty can be used to great advantage as one of the instruments by which the economist can introduce noneconomic factors into his analytical framework. Vague concepts like "resistance to change," "speculative preferences," etc., acquire operational meaning for the economist if they can be integrated into his system as determinants of specialized entrepreneurial experience and skill, or the lack thereof, or as the entrepreneur's ability to appraise elements of cost and profit in some kind of rational calculation based on precedents. Awareness of limits to such appraisal are registered subjectively in the form of uncertainty. The influence of uncertainty on risk-taking in investment decisions is a complex matter of which we ought to know more in detail, as Spengler says. I pointed to concrete situations in underdeveloped countries in order to make the relevance of uncertainty at least plausible; how great it is under specific conditions cannot be stated with assurance, nor can we generalize on the extent of differences between underdeveloped and other countries. If, however, my paper used an imperfect tool with less than due caution, further research will doubtless provide correction and refinement.

REPLY BY MARION J. LEVY, JR.

I do not feel that it is appropriate in this volume to make a detailed reply to Oshima's questions. I feel that on several of the points he has raised we are either speaking past one another or merely using somewhat different vocabularies. On other points I feel that there is genuine disagreement between us. On these points I must confess that I should prefer to await the outcome of a fairly extensive program of research on Japan. This research in which I am presently engaged touches on several of the points raised by Oshima. The findings of the research may persuade me to reject my present hypotheses and embrace his, or, what is more likely, lead to modifications of both positions or to new ones altogether. To pursue these questions via a reply here would take us into substantive issues very far afield from the interest of this volume. It would require considerable space and involve questions about which neither Oshima nor I have at present much more than hypotheses about the facts to offer. As for the relevance of his comments for the general concerns of my paper, I can only remind the reader—and this with no invidious implications for the validity of Oshima's remarks—that I pointed out early in the paper that the "empirical" materials presented would consist largely of "hypotheses about the facts in China and Japan," that these materials were presented merely as examples or illustrations, and that the generalizations presented in the paper were themselves more properly to be viewed as hypotheses than in any other light at the present stage of their development.

PART V

TECHNOLOGICAL PROGRESS AND INVESTMENT